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Third Annual and
Twelfth Quarterly
Progress Report

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1999-2000 Workplan

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FORWARD 

Collaborative Approaches for Resolving Water Issues

A

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THIRD ANNUAL AND TWELFTH QUARTERLY PROGRESS REPORT

INTRODUCTION

This project year has been a time of program expansion and geographical spread. By the close of the project's third year, it had active programs with all five entities which have USAID missions: Morocco, Egypt, West Bank/Gaza, and Lebanon. There was also some expectation that the project would in its fourth year expand into Asia and develop activities focused on transboundary issues. The growing portfolio of FORWARD now covers most of the major policy and technical issues facing the water sector in the Middle East, including: water pricing and tariff restructuring, watershed management, private sector participation, decentralization, stakeholder participation, aquifer management, and water quality degradation.

In Egypt:

- FORWARD has carried out programs to facilitate an increase in water and wastewater tariffs in Cairo and assist water and wastewater utilities to reach fiscal autonomy. FORWARD has engaged a multidisciplinary senior-level team consisting of highly distinguished Egyptian experts, including the executive director of UNDP and the former Egyptian ambassador to the United Nations and the United States, to provide access to the highest levels of the government. Thus far, the project has prepared a memorandum, awaiting final approval by the Popular Council of Cairo, that provided justification for an increase in the level of tariffs. The Mission has noted that the project efforts have reopened a long-closed dialogue between the agencies and USAID, and raised the level of that dialogue so that it is productive and based on technical issues.
- In addition, FORWARD is carrying out a series of managerial assessments of major water sector entities including the Cairo General Organization for Sanitary Drainage, the National Organization for Potable Water and Sanitary Drainage, and the Central Water Organization. These assessments seek to creative dialogue between the mission and the agencies as the latter restructure themselves to face changes in the sector.
- FORWARD is also developing a major, new program for USAID which focuses on the reduction and phasing out of water sector subsidies and fosters the financial independence of water utilities. This last program is highly sensitive politically and makes use of FORWARD's specialized collaborative planning expertise.

In Jordan:

- FORWARD has worked closely with the Water Authority of Jordan and the Jordan Valley Authority to develop three cost/tariff models for water, wastewater, and irrigation water. The models, which are very accessible and powerful, enable the Ministry to develop and test an unlimited range of what-if scenarios to determine the impact of social and economic impacts of water costs. The models have enabled WAJ to negotiate a management contract with private sector operators who have taken over responsibility for operation of the Greater Amman water and wastewater network and JVA to pursue its course of more business-like operations.

- As a result of the model development, FORWARD has been asked to extend the WAJ models to other governorates in Jordan and to design and implement a financial accounting system for JVA. The two-year program, now underway, involves the mapping of existing business practices, development of a chart of accounts, and redesign of systems. As part of the program, more than 200 JVA staff at all levels of authority will be trained in accounting, financial analysis, and information technology. The introduction and operation of the financial system is certain to drastically change how business is done in JVA and requires building consensus among government officers who fear having greater accountability.
- Finally, JVA has asked FORWARD to develop and carry out a strategic planning program which will enable it to reassess its mandate and set new directions for the next many years. FORWARD will assist JVA to define a mission, vision, and strategies through task forces and working groups. During the period, FORWARD held a strategic planning workshop for senior JVA management and began developing a scope of work to carry out the program.

In West Bank and Gaza:

- FORWARD has worked with the mission and the Palestinian Water Authority to bring major stakeholders together to design the two largest water projects there, one focusing on stormwater management in Gaza, the other on integrated water resources management in Hebron and Bethlehem.
- To do these, FORWARD conducted a series of mutual fact-finding exercises on industrial wastewater management, aquifer recharge and irrigation reuse, and stormwater harvesting in the West Bank, which included industrial users and polluters, farmers, urban users, and government officers in the project early planning design.
- As a follow-on, the mission asked FORWARD to field a long-term expatriate hydrologist to Gaza to oversee the implementation of the Coastal Aquifer Management Project. He is now in his second year.

In Lebanon:

- FORWARD carried out a scoping visit to review three ongoing or potential intervillage disputes in the Bekaa Valley. Since then, it has worked with water users from a number of villages in the Yammoune water supply system in northern Bekaa to develop an ongoing process for villagers to play an active role in determining the benefits they received from donors and control how water is managed in the system. This has been an area of violence and extortion with a breakdown in confidence among the villages.

Finally, in Morocco:

- The mission asked FORWARD to assist in the creation of a new river basin authority in the southwest around Agadir. FORWARD fielded a team of water and collaborative planning experts who prepared a convening report examining the feasibility of establishing the authority. FORWARD's role was to bring a diverse group of stakeholder

entities, both public and private, into the process to encourage their participation and cooperation.

- Based on this effort, USAID has asked the project to develop a new program which focuses on the creation of a water quantity/water quality database which would be contributed to and shared by the different stakeholders.

During its three years of activity, FORWARD has captured the imagination of missions and host country governments alike. The evidence is a vital portfolio of programs which continues to expand and diversity. Expected new areas for FORWARD in 1999-2000 are programs in Asia and on transboundary issues.

Notable achievements of this past year include:

- Continuing enthusiasm for the project approach by USAID missions and cooperating country governments;
- Expansion of existing country programs, including the Design and implementation of the JVA Financial Accounting System and managerial assessments of water sector entities in Egypt;
- Approval for developing a long-term strategic planning program for the Jordan Valley Authority;
- Initiation of Lebanon program development in the Bekaa Valley on intervillage disputes over water supply conveyance;
- Completion of the first phase of the water quality mediation in the Jordan Valley; and
- Invitation by the ANE Bureau for FORWARD to give a presentation at high-level meetings with the European Commission in Brussels.

1. PROJECT BACKGROUND

Project Goal. To promote equitable and sustainable water management strategies, policies, and plans in selected countries in the ANE region, which are facing serious water shortages and/or conflicts over water.

Project Purposes. To develop, test, and refine methods for national and transboundary collaborative problem-solving and dispute resolution for water resources issues. To establish or enhance indigenous capacity in the theory and practice of collaborative problem-solving and dispute resolution for water resources issues.

Contract Line Item Numbers and Project Results. The contract for FORWARD identifies sixteen CLINs (contract line item numbers) and sixteen project results, which are phrased exactly alike for the 30-month base period and the additional 30-month contract option period. Under the project results there are 20 performance indicators, towards which either substantial or lesser progress is to be made by the contractor during the base period.

- **CLINs 1 and 9 and Project Result A: Improved Approaches.** Improved approaches to resolving water resources issues collaboratively have been developed, tested, refined and analyzed; and the results have been disseminated to interested parties.
- **CLINs 2 and 10 and Project Result B: Negotiation Training.** Approximately 200 individuals receive comprehensive information which enhances their creative joint problem-solving capabilities, and they gain significant experience in using joint problem-solving strategies in negotiating solutions to water resources disputes.
- **CLINs 3 and 11 and Project Result C: Mediation Training.** At least 15 host country nationals in the ANE region are provided with educational and experimental training necessary to prepare them to serve effectively as third party impartial and dispute resolution process designers for water resources disputes.
- **CLINs 4 and 12 and Project Result D: Water Solutions.** For at least three significant water resources management problems, affected parties have produced and begun to implement, integrated solutions developed through a joint problem-solving process involving extensive, sustained collaboration among appropriate stakeholders. Solutions are to be detailed and specific, including specific actions required of each party, and means of monitoring and enforcement of the agreement.
- **CLINs 5 and 13 and Project Result E: Mobilizing Resources.** Resources of the host governments, of the donor community, and/or of multilateral institutions, are mobilized for implementation of agreements reached under CLIN 1.
- **CLINs 6 and 14 and Project Result F: MEPP/Transboundary Issues.** At least four major short-term (1-8) analytical and/or training activities promoting collaboration among regional sharing water resources are conducted, and each activity makes a contribution to the body of knowledge on how to resolve transboundary water resources disputes in the ANE region, in terms of both process and substance.

- **CLINs 7 and 15 and Project Result G: Valuing the Approaches.** Project beneficiaries value the approaches used, and choose to use them in other contexts, both within and outside of the water sector.
- **CLINs 8 and 16 and Project Result H: Knowledge for Follow-on.** Knowledge developed under this project is sufficiently comprehensive and detailed to determine whether or not a follow-on project should be undertaken, how such a project should be structured, and what applications for joint problem-solving/dispute resolution might be appropriate outside of the water sector in the ANE region.

Financial Information. FORWARD is a thirty-month project, with an optional thirty-month extension period. It has the following base and extension period budget:

**Estimated Budget per CLIN
(1 July 1996- 30 June 2001)**

CLIN	Contract Budget
1. Improved Approaches	\$ 2,438,860
2. Negotiation Training	\$ 612,837
3. Mediator Training	\$ 436,917
4. Water Solutions	\$1,595,671
5. Mobilizing Resources	(Not separately priced)
6. MEPP Transboundary Issues	\$ 350,000
7. Valuing the Approaches	(Not separately priced)
8. Knowledge for Follow-on	(Not separately priced)
Estimated Base Period Cost	\$5,434,285
9. Improved Approaches	\$ 2,108,365
10. Negotiation Training	\$ 420,075
11. Mediator Training	\$ 275,625
12. Water Solutions	\$ 1,766,790
13. Mobilizing Resources	(Not separately priced)
14. MEPP Transboundary Issues	\$ 350,000
15. Valuing Approaches	(Not separately priced)
16. Knowledge for Follow-on	(Not separately priced)
Estimated Option Period Cost	\$4,920,855
Total Estimated Cost	\$ 10,355,140

2. PROGRESS BY CLIN AND PROJECT RESULT

This section provides a summary of progress made during the third year of project implementation, based on activity clusters within a CLIN or project result, as given in the first and second year workplans. For clarification, breaks in the numbering are indications that activity clusters and activities are closed and had no efforts during the period.

CLIN 1 and Project Result A: Improved Approaches

Activity Cluster 1.2: Project Management

- **1.2.2: Prepare Annual Workplans and Progress Reports.** As a result of the mid-term evaluation of FORWARD and discussions with FORWARD's COTR quarterly reports are now two to three page memos with a lengthier annual report. In addition, annual workplans are now to be tables which identify the activities and provide a timeframe. This approach was thought to be more accessible, less time-consuming, and more consistent with the ever-evolving nature of project implementation.
- **1.2.3: Maintain Administrative Systems.** FORWARD completed the development of a new financial planning and tracking system, the Financial Invoiced, Pipelined, and Programmable System (FIPPS). The system permits the project team to know the level of funding available to be programmed for any activity. Ivan Urlaub, project associate, who developed the system as a series of interconnected Excel workbooks, maintains all FIPPS files. As part of FIPPS, Ivan prepared a user's manual in December 1998.
- **1.2.4: Subcontracting with US, Egyptian, Jordanian, Lebanese, Moroccan and West Bank and Gaza Firms.** A subcontract was prepared with CDR Associates for Dr. Christopher Moore's participation in the Financial Accounting System program for the Jordan Valley Authority and Mr. Peter Woodrow's participation in the creation of a watershed authority in the Souss-Massa Basin of Morocco. FORWARD also subcontracted with the Tennessee Valley Authority and Geomatrix Consultants to participate in the Moroccan watershed authority program. A subcontract agreement was made between Optimal and FORWARD for their performance in the managerial capacity assessment of the Cairo General Organization for Sanitary Drainage (CGOSD). Also, a subcontract with TetraTech, EM Inc. enabled their participation in the Eastern Aquifer Treatment Options program in the West Bank and Gaza. And last, ValuAdd Management Services has participated in the managerial capacity assessment of the Cairo General Organization for Sanitary Drainage and in the Organizational Analysis of the National Organization for Potable Water and Sanitary Drainage in Egypt.
- **1.2.5: Carry out Procurement for U.S. and Regional Offices.** One photocopier, two printers and five desktop and three laptop computers, including necessary software and peripheral accessories, were purchased for use by the Financial Accounting System team office located in the Ministry of Water and Irrigation in Amman. Plans are underway for more significant technology purchases for use by this program and the Jordan Valley Authority over the next 18 months. Various furnishings and supplies have

been procured to establish a regional office and living quarters in the West Bank-Gaza for Wayne Curry, FORWARD's long-term technical assistant in the region.

- **1.2.6: Consult with USAID in Washington, Amman, Cairo and Tel Aviv.** During the period, the project director has met regularly and frequently with the COTR, and in the course of program development and implementation consulted with USAID missions in Amman, Cairo and Tel Aviv. Near the end of the reporting period, Jeff Goodson, the original COTR shifted to the Africa Bureau and was replaced by John Wilson. To ease the transition, the project director gave several briefings to John Wilson and Del McCloskey on FORWARD.

Activity Cluster 1.3: Method Development

- **1.3.1: Conduct Consultations.** During the year, the project director and other project staff conducted regular and frequent consultations with the ANE Bureau, all missions in the Middle East region, and with cooperating country governments to monitor existing programs and develop new ones. Along with the project director, key resources included: Raed Daoud in Jordan, Said Ouattar in Morocco, Wayne Curry in West Bank/Gaza, George Kinias in Egypt, and Oussama Safa in Lebanon.
- **1.3.4: Prepare Lessons Learned Documentation and Analysis.** During the period, the ANE Bureau prioritized FORWARD activities and gave low importance to the preparation of lessons learned documentation for the use of core funds. Instead, the Bureau preferred that this work be done with mission incremental funding as part of existing programs. The last of the core funded lessons learned reports to be prepared was entitled, "Capacity Building in Collaborative Problem-Solving for Stakeholders and Mediators: Midpoint Status," dated February 1999. (See Annex C for the executive summary). Mission-funded lessons learned reports include "Water and Wastewater Cost/Tariff Models for the Water Authority of Jordan" and two reports for the Jordan Valley Authority, "The Jordan Valley Authority Cost/Tariff Model – Operation and Maintenance Costs" and "The Jordan Valley Authority Cost/Tariff Model – Operation and Maintenance and Capital Costs." All three were completed in December 1998.

Activity Cluster 1.5: Information Dissemination

- **Activity 1.5.2: Present FORWARD at USAID-European Commission High-Level Meetings in Brussels.** In May 1999, the project director accompanied Robert Randolph, ANE Assistant Administration and Joseph Carroll of the Bureau to the European Commission to make a presentation about FORWARD to the Middle East Directorate in Brussels. As a follow-up to the meeting, FORWARD is pursuing a partnership with the EC in the Middle East where the latter can use the assistance of the project's collaborative planning and consensus-building skills and experience. (See Annex B for the presentation.)

Activity Cluster 1.6: Program Implementation

- **1.6.1: Provide Long-term Technical Support to USAID/West Bank and Gaza.** During the year, major efforts carried out by Wayne Curry included the following:

Initiation and Mobilization

- During the week of 6 July, Wayne Curry participated in a DAI orientation in the DAI headquarters office, Bethesda, MD. Topics included briefings by Peter Reiss, FORWARD Project Director, regarding FORWARD activities, as well as meetings with Jeff Goodson, FORWARD COTR, regarding finalizing the Senior Hydrologist scope of work for the USAID West Bank and Gaza Mission. DAI provided a new laptop computer and printer to be used in the Gaza Coastal Aquifer Management Program (CAMP).
- During the week of 13 July, Wayne Curry attended a CDR training course in Boulder, Colorado, entitled "The Mediation Process". This course provided training in the elements of conducting and participating in the resolution of disputes by mediation. Although the course did not include specific training in water disputes, it did provide basic tools for mediating such disputes.

Participation on Short-Term FORWARD Activities

- During August, Wayne Curry participated in progress meetings and technical reviews of FORWARD reports for short-term projects entitled "The Potential for Stormwater Harvesting in the Eastern Surface Catchment of the West Bank", "Industrial Wastewater Management Options Plan for Hebron" and "Agricultural Reuse and Aquifer Recharge Options Action Plan for Hebron".
- During December, Wayne Curry was involved in the design and preparation of the Statement of Work for the West Bank Water Resources Phase –III Integrated Water Resources Management Program.
- During 23-24 May, Wayne Curry attended a FORWARD workshop in Amman, Jordan concerning the Jordan Valley Authority (JVA) Strategic Planning Program. The purpose of the workshop was to introduce senior managers of the JVA and other stakeholders to concepts of strategic planning and obtain feedback from them regarding the issues involved.

West Bank Activities

- During the period of August through January, a number of visits were made to the West Bank Phase I production well sites to meet with drilling contractor, CDM and PWA personnel. During those site visits, progress, drilling procedures, borehole logging, aquifer testing and technical issues were discussed and problems were resolved.
- Visits were made during the period to observe construction of the Hebron-Bethlehem water transmission system, including the main transmission pipeline, Sa'ir booster station and Halhul storage reservoir.

- During the period of August through January, time was spent reviewing aquifer test results and borehole logs for Phase I production wells, as they were completed and tested. John Starnes was provided with technical input on the reviews and results of the tests and logging.
- Time was spent in the review of the technical scope of work for the West Bank Water Resources – Phase II and Bethlehem 2000 program. Some additions were made to the scope of work, including requirements for physical surveys, well bore logging and establishment of a baseline water quality monitoring program for the Eastern and Northeastern Aquifer Basins.
- During September, Wayne Curry was nominated by John Starnes to participate in a USAID selection committee for the interview of candidates for a USAID FSN Engineer position for West Bank projects. Candidates were interviewed and a recommendation for the selection of a candidate was given.
- During the period of September to November, Wayne Curry was involved in the USAID funded Jericho Flood Mitigation project from the standpoint of attending progress meetings, conducting field inspections and reviewing design reports and plans prepared by Contractors Metcalf and Eddy and Khatib and Alami.
- Time was spent preparing a summary of recommendations for a Hebron area wastewater sampling program, as well as providing recommendations for wastewater sampling parameters to be analyzed in the Hebron lab. This was submitted to USAID.
- During the period of September through January field trips were made to select proposed production and monitoring well sites in the Eastern and Northeastern Aquifer Basins for Phase II work. These were conducted with PWA West Bank Water Department (WBWD) personnel. As part of this process, spreadsheets were developed to track progress of well selection and well permitting and periodic updates were provided to USAID.
- At the request of John Starnes, a summary of “lessons learned” related to Eastern Aquifer Basin groundwater modeling and production well drilling was prepared and submitted to USAID. This information was subsequently included in Power Point presentations by John Starnes to describe West Bank water resources activities undertaken by USAID.
- During February and March, meetings were held with Contractors CH2M-Hill/Montgomery Watson to discuss the finalization of production and monitor well siting and groundwater modeling tasks for West Bank Water Resources Phase II. Communication continued with the Phase II Contractor during April through June regarding progress and technical issues.

Gaza Strip Activities

- During August, a trip to Gaza was made with Chuck McElroy of USAID to meet with USAID FSN engineers, Metcalf and Eddy contractor personnel and Gaza municipality engineers associated with the construction of the Gaza wastewater treatment plant, Sheikh Radwan reservoir, "old railroad station" infiltration basin and Gaza industrial
- During February and March, Wayne Curry held numerous meetings with PWA Team Leaders and Core Team personnel to discuss initial work and program requirements for Gaza CAMP. Time was also spent in the PWA library in reviewing reports of previous work that has been done in the Gaza Strip related to groundwater quantity and quality.
- During March, meetings were held in the PWA offices to introduce Metcalf and Eddy personnel to the PWA Team Leaders and Core Team personnel and discuss Gaza CAMP initial activities.
- Field visits to piezometer and monitoring well sites, desalinization plants, agricultural areas, urban housing areas and possible areas for wastewater reuse and recharge have been conducted with Ahmed Yaqubi of the PWA and Metcalf and Eddy (M&E) staff.
- In the period of April through June, numerous meetings were held with PWA Team Leader and Core Team personnel to discuss the beginning work tasks and arrangements for the Gaza CAMP.
- Numerous informal meetings and discussions have been held with the Chief of Party (COP) M&E regarding planning activities and technical issues in the Gaza CAMP work.
- On 12 April, an informal meeting was requested by and held with Nabil Sharif, Head of the PWA, to discuss the schedule for implementation of Gaza CAMP tasks. Ahmed Yaqubi of the PWA, Wayne Curry and Mariam Qudairi of USAID attended. Wayne Curry explained to Nabil Sharif the necessary work tasks leading to project implementation and the schedule for beginning implementation of water resources management options.
- Time was spent in evaluating water level data from piezometer well monitoring sites and some data plots that were developed by Wayne Curry were provided to Ahmed Yaqubi, for a presentation in the Islamic University regarding the water and wastewater situation in northern Gaza Strip. Wayne Curry attended the presentation at PWA's invitation.
- Gaza CAMP Task 1 draft inception and procurement plan reports were received from M&E on 24 April and were subsequently reviewed. Wayne Curry submitted written comments to USAID concerning the reports. A subsequent meeting was held in M&E offices to discuss the draft inception and procurement plan reports. Tom

Delaney, Wayne Curry, and Mariam Qudairi attended on behalf of USAID, as well as M&E/CDM and PWA core team staff.

- During May and June, the majority of activities were concerned with input and discussions with M&E and PWA senior staff regarding evaluations of existing conditions of the groundwater system, proposed physical surveys and monitoring wells.
- M&E completed the preparation of permanent offices for Gaza CAMP in May and Wayne Curry began working out of those offices dedicated to USAID staff.
- **1.6.2: Participate in World Bank International Pricing Workshop.** At the invitation of the World Bank, Koussai Quteishat, Secretary-General of the Ministry of Water and Irrigation in Jordan, and Raed Daoud, Jordan Program Manager, gave presentations on the cost/tariff models to an international audience on designing and implementing water pricing mechanisms.
- **1.6.3: Conduct a Managerial Assessment of the Cairo General Organization for Sanitary Drainage.** In November and December, Phil Giantris of ValuAdd led a six-person team which assessed the managerial capacity of GOSD to handle nearly \$2 billion in donor investment in Greater Cairo wastewater infrastructure. As a follow-on, in June, Phil Giantris returned to meet with the chairman of GOSD to present the report and discuss next steps. (The executive summary is found in Annex C).

CLIN 2 and Project Result B: Negotiation Training

Activity Cluster 2.1: Curriculum Development

- **2.1.1: Develop Training Materials.** FORWARD, through CDR Associates, has tailored training materials for skills building in Lebanon with the Ministry of Hydraulics, the North Bekaa Water Authority, and team members of two USAID projects contracted through Cooperative Housing Foundation and Creative Associates International and in Jordan with the FAS long-term team.
- **2.1.2: Prepare a Lessons Learned Report on Training Activities.** John Murray and Kathy Alison prepared a midpoint status review of the project's capacity-building efforts in collaborative problem-solving for stakeholders and mediators. The report set new directions for training under FORWARD in the future. Major recommended actions include the following:
 - **Broaden the definition of training carried out by the project to include on-the-job training, mentoring, and modeling collaborative behavior.** Mentoring and on-the-job training occur when experienced dispute resolution specialists and facilitators assist trainees in applying collaborative approaches to real life problems. Modeling collaborative behavior occurs when FORWARD facilitates technical workshops that include problem-solving discussions as part of the agenda.

- **Training will be conducted only in the context of specific technical activities.** FORWARD will not conduct any generalized collaborative problem-solving training in the future. It must clearly connect to technical programs and be justified on the basis of its support for technical program objectives.
- **Use available materials for generalized collaborative problem-solving training rather than develop new ones.** Over the past two and a half years, it has become evident that the ANE Bureau and missions are reluctant to use funds for developing the comprehensive training materials called for in the contract. FORWARD proposes to use already available materials that are found in the region. In those cases where specialized materials are needed, the project will develop them on a restricted basis.
- **Initiate all capacity-building interventions with a training needs assessment.** Before conducting any technical, management, or collaborative problem-solving training in the future, the project will carry out a training needs assessment which will serve as the basis for a capacity-building interventions.

The executive summary is found in Annex C.

Activity Cluster 2.2: Negotiation Training

- **2.2.1: Conduct a Water Policy Sector Reform Program in Egypt.** At the beginning of the period, FORWARD completed initial work on the sector policy reform program in Egypt with the preparation of a convening report and assistance to the USAID Legal and Institutional Regulatory Reform Program (LIRR) being conducted by Chemonics Egypt. FORWARD's role was to prepare a situational analysis and develop a process to train stakeholders in collaborative planning and consensus-building under the supervision of a government senior-level steering committee. In October, the mission suggested that the program be put on hold and that the remaining funding be used for another purpose to indirectly support the thrust of the LIRR efforts.

CLIN 3 and Project Result C: Mediator Training

Activity Cluster 3.3: Carry Out Mediator Training

- **3.3.4: Provide On the Job Opportunities for Mediators in the Region.** During the period, FORWARD has been privileged to work with two excellent mediators in Jordan and Lebanon and provide opportunities to build their experiences. Maha Khatib in Jordan and Oussama Safa in Lebanon have worked closely with Chris Moore of CDR Associates on the FAS Program and the Yammoune system disputes, respectively. In addition, plans were made for Oussama Safa to join Chris in Amman to develop a collaborative planning process for the FAS. They worked closely with Maha, program facilitator.
- **3.3.5: Develop and Carry out an Intervillage Dispute Resolution Program in the Bekaa Valley in Lebanon.** FORWARD has made three visits to Lebanon to develop a

program at the request of USAID/Beirut to address implementation issues emerging from work in villages in the Bekaa Valley. The purpose of the program is to assist in the sustainable, amicable resolution of water issues in the Bekaa Valley that are hindering the implementation of USAID's rural development initiatives. The objectives of the program are to:

- Enhance the collaborative problem-solving skills of villagers, municipal leaders, government officials, and other stakeholders to enable them to resolve critical water issues in the Bekaa Valley;
- Design culturally appropriate collaborative problem-solving approaches that can be used to assess the feasibility of projects, reach agreements between key stakeholders, and implement settlements;
- Assist stakeholders in reaching agreements that will be acceptable to government and donor agencies, and lead to investment in projects; and
- Strengthen third-party mediation capacity in Lebanon to assist in the resolution of water issues and other types of conflicts.

CLIN 4 and Project Result D: Water Solutions

Activity Cluster 4.1: Situational Analyses

- **4.1.1: Hold Consultations and Orientations on Water Issues.** During the period, FORWARD prepared three situational analyses related to programs in Morocco, Lebanon, and Jordan and held many consultations in the process. These analyses included creation of a new river basin authority in Morocco, design and implementation of a financial accounting system for JVA in Jordan, and intervillage water conveyance disputes in the Bekaa Valley in Lebanon.

Activity Cluster 4.2: Dispute Resolution Process Development

- **4.2.6: Develop a Cost/Tariff Model for Irrigation Water Services in the Jordan Valley.** During the period, the team:
 - Completed the irrigation water model and received JVA approval;
 - Prepared two final reports for JVA and MWI summarizing the model – one related to operation and maintenance costs and the second related to operation and maintenance and capital costs;
 - Conducted training of JVA staff; and
 - Developed the scope of work and workplan for the design and implementation of the JVA financial accounting system program.

- **4.2.7: Develop a Cost/Tariff Model for Municipal Water Services in Amman.** During the period, the WAJ effort was completed. The team:
 - Prepared the final report summarizing the water and wastewater models;
 - Received WAJ's approval for the two models; and
 - Regularly worked with the WAJ model operator in updating the model. This was done by Ahmed Al Azzam, team financial analyst.

WAJ has indicated an interest in adapting the models for Aqaba, Irbid, and Zarqa governorates. No scope of services or budget has yet been developed for these activities, but it can be provided at USAID's and WAJ's request.

- **4.2.9: Facilitate a Decision-Making Process for a Water and Wastewater Policy Reform Agenda and Sector Strategy in Egypt.** FORWARD submitted a final convening report to USAID for approval based on interviews with stakeholders from national, governorate and local water and wastewater agencies. The aim of the interviews is to develop an increasingly broad view of stakeholder issues, concerns and interests as the basis for designing an interactive and inclusive process for determining sector reform policy. An important part of the program was coordinating with another USAID program that is providing technical expertise in areas of regulatory reform, private sector participation and institutional restructuring.

Activity Cluster 4.3: Mutual Fact-Finding

- **4.3.2: Carry out the Willingness and Ability to Pay Survey in Greater Amman.** The combined team of Marketing Research Organization in Amman and Management, Planning, and Research Consulting of Beirut:
 - Completed the discussion guide for the residential and non-residential focus groups and held 17 meetings before and after the water crisis of summer 1998;
 - Gave a presentation to MWI and WAJ on the findings of the focus groups;
 - Met with MWI secretary-general and WAJ Technical Working Group and discussed the discussion guides;
 - Prepared the sampling frame for the focus groups' recruitment and got MWI and TWG agreement;
 - Prepared the questionnaires for sample surveys of residential (n=1000) and non-residential (n=401) consumers in Greater Amman, and carried out the interviews;
 - Entered all data and carried out the analysis; and
 - Prepared the final report for review by MWI and USAID.

- **4.3.3: Assess Impact of Water Quality in the Jordan Valley.** During the period, the team of technical experts from Jordan and the US, working closely with the WAJ/JVA Joint Technical Working Group to complete the first phase which was a technical report discussing the impacts of water quality on marketing and agricultural production. The objectives of the assessment are to:
 - Reach consensus among concerned parties, including MWI, WAJ, and JVA, about the nature of water quality differences.
 - Determine the impacts of water quality differences on productivity of farms, on-farm management practices, and marketing of agricultural products. Those impacts are associated with the soil types and the cropping patterns in different areas in the valley.
 - Reflect water quality differences and their impacts in JVA tariff structure.
 - Contribute to consensus building concerning the reasonable sharing of costs between JVA and WAJ.
 - Identify and assess relevant institutional, regulatory, and policy issues associated with treated wastewater for irrigation.

CLIN 6 and Project Result F: MEPP/Transboundary Issues

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During the period, the ANE Bureau asked FORWARD to meet with representatives at the World Bank to discuss the Nile Initiative. It also reviewed the terms of reference for USAID intervention in the initiative. With the addition of core funding, the Bureau has also asked FORWARD to develop a series of brief concept papers on what it might do in major international river basins in the Middle East and Asia. To begin, FORWARD has recruited a senior Jordanian expert to develop ideas for the area including Jordan, Israel, Lebanon, and West Bank/Gaza.

CLIN 9 and Project Result A: Improved Approaches

Activity Cluster 9.1: Program Implementation

- **9.1.1: Design and Implement a Financial Accounting System for the Jordan Valley Authority.** During the period FORWARD prepared a scope of work and workplan, gained MWI and USAID approval and funding, and started carrying out a two-year program to develop and install a financial accounting system in the Jordan Valley Authority. The purpose of the program is to design and institutionalize an appropriate and operational financial accounting system in the Jordan Valley Authority, which is internally and externally acceptable and meets the needs of its users. The objectives of the program are to:

- Establish and have JVA managers use an accrual-based financial accounting system in the Jordan Valley Authority;
- Have in place a trained staff within JVA who will update and maintain the FAS and produce timely reports for managers and decision-makers;
- Improve financial and planning communication between the Amman headquarters and the operation and maintenance directorates; and
- Have JVA adopt the cost/tariff model for financial planning because of the greater reliability of data provided through the accounting system.

The Financial Accounting System Program will use collaborative planning and consensus-building approaches which emphasize the participation of key affected parties throughout the design and implementation phases. For the FAS Program this means actively involving JVA staff and other stakeholders in the program by:

- Demonstrating to management and staff that the new financial systems will significantly enhance JVA daily operations;
- Understanding the concerns of JVA staff in the implications of these new financial systems and addressing them seriously and effectively;
- Keeping lines of communication open and close with JVA senior management to them aware of all program developments and issues;
- Supporting the creation and activities of an oversight committee which is delegated a decision-making authority over the resources of the program;
- Identifying and using all means to involve a broader base of JVA staff;
- Securing the cooperation and support of JVA management to appoint appropriate staff to the program and keep them in place;
- Strengthening financial, information technology, planning, and collaborative skills within JVA to supervise the design and implementation of the system and manage it after program completion;
- Regularly scheduling meetings and sessions with JVA management and staff to keep them informed of developments;
- Preparing user-friendly materials about the program for distribution which are interesting and accessible;
- Preparing all major documentation of the program, including all major reports, in Arabic with executive summaries in English; and
- Constantly reviewing bottlenecks and issues which emerge and resolving them quickly in partnership with JVA.

The program has a long-term team, supported by short-term consultants, and is housed in the main building of the Ministry of Water and Irrigation.

CLIN 12 and Project Result D: Water Solutions

Activity Cluster 12.3 Program Implementation

12.4.3: Facilitate the Creation of a New River Basin Authority in Morocco. The Mission plans to assist the Government of Morocco in creating a river basin authority for the Souss-Massa region of southwest Morocco. USAID chose the Souss-Massa basin, in part, because of the region's growing water shortage problems and because of the critical importance of this area to agricultural production. A decree establishing a Souss-Massa basin agency is expected to be issued within a year.

USAID/Rabat requested FORWARD to develop an initial vision for the new agency with national and local levels stakeholders and to develop a work plan to initiate collaborative planning and integrated management of water resources in the basin. The scope of work for this assignment consisted of:

- Meeting with Moroccan officials at the national and local levels to explore what the creation of a watershed agency entails;
- Identifying and meeting with potential stakeholders in the Souss-Massa basin;
- Identifying key technical and process issues that may arise in creating the authority and implementing USAID projects;
- Conducting a debriefing for the USAID Mission, including a discussion of preliminary observations and recommendations; and
- Preparing a report that includes a situational analysis and a plan to initiate collaborative planning for water resource management in the Souss-Massa basin.

As a follow-on, FORWARD will develop a scope of work for an activity which explores the feasibility of creating a water quantity and water quality database to be contributed to and accessed by public and private sector stakeholders in the basin.

3. PROGRESS BY PERFORMANCE INDICATOR

This section reviews the contract's 20 performance indicators in terms of progress made toward their achievement during the life of the project, particularly focusing on the third year. The table that follows this discussion indicates the activities that contributed to the performance indicators during the last quarter.

1. New and significant knowledge and experience regarding effective water resources dispute resolution processes in the ANE region is being produced.

FORWARD is an increasingly powerful tool of the ANE Bureau. The growing project portfolio now covers most of the major policy and technical issues facing the water sector in the Middle East, including: water pricing and tariff restructuring, watershed management, private sector participation, decentralization, stakeholder participation, aquifer management, and water quality degradation. This range of issues puts FORWARD in an unusual situation, having both a broad and deep understanding and familiarity with effective and ineffective measures to resolve water resources disputes.

In Egypt, FORWARD has developed a special and, previously unexpected, niche which is to conduct managerial assessments of major water and wastewater sector entities which permit USAID to reshape its dialogue with them as they determine their future direction. So far, FORWARD has conducted one of the Greater Cairo wastewater authority and begun planning for an assessment of the national agency which carries out all infrastructure development. These efforts fit perfectly within FORWARD's mandate since they establish mechanisms for open, honest and progressive conversations based on collaborative planning.

In Jordan, the project continued or initiated many activities under the Jordan workplan, including the near completion of the willingness and ability to pay study and the mediation of the water quality issue between the two leading water agencies in the country. Building on those agreements, it is carrying out a major two-year program to develop and install a financial accounting system in the Jordan Valley Authority and is working towards the design of a strategic planning program for the same agency.

In the West Bank/Gaza, it fielded a long-term resident senior hydrologist to assist the mission in managing the Coastal Aquifer Management Project in Gaza. He serves as a technical expert but has increasingly played the role of facilitator, working among USAID, the contractor, and the Palestinian Water Authority in seeking to transfer information and agree on plans and actions.

In Lebanon, FORWARD worked at the village level, exploring how to encourage the open and unfettered participation of water users in a context which is contentious and often grows violent.

In Morocco, it is developing a collaborative planning process to bring together more than a score of stakeholder entities - both private and public sector - to support and participate in the creation of a new river basin management authority.

FORWARD has, over the past three years, begun to identify the broad framework for an approach that is appropriate for resolving water resources disputes in the ANE region. It includes the following elements:

- **Stakeholders own the process with impartial mediators acting as facilitators.** The role of FORWARD is to help guide the process but not direct it. It is primarily a process catalyst and technical resource. This approach is further confirmed by the project's reliance on technical experts from the region.
- **Technical working groups guide the work and build consensus within.** FORWARD operates through working groups of stakeholders who determine the direction of the effort, approve technical assistance and products, and serve as intermediaries with decision-makers.
- **Mutual fact-finding creates a shared database.** At the heart of any water resources disputes is often a suspicion by the parties about the reliability of the data. FORWARD works with stakeholders to overcome these differences by jointly designing and carrying out data collection and analysis efforts which remove the political taint.
- **Problem-solving and negotiation training is used to empower the parties.** FORWARD provides mentoring to stakeholders and practical opportunities to mediator candidates to expand the skills base in collaborative problem-solving in the region.
- **The process builds on interim water agreements.** Agreements to water issues for FORWARD are disaggregated into a series of milestones to attain, each building upon the last, leading to a final agreement. This approach addresses parties' fears that surprises will emerge which make agreement at the end impossible for them to give or honor.
- **Parties work from a single text which is accessible to all.** In the midst of negotiations, all parties have equal access to the same document, whether it is the results of data analysis or the wording of a formal agreement, to stress the openness and jointness of the process.
- **Parties continually review and revise expectations and outcomes.** The process must be flexible in a constantly changing environment, and the results cannot be known at the outset. To ensure that the effort is proceeding properly and meeting the expectations of the parties, they must regularly review what has been achieved and what they hope to achieve and make adjustments, as needed.

One of FORWARD's objectives is to develop and test socially, culturally, and politically appropriate dispute resolution approaches to resolving water issues. The following are some initial lessons learned, which will help to inform FORWARD's development of these approaches:

- The merging of collaborative problem-solving with technical expertise has had considerable and surprising success.

- The reliability and acceptability of data play a central role in every issue.
- *The importance of dispute prevention rather than dispute resolution was not expected.*
- There are serious misgivings about the concept of *impartial mediation*.
- The *single text*, emphasizing openness of the process, has been critical in reaching agreement.
- Parties are often reluctant to make decisions in open meetings, particularly on politically sensitive issues.
- Technical working groups have been a key forum for discussion and agreement - securing decision-makers' approval.
- Mentoring has been far more effective in developing collaborative planning and problem-solving skills than traditional training.

After three years of project implementation, it is clear that collaborative planning and consensus-building approaches are of growing interest in the region and of increasing effectiveness. Over the next two years, these approaches will be explored more analytically as the project develops and standardizes its methodologies.

2. The knowledge and experience developed under this project is collected, analyzed, and presented in a "user-friendly" format, and made readily available to interested audiences in host countries, and to the development assistance community at large.

FORWARD is not yet at a point when widespread dissemination of project knowledge and experience is either practical or appropriate. The project is still in the midst of ongoing programs and is now reaching out to identify more generalized approaches. Even more so, the nature of the project and the issues it is addressing demand a high degree of confidentiality for stakeholders. As such, FORWARD reports are not openly circulated to interested audiences in host countries, and to the development assistance community at large. Finally, a plan to develop a web site for the project was proposed to the ANE Bureau, which placed it at a low priority. We expect that the growing knowledge and experience of the project will be made available at a later stage and in a more generalized form.

3. Peer reviews of host country and other unbiased experts regarding contract performance (vs. project performance) are favorable.

No peer reviews were conducted during the period.

4. Culturally appropriate, comprehensive training materials are developed in English, and the host country language.

The ANE Bureau has decided that the production of training materials has a low priority for core funds. Mission also prefer to fund other efforts. As a result, FORWARD does not develop its own materials but uses instead materials already produced by mediation, collaborative planning, and facilitation firms. During the year, FORWARD successfully used materials created by CDR Associates for training in Lebanon. FORWARD did, however, translate the materials into Arabic for the sessions.

5. Essentially the same group of individuals participate throughout a particular negotiation for a total of approximately 200 individuals with training and experience.

FORWARD conducts its collaborative problem-solving training in three primary forms: as workshops, seminar sessions, and mentoring or coaching on the job. Most training opportunities for stakeholders during this year took the form of mentoring on the job. FORWARD activities in the region included instruction or coaching in collaborative processes, modeling behavior for the government managers and employees who were directly involved in carrying out the scope of work. Mentoring may be the best way of bringing people into the project and motivating them, including them in more formal trainings once they are sensitized to the project's approach and actions.

- In Egypt, FORWARD mediators interviewed 50 key officials in the water and wastewater sector at national, regional and local levels. During the interviews, FORWARD introduced these stakeholders to collaborative approaches for policy development and the unique role of the impartial third party. With the development of a new subsidies program in Egypt, which brings together stakeholders from several national entities and four major utilities will further increase participation.
- In Jordan, development of the cost/tariff model and implementation of the financial accounting system has involved more than 75 officials and employees of the Ministry of Water and Irrigation, the Jordan Valley Authority, and the Water Authority of Jordan in its preparation. The new strategic planning program will involve many more officials and private sector stakeholders in task forces and working groups.
- In Lebanon, FORWARD has worked closely with two dozen villagers in the Yammoune system and with a small number of government officials from the Ministry of Hydraulics and the North Bekaa Water Authority in designing and carrying out the program.
- In West Bank/Gaza, FORWARD is working with Palestinian Water Authority officials in supervising the CAMP contract.
- In Morocco, FORWARD has begun collaborative planning with representatives of three national entities, eight local entities, and a number of nongovernmental organizations. The number of individual stakeholders FORWARD is working with exceeds 30.

FORWARD is already working with roughly 200 stakeholders.

6. Creative joint problem-solving skills of participants are enhanced.

In working with the senior policy officials and advisors in Jordan's MWI, WAJ and JVA, FORWARD experienced increasing appreciation for its collaborative problem-solving approaches in addressing technical issues. These stakeholders observed a successful collaborative process during the activities and recognized key variables that contributed to that success – variables that were culturally acceptable and worthy of emulation. This growing awareness and valuing of FORWARD's approach is indicative of the enhancement of joint problem-solving skills.

7. At least 15 nationals of the ANE region receive training in environmental dispute resolution.

Over the year, FORWARD has been developing the collaborative problem-solving skills of 12 people in the Middle East who participate in its programs. (The number would be higher if we include others who were heavily involved but have ceased participating for a variety of personal reasons.) Six of them (four in Egypt, one in Jordan, and one in Lebanon) are interested in becoming mediators themselves. The others are technical experts who are "naturals" and have served effectively as dispute resolvers or facilitators in the course of carrying out FORWARD activities. These experts have been mentored by collaborative problem-solving experts and others during the year in ongoing programs.

8. At least 15 nationals of host countries in the ANE region serve as host country experts or as apprentices in dispute resolution processes conducted under this project.

Four Egyptian nationals have worked with two FORWARD expatriate dispute resolution specialists in conducting a situational analysis and preparing a convening report for facilitating water and wastewater sector policy reform. Maher Khalifa of the National Center for Middle East Studies, the lead mediator trainee, managed the interview process, organized the participation of the others, attended all interviews, and prepared most of the interview reports. Interviewing – asking appropriate questions and listening to the responses – forms a basic skill for a mediator or facilitator. Others have received on the ground experience in Morocco, Lebanon, and Jordan. For FORWARD, "apprenticeship" means direct and sustained involvement in activities.

9. Opportunities for environmental dispute resolution training are extended to both women and men.

FORWARD has tried to cultivate the talents of mediator trainees and has actively sought out women to participate. Of those involved actively, one in Jordan has been most involved. The project will continue to search out good candidates in the future.

10. Regular formal negotiating sessions are held, at a frequency adequate to generate continued momentum towards resolution; significant effort to develop and evaluate options between sessions is being invested by all parties; relevant data are being generated by mutually agreed-upon experts; appropriate stakeholders are identified and involved; options being discussed consider modern principles of integrated water resources management.

FORWARD's experience has confirmed the conclusion that negotiation patterns are far less public and formal than this indicator suggests would be the case. Project activities during the year were involved in technical studies and facilitation of policy dialogues, rather than negotiating sessions.

That said, however, FORWARD teams in their facilitative and technical work with stakeholders encouraged regular communication about important issues, developed creative options, stimulated joint search for credible data by mutually agreed-upon experts, identified appropriate stakeholders, and observed the integration of modern water resources management techniques. Although a broad range of stakeholders were routinely identified, FORWARD found that government officials prefer to move slowly toward a more inclusive process, starting with an initial core group of actors from the ministry or agency involved, and broadening only when perceived by them to be constructive for the underlying objectives of the effort.

11. Implementation of agreements is proceeding adequately.

FORWARD's programs are focusing on reaching agreement over the following general issues:

- In Morocco: the creation of a new river basin authority and how individual stakeholders contribute to its establishment and redefine their own mandates, as required.
- In Egypt: resource mobilization in Greater Cairo, the direction of major water sector entities in the future, and subsidy reduction nationwide.
- In Jordan: price of water, wastewater and irrigation water services, design and implementation of a financial accounting system which will significantly change business practices in JVA, and the strategic direction of that agency.
- In Lebanon: water conveyance and water quality among villages in the Bekaa Valley.
- In West Bank/Gaza: the integrated management of water resources.

An agreement was reached by the Ministry of Water and Irrigation and the Water Authority of Jordan to accept three cost/tariff models for water, wastewater, and irrigation water developed with FORWARD assistance. The ministry and authorities have dedicated resources to support the adoption of the model, and WAJ allocated scarce training time of employees for instruction in handling the model. WAJ has enthusiastically approved the model developed by FORWARD and has already formally established a planning office to house it, appointed dedicated staff to run and maintain it, and trained them. The model is being integrated into the authority's operations.

Other programs are still underway.

12. Host governments, donors, multilaterals make commitments to fund agreement activities and/or projects should agreements be reached.

The Water Authority of Jordan has committed staff and space on the basis of the WAJ model agreement. The Jordan Valley Authority and USAID have committed funds for the design and implementation of a financial accounting system based on agreements concerning the *irrigation cost/tariff model*. USAID is committing funds for the creation of a river basin authority in Morocco.

13. USAID bilateral missions assume some of the costs of the negotiations (after year 3).

FORWARD has had significant success in receiving funding from USAID missions for its activities. In Egypt, the project prepared and submitted a program workplan in November and received funding from USAID/Cairo in December for \$830,000 to facilitate and mediate a water and wastewater sector reform. Funding was also provided by USAID/West Bank and Gaza for a series of activities leading to consensus on a new aquifer management project in the West Bank. In Jordan, the mission has committed funds to carry out the FAS and is expected to carry out funds for developing a strategic plan for the Jordan Valley Authority.

The significance of this success is four-fold:

- Incremental funding by missions came at a time when the level of core funding was being reduced from what was originally planned.
- This funding permitted FORWARD to focus on specific technical areas where collaborative problem-solving expertise can directly support the specific projects of host governments and use these efforts as the basis for method development and general dispute resolution.
- The development of FORWARD's training programs has changed dramatically – from a reliance on free-standing structured workshops planned independently of regular host government activity and considered as the beginning of collaborative activity in the country to a program responsive to and supportive of current host government activity, providing a flexible approach to training that keeps the workshop but also includes seminar sessions and individualized mentoring or coaching programs for on-the-job instruction.
- It was initially envisioned that FORWARD would base its efforts at method development primarily on the results of training activities and academic research into regional dispute resolution methods. Reliance on incremental funding has shifted the project's method development work to a more inductive approach – building a picture of regional DR methods based on specific tasks. These changes are seen as healthy for the project and the DR field as well.

14. Agreements are funded.

The Jordanian government is funding the agreements related to the water and wastewater cost/tariff models for the Water Authority of Jordan (See indicator 12).

15. Short-term analytical and/or training activities involving joint problem solving are conducted.

No significant regional activities were conducted during the year.

16. The activities contribute to the body of knowledge about resolving water resources disputes in the ANE region.

FORWARD activities have generated valuable lessons in dispute resolution and collaborative problem solving that are captured in separate reports. However, distribution of these materials is necessarily limited because of the sensitive ongoing nature of the activities. Therefore, FORWARD has not contributed yet to the body of knowledge about resolving water resource problems in the ANE region. As FORWARD completes more individual cases and produces lessons learned reports based on the results, it will become appropriate to hold a more inclusive and deliberative conference to review the breadth of this experience and extract the significant additions for the current body of knowledge.

17. Participants, and others in the water sector and in other sectors, formally request that project activities be expanded.

Last year, the Ministry of Water and Irrigation in Jordan requested of USAID that FORWARD expand its efforts to include the development of a financial accounting system for the Jordan Valley Authority, reform of the land tenure system in the Jordan Valley, and examination of groundwater regulations and use. This year, the MWI asked USAID to have FORWARD develop and carry out a strategic planning program for JVA. As the project began its fourth year, the strategic planning program appeared to be the next program in Jordan. Elsewhere, at the request of USAID mission staff in Morocco and Lebanon, FORWARD visited their countries to discuss with them the possibility of the project providing assistance in specific local water issues.

18. Governments invest their own resources in using the project approach in other contexts.

It is still too early for governments to have evaluated the results of their individual activities and acted to invest in expanding collaborative problem solving approaches to other contexts. However, examples are emerging of governments using the approach through other donors. A notable one is in Jordan where the World Bank will be funding an extension of the cost/tariff models in Greater Amman as part of the contracting for system management transfer to a private operator.

19. Knowledge developed is adequately definitive regarding the usefulness of promoting formal joint problem-solving approaches to resolving water resources problems in the ANE region.

One of the indirect achievements of FORWARD has been the incorporation of dispute resolution components into new project designs. In Egypt, the Alexandria water institutional development project RFP specifically noted FORWARD's contributions to the Greater Cairo tariff issue and required collaborative problem-solving to be part of the response of bidders. In Gaza, a consensus-building approach was integrated into the design of CAMP.

20. All project activities are accomplished on time and within the budget.

FORWARD has largely kept to the schedule for completion of activities, recognizing that timeframes are subject to constant revision. They are accomplished "on time and within the budget" and, more important, responsive and sufficiently flexible to accommodate the needs of the missions and host countries. It has also largely stayed within budget, but the approach of the ANE Bureau has been that the original budgets are only best guess estimates that need revision. Missions and the COTR have been kept informed of budget status, and the project has worked closely with them on any necessary revisions, reallocations, or supplements.

Activities Contributing to Performance Indicator During the Third Year

CLINs	Project Result	PI	Description	Workplan Activities
1 and 9	A		Improved Approaches. Improved approaches to resolving water resources issues collaboratively have been developed, tested, refined and analyzed; and the results have been disseminated to interested parties.	
		1	New and significant knowledge and experience regarding effective water resources dispute resolution processes in the ANE region is being produced.	<i>1.3.1 Conduct Consultations All country activities</i>
		2	The knowledge and experience developed under this project is collected, analyzed, and presented in a "user-friendly" format, and made readily available to interested audiences in host countries, and to the development assistance community at large.	<i>1.3.4 Prepare Lessons Learned Documentation and Analysis</i>
		3	Peer reviews of host country and other unbiased experts regarding contract performance (vs. project performance) are favorable.	
2 and 10	B		Negotiation Training. Approximately 200 individuals receive comprehensive information which enhances their creative joint problem-solving capabilities, and they gain significant experience in using joint problem-solving strategies in negotiating solutions to water resources disputes.	
		4	Culturally appropriate, comprehensive training materials are developed in English, and the host country language.	<i>2.2 Develop Training Materials 2.1.2 Prepare a Lessons Learned Report on Training Activities</i>
		5	Essentially the same group of individuals participate throughout a particular negotiation for a total of approximately 200 individuals with training experience.	<i>Various country programs</i>
		6	Creative joint problem-solving skills of participants are enhanced.	<i>Various country programs</i>

CLINs	Project Result	PI	Description	Workplan Activities
3 and 11	C		Mediation Training. At least 15 host country nationals in the ANE region are provided with educational and experimental training necessary to prepare them to serve effectively as third party impartial and dispute resolution process designers for water resources disputes.	
		7	At least 15 national of the ANE region receive training in environmental dispute resolution.	3.3.4 <i>Provide On the Job Opportunities for Mediators in the Region</i> 3.3.5 <i>Develop and Carry out and Intervillage Dispute Resolution Program in the Bekaa Valley in Lebanon</i>
		8	At least 15 nationals of host countries in the ANE region serve as host country experts or as apprentices in dispute resolution processes conducted under this project.	
		9	Opportunities for environmental dispute resolution training are extended to both women and men.	
4 and 12	D		Water Solutions. For at least three significant water resources management problems, affected parties have produced, and begun to implement, integrated solutions developed through a joint problem-solving process involving extensive, sustained collaboration among appropriate stakeholders. Solutions are to be detailed and specific, including specific actions required of each party, and means of monitoring and enforcement of the agreement.	
		10	Regular formal negotiating sessions are held, at a frequency adequate to generate continued momentum towards resolution; significant effort to develop and evaluate options between sessions is being invested by all parties; relevant data are being generated by mutually agreed-upon experts; appropriate stakeholders are identified and involved; options being discussed consider modern principles of integrated water resources management.	4.1.1. <i>Hold Consultations and Orientations on Water Issues</i> 4.2.6. <i>Facilitate Costing Municipal and Industrial Water Services and Restructuring Tariffs in Jordan</i> 4.2.7. <i>Facilitate Costing Irrigation Water Services and Restructuring Tariffs in Jordan</i> 4.2.8. <i>Design Jordan Valley Farmer Participation Process</i> 4.2.9. <i>Develop a Program for USAID/Cairo on Decentralization for Urban Water and Wastewater Public Economic Utilities</i> 4.2.13. <i>Design and</i>

CLINs	Project Result	PI	Description	Workplan Activities
				<i>Implementation of a Financial Accounting System for the Jordan Valley Authority</i> 4.3.2. <i>Carry out Willingness and Ability to Pay Survey</i> 4.3.3. <i>Assess Impact of Water Quality in the Jordan Valley</i>
		11	Implementation of agreements is proceeding adequately.	4.2.7. <i>Develop a Cost/Tariff Model for Municipal Water Services in Amman</i>
5 and 13	E		Mobilizing Resources. Resources of the host governments, of the donor community, and/or of multilateral institutions, are mobilized for implementation of agreements reached under CLIN 1.	
		12	Host governments, donors, multilaterals make commitments to fund agreement activities and/or projects should agreements be reached.	4.2.7. <i>Develop a Cost/Tariff Model fo Municipal Water Services in Amman</i>
		13	USAID bilateral missions assume some of the costs of the negotiations (after year 3).	4.2.6 <i>Facilitate Costing Municipal and Industrial Water Services and Restructuring Tariffs in Jordan</i> 4.2.9. <i>Develop a Program for USAID/Cairo on Decentralization for Urban Water and Wastewater Public Economic Utilities</i> 4.2.13. <i>Design and Implementation of a Financial Accounting System for the Jordan Valley Authority</i> 4.3.3. <i>Assess Impact of Water Quality in the Jordan Valley</i> 9.1.1 <i>Design and Implement a Financial Accounting System for the Jordan Valley Authority</i> 12.4.3 <i>Facilitate the Creation of a New River Basin Authority in Morocco</i>

CLINs	Project Result	PI	Description	Workplan Activities
		14	Agreements are funded.	
6 and 14	F		MEPP/Transboundary Issues. At least four major short-term (1-8) week) analytical and/or training activities promoting collaboration among regional sharing water resources are conducted, and each activity makes a contribution to the body of knowledge on how to resolve transboundary water resources disputes in the ANE region, in terms of both process and substance.	
		15	Short-term analytical and/or training activities involving joint problem-solving are conducted.	
		16	The activities contribute to the body of knowledge about resolving water resources disputes in the ANE region.	
7 and 15	G		Valuing the Approaches. Project beneficiaries value the approaches used, and choose to use them in other contexts, both within and outside of the water sector.	
		17	Participants, and others in the water sector and in other sectors, formally request that project activities be expanded.	
		18	Governments invest their own resources in using the project approach in other contexts.	
8 and 16	H		Knowledge for Follow-on. Knowledge developed under this project is sufficiently comprehensive and detailed to determine whether or not a follow-on project should be undertaken, how such a project should be structured, and what applications for joint problem-solving/dispute resolution might be appropriate outside of the water sector in the ANE region.	
		19	Knowledge developed is adequately definitive regarding the usefulness of promoting formal joint problem-solving approaches to resolving water resources problems in the ANE region.	
		20	All project activities are accomplished on time and within the budget.	<i>1.2.2 Prepare Annual Workplan and Progress Report</i>

				<p><i>1.2.3. Maintain Administrative Systems</i></p> <p><i>1.2.6. Consult with USAID in Washington, Amman, Cairo and Tel Aviv</i></p>
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4. PROGRESS ON CONTRACT DELIVERABLES

No.	Contract Deliverable	Contract Target	Current Status	Number Completed
1	A detailed report presenting a preliminary environmental dispute resolution methodology/approach which is appropriate socially, culturally, and politically, and which has been tested against actual water resources disputes.	Not specified	Components of methodology being developed from actual collaborative problem-solving interventions	To be submitted at close of project
2	A situational analysis which explores, in depth, selected water resources disputes in the ANE region, including identification of the parties to the dispute, the history of the dispute, identification of each party's position and interests, determination of parties' willingness to negotiate, identification of potential options for joint gain, identification of each party's perceived best alternative to a negotiated agreement, and other such factors.	8-10	<ul style="list-style-type: none"> •Cairo Water and Wastewater Resource Mobilization (December 1996) •Development of Analytical and Policy Tools for Costing and Tariffs for the Water Authority of Jordan (April 1997) •Development of Analytical and Policy Tools for Costing and Tariffs for the Jordan Valley Authority (April 1997) •Design and Implementation of a Financial Accounting System for the Jordan Valley Authority (December 1998) •Policy Reform in Egypt's •Building Collaborative Planning Capacities to Resolve Intervillage Water Disputes in Lebanon (March 1999) •Supporting the Creation of a Watershed Authority in the Souss-Massa River Basin in Morocco (June 1999) •Decentralization and Private Sector Participation in Egypt's Water and Wastewater Sector (final draft) 	7

3	Detailed reports analyzing the process of and progress towards reaching agreement in each of the dispute resolution cases being undertaken (including the text of any agreements, draft or final). The reports must be sufficiently detailed to serve as the basis for the annual, mid-cycle, and final "lessons learned" documentation for this project.	Not specified	<ul style="list-style-type: none"> • <i>Mediating Water and Wastewater Tariff Increases in Greater Cairo: Challenges, Lessons, and Accomplishments</i> (January 1998) • <i>Water and Wastewater Cost/Tariff Models for the Water Authority of Jordan</i> (December 1998) • <i>The Jordan Valley Authority Cost/Tariff Model – Operation and Maintenance and Capital Costs</i> (December 1998) • <i>Assessment of Water Quality Variations in the Jordan Valley</i> (underway) 	4
4	New studies, analyses, or data collection activities, conducted jointly by the parties to each dispute resolution case being undertaken, and with the parties' concurrence on the results.	4	<ul style="list-style-type: none"> • <i>Assessment of Water Quality Variations in the Jordan Valley</i> (underway) • <i>Customer Willingness and Ability to Pay in Greater Amman</i> (underway) 	2
5	Joint problem-solving/dispute resolution training materials, tailored to each host country cultural and political situation, both for the training of parties participating in dispute resolution processes, and for training of third party impartial.	Not specified	Materials are tailored and translated	
6	Consensus reports, databases, scopes of work, or other such products, produced by collaboration among regional parties to a transboundary dispute (most likely conducted under the MEPP, but other fora are possible), and detailed report on the process by which these work products were produced, and on what was learned about dispute resolution in this context.	At least 2	No project participation on transboundary issues to date	

7	Annual and mid-cycle "lessons learned" documentation including how to convene dispute resolution processes, when a dispute is "ripe" for resolution, appropriate incentives for bringing parties to the table, designing an effective dispute resolution process, how to orient and train participants, overcoming deadlocks, when to terminate a dispute resolution process, guaranteeing agreement implementation, role and access of the media, resources and logistics, etc., appropriate to the host country and the regional context.	Not specified	Lessons learned documentation being prepared for every project intervention.	
8	Individuals trained in problem-solving negotiation strategies, and individuals trained in environmental dispute resolution.	200 stakeholders 15 mediators		Nearly 200 stakeholders mentored 12 mediator trainees
9	Institutions in the region have experience and expertise in conducting environmental dispute resolution efforts for water resources disputes;	3 or more	Close partnership with National Center for Middle East Studies in Egypt established	1
10	Annual Workplan	5 annual workplans	Prepared annually	3 annual workplans 2 midterm revisions
11	Quarterly Performance Reports	20 quarterly report	Prepared for each quarter	12 including 3 annual progress reports
12	Completion reports	1	To be done at project completion	

5. SUMMARY OF IMPORTANT MEETINGS

During the third year, FORWARD organized or participated in some significant meetings worthy of mention below:

USAID-European Commission High-Level Coordination Meeting in Brussels

In May, at the invitation of the Assistant Administrator of the ANE Bureau, the project director accompanied a party of senior agency management to Brussels to attend coordination talks. At the meetings, he gave a presentation to the Middle East directorate on FORWARD and suggested ways for the two to work together. The EC suggested working with the EC delegation in Jerusalem on a longstanding issue in Gaza. The project is following up now with both the Brussels headquarters and the Jerusalem delegation. The presentation is found in Annex B .

Briefings to USAID Missions in Tel Aviv and Amman

In May, the project director gave briefings to staff in USAID/Amman and USAID/West Bank and Gaza. The purpose was to expose them to the range of project efforts, given they were often new to the project because of staff transfers and new hirings. In June, FORWARD briefed the incoming mission director for West Bank/Gaza.

Meetings with the Jordan Valley Authority on the Financial Accounting System and the Strategic Planning Programs

In February and May, respectively, FORWARD carried out workshops with senior management and staff of the Jordan Valley Authority. The first, led by Maha Khatib, Kathy Alison, and Heather Bailey, launched the FAS Program. The second, led by Tony Bagwell, Heather Bailey, and Maha Khatib, was designed to introduce senior management of JVA to principles of strategic planning and encourage their participation in the planning process.

6. EXPENDITURES DURING THE TWELFTH QUARTER AND TO DATE

FORWARD Budget and Expenditures through 30 June 1999

Contract Line Item Number	Budgeted	Expended	Remaining Amount
CLIN 1: Improved Approaches	2,438,860	1,888,848	550,012
CLIN 2: Problem-Solving Training	612,837	324,645	288,192
CLIN 3: Dispute Resolution Training	436,917	159,643	277,274
CLIN 4: Solutions to WRM Issues	1,595,671	1,554,902	40,769
CLIN 5: Mobilizing Resources	0	0	0
CLIN 6: Task Orders for MEPP	350,000	2,537	347,463
CLIN 7: Valuing Approaches	0	0	0
CLIN 8: Knowledge for Follow-on	0	0	0
CLIN 9: Improved Approaches	2,108,365	93,286	2,015,079
CLIN 10: Problem-Solving Training	420,075	0	420,075
CLIN 11: Dispute Resolution Training	275,625	0	275,625
CLIN 12: Solutions to WRM Issues	1,766,790	84,136	1,682,654
CLIN 13: Mobilizing Resources	0	0	0
CLIN 14: Task Orders for MEPP	350,000	0	350,000
CLIN 15: Valuing Approaches	0	0	0
CLIN 16: Knowledge for Follow-on	0	0	0
TOTAL	10,355,140	4,107,998	6,247,142

7. PROCUREMENT

According to the FORWARD contract (Section H.4), the contractor is authorized to purchase office equipment, office furniture, computers and ancillary equipment to a total cost not to exceed \$100,000.

The following was purchased by the project during the twelfth quarter:

- Office furniture for the Jordan Financial Accounting System program office in the Ministry of Water and Irrigation;
- One photocopier, one LaserJet, one DeskJet, and one ScanJet printer for the Jordan Financial Accounting System program;
- Five desktop computers, three laptop computers, seven computer monitors, two Zip drives, and three combo Ethernet cards for use by the Jordan Financial Accounting System program;
- One DeskJet printer for use by Wayne Curry who serves as a long-term consultant in Gaza;
- Two computer monitors for home office project management;
- One laptop for use by a short-term consultant who will assist FORWARD on transboundary programs; and
- Software packages for all computers listed above.

8. FORWARD PUBLICATIONS

Date	Title	Authors	Report Type	CLIN
Project Management				
Various	Quarterly and Annual Progress Reports and Annual Workplans		PR/PW	CLIN 1
12/98	Financial Invoiced, Pipelined, and Programmable System User's Manual	Ivan Urlaub	UM	CLIN 1
Egypt: Water/Wastewater Tariff Increase in Greater Cairo				
12/96	Cairo Water and Wastewater Resource Mobilization	Gail Bingham	SA	CLIN 1
4/98	Mediating Water and Wastewater Tariff Increases in Greater Cairo: Challenges, Lessons, and Accomplishments	Randa Slim, John Murray, Peter Reiss	LL	CLIN 3
Egypt: Water/Wastewater Sector Reform				
12/97	Supporting National Policy Development and Decentralization in Urban Water and Wastewater in Egypt – Statement of Work	Peter Reiss and John Murray	FW	CLIN 1
2/99	Assessment of the Managerial Capacity of the Cairo General Organization for Sanitary Drainage	Philip Giantris, Ahmed Allam, Franklin Dryden, Farouk El Sheikh, Mohamed Harfoush, George Kinias	TR	CLIN 1
6/99	Cairo General Organization for Sanitary Drainage Managerial Capacity Assessment – Next Steps	Philip Giantris	TR	CLIN 9
Jordan: Cost/Tariff Model Development				
4/97	Development of Analytical and Policy Tools for Costing and Tariffs for the Water Authority of Jordan	Tony Bagwell, Raed Daoud, Parviz Hekmat, Odeh el-Jayyousi, David Kennedy, Peter Reiss, Randa Slim	FW, SA	CLIN 1
4/97	Development of Analytical and Policy Tools for Costing and Tariffs for the Jordan Valley Authority	Tony Bagwell, Raed Daoud, Parviz Hekmat, Odeh el-Jayyousi, David Kennedy, Peter Reiss, Randa Slim	FW, SA	CLIN 1
3/98	Development of Cost/Tariff Model and Efficiency Scenarios Meeting for the Water Authority of Jordan	Tony Bagwell, Ahmad Al Azzam	WR	CLIN 4
4/98	Cost/Tariff Model Interim Meeting for the Jordan Valley Authority	Tony Bagwell, Ahmad Al Azzam	WR	CLIN 4
8/98	Jordan Valley Authority Cost/Tariff Model – Final Meeting	Raed Daoud, Tony Bagwell, Ahmad Al Azzam	WR	CLIN 4
12/98	The Jordan Valley Authority Cost/Tariff Model – Operation and Maintenance Costs	Raed Daoud, Tony Bagwell, Ahmad Al Azzam	CR	CLIN 4
12/98	The Jordan Valley Authority Cost/Tariff Model – Operation and Maintenance Costs and Capital Costs	Raed Daoud, Tony Bagwell, Ahmad Al Azzam	CR	CLIN 4
12/98	Jordan Valley Authority Cost/Tariff Model –User's Manual	Tony Bagwell, Ahmad Al Azzam	UM	CLIN 4
12/98	Assessment of the Impact of Water Quality Variations in the Jordan Valley – Situational Analysis	John Murray	SA	CLIN 4
12/98	The Water Authority of Jordan – Water and Wastewater Cost/Tariff Models	Raed Daoud, Tony Bagwell	CR	CLIN 4

12/98	Cost/Tariff Model and Efficiency Scenarios Meeting for the Water Authority of Jordan	Raed Daoud,	WR	CLIN 4
1/99	The Amman Governorate Water Authority Water and Wastewater Cost/Tariff Models-User's Manual	Tony Bagwell, Ahmed Al Azzam	UM	CLIN 4
Jordan: Financial Accounting System				
12/98	Design and Implementation of a Financial Accounting System for the Jordan Valley Authority	Ahmed Al Azzam, Heather Bailey, John Folk-Williams, Maha Khatib	FW	CLIN 1
6/99	Process Mapping and System Redesign Methodology	Nadeem Mansour	TR	CLIN 9
6/99	Training Needs Assessment	Nadeem Mansour, Ramez Mallouk, Samer Qubain	TP	CLIN 9
6/99	Training Implementation Strategy	Nadeem Mansour, Ramez Mallouk, Samer Qubain	TP	CLIN 9
West Bank and Gaza: Coastal Aquifer Management				
9/97	Coastal Aquifer Management Project Design	Fred Zobrist, Said Assaf, Tony Bagwell, Alex Cheng, Carl Dutto, Kaz Kawata	PD	CLIN 1
West Bank and Gaza: Integrated Water Resources Management				
9/98	Agricultural Irrigation Reuse and Aquifer Recharge Options for Hebron	Robert Kent, Said Assaf, Bruce Douglas, Nader Al-Khateeb, John Letey	TR	CLIN 1
9/98	Industrial Wastewater Management Options in Hebron	James Morris, Nader Al-Khateeb, Said Assaf, Alexander Friedman, Mohammad Abu-Orf	TR	CLIN 1
9/98	The Potential for Stormwater Harvesting in the Eastern Surface Catchment of the West Bank	Henning Moe, Nader Al-Khateeb, Nidal Rabah	TR	CLIN 1
12/98	Water Resources, Aquifer Protection, and Urban Planning (WRAP-UP) Program Design – Statement of Work and Annexes	Fred Zobrist, Wayne Curry, Roger Hosier, James Morris	PD	CLIN 1
Morocco: Watershed Management				
6/99	Supporting the Creation of a Water Authority in the Souss-Massa Basin of Morocco	Robert Kent, Said Ouattar, John Higgins, Peter Woodrow	SA, PD	CLIN 12
Lebanon: Water Conveyance Intervillage Disputes				
3/99	Building Collaborative Planning Capacities to Resolve Inter-village Disputes in Lebanon	Peter Reiss, Kathy Alison, Muhammad Faour, Christopher Moore	PW	CLIN 3
Collaborative Problem-Solving Training Program				
1/98	Dispute Resolution Training Program	John Murray	TP	CLINs 2&3
2/99	Capacity Building in Collaborative Problem-solving for Stakeholders and Mediators-Midpoint Status	John Murray, Kathy Alison	MS	CLINs 2&3

FW = FORWARD Program Workplan
LL = Lessons Learned
MS = Mediation Status
PD = Project/Program Design

PR = Progress Reports
PW = Project Workplan
SA = Situational Analysis
TP = Training Plan

TR = Technical Report
UM = User's Manual
WR = Workshop Report
CR = Activity Completion Report

9. IMPLEMENTATION ISSUES AND PROPOSED REMEDIAL ACTIONS

According to the FORWARD contract, progress reports ought to indicate any problems encountered during the period and proposed remedial actions, as appropriate. The following are the major management and technical issues faced by the project during its twelfth quarter:

FORWARD Financial Management

FORWARD has devised FIPPS to track project finances, independently of the DAI finance office and USAID. In the tracking of FORWARD's financial costs, a number of errors made in the corporate accounting office have come to the attention of project management. These errors resulted in discrepancies in both budgeted and expended amounts between the project balance sheets of USAID and DAI.

FORWARD staff found the errors in April 1999 and investigated them over the course of April and May. A number of efforts have been taken in coordination among FORWARD, DAI Finance, and USAID to define errors and make corrections.

Proposed Action: FORWARD project management will continue to encourage DAI Finance and USAID to resolve all outstanding financial issues related to FORWARD together. In addition, further steps will be taken to coordinate accurate tracking of project costs between FORWARD and DAI Finance to ensure that future errors are prevented.

Program Management and Staff Recruitment

FORWARD has been cost-effective by restricting program management to the project director and office manager, with continuing assistance from associates in the region. This approach, while low cost, has constrained the expansion of the project into Asia and transboundary arenas.

Proposed Action: With the influx of core funding in June, it should be possible to hire someone to join the long-term team for the remainder of the contract. To date, it has been difficult to find the right individual, but project management continues to recruit actively.

1999-2000 ANNUAL WORKPLAN

FORWARD WORKPLAN 1999-2000

Activity	Name	Objectives	Program Components	Technical Assistance	Schedule
CLINs 1 and 9					
Project Management and Administration					
121	Progress reporting	Regular progress reporting provided to ANE Bureau and missions	Preparation of quarterly reports and other documents, as requested	Project director	Throughout the period
122 123	Procurement Project management	Timely and effective project management	-Recruitment for full-time technical position -Contract modifications identified and approved -Maintenance of FIPPS -Preparation of other documents requested	Project director	Throughout the period
125	New Program Development				
126	Mission Core Support				
251	Project updates	Update USAID and other parties on project accomplishments	Low--cost update on project	Project team	Quarterly
Jordan					
127, 128, 163	Design and implementation of a financial accounting system for the Jordan Valley Authority	Design and implement an accrual-based accounting system in JVA Provide training in cost/tariff models for WAJ and JVA Assist MWI in revising tariff policies for water, wastewater, and irrigation water	-FAS procurement -FAS management (US) -FAS management (Jordan) -FAS design -FAS implementation -Tariff policy restructuring -FAS contingency funds	Team leader (J) Utility expert (US) Financial analysts (J) 3 Computer systems (J) Computer systems (US) Administrative assistant (J) Project director (US) Program coordinator (J) Office Manager (US)	FAS design: March 1999-April 2000 FAS implem'tion: May 2000-February 2001
253	World Bank Pricing				

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Activity	Name	Objectives	Program Components	Technical Assistance	Schedule
Egypt					
124, 151, 152, 156, 164, 252	Water and wastewater sector policy reform Assessment of the Managerial Capacity of GOSD	Assist in development and vetting of sector reform strategy for decentralization and private sector participation	-Development and vetting of sector reform strategy -Program management -Assessment of Cairo wastewater authority to manage the new infrastructure	Collaborative problem-solving experts Sanitary engineers Management experts Utility operators	April 1999 onwards GOSD assessment through February 1999
West Bank and Gaza					
156, 157, 158, 159, 161, 166	Water and wastewater use and treatment				
162	CAMP LT Support – Year 1	Provide technical support for overseeing the Coastal Aquifer Management Project contractor	-Groundwater hydrology oversight of CAMP contractors -Assistance to water resources portfolio beyond CAMP	Senior hydrologist Project director Collaborative problem-solving expert	July 1998- June 1999
Lebanon					
165	Resolution of Intervillage Water Disputes in the Bekaa Valley	Resolve water disputes and develop mechanisms to empower stakeholders to settle issues among themselves and with the government in the future	-Resolution of disputes between villages in Bekaa Valley related to downstream contamination, tourist development, and water conveyance -Developing mechanisms for resolving issues between villages -Providing training to stakeholders -Providing collaborative planning in areas outside USAID sites -Developing mechanisms for Government of Lebanon to open decision-making process to stakeholders	Collaborative planning experts Water resources experts	February 1999 onwards

Activity	Name	Objectives	Program Components	Technical Assistance	Schedule
CLINs 2 and 10					
Stakeholder Collaborative Problem-Solving Training					
324	Training program development	Develop an assessment of the training and mentoring program	-Assessment of the training program -Recommendations for contract modifications	Training specialist	January-February 1999
Egypt					
323, 325, 326, 327	Water and wastewater sector policy reform	Provide water and wastewater utilities with collaborative planning and negotiation skills to resolve issues in their entities and with other stakeholders	-Facilitation of agenda setting and problem resolution by chairmen of the public economic utilities -Mediation of utility issues and development of a dispute resolution mechanism -Collaborative problem-solving training	Collaborative problem-solving experts Water and wastewater experts	April 1999 onwards
Jordan					
328	Design and implementation of a financial accounting system for the Jordan Valley Authority	Carry out management training for MWI and JVA officials	-Management training in visioning and water utility commercialization	Management trainer (J) Management trainer (US) Facilitator (J) Collaborative planner (US)	March-August 1999
CLIN 3					
Lebanon					
454, 455	Mediator Mentoring	Providing opportunities for co-mediation	-Participation in program development -Participation in mediations mentored by a US expert	Collaborative planning experts	February 1999 onwards
Project Management					
453	Training Program Development				

Activity	Name	Objectives	Program Components	Technical Assistance	Schedule
CLIN 4 and 12					
Jordan					
517, 518	WAJ water and wastewater cost/tariff models development	Enable WAJ to restructure water and wastewater tariffs using realistic costs for service delivery	-Develop water and wastewater cost/tariff models for Greater Amman -Prepare a user's manual and conduct training for WAJ staff	Financial analysts	Through February 1999
519, 520	JVA water and wastewater cost/tariff models development				
522	Willingness and ability to pay study	Determine the willingness and ability of Greater Amman users to pay for water services as part of effort to restructuring water and wastewater tariffs	-Carrying out 14 focus groups of residential and nonresidential users -Conducting a survey of 1400 users in Greater Amman	Marketing experts Water resources engineer Program coordinator Project director	Survey through March 1999 Final report to be submitted May 1999
523	JVA benefits	Determine the direct and indirect benefits of irrigation agriculture in the Jordan Valley to the Kingdom	-Analysis of direct and indirect benefits of irrigation agriculture	Agronomist Agricultural economist Program coordinator	Through March 1999
524, 528	Water quality impact assessment	Mediate dispute between WAJ and JVA concerning impact of water quality variations in the Jordan Valley to be used for tariff restructuring	-Technical analysis of major impacts of water quality variation on -Recommendations for how water quality impacts better inform tariff restructuring for irrigation water	Water quality expert (US) Tariff/financial analyst (US) Agronomist (J) Agricultural/marketing economist (J) Irrigation engineer (J)	Through December 1999
West Bank/Gaza					
527	Program development	Explore opportunities for FORWARD in West Bank/Gaza	-Funds available for scoping new programs and developing workplans and situational analyses	Project director Collaborative problem-solving expert	April-June 1999
CLIN 6					
751	ANE Bureau – Transboundary Support	Provide technical assistance to the ANE Bureau and missions on transboundary issues	-Possible participation in World Bank Nile Initiative -Others efforts to be determined by bureau	To be determined, according to program requirements	July 1999 onwards, as requested

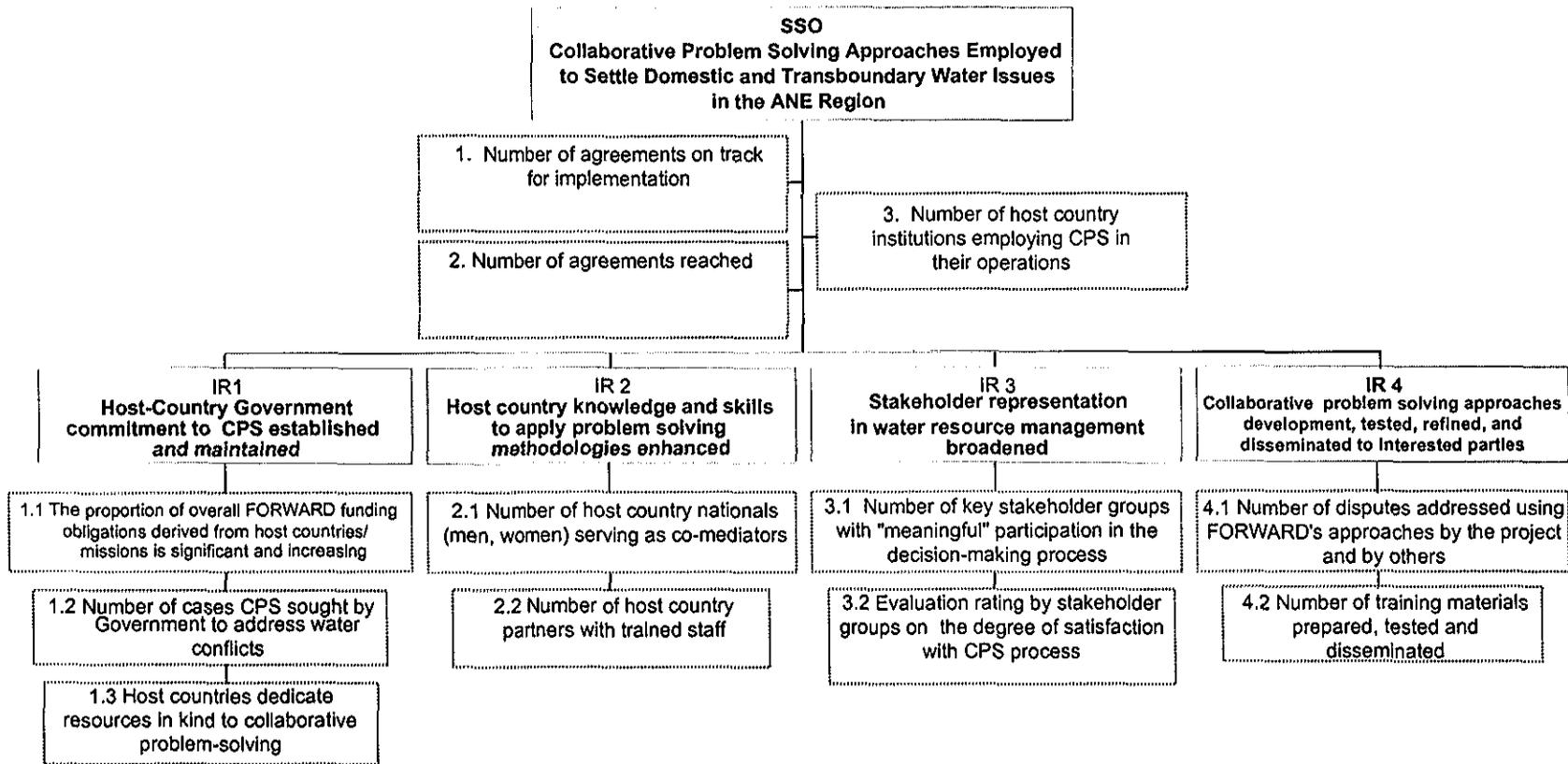
Activity	Name	Objectives	Program Components	Technical Assistance	Schedule
CLIN 9					
West Bank and Gaza					
261	CAMP LT Support – Year 2	Provide technical support for overseeing the Coastal Aquifer Management Project contractor	-Groundwater hydrology oversight of CAMP contractors -Assistance to water resources portfolio beyond CAMP	Senior hydrologist Project director Collaborative problem-solving expert	July 1999- June 2000
262	WB/G Program Development				
Jordan					
263, 264, 265, 266, 267	Design and implementation of a financial accounting system for the Jordan Valley Authority	Design and implement an accrual-based accounting system in JVA Provide training in cost/tariff models for WAJ and JVA Assist MWI in revising tariff policies for water, wastewater, and irrigation water	-FAS procurement -FAS management (US) -FAS management (Jordan) -FAS design -FAS implementation -Tariff policy restructuring -FAS contingency funds	Team leader (J) Utility expert (US) Financial analysts (J) 3 Computer systems (J) Computer systems (US) Administrative assistant (J) Project director (US) Program coordinator (J)	FAS design: March 1999- April 2000 FAS implem'tion: May 2000- February 2001
CLIN 12					
531	Mission Training Support				
532	Creation of a Moroccan River Basin Authority				

ANNEXES

ANNEX A

1998 FORWARD Strategic Support Objectives

FORWARD Results Framework



STRATEGIC SUPPORT OBJECTIVE: Collaborative Problem-Solving Approaches are Employed to Settle Domestic and Transboundary Water Issues in the ANE Region

Indicator 1: *Number of agreements on track for implementation*

	Year	Planned	Actual
<p>Unit of Measure: agreements implemented through new donor or government contracts or commitments, new legislation, new policies adopted, or organizational changes</p>	1996-7 (B)	0	0
<p>Source: project reports, supported by mission information, legal codes, signed policy directives, letters of funding obligation, and organizational charts</p>	1998	2	5
<p>Comments: FORWARD's performance will be measured not only by the number of significant issues that are settled, but also by whether the agreements are carried out by the parties. Agreement implementation can take many forms, including laws enacted, policy changes, new programs funded, and offices created and institutionalized. The focus of the indicator is on the sustainability of the agreement reached by a diverse set of stakeholders.</p>	1999	4	
<p>Checklist: For illustrative purposes, the following is checklist of anticipated efforts undertaken by the Water Authority of Jordan to implement agreement concerning the costing of urban water services for tariff restructuring:</p> <ul style="list-style-type: none"> ▪ a new department is created by the secretary-general of WAJ to house the water and wastewater models ▪ WAJ officers are formally appointed to staff the new department ▪ WAJ staff are trained in using and maintaining the models ▪ the models are integrated into WAJ's planning process for revenue generation and increased efficiency efforts ▪ block pricing for water in Greater Amman is restructured based on agreement over the costing of water services 	2000-1	6	
<p>Targets: The FORWARD contract indicates that "for at least three significant water management problems, affected parties have...begun to implement integrated solutions." The project expects to exceed this level during its life. The number of targets is cumulative over the life of the project.</p>			
<p>Critical Assumption: Adequate donor and government resources will be available to implement any agreements reached.</p>			

STRATEGIC SUPPORT OBJECTIVE: Collaborative Problem-Solving Approaches Are Employed to Settle Domestic and Transboundary Water Issues in the ANE Region

Indicator 2: Number of agreements reached

Unit of Measure: water issues

(For FORWARD, a water issue is a longstanding, multiparty dispute with important implications for policy reform and/or program implementation for both the host country and USAID.)

Source: written agreements, project reports, and mission activity summaries

Comments: FORWARD is working closely with governments and authorities in the Near East on key domestic issues related to costing and charging for water services, decentralization and fiscal autonomy, privatization, water quality, land tenure and water rights, and groundwater management. Agreements over these issues, which result from collaborative problem-solving approaches, include revisions in government levels for water costs leading to a restructuring of tariffs, policy reforms at the most senior levels of government, and new program designs, among others. Agreements are anticipated with the Water Authority of Jordan and the Jordan Valley Authority on the costing of urban and irrigation water services for tariff restructuring and on the causes and implications of water quality in the Jordan Valley. Work continues with stakeholders in Egypt on reaching agreement over a policy reform agenda and in the West Bank on management of the Eastern Aquifer. A baseline of zero is considered appropriate.

Checklist: As illustration, the following is a checklist of anticipated agreements between WAJ and JVA concerning the assessment of the impact of water quality variations in the Jordan Valley:

- initial scope of work as the framework for discussion
- set of most important water quality parameters
- adequacy and acceptability of existing laboratory and cropping/soil data
- projections of future water quality
- economic returns for farms and impact on export marketing
- technical options for mixing different water qualities
- practical ways to equitably account for water quality differences

Targets: The FORWARD contract indicates that "for at least three significant water management problems, affected parties have produced...integrated solutions." The project expects to exceed this level during its life. The number of targets is cumulative over the life of the project.

Critical Assumption: Sufficient political will exists and political stability persists to permit stakeholders to reach agreement in good faith.

Year	Planned	Actual
1996-7 (B)	0	0
1998	3	3
1999	5	
2000-1	8	

STRATEGIC SUPPORT OBJECTIVE: Collaborative Problem-Solving Approaches are Employed to Settle Domestic and Transboundary Water Issues in the ANE Region

Indicator 3: *Number of host country institutions employing collaborative problem-solving approaches in their operations*

Unit of Measure: institutions in the public and private sectors

Source: project and mission activity reports

Comments: At project inception, no institutions in Egypt or Jordan – neither government entities nor private institutions – were employing collaborative problem-solving approaches to resolve in the water sector issues. Since 1996, FORWARD has worked closely with government and private institutions in these countries. The institutions play different roles. Private institutions, including NGOs, may provide collaborative problem-solving services to government entities, which are parties to disputes. The true test is the ways in which these approaches are being integrated into ongoing operations of the entities, in terms of staffing, planning, programming, and frequency of use. In Egypt, the project is working with the National Center for Middle East Studies which has already received training in collaborative problem-solving and is now playing a significant role in the design and co-mediation of a major dispute concerning decentralization and fiscal autonomy. A baseline of zero is considered to be appropriate.

Checklist: For illustrative purposes, the following is a checklist for recognizing achievement of the indicator:

- staff are identified and trained
- staff are dedicated to collaborative problem-solving activities under FORWARD
- staff have used opportunities to design and co-mediate project efforts
- staff are capable of conducting stakeholder training and done so as lead trainers
- collaborative problem-solving is formally incorporated into the organizational structure of the institution
- collaborative problem-solving services are offered to other entities

Targets: As stated in the FORWARD contract, "Three or more institutions in the region have experience and expertise in conducting environmental dispute resolution efforts for water resources disputes."

Critical Assumption: Appropriate institutions exist which are prepared to devote staff and other resources for these efforts.

Year	Planned	Actual
1996-7 (B)	0	0
1998	1	1
1999	2	
2000-1	4	

INTERMEDIATE RESULT 1: Host country government commitment to collaborative problem-solving established and sustained

Indicator 1.1: *The proportion of overall FORWARD funding obligations derived from host countries/missions is significant and increasing.*

Unit of Measure: percentage of FORWARD incremental, versus core, funding	Year	Planned	Actual
Source: contract modifications and letters of implementation	1996-7 (B)	35%	58%
Comments: Although some core funding has been made available to FORWARD by the ANE Bureau, the project is expected to depend largely on incremental funding provided by USAID missions. This funding is accessible by virtue of formal host country requests or letters of implementation for and approval of allocations to FORWARD. An increasing proportion of the total funding being provided by missions should serve as a surrogate indication of the commitment of host country governments to the project approach, particularly in those cases where repeated funding is provided.	1998	>50%	69.7%
Targets: An initial level of 50% or more moving to 75% or more in incremental funding seems reasonable and attainable, and exceeds the expectations of the project paper.	1999	>60%	
Critical Assumption: Missions have adequate funding in their water portfolios to commit to FORWARD.	2000-1	>75%	

INTERMEDIATE RESULT 1: Host country government commitment to collaborative problem-solving established and sustained

Indicator 1.2: *Number of cases using collaborative problem-solving sought by host country governments to address water conflicts*

Unit of Measure: number of cases sought

Source: formal letters from host country governments requesting project services, project reports, mission communication,

Comments: FORWARD's approach is based on a close working relationship with host country governments and other key stakeholders in identifying critical water issues to address. The number of cases identified by governments, and their frequency and seriousness, suggests the degree to which governments believe that collaborative problem-solving approaches can be used to settle problems and make decisions with reasonable likelihood of success. Thus far, for 1996-97, the host countries have identified six cases for FORWARD: cost/tariff restructuring in Greater Amman, cost/tariff restructuring in the Jordan Valley, impact of water quality in the Jordan Valley, water and wastewater policy reform and decentralization in Egypt, and aquifer management in the West Bank.

Targets: This indicator focuses on the number of cases identified by governments, but it does not necessarily imply all that all of these cases are "ripe" for mediation and that the project will, in fact, bring its technical resources to bear to address them. The number of targets presented here represent new cases identified each year.

Critical Assumption: Host country governments will have opportunities to identify and request services and that core and mission funding are available to carry out initial program design and implementation.

Year	Planned	Actual
1996-7 (B)	3	6
1998	5	6
1999	5	
2000-1	5	

INTERMEDIATE RESULT 1: Host country government commitment to collaborative problem-solving established and sustained

Indicator 1.3: *Host countries dedicate resources in kind to collaborative problem-solving*

Unit of Measure: office space, government staff time, and other resources	Year	Planned	Actual
Source: project reports, mission communication	1996-7 (B)	0	1 office 3 TWGs
Comments: FORWARD's approach requires close physical contact with host country governments. Furthermore, commitments to donor efforts are usually made through in-kind contributions of office space, staff time, supplies, and other tangible resources, rather than easily monetized support. Experience in Jordan and Egypt has confirmed that these resources are in short supply and come at a premium. A surrogate measure of government commitment to the collaborative problem-solving approach is the level of their contribution to FORWARD efforts. The resources take the form of dedicated program space in government buildings and creation and regular meetings of technical working groups (TWGs) or other oversight/decision-making committees.	1998	2 offices 4 TWGs	1 office 4 TWGs
Targets: Admittedly, this indicator poses problems for setting easily monitored targets, since the resources are diverse, but nevertheless reflect the reality of the working conditions and relationships. The targets presented here are annual.	1999	4 offices 4 TWGs	
Critical Assumption: Host countries have available resources to dedicate to FORWARD.	2000-1	8 offices 6 TWGs	

INTERMEDIATE RESULT 2: Host country knowledge and skills needed to apply collaborative problem-solving approaches enhanced

Indicator 2.1: *Number of host country nationals (men and women) serving as co-mediators*

Unit of Measure: host country nationals	Year	Planned	Actual
Source: project mediation reports	1996-7 (B)	0	0
Comments: In order for mediator trainees to assume the status of experienced practitioners, they must be given opportunities to test their skills in actual disputes, being mentored by seasoned mediators from the US. FORWARD's approach moves beyond the narrowly provided training by others in the past to their active participation in the entire mediation process.	1998	5	6
Checklist: The following is an illustrative list of efforts that ought to be carried out as part of mediation training:	1999	10	
<ul style="list-style-type: none"> ▪ designing collaborative problem-solving programs ▪ interviewing parties to a dispute ▪ preparing convening reports/conflict analyses ▪ facilitating roundtable discussions ▪ co-mediating negotiations ▪ preparing mediation progress and lessons learned reports 	2000-1	>15	
Targets: According to the FORWARD contract, "at least 15 host country nationals are to provided educational and experiential training necessary to prepare them to serve effectively as third party impartial and dispute resolution designers." The targets presented here are cumulative over the life of the project.			
Critical Assumption: Host country governments and other key stakeholders will welcome the involvement of local mediators in the process.			

INTERMEDIATE RESULT 2: Host country knowledge and skills needed to apply collaborative problem-solving approaches enhanced

Indicator 2.2: *Number of host country partners with trained staff*

Unit of Measure: host country partner institutions	Year	Planned	Actual
Source: project reports	1996-7 (B)	1	2
Comments: FORWARD is working with host country institutions in Egypt and Jordan that are interested in developing in-house expertise in collaborative problem-solving with the long-term objective of becoming dispute resolution centers in the Middle East.	1998	2	3
Targets: FORWARD, according to the contract, is to help develop at least three institutions in the region. The targets are cumulative over the life of the project.	1999	4	
Critical Assumption: Partner institutions have and assign suitable staff to collaborative problem-solving training and mediation efforts.	2000-1	6	

INTERMEDIATE RESULT 3: Stakeholder representation in water resources management broadened

Indicator 3.1: *Number of stakeholder groups with "meaningful" participation in the decision-making process*

Unit of Measure: key stakeholder groups	Year	Planned	Actual
<p>Source: mediation progress reports and meeting attendance records</p>	1996-7 (B)	6	8
<p>Comments: Decision-making over water issues is restricted to a small group of parties, usually senior officers of a single implementing agency. FORWARD seeks to open participation in policy formulation and program design and implementation by broadening involvement of key stakeholders in the public and private sectors. An increased openness by host country entities should reflect their growing comfort with and support for collaborative problem-solving.</p>	1998	30	52
<p>Targets: Targets refer to the number of different entities involved meaningfully in mediation efforts annually. <i>Meaningful, in this context, means that stakeholders participate as part of the decision-making process, that is prior to the time that a decision is made – so they are not simply informed - and that they are encouraged to contribute ideas to technical and process components. The targets are annual.</i></p>	1999	50	
<p>Critical Assumption: Host country entities will come to recognize the benefits of transparent and inclusive decision-making.</p>	2000-1	>100	

INTERMEDIATE RESULT 3: Stakeholder representation in water resources management broadened

Indicator 3.2: *Evaluation rating by stakeholder groups on the degree of satisfaction with the collaborative problem-solving process*

Unit of Measure: satisfaction rating (based on 1-5 from very unsatisfied to very satisfied)

Source: evaluation of stakeholders

Comments: FORWARD will carry out an evaluation of stakeholder satisfaction of the collaborative problem-solving process through the use of a brief questionnaire. Stakeholders will be asked to respond to satisfaction with, among others:

- attention and seriousness paid to their contributions by other parties
- breath of participation of other stakeholders
- their inclusion at times of key decision-making
- terms of the agreement reached
- their role in implementing the agreement

Targets: Responses from each stakeholder group will be aggregated into a single number from 1-5 which indicates the degree of their satisfaction. It is anticipated that, no matter how open the process, not all stakeholders will be highly satisfied (5) with the process. However, for the agreements to be long-lasting and for the process to be sustainable, the degree of satisfaction should be favorable (greater than 3).

Critical Assumption: Stakeholders will respond openly and honestly to requests for their assessment.

Year	Planned	Actual
1996-7 (B)	0	0
1998	3	Not carried out
1999	4	
2000-1	4	

INTERMEDIATE RESULT 4: Collaborative problem-solving approaches are developed, tested, and refined and disseminated to interest parties

Indicator 4.1: *Number of disputes addressed using FORWARD's approaches by the project and by others*

Unit of Measure: disputes	Year	Planned	Actual
Source: project and mission reports, communications with dispute resolution practitioners	1996-7 (B)	3	3
Comments: The success of FORWARD should be measured by both the disputes addressed by the project and, more significantly for sustainability, by others using the approaches developed by FORWARD.	1998	5	7
Targets: It is anticipated that others will not make use of FORWARD's approaches until the final year of the project and beyond.	1999	7	
Critical Assumption: FORWARD's approaches can be disseminated to others without compromising parties' need for confidentiality and without threatening the openness and trust of the parties.	2000-1	12	

INTERMEDIATE RESULT 4: Collaborative problem-solving approaches are developed, tested, and refined and disseminated to interest parties

Indicator 4.2: *Number of training materials prepared, tested, and disseminated*

Unit of Measure: case studies, simulations, and other materials	Year	Planned	Actual
Source: training materials submitted to the host country governments and USAID as deliverables	1996-7	0	0
Comments: Culturally appropriate training materials for mediators do not exist in the Middle East and Asia. Training efforts to date have relied on US produced materials which are of less relevance to participants. FORWARD will work with local institutions to produce training materials, including case studies and simulations. A baseline of zero is appropriate.	1998	2 case studies 2 simulations	None done during period
Targets: Targets are annual.	1999	3 case studies 3 simulations	
Critical Assumption: Adequate core and mission funding is available to prepare the materials.	2000	3 case studies 5 simulations	

ANNEX B

**FORWARD Presentation at the U.S. Agency for International
Development and the European Commission Coordination Meeting**

7 May 1999



FORWARD Collaborative Approaches for Resolving Water Issues

Overview

- **Introduction to dispute resolution**
- **Origin and rationale**
- **Ongoing programs**
- **Accomplishments and challenges**

Emergence of Alternative Dispute Resolution

Western United States water issues

Alternative to legal recourse

**Formalized through licensing and
statutes**

Dispute Resolution

**Collaborative process, often facilitated by a
neutral person, through which major parties to
water resources policy planning, or
implementation issues, work toward agreement.**

Characteristics of Collaborative Problem-Solving

It is voluntary.

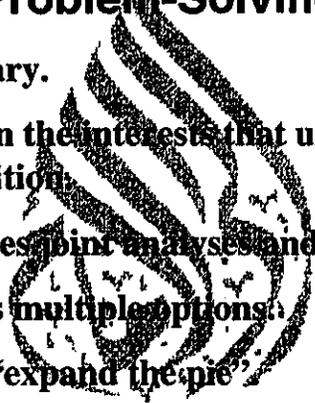
It focuses on the interests that underlie each party's position.

It encourages joint analyses and evaluation.

It generates multiple options.

It seeks to "expand the pie"

It prepares for implementation.

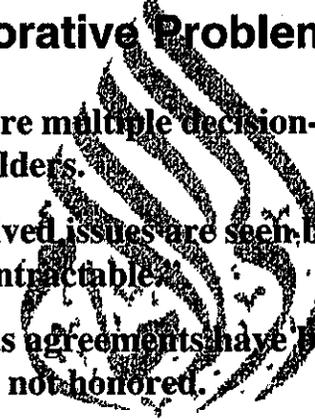


When to Use Collaborative Problem-Solving

There are multiple decision-makers or stakeholders.

Unresolved issues are seen by parties to be "intractable."

Previous agreements have been short-lived or not honored.

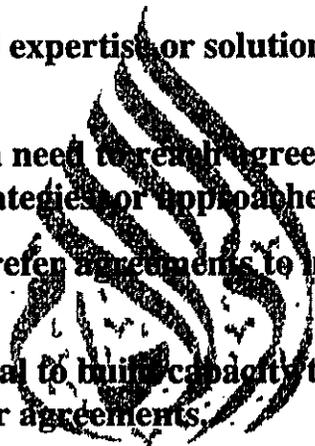


Technical expertise or solutions are not enough.

There is a need to reach agreement on goals, strategies or approaches.

Parties prefer agreements to imposed decisions.

It is critical to build capacity to negotiate and honor agreements.



FORWARD

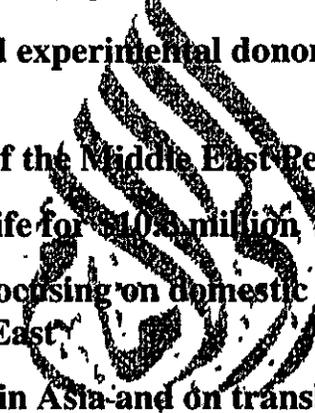
Unique and experimental donor development project

Grew out of the Middle East Peace Process

Five-year life for 10.5 million

Presently focusing on domestic water issues in Middle East

May work in Asia and on transboundary issues in future



Objectives

Reach agreement on important water issues by merging mediation and water resources expertise.

Strengthen capacities in collaborative problem-solving.

Develop and test dispute resolution approaches to resolve water issues.

FORWARD's Approach to Dispute Resolution

Stakeholders own the process with impartial mediators acting as facilitators.

Technical working groups guide the work and build consensus within.

Mutual fact-finding creates a shared data base.

Problem-solving and negotiation training empower the participants.

The process builds on interim water agreements.

Parties work from a *single text* which is accessible to all.

Parties continually review and revise expectations and outcomes.

The combination of dispute resolution and technical expertise seems to command the attention of stakeholders and gain their commitment.

Programs

Egypt

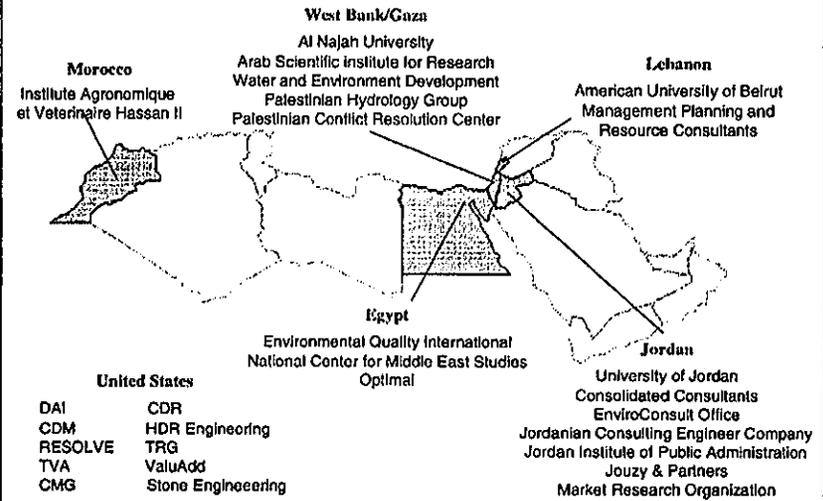
Jordan

West Bank/Gaza

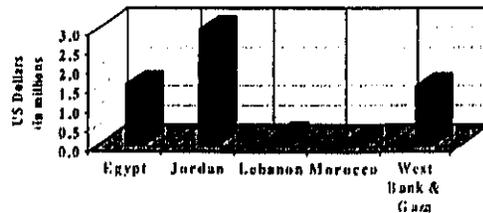
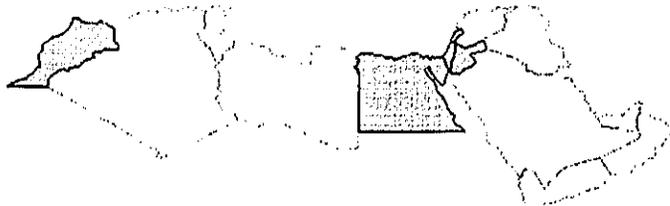
Lebanon

Morocco

The FORWARD Team



FORWARD Funding



Egypt

Water and wastewater tariff increases in Greater Cairo

National water sector reform for decentralization and private sector participation

Jordan



**Costing of water,
wastewater, and
Irrigation water services for tariff restructuring**

**Mediating an inter-agency water quality dispute in
the Jordan Valley**

**Financial accounting system design and
implementation to support Jordan Valley
Authority's commercialization goals**

West Bank & Gaza



Aquifer and stormwater management in Gaza

**Integrated water resources management for
Hebron and Bethlehem in the West Bank**

Lebanon



**Inter-village water disputes over water
supply and quality in the Bekaa Valley**

Morocco



**Supporting creation of a watershed
management authority for the Souss-
Massa River Basin**

Lessons Learned

The collaborative problem-solving approach needs to be designed differently for each issue.

Initially, technical expertise serves as an effective hook to bring parties into the process.

The reliability and acceptability of data play a central role in every water issue.

The emphasis on dispute prevention rather than dispute resolution was not expected.

There are misgivings about the concept of impartiality.

The *single text*, emphasizing "jointness" of the process, has been critical in reaching agreement.

Formal, negotiating sessions have not been the venue of choice for parties.

Technical working groups have been a key forum for communication and collaborative decision-making.

Mentoring has been far more effective in developing collaborative planning and problem-solving capacity than traditional training.

Areas for US-EC Collaboration

Raise the profile of water dispute resolution among donors and the development community.

Promote the value of water dispute resolution to host country counterparts.

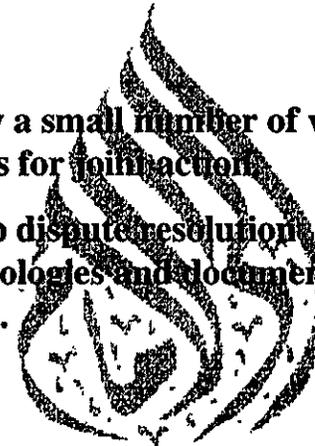
Identify opportunities for attracting new professionals--mediators and lawyers--to international development.

Carry out training needs assessments for building dispute resolution and collaborative problem-solving capacities.



Identify a small number of water disputes for joint action.

Develop dispute resolution methodologies and document lessons learned.



Previous US-EC Cooperation

Jointly conducted water resources training needs assessments in Egypt, Israel, Jordan and West Bank, Gaza in 1993.

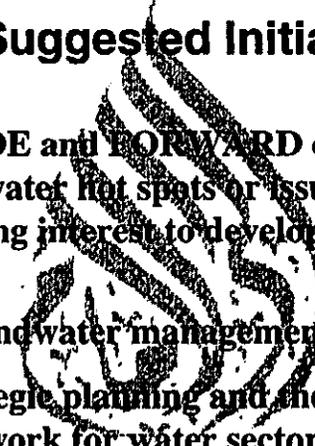
Basis of a regional training program funded under the Middle East Peace Process.



A Suggested Initiative

1. SEMIDE and FORWARD could explore regional water hot spots or issues of overlapping interest to develop joint action plans.

- **groundwater management**
- **strategic planning and the legal framework for water sector development**



2. Engage in a joint mission to bring parties together on a specific issue to:

- develop buy-in
- frame the issues
- strengthen collaborative skills
- develop the process/strategy



3. The US and EC could jointly address a water issue in the region:

FORWARD

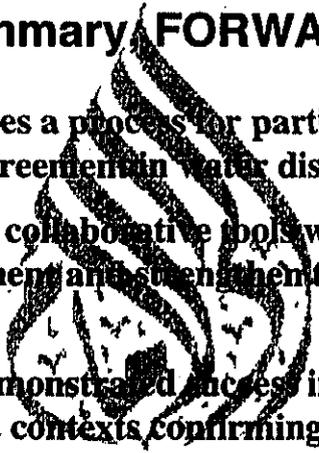
SEMIDE

- process development
- mediation
- collaborative capacity-building
- research
- institution-building
- training
- documentation



In Summary FORWARD...

- provides a process for parties to reach agreement in water disputes
- brings collaborative tools which complement and strengthen technical efforts
- has demonstrated success in different contexts confirming the validity of the approaches



ANNEX C

Executive Summaries from FORWARD 1998-1999 Reports

Design and Implementation of a Financial Accounting System for the Jordan Valley Authority

December 1998

EXECUTIVE SUMMARY

Senior management of the Jordan Valley Authority has committed itself to achieving financial self-sufficiency by operating on a more commercial footing. This decision reflects a government-wide policy to free revenue-generating agencies of subsidies. To reach financial independence, JVA requires accounting tools for tracking, recording, and accessing complete financial information for all operations. Development and institutionalization of an integrated financial accounting system would be a major step in achieving the financial independence sought by the authority.

As a result of its efforts to develop an irrigation water cost/tariff model for JVA, FORWARD was invited in August 1998 to prepare a workplan for the design and implementation of a financial accounting system. This report is the product of an intensive effort to detail the requirements for developing and implementing the system. It is based on extensive interviews with officials and staff of JVA, the Ministry of Water and Irrigation, the Ministry of Finance, and the Ministry of Planning, as well as others. The approach integrates technical expertise in financial management with collaborative planning and consensus-building so that the new system is accepted and approved. FORWARD brings to the program an understanding of and sensitivity to the interests and concerns of the major parties who will be most affected.

Purpose and Objectives

The purpose of the program is to design and institutionalize an appropriate and operational financial accounting system in the Jordan Valley Authority, which is internally and externally acceptable and meets the needs of its users.

The objectives of the program are —

- to establish an accrual-based financial accounting system in the Jordan Valley Authority;
- to have in place a trained staff within JVA who will update and maintain the FAS and produce timely reports for managers and decision-makers;
- to have JVA managers use an accrual-based accounting system for financial planning;

- to improve financial and planning communication between the Amman headquarters and the operation and maintenance directorates; and
- to have JVA adopt the cost/tariff model for financial planning because of the greater reliability of data provided through the accounting system.

Accrual Basis Accounting

Unlike the current cash basis accounting system, the recommended accrual basis financial accounting system will provide JVA with:

- timely financial and operational reports;
- records of revenues and expenses when incurred for following up and controlling revenues and expenses;
- matching of revenues and expenses ;
- proper income statements and cash flows for a clear picture of performance for a certain period of time and a better tool for future forecasting;
- accurate transactions and balances for current assets, details of fixed assets, and obligations;
- actual revenues, expenses, and balance sheet items, which represent a good basis for performance evaluation;
- cost center/profit center analysis; and
- a better base for evaluating economic efficiency and revenue sustainability.

Proposed Approach

A review of several approaches for designing and implementing the system indicated that the most appropriate was for JVA to purchase, install, operate, and maintain its own software package system. JVA would contract for technical assistance and accounting expertise through the design and implementation phases. This option will build the internal capacity of JVA staff to carry out their financial tasks. JVA would have a better control of program design and implementation to meet its objectives. Moreover, integrating this system within JVA will build on other computerization efforts in the authority. JVA has capable staff in different directorates who have designed computerized systems. ACCPAK accounting software, used by WAJ/AGWA, offers many advantages and could be considered for JVA, but a broader analysis of accounting packages will be carried out before the final decision is made. This

approach was clearly favored by both JVA and MWI. The workplan presented in the report is developed around this option.

Workplan Tasks

The workplan presents a number of discrete tasks over 14 months for the design phase and 10 months for the implementation phase of the financial accounting system. These include accounting and management training for JVA managers, mapping current business processes, developing a chart of accounts, defining system interfaces, assessing and purchasing software during design and developing internal control features, installing the hardware and software, and gaining final system acceptance during implementation.

Pre-Program Start-up and Design and Implementation Issues

The report identifies pre-program implementation issues which ought to be discussed by JVA management, USAID, and the program team prior to the start-up of the FAS program. Some of these issues have financial and institutional implications, such as the availability of JVA staff as program members and dedicated space within the headquarters building. Others require coordination with other projects for computerization and hardware purchases or emerge from changing business practices in JVA field offices and financial directorates. During the design and implementation phases, the adequacy of JVA staff working on the FAS, expansion and upgrading of communication networks, and involvement of the Ministry of Finance are potential issues are likely to appear. Although these issues will be addressed in the pre-program phase, they are likely to continue throughout program design and implementation.

Follow-on Support to JVA and WAJ

FORWARD will continue to support the use and institutionalization of the models within the authorities by exposing senior managers to the power of the models and clarify how they can be used for improved decision-making about financial planning, broadening the base of staff who will provide data and operate and update them, and assist in the development of new cost and revenue centers, as needed.

Addressing Policies Related to Tariff Restructuring

Now that the models are in place and the additional studies will come to closure in the near term, FORWARD proposes to use collaborative planning approaches to focus on the larger tariff restructuring decisions that are to be made by government. Specific activities that could be carried out include: holding activity closure meetings to focus on how the results of the willingness and ability to pay study and the water quality impact

assessment inform a new pricing framework, preparing a policy issues paper on the major policy issues facing WAJ and JVA, and convening a series of policy meetings and workshops to discuss and reach agreement on the implications of the activities for tariff restructuring.

Assessment of the Managerial Capacity of the Cairo General Organization for Sanitary Drainage

February 1999

EXECUTIVE SUMMARY

Assessment Purpose and Methodology

This report provides an assessment of the current managerial capacity of the Greater Cairo General Organization for Sanitary Drainage (CGOSD) to carry out its intended mandates under the various presidential decrees that established it as a general organization to perform a defined public service.

In this regard, it is not an evaluation of what has come before, in terms of technical decisions made relative to the system, its sizing, processes and configuration; nor is it an evaluation focused on pointing out CGOSD's institutional deficiencies. In addition, the assessment does not seek to gain a consensus and commitment of any kind from CGOSD's management to undertake any specific course of action.

The purpose of the assessment, as commissioned by the U.S. Agency for International Development, was to provide an additional tool for CGOSD to use in becoming a purpose-driven, results-oriented economic authority.

The basic methodology of the assessment was to compare CGOSD along a variety of defined functional areas that are common to a publicly owned and operated wastewater utility. The basic information used in making the assessment was the result of an extensive interview program that cut across the entire spectrum of current functional activities of CGOSD and solicited input from a variety of levels of the organization.

This assessment, which was conducted over an intensive five-week period, would not have been successfully completed without the full and open cooperation of CGOSD. The assessment team is indebted to the CGOSD staff, and to the open and cooperative atmosphere created by the Chairman of CGOSD in enabling the assessment team to undertake this effort.

Assessment of Current Managerial Capacity

The assessment considered thirteen specific assessment tasks as defined in the terms of reference of the assessment requested by USAID. Each of these tasks was addressed and is presented with individually documented observations and assessments in the detailed report.

The mission of CGOSD is to protect public health and the environment through proper wastewater collection, treatment, and environmentally safe disposal. Although significant progress has been made by the utility in the past fifteen years in meeting its mission by

transporting wastewater away from its sources, based on the findings of this assessment, it is safe to conclude that the mission of CGOSD is not fully met. A considerable portion of the wastewater collected still receives no treatment.

In addition, there is clear evidence that a deterioration of the substantial investment made by Egypt in wastewater infrastructure has begun, and with that will come a reduction in the quality of the service and most likely frequent system failures. To cope with this one critical issue of operational sustainability is a major task. However, CGOSD is also faced with an equally serious financial sustainability issue that must be addressed in the near-term.

What the assessment team endeavored to determine was whether CGOSD, as a utility providing an essential public service, was properly empowered, structured, organized, and managed to be what is routinely referred to as a "self-sustaining utility." The "bottom line" of the assessment is that, for specific operational and fiscal reasons, CGOSD cannot be considered to be a self-sustaining utility. As a result of that determination, CGOSD could fail to achieve its mission objectives.

Recommended Solution Model

In light of the above stated assessment, the assessment team has structured the following solution model to address these root issues and present a summary solution strategy for all parties interested in the successful functioning of CGOSD as a wastewater utility.

OPERATIONAL SUSTAINABILITY	Observation	FINANCIAL SUSTAINABILITY
The system is running (pumping), however it is slowly but steadily deteriorating because of inadequate maintenance and planned corrective maintenance.		The near-term capital needs — plus rapidly rising O&M costs — will only result in a larger national subsidy to CGOSD which undermines credit-worthiness.

Increasing risk of operational failures with the associated political consequences.	Predictable Outcome	Under funding of capital and/or O&M expenses which will result in a reduced level of services.
Initiate a rapid change in the way the assets are protected and operated: <ul style="list-style-type: none"> • Internal performance improvement • Contract all operational services 	Solution Strategy	Institute true enterprise-based financial management with cost-center-based accounting, and implement a revenue program to eliminate the national subsidy.

Implementation Strategy

The recommended implementation strategy actions that have been developed as a result of this assessment have been grouped into three categories as follows:

Policy Actions Required

This category requires the action of higher levels of government (approvals or changes in law) or the direct policy action of the CGOSD Board of Directors

Technical Assistance Actions Required

The actions under this category are defined to require serious, external intervention of expertise that is not currently available within CGOSD or cannot be hired by CGOSD on an employment basis at this time.

CGOSD Internal Actions Required

This category presents actions that CGOSD can largely undertake at this time, within its current authority and using the expertise of personnel that it already has under employment.

Specific actions under each of these categories are presented in a matrix table at the end of this executive summary. This table defines the need, action task, approach, and timeframe for completion.

RECOMMENDATIONS AND IMPLEMENTATION STRATEGY SUMMARY FOR CGOSD

Item No.	Need	Task	Approach	Estimated Timeframe to Complete
POLICY ACTIONS REQUIRED:				
1	To change CGOSD governance to make it an autonomous and sustainable utility with a responsible Board of Directors comprised of stakeholders.	Convert the powers included in Presidential Decree No. 95 to national law and reconstitute the Board of Directors.	This will require the support of the Greater Cairo governorates and the Prime Minister, as well as the Chairman.	18 months
2	To upgrade the level of system performance and sustainability by utilizing outside expertise through service contracts and management contracts.	Contract with an outside international service provider for operation and maintenance of all major pump station and WWTP facilities.	Contract with outside O&M service organization to work in partnership with CGOSD or an Egyptian firm to assume guaranteed performance responsibilities for all critical system facilities.	6 to 12 months to contract; contractual service to be reviewed at the end of 10 years and be terminated or continued at that time.
TECHNICAL ASSISTANCE ACTIONS REQUIRED:				
3	To make better use of financial data and utilize it for financial forecasting and management.	Implement financial management system and convert to cost-center, computer-based accounting.	Contract with a qualified financial manager to provide this service.	12 months

RECOMMENDATIONS AND IMPLEMENTATION STRATEGY SUMMARY FOR CGOSD

Item No.	Need	Task	Approach	Estimated Timeframe to Complete
4	To provide O&M with the computer-based tools to efficiently conduct its activities.	Complete the installation of MP-2, the inventory control system and the collection network mapping.	Contract with a private sector service provider to work with the O&M staff to convert MP-2 to Arabic, complete the coding and data entry for inventory control, and continue the protocol for mapping the collection system.	6 months to contract 2 years to complete
5	To establish sectors and major facilities as cost centers with responsibility for operation, maintenance, personnel, budgeting and stores.	Restructure core business organization to improve efficiency and effectiveness.	Chairman can delegate authority to sector managers and contract with management firms for support services and shadow managers.	24 months
6	To separate line functions from support functions and place all support functions in a new department.	Establish a technical services Department to include laboratories, industrial wastes, central stores, MIS, monitoring and compliance reporting.	If the chairman cannot create a new department until CGOSD becomes autonomous, the technical services function can be accomplished by contracting for a technical services manager.	12 months
7	To form a group with the responsibility for immediate development of a strategic plan and its long term implementation and revision.	Create an Office of Strategic Planning and prepare and maintain a strategic plan.	The chairman can assign key staff supported by outside contracted skills.	Establish within 6 months with CGOSD assuming full responsibility within 3 years.

RECOMMENDATIONS AND IMPLEMENTATION STRATEGY SUMMARY FOR CGOSD

Item No.	Need	Task	Approach	Estimated Timeframe to Complete
CGOSD INTERNAL ACTIONS REQUIRED:				
8	To relieve the chairman of day-to-day decisions regarding operations and maintenance of the system so that he can concentrate on financial and administrative problems.	Create a position of Chief Operating Officer (COO). The Chairman would be designated Chief Executive Officer (CEO).	The chairman would establish the position of COO to be responsible for operations and maintenance and be the second in command to the chairman who would be designated Chief Executive Officer (CEO).	6 months
9	Information on performance and efficiency of operations to be organized and analyzed in a manner to provide the CEO and COO with a suitable basis for key decisions.	Establish the Office of Performance Information Management and develop a performance information management system.	The Chairman can create this position and assign a qualified staff person to lead it, supported by other staff members who have the skills to analyze and present data.	6 months
10	All data processing systems to be completed and utilized throughout CGOSD including MIS, MP-2, inventory, personnel, and financial management.	Properly staff and compensate sufficient positions in Computer and Information Department, as well as in each facility.	Define the skills needed and appropriate compensation to be competitive and get the necessary positions established through CAO. A.	6 months to staff 2 years to complete
11	To have all CGOSD personnel understand that their purpose is to serve the customers and users of the system while protecting public health and the environment.	Redefine the customer service function and focus it at the sector level.	The chairman and all senior managers must stress the customer service function to all staff who deal with the public in any way and assign the responsibility to sector managers.	12 months

Building Collaborative Planning Capacities to Resolve Inter-village Disputes in Lebanon

February 1999

EXECUTIVE SUMMARY

During the fall of 1998, USAID/Beirut invited the Fostering the Resolution of Water Resources Disputes Project (FORWARD) to visit Lebanon and assess what appeared to be three intervillage water disputes in the Bekaa Valley which might slow project implementation and determine if it could resolve them. FORWARD, based in USAID's Asia and the Near East Bureau, works with national and local government officials, private sector representatives, donor staff, water users, and other stakeholders to:

- Design and carry out an open decision-making process for forming water policies in complex and sensitive areas;
- Address specific water disputes between stakeholders that present obstacles to the implementation of sustainable programs; and
- Strengthen the capacity for collaborative problem-solving and consensus-building through training and coaching during ongoing mediations and other interventions

Program Purpose and Objectives

The purpose of the program is to assist in the sustainable, amicable resolution of water issues in the Bekaa Valley that are hindering the implementation of USAID's rural development initiatives.

The objectives of the program are to:

- Enhance the collaborative problem-solving skills of villagers, municipal leaders, government officials, and other stakeholders to enable them to resolve critical water issues in the Bekaa Valley;
- Design culturally appropriate collaborative problem-solving approaches that can be used to assess the feasibility of projects, reach agreements between key stakeholders, and implement settlements;
- Assist stakeholders to reach agreements that will be acceptable to government and donor agencies, and lead to investment in projects; and
- Strengthen third-party mediation capacity in Lebanon to assist in the resolution of water issues and other types of conflicts.

Program Approaches

The following approaches are proposed for implementing FORWARD's program in Lebanon:

- **Develop disputes resolution approaches at the local level.** FORWARD team members will design and implement a series of meetings and other interventions at the national and local levels to expose stakeholders to collaborative planning and problem-solving approaches and to initiate development of dispute resolutions mechanisms to address water issues.
- **Facilitate resolution of village and village cluster water issues.** FORWARD plans to convene sessions with key stakeholders to discuss and agree on the resolution of specific disputes that are hindering the implementation of at least one water project in the Bekaa Valley.
- **Train Mediators.** FORWARD will provide coaching and mentoring as well as co-mediating and co-facilitating opportunities for Lebanese who are interested in learning more about these techniques.

Due to time and funding limitations, the following approaches cannot be carried out under the program but could be offered if the mission is interested:

- **Explore technical solutions.** FORWARD could assist the stakeholders involved in village disputes to define the information needed and assist them in the identification of mutually acceptable researchers to collect data.
- **Do troubleshooting.** FORWARD's team could be available to work with any communities that are involved in USAID rural development program activities to coach them on how to overcome impasses.

Selection of Disputes for the Program

The design team assessed three cases in the Bekaa Valley, which were identified by the mission, in the course of deciding where to focus program interventions.

- **Water Supply and Water Quality in the Yammoune System.** The compensation schemes are not in place, particularly with regard to the piped water project or the wastewater treatment plant, both of which are on hold because funds have not been authorized. There is not a consensus, either within Yammoune or between the village and government agencies, concerning a long-term management body and no mechanism for settling disputes over water allocation once water from Yammoune reaches end-users. The intention to use

an army contingent to prevent water cut-off at Dar el Ouassa is not a viable long-term solution even if it were so in the short term. There is need to promote mutual understanding and collaboration between Christian and Muslim villages. One plausible way is to engage both in area-wide development projects. The team recommends that program interventions be focus on this system.

- **Tourism and Water Supply in Ayoun Urghosh.** The USAID mission would prefer that FORWARD focus on the Yammoune system initially, rather than including Ayoun Urghosh in the program. The issues in Yammoune are more immediate, and the plans for development of the lake in Ayoun Urghosh are still not complete.
- **Water Conveyance from El Lebweh to El Qaa.** The sources of problems connected with this project do not currently appear to be primarily social in nature. Community leaders in El Qaa, the aggrieved party, believe that if funding can be secured and the canal completed the dispute or problem will cease to exist. However, in the future if water does not flow as anticipated or if there are disputes arising between villagers over its allocation in El Qaa, the services of FORWARD may be requested. It probably will take another four to six months to determine the final results of the water project, and the extent of issues that need to be addressed. However, core funding is not available for this intervention.

Anticipated Results

The FORWARD program expects to achieve the following results:

- Progress on developing and using dispute resolution approaches at the local level to address an important water issue for USAID project implementation;
- Stakeholders exposed to collaborative problem-solving approaches;
- Resolution of one water dispute, allowing multiple stakeholders to reach agreement to implement a water delivery project;
- Individuals from the region trained in facilitation/mediation of water disputes and able to assist parties to manage and resolve differences in the future.

Proposed Next Steps

The FORWARD Project Team will take the following steps to implement the project:

- Reach agreement with USAID/Beirut and ANE Bureau on carrying out the FORWARD program in Lebanon.
- Secure the participation of the government in FORWARD's work in Lebanon.

- Develop an operational understanding between FORWARD and Creative Associates International (CAI) and the Cooperative Housing Foundation (CHF) regarding future collaborative working relationships and mutual responsibilities.
- Contact members of the World Bank team working on water development projects in the Bekaa Valley to determine the status of current projects and the potential for future ones in the area.
- Develop a schedule of activities to be completed by FORWARD during the next quarter.
- Recruit two Lebanese co-mediators and a logistics coordinator.
- Initiate start-up meetings with parties.
- Prepare problem-solving meeting materials.

Capacity Building in Collaborative Problem-solving for Stakeholders and Mediators—Midpoint Status

February 1999

EXECUTIVE SUMMARY

Purpose of the Status Report

The purpose of this status report is to take stock of FORWARD's capacity building efforts to date by looking at the following:

- The original intent of FORWARD's capacity building efforts;
- The approach and methodology of the capacity building program;
- The status of the capacity building program;
- An assessment of the activities;
- Lessons learned since FORWARD began in July 1996; and
- Recommended actions to improve the capacity building activities.

Objectives of FORWARD's Capacity Building Activities

The objective of FORWARD's capacity building activities is to develop and enhance the skills of public and private sector representatives in collaborative problem-solving, interest-based negotiation, and consensus decision making techniques. FORWARD focuses on the development of more effective stakeholders, mediators and other third-party intermediaries who are involved in designing and implementing water-related policies and programs in countries in the Middle East. The capacity building activities are designed to support FORWARD's country-specific technical programs which are funded by the U.S. Agency for International Development (USAID) missions in the Middle East.

Now at its midpoint, FORWARD is using collaborative problem-solving techniques to address water issues in the Middle East. The project currently has programs in Egypt, Jordan, and West Bank/Gaza, and is preparing workplans for Lebanon and Morocco. Capacity building in collaborative problem-solving is an integral part of these programs.

FORWARD designs capacity building programs for two groups:

- Mediators and other third-party intermediaries – managers and other professionals from the public and private sectors who want to develop their knowledge and skills to perform mediation and other third-party work; and
- Stakeholders – government and private-sector decision makers in the water sector who are involved in water-related issues and can use dispute resolution skills in their current jobs.

The capacity building activities include on-the-job training, mentoring, and modeling of collaborative behavior in addition to formal training sessions.

Current Status of Capacity Building Activities

FORWARD's experience over the first two and one-half years of the project has led to a modification of the initial concept of how capacity building should take place. Originally, the project planned to conduct formal training sessions for stakeholders in collaborative problem-solving approaches and then include those stakeholders in activities aimed at resolving contentious water issues. FORWARD had also planned to identify and train potential mediators and other third-party intermediaries and then involve them in specific dispute resolution activities. However, FORWARD found that stakeholders were more interested in participating in a collaborative process to resolve immediate problems they were facing regularly on-the-job. Only then would they consider attending formal training courses.

Based on these experiences, FORWARD is now emphasizing other types of capacity building activities in addition to formalized training. These activities include on-the-job training, mentoring, and modeling of collaborative behavior, all focused on supporting country-focused technical activities. These practices are designed to support the achievement of FORWARD's goals in country-specific technical activities that are funded through incremental funding from missions, rather than relying on core funding.

Assessment of the Capacity Building Program

FORWARD has trained mediators and other third party intermediaries in both Egypt and Jordan, and has provided them with opportunities to apply their newly gained knowledge and skills on specific collaborative activities in the water sector. Nine Egyptians and eight Jordanians have participated in two separate mediation workshops held in each country. In addition, six Egyptians and two Jordanians have received individual mentoring and on-the-job training in such specific mediation tasks as conducting convening interviews and facilitating working groups and workshops. With these efforts, FORWARD is far along in achieving its goal of fifteen trained mediators in the region by the end of the five-year project term.

FORWARD has also conducted a limited number of stakeholder training sessions, all in Jordan, as part of the on-going Cost/Tariff Model and Financial Accounting System Programs. These stakeholder training sessions reached approximately twenty-six stakeholders.

Because of changing USAID priorities, FORWARD has received less core funding than originally expected during its first two and a half years of implementation. This has required that the project rely more heavily on incremental mission funding provided to support specific technical objectives and activities. The change in funding levels and sources has had a significant impact on the project's ability to design and implement an effective formal training program. Because missions have specific technical objectives for FORWARD interventions, they have been hesitant to fund formal mediator training and development of collaborative training materials that were not directly tied to achieving their technical objectives.

In addition, there is less demand for formal training courses and related training material than was originally anticipated. FORWARD has found that stakeholders, in particular, are more interested in participating in an activity that uses collaborative problem-solving techniques to help them solve an actual pressing problem, rather than take a formal training course. For this reason, the project has focused more on integrating and modeling collaborative approaches during planning and technical workshops and meetings sponsored by the project. This has provided an opportunity for FORWARD to introduce collaborative approaches using actual situations that identify contentious or difficult issues and then provide a safe environment to work through options and agree on a resolution.

Lessons Learned

The project has learned a number of important lessons in designing and implementing capacity building activities in the region.

General Lessons

- Capacity building for stakeholders works best when it is integrated with a specific technical activity that is focused on resolving a water-related issue.
- Career opportunities for neutral third-party intermediaries are limited in most Middle East countries, which makes it difficult to identify and develop a cadre of local professional mediators and facilitators.
- Host country ministries and USAID missions give lower priority to formal training than they do to technical activities or on-the-job training and mentoring interventions.

Formal Training Design

- The first step to designing effective formal training is a comprehensive assessment of the training needs of the intended audience, followed by the development of learner-centered objectives, and a detailed course design that meets the needs identified by the participants and their parent organizations.
- An interdisciplinary team composed of a collaborative problem-solving expert and a training design specialist should design any formal training program.

Mentoring, On-the-Job Training, and Modeling Collaborative Behavior

- Mentoring and on-the-job training are long-term activities that usually extend throughout the life of a technical activity.
- Modeling collaborative behavior is an essential first step for stakeholder groups that do not have the knowledge of, or appreciation for, collaborative approaches to resolving or avoiding problems.
- Developing good collaborative problem-solving skills for potential third-party intermediaries takes time and requires a combination of on-the-job training, mentoring and formal training.
- Culture-based concepts about impartiality pose problems for acceptability of local mediators and other third-party intermediaries.
- Missions are reluctant to fund mediator training unless it directly supports the objectives of the technical activity.
- ANE core funding is the only funding available for formal mediator training

Stakeholder Training

- Stakeholder training, as described in the contract and envisioned during the early part of the project, includes only formal training which is too narrowly defined. Capacity building should include a broader array of interventions such as on-the-job training and mentoring and modeling of collaborative behavior.
- Formal training is not a natural first step to building the motivation, interest, and skills of stakeholders in collaborative problem-solving.

Training Materials

- Participants in formal training courses need training materials that are regionally focused, with relevant local examples, case studies, and simulations.

- Designing and producing training manuals, simulations, case studies and relevant handouts in English and Arabic is not a priority for technically focused programs.

Recommended Actions

Based on this assessment of FORWARD's collaborative problem-solving training program for stakeholders and mediators, the following actions are recommended:

- **Broaden the definition of training carried out by the project to include on-the-job training, mentoring, and modeling collaborative behavior.** Mentoring and on-the-job training occur when experienced dispute resolution specialists and facilitators assist trainees in applying collaborative approaches to real life problems. Modeling collaborative behavior occurs when FORWARD facilitates technical workshops that include problem-solving discussions as part of the agenda.
- **Training will be conducted only in the context of specific technical activities.** FORWARD will not conduct any generalized collaborative problem-solving training in the future. It must clearly connect to technical programs and be justified on the basis of its support for technical program objectives.
- **Use available materials for generalized collaborative problem-solving training rather than develop new ones.** Over the past two and a half years, it has become evident that the ANE Bureau and missions are reluctant to use funds for developing the comprehensive training materials called for in the contract. FORWARD proposes to use already available materials that are found in the region. In those cases where specialized materials are needed, the project will develop them on a restricted basis.
- **Initiate all capacity-building interventions with a training needs assessment.** Before conducting any technical, management, or collaborative problem-solving training in the future, the project will carry out a training needs assessment which will serve as the basis for a capacity-building interventions.

Supporting the Creation of a Water Authority in the Souss-Massa Basin of Morocco

June 1999

EXECUTIVE SUMMARY

Morocco's 1995 Water Law authorized the creation of watershed authorities to manage the water resources of river basins throughout Morocco. In 1997, a decree established the first of these authorities in central Morocco. The USAID Mission in Morocco will assist the Government of Morocco in creating a second watershed agency for the Souss-Massa region in the southwest of the country, an area of rapidly growing secondary cities and burgeoning tourism. USAID chose this basin, in part, because of the region's worsening water shortage and because of its critical importance to agriculture production. Souss-Massa is dangerously depleting its groundwater resources by 250 million cubic meters a year, while the agricultural sector is using 95 percent of the total water resources.

USAID/Rabat requested FORWARD to develop an initial vision with stakeholders at the national and local levels for the new watershed agency and to develop a work plan to initiate collaborative planning and management of integrated water resources in the basin. FORWARD's specific objectives were to:

- Conduct a situational analysis of water resources in the basin and institutional roles and responsibilities as they relate to the proposed water basin agency;
- Suggest approaches for USAID assistance in developing participatory planning processes in the basin; and
- Identify areas in which USAID can help the new river basin agency achieve long-term goals.

During the assignment, the team:

- Reviewed and summarized available information on water resources, institutions, and water use in the Souss-Massa basin;
- Discussed water needs and creation of the new basin agency with potential participants and stakeholders;
- Verified the technical value of Souss-Massa as a potential USAID project; and
- Identified an approach for USAID to participate in water management for the new river basin agency.

The following recommendations for USAID participation in the Souss-Massa basin are offered for consideration:

- At least until the river basin agency is created, concentrate program activities on promoting collaborative and participatory processes in integrated water management, emphasizing cross-sectoral, interagency, and multilevel planning.
- It is important to recognize that (1) the water law offers an innovative legal regulatory framework for integrated management of water resources at the regional level, (2) the Direction Générale de l'Hydraulique (DGH) played and will continue to play a leading role in this process, and (3) the primary agency responsible for water resource management will be the river basin agency (most likely created from Direction Régionale de l'Hydraulique [DRH]).
- While working with DGH and DRH as leading partners, USAID should encourage broad participation by stakeholders in the basin. Other options could be considered, although flexibility should be the rule because water is an extremely sensitive issue in the Souss-Massa basin.
- In the first year, before formal creation of a river basin agency, engage all stakeholders in a series of participatory planning exercises aimed at developing cooperation among all stakeholders that can then be incorporated into the operating culture of the new river basin agency.
- Starting in the first stage, establish subcommittees or task groups representing key stakeholders and sectors. These committees could work on specific tasks. If the participants are carefully selected and the tasks well defined, the committees could play a dynamic role in the planning process.
- As an outcome of the participatory planning process, explore practical actions and projects that can be designed and implemented collaboratively.

The team identified several specific efforts as being critical for meeting the long-term water management goals established for the Souss-Massa basin, including:

- **Develop an aquifer management plan.** Groundwater is the most important resource in the basin, supplying roughly 67 percent of the water used. Overpumping in some areas (specifically the Guerdane area) has lowered water levels to the point where pumping costs are excessive. An integrated surface water-groundwater model needs to be developed so that this declining resource can be managed and the agri-economical investments which have been made in the basin can be maintained.
- **Develop geographic information, global positioning, and Internet or wide-area access systems.** New database and information systems are required for managing, analyzing, and reporting on the large volumes of information concerning water use, wastewater discharges, water levels, and water quality.

- **Introduce water conservation methods to increase irrigation system efficiency.** To achieve significant water conservation, small to medium-sized farmers who may not be able to afford the capital investment in drip irrigation might be considered for some kind of assistance, although this approach requires further exploration of bank loans and pricing structures.
- **Focus on irrigation water management through a variety of interventions.** Because 95 percent of the water in the basin is used for irrigation, USAID might best focus funding on irrigation water management. If the basin is to have sufficient supplies of water in the future, major water conservation methods must be implemented. USAID could provide technical assistance and implement demonstration and pilot projects to improve irrigation efficiency. Interventions could include evaluating and introducing improved irrigation methods; comparing water use efficiency among crops and identifying the best cropping systems; evaluating the impact of water pricing on water allocation and saving; testing and experimenting with new tools and technologies, including weather forecasting and field instruments, for better water monitoring and management; advising farmers on water requirements; and strengthening extension services for better water management.
- **Disseminate improved water management practices through water user associations.** It is important to disseminate better water management practices developed in the region or adapted from experiences learned in similar agricultural and ecological contexts. In the valley, 75 water user associations are managing irrigation systems. Special programs are needed to improve the managerial and technical skills of water user associations. Actions could be developed to ensure that users are adequately represented in the decision-making process. This outreach program in itself could have a tremendous impact on irrigation water use and conservation. In addition, it could set a model for fostering, on a large scale, local participation and local democracy.
- **Carry out pilot projects to increase awareness of better environmental practices.** Lack of a sanitation infrastructure, nontreated effluents from urban communities, and the intensive use of fertilizers and pesticides can cause health problems, damage estuaries, and contaminate beaches and wells used for water drinking. Effluents from Agadir and the industrial area in Anza are being discharged into the port and the ocean. If the situation is not controlled, this will have a detrimental impact on the urban community's health, tourism industry, estuaries, and endangered species. Working with local communities and agencies, USAID could initiate pilot projects and provide a series of support activities to increase awareness and develop methods for better environmental practices and technologies.
- **Explore opportunities for pollution abatement projects.** Pollution abatement projects—including taking direct action at the farm and industry levels, implementing decrees imposing fees on polluters, and carrying out wastewater treatment pilot projects—should be considered.
- **Develop financial, legal, collaborative problem solving, and communication skills within the new agency.** For the river basin agency to perform its mandate,

new skills will have to be developed. The river basin agency must deal effectively with technical and financial issues related to water management. The agency should be able to perform well in these new areas: (1) financial—fee collection and management, (2) legal—fines and potential legal conflicts with users, (3) collaborative problem-solving—reaching consensus within the agency and with users, and (4) communication—interactions with clients and partners. Providing training and assistance in these areas is crucial as the agency develops a new institutional culture, moving from an administrative model to one more focused on serving clients' needs.

Developing an approach to create and sustain a river basin agency is one of two major objectives of the upcoming USAID project; the other is fostering integrated water resources management in the region. The approach will require identification of the best and most innovative organization models. These organizational structures and operations need to be designed, tested, and implemented in the existing Souss-Massa context to encourage the full participation of stakeholders.

ANNEX D

ACRONYMS

ANE	Bureau for Asia and the Near East
CAMP	Coastal Aquifer Management Program
CDM	Camp Dresser & McKee International, Inc.
CGOSD	Cairo General Organization for Sanitary Drainage
CLIN	Contract Line Item Number
COP	Chief of Party
COTR	Contracting Officer's Technical Representative
DAI	Development Alternatives, Inc.
DR	Dispute Resolution
EC	European Commission
FAS	Financial Accounting System
FIPPS	Financial Invoiced, Pipelined, and Programmable System
FORWARD	Fostering Resolution of Water Resources Disputes Project
GOE	Government of Egypt
GOJ	Government of Jordan
GOL	Government of Lebanon
GOM	Government of Morocco
JVA	Jordan Valley Authority
LIRR	Legal and Institutional Regulatory Reform Program
M&E	Metcalf and Eddy
MEPP	Middle East Peace Process
MWI	Ministry of Water and Irrigation
NCMES	National Center for Middle East Studies
NOPWASD	National Organization for Potable Water and Sanitary Drainage
PWA	Palestinian Water Authority
PWA WBWD	Palestinian Water Authority - West Bank Water Department
RFP	Request for Proposals
UNDP	United Nations Development Program
USAID	U. S. Agency for International Development
WAJ	Water Authority of Jordan