

**Water Resources Sustainability Project
(WRS)**

**1996 Annual Report
§ May 1 to December 31, 1996 §**

**Deliverable for
United States Agency for International Development**

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Ministry of Environment

American Agency for International Development (USAID)

WRS Project

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Introduction

This document constitutes the annual progress report of the Water Resources Sustainability Project (WRS) for calendar year 1996. This report covers the activities of the WRS project from contract signature on May 1, 1996 to December 31, 1996.¹ The WRS contract was signed on May 1, 1996 and mobilization of the project team began immediately thereafter. The WRS project administrator was fielded in June to begin the process of setting up the field office. The WRS Chief of Party and Demonstration Activity Coordinator began to work in-country on July 15, 1996.

The WRS project directly addresses USAID's environmental strategic objective to improve water resources management in the agricultural, urban, and industrial sectors in Morocco. To reach this strategic objective, USAID Morocco has defined three intermediate results:

- Improved policy, regulatory, and institutional framework;
- Improved environmental technologies; and
- Broadened public participation for environmental action.

This report presents the activities of the WRS project with respect to the strategic objective, intermediate results, and indicators of performance. The report provides an overview of progress since the project's inception and to summarize project activities in 1996. This document contains two sections: Section 1 presents office set up and staff hiring activities, and Section 2 presents progress on indicators of performance. The report also contains four annexes: Annex 1 summarizes field missions; Annex 2 summarizes key

¹ This progress report incorporates the activities described in the Third Quarter report covering the period from July 15 to October 15, 1996.

meeting attended; Annex 3 describes the deliverables submitted; and Annex 4 presents budget expenditures for the period covered in this progress report.

1. Project Start up Activities

WRS mobilization activities were conducted from contract start-date until mid-September. The long-term technical advisors were fielded permanently on July 15, 1996. However, they did conduct some project work in June prior to permanent fielding. The COP traveled to Morocco at the end of June for one week to meet with USAID and MOE staff as well as to liaise with the team from the Project in Development and Environment which was conducting a pollution prevention activity with tanners and metal platers in Fes. Technical project activities officially began when the COP and Demonstration Activity Coordinator started work on July 15.

Administrative mobilization activities commenced immediately. Major activities during the first few months focused on drafting subcontracts and setting up in-country project operations. The Chemonics Project Administrator (PA) conducted two short-term assignments to accomplish the latter task. The first trip occurred at the beginning of June 1996. During a two week period, the PA interviewed prospective support staff, viewed housing for the COP, surveyed the office space and gathered quotes for office furniture and equipment. For budget and reasons of timeliness, a decision was made to purchase all office furniture and office equipment locally. However, since a final decision regarding the office space was not made until the long-term team arrived in July, final decisions regarding furniture and equipment could not be taken until the beginning of August.

The PA returned to Morocco at the beginning of August to purchase office equipment and furniture and secure their delivery; assist in the hiring and training of local support staff; and to establish the project office systems and physical location. The office manager began work on August 1st and the driver started two weeks later. Although, a secretary/translator was budgeted, the COP decided to postpone hiring someone until project work level could be examined. Translation requirements will be contracted out on an as-needed basis until a final decision is reached.

During her five weeks in-country, the PA worked with the office manager to complete project mobilization tasks. Some efforts, such as furniture procurement, were hampered by the fact that project mobilization occurred in August when many factories close. All furniture and equipment were ordered prior to the PA's departure with delivery and installation continuing until the end of September. Equipment purchased included air conditioners, fax machine, photocopier, telephone system, and typewriter. Other physical improvements to the office space completed by the project include installation of computer and power cable channels and establishing a small peer-to-peer computer network, erecting a partition to create an office for the Demonstration Activity Coordinator, and repainting the office once all improvements were complete.

· Hiring of Local Support Staff

The WRS Chief of Party and Demonstration Activity Coordinator conducted extensive interviews of candidates for local support staff positions from July 15 to August 15, 1996. The project recruited for two positions: Office manager and Driver/Courier. We hired Nadia Afsahi for the Office manager position and Hassan Nablaoui as Driver/Courier.

Ousmane N'Diaye, an accountant with the Chemonics Home Office was fielded from October 14th to October 19th to train Nadia Afsahi on the use of the Solomon accounting software. Our driver/courier, Hassan Nablaoui received training on the use of the Xerox photocopy machine and on the use of a binding machine.

· **Other Activities**

- **Subcontracts:** Prior to the COP's fielding, a subcontractor's meeting was held in Washington, D.C. This meeting enabled all subcontractors to have a broad introduction to the project and to express their interests and concerns. It also allowed EAU to introduce the subcontractors to the joint venture and to explain how the joint venture will be managed. EAU began drafting subcontracts in July with all six signed between October 14, 1996 and December 16, 1996.
- **Invoice development:** The project Home Office began developing a format for EAU's invoices soon after contract signature. Due to the CLIN structure, the newness of the joint-venture and Chemonics switch to Solomon IV, development of the new invoice format was slowed down considerably. Consequently, our first invoice was submitted late. However, the format established was accepted by USAID and the local project staff was trained on the use of Solomon software. We will continue to refine the format of invoicing when we switch to Solomon IV in April 1998.
- **Vehicles:** the project purchased three Jeep Cherokees for project field activities. The vehicles were purchased in October and shipped from the United States on December 26, 1996.

2. Progress Towards Objectives

This section describes how the WRS activities during this reporting period helped achieve progress towards the stated intermediate results and strategic objectives of the project. The period covered includes project start up activities, development of the annual work plan, and preparation of a policy assessment study.

2.1 Expected Results

The WRS project is expected to achieve results, as measured by specific indicators of performance. USAID Morocco's environmental strategic objective, intermediate results, and indicators of performance are summarized in Exhibit 1. The WRS activities seek to affect these indicators in the following way:

3. Reduced amount of water pollution in target areas through:

- Reduction of chromium effluents released into the Sebou river from tanneries in Fes.
- Reduction in urban sewage wastewater released into water bodies in Agadir.

2. Increased volume of water savings in target areas through:

- Reuse of treated urban wastewater in Agadir.
- Improved management practices at tanneries in Fes.

3. Reduced soil erosion in target areas through:

- Soil erosion control measures implemented in the Nakhla watershed

4. Implementation of key policy reforms through:

- Identification of water policy areas requiring reforms.
- Strengthening of MOEs position and ability to implement reforms.
- Drafting of laws and decrees.
- Increased ability of MOE to be proactive in environmental action.
- Implementation and enforcement of laws and decrees.

5. Increased number of tanners adopting chrome recycling technologies through:

- The implementation of pollution prevention technologies at leather tanneries in Fes.
- The replication of chrome recycling technologies throughout Morocco.

Exhibit 1

6. Implementation of project activities with non-governmental partners through:

- The active participation of NGOs in project implementation.
- Awareness activities for water user groups and concerned citizens.
- Use of media to promote project goals and water sustainability issues.

2.2 Performance

This section describes the progress made during the reporting period with respect to the indicators of performance.

Indicator 2.1: Amount of Water Pollution in Target Areas

Project activities in 1996 have not yet directly affected the amount of water pollution in target areas. However, WRS project activities that affect this indicator were started in two areas:

1. Reduction of chromium effluents released into the Sebou river from tanneries in Fes

During this period, we selected the target area as the Dokkarat industrial zone in Fes for the industrial pollution prevention pilot project, we conducted a preliminary characterization of all twelve operating tanneries in Dokkarat, and we started analyzing previous studies on industrial pollution in Fes and specifically pollution from leather tanneries. A team of local consultants (Said Bouanani and Driss Messaho) accompanied by technicians from the Ministry of Environment Laboratory conducted the preliminary characterization of tanneries in the first part of December. The team took samples of effluents and leather tanneries for an initial characterization of baseline conditions and identified indicators of performance. Also, we provided the tanners in Dokkarat with information on pollution prevention and better management practices. The information collected in 1996 will serve to identify technological options for a pilot demonstration project that will reduce chromium effluents released into the Sebou river.

2. Reduction in urban sewage wastewater released into water bodies in Agadir

In 1996, we developed a methodology for conducting the feasibility study for the wastewater treatment and reuse pilot project which we presented in the annual work plan, and we started the feasibility study. The project's demonstration activity coordinator accompanied by two local consultants (Dr. Khalid Khallayoune and Dr. Brahim Soudi) identified target communes that could benefit from the wastewater treatment and reuse demonstration project in the Agadir area and began the collection of information on those communes that will be used to select appropriate technological options.

Indicator 2.2: Volume of water savings in target areas

This indicator will be affected by the wastewater treatment and reuse feasibility study. During the reporting period, we participated in a workshop on wastewater treatment and reuse in the Mediterranean, which was held in Agadir on November 23 to 26, and in which examples of successful applications of wastewater reuse were presented. A key theme of the workshop was that the reuse of treated wastewater is one of the key technical options of the future for countries such as Morocco that will be facing water scarcity problems in the near to medium term. Representatives from USEPA and from U.S. companies were present at the workshop, which highlighted the applicability of U.S. technologies to wastewater treatment and reuse. In our annual work plan, we developed detailed terms of reference for the wastewater treatment and reuse feasibility study, which will enable us to apply technologies that will increase the volume of water saved by reusing treated urban sewage for agricultural and other irrigation purposes

Also, in the context of work done by WRS and previous USAID projects (GEM and PRIDE) with leather tanners in Fes, some recommendations were made about process improvements that should result in water savings. The tannery Saiss, which has been visited several times by the WRS and other project teams, has already started to implement small process changes that could result in small water savings.

Indicator 2.3: Volume of soil erosion in target areas

This indicator is affected by the soil erosion control pilot project that will be implemented under WRS. In 1996, we selected the site of the Nakhla watershed for the feasibility study (i.e., we defined the target area). The initial terms of reference for WRS specified Oued Laou as the watershed for the soil erosion control pilot demonstration project. After meeting with representatives of the Administration des Eaux et Forêts of the Ministry of Agriculture (MAMVA), we were informed that Oued Laou was not among the 25 priority watersheds for soil erosion control in the Moroccan National Watershed Protection Strategy.

In order for the WRS soil erosion control project to be consistent with the national strategy of watershed protection, we opted to select a watershed that (1) was among the 25 priority watersheds in the Government of Morocco strategy, and (2) responded to the criteria necessary for the participatory approach that will be used in the feasibility study. After considering several alternatives, we selected the Nakhla watershed as one that presented good opportunities for achieving significant reductions in soil erosion and that was representative of other watersheds of the north of Morocco where similar actions could be replicated.

A team from the SANREM/CRSP program, led by the University of Georgia, composed of Dr. Irma Silva-Barbeau (Virginia Tech University), Dr. David Swift (Colorado State University), Dr. Ian Flitcroft (University of Georgia), and Dr. Carla Roncoli (University of Georgia) came to Morocco in November to conduct a Participatory Lifescape Landscape Appraisal in the Oued Nakhla watershed. The SANREM CRSP Team worked closely with the Ecole Nationale d'Agriculture de Meknes (ENA Meknes) on the PLLA.

Prior to undertaking the PLLA, the team presented a workshop on participatory approaches in Meknes on November 8 and 9. The project team composed of the

SANREM/CRSP scholars, several researchers from ENA Meknes, two staff members from the Ministry of Environment and the WRS demonstration activity coordinator, conducted the PLLA from November 11 to November 22. The results of this process identified farmers concerns with erosion problems in the watershed, potential solutions and mitigation measures to the soil erosion problem that farmers would have an interest in maintaining, and the causes of erosion resulting from human interactions with the watershed. The team also conducted a geological and soil use assessment of the watershed and collected data on the economic situation in the watershed.

In addition, we engaged the services of Dr. M'hamed Tayaa to conduct a baseline assessment of soil erosion in the watershed. Dr. Tayaa started work on a methodology to model soil erosion rates in the Nakhla watershed based on rainfall and soil characteristic data.

Indicator 2.1.1: Progress Towards Implementation of Key Policy Reforms

Exhibit 2 shows the policy reform agenda for the environmental strategic objective which includes 11 key policy reform. The reforms that are specifically tied to WRS activities include:

- The development of progressive water pricing policies.
- The development of targeted industrial effluent norms and standards.
- The implementation of the polluter-pays principle.
- The acceptance of the Ministry of Environment as a coordinating ministry in the water sector.

Exhibit 2: POLICY REFORM AGENDA
Water Demand Management
1. Progressive policy pricing
2. Decentralized management
Water Supply Enhancement
3. Environmental impact assessments
4. Private sector involvement
Water Quality Improvement
5. Industrial effluent norms
6. Polluter-pay principle
Institutional Strengthening
7. MOE coordinating ministry
8. Water Users Associations
9. ORMVA's efficiency
10. Sustainability of FEC
11. Sustainability of ANHI

The WRS activities that contributed to progress towards these policy reforms are described below.

1. Development of progressive pricing policies

Much of the WRS project activities in 1996 focused on setting the stage for progress towards water policy reform. The project fielded Joy Hecht (senior economist) and Driss Messaho (environmental specialist) to conduct an assessment of water policy in Morocco and its implications on the WRS project. This assessment presented the current legal and regulatory framework for water resources management and highlighted roles for MOE in sustainable water resources management. The policy assessment study will be used to develop a policy agenda and set priorities for actions fostering sustainable water resources management by the Government of Morocco. A key finding of the policy assessment study is that the Ministry of Environment should be actively engaged in encouraging progressive water pricing policies that provide incentives for the sustainable use of the resource. In the wastewater treatment and reuse pilot demonstration project, we plan to test the principle of progressive pricing policies by pricing treated wastewater for reuse in irrigation.

2. *Development of industrial effluent norms and standards*

The water policy assessment study identified the draft application decrees of the new water law that pertain to industrial norms and standards and recommended roles for the Ministry of Environment on the development of norms and standards. We plan to test the practical applications of norms and standards in the pollution prevention pilot demonstration projects for tanneries in Fes.

3. Implementation of the polluter-pays-principle

The water policy assessment study identified and analyzed the provisions of the new water law that concern the polluter-pays-principle. The pollution prevention pilot demonstration project will test ways in which this principle can be applied.

4. *Fostering the role of MOE as a coordinating ministry in the water sector*

The first meeting of the inter-ministerial steering committee was held on September 30, 1996. This meeting was well attended and succeeded in presenting the goals of the project to key Moroccan institutions involved with water resources management and in developing a spirit of cooperation among institutions, with the Ministry of Environment as coordinator.

Indicator 2.2.2: Percent of tanners adopting chrome recycling technologies

This indicator is closely related to indicator 2.1 (amount of water pollution in target areas) in that the more tanneries adopt chrome recycling technologies, the greater the reduction in the amount of pollution in the target areas. In 1996, we began the feasibility study for the pollution prevention project at leather tanneries in Fes. This study will include full audits of the tanneries in Dokkarat that will result in recommendations for the implementation of chrome recycling and recovery technologies. We also expect to conduct awareness training activities for the tanners on pollution prevention that will increase the interest of tanners in these technologies.

Indicator 2.3.1: Activities implemented with non-governmental partners

An important aspect of the WRS project is the participation and adhesion of representatives of civil society in project activities. To this end, non-governmental organizations (NGOs) and other groups have an important role to play in mobilizing public support for actions that will foster water resources sustainability. The Chief of Party and Demonstration Activity Coordinator met with Ms. Houria Tazi Sadeq, president of the Alliance Maghreb-Machrek pour l'Eau, which is an alliance that regroups several Moroccan NGOs, concerned with water resources issues, to discuss how to coordinate project activities with the concerns of Moroccan NGOs. We also developed ties to the tanners in the Dokkarat area in Fes and initiated contacts with citizens association in the Agadir area. The links developed with key non-governmental partners at this early stage of the project will help ensure the implementation of project activities with non-governmental partners.

ANNEX 1
FIELD MISSIONS

This annex describes the various missions that were fielded by the WRS project in Morocco in calendar year 1996. During the first six months of the project, consultants were fielded to assist with office set up, assist in the preparation of the annual workplan, prepare a project training plan, prepare a policy assessment study, and begin the feasibility studies for the soil erosion control, pollution prevention, and wastewater treatment and reuse pilot projects. These missions are described below.

- ***June 1 to June 14***

Judith Scholar (Chemonics) was fielded to begin the set up of the field office. Specifically, Ms. Scholar's mission included the following tasks: screen candidates for local support staff positions, set up a local project bank account, identify housing possibilities for the COP, and obtain quotes from vendors of office furniture and equipment.

- ***July 22 to August 26***

Judith Scholar (Chemonics) was fielded to assist the COP in project start-up activities and with the set up of the field office. Ms. Scholar's mission included purchasing office furniture and equipment, establishing the project office system, and training the office manager in the project's administrative procedures.

- ***August 20 to August 31***

Jean Tilly (ECODIT) was fielded to assist with project start-up and to work with the COP and Demonstration Activity Coordinator with preparing the first draft of the annual work plan.

- ***August 25 to September 21***

Joy Hecht (ECODIT), an environmental economist, was fielded to prepare the policy assessment study. Ms. Hecht worked with Mr. Driss Messaho (ECODIT), a local environmental consultant, to collect information on water resources policies and management in Morocco and prepared a report that presented the roles of various institutions, analyzed the new water law (10-95), highlighted roles for the Ministry of Environment in water resources management, and identified key policy issues for the implementation of the WRS pilot demonstration projects. Ms. Hecht and Mr. Messaho presented a workshop on water resources management issues to MOE staff.

- ***September 9 to September 14***

Joseph Karam (ECODIT) was fielded to assist in preparing the workshop on water policy with the Ministry of Environment's project monitoring committee.

- ***September 9 to September 27***

Cathryn Goddard (Coverdale) was fielded to help organize the inter-ministerial steering committee meeting and to prepare the WRS professional development plan.

- ***October 14 to October 19***

Ousmane N'Diaye (Chemonics) was fielded to train the staff office manager (Nadia Afsahi) in use of the Solomon software and in USAID's accounting procedures.

- ***October 28 to November 23***

Dr. David Swift, a range ecologist, was fielded to help select the watershed for the soil erosion control pilot demonstration project, and to participate in the participatory landscape lifecycle appraisal (PLLA) of the Nakhla watershed with a team from the SANREM/CRSP program.

- ***November 3 to November 23***

Dr. Irma Silva Barbeau, Dr. Carla Roncoli, and Dr. Ian Flitcroft of the SANREM CRSP program led by the University of Georgia were fielded to provide training to staff from MOE and from ENA Meknes on participatory rural appraisal techniques and to conduct a PLLA in the Nakhla watershed. The PLLA process will be used to identify causes of erosion in the Nakhla watershed and sustainable erosion control measures.

- ***October 4 to December 31***

Dr. Said Bouanani, an environmental engineer was fielded to conduct a preliminary characterization of leather tanneries in the Dokkarat industrial area of Fes, and to review and summarize previous studies on industrial pollution from leather tanneries in Fes.

- ***December 3 to December 31***

Dr. Driss Messaho, an industrial process engineer was fielded to work with Dr. Bouanani on the preliminary characterization of tanneries in Dokkarat.

- ***December 25 to December 31***

Dr. Brahim Soudi and Dr. Khalid Khallayoune were fielded to begin data collection and characterization of communes in the Agadir area where a wastewater treatment and reuse pilot demonstration project could be implemented.

- *December 20 to December 25*

Dr. M'Hamed Tayaa was fielded to measure the baseline soil erosion in the Nakhla watershed and to develop a model to monitor the impact of erosion control efforts under WRS.

ANNEX 2
MEETINGS

This annex summarizes the key meetings held by the project team in 1996.

Date	Meeting With	Purpose of Meeting
July 16	Leather tanners and metal platers in Fes	To attend a presentation on the PRIDE activities in Fes with leather tanners and metal platers
August 27	USAID	Briefing on project start up issues
September 11	Alliance Maghreb Machrech pour l'Eau	Met with Ms. Houria Tazi Sadeq to discuss the involvement of Moroccan NGOs involved with water management issues
September 12	USAID	Contractors roundtable meeting
September 18	USAID	Presentation by Joy Hecht and Driss Messaho on the main conclusions of the policy assessment study
September 18	RADEEF and ADER (Fes)	Redouane Choukr-Allah (RCA), Demonstration Activity Coordinator, met with the RADEEF and the ADER of Fes to discuss ongoing activities in Fes and potential interventions of the WRS project
September 19	ENA Meknes	RCA met with ENA Meknes to discuss the soil erosion control project in a watershed of the Rif and the criteria that argued in favor of Oued Laou
September 20	MOE	Presentation of the project objectives and of the draft annual work plan to MOE's internal project monitoring committee
September 24	MAMVA	Meeting with the Ministry of Agriculture's Administration des Eaux et Forêts to discuss the soil erosion control feasibility study and the selection of an appropriate site
September 25	USAID	Attended a workshop to discuss the integration of the various projects contributing to USAID Morocco's environmental strategic objective (SO2)
September 30	MOE, USAID, and all institutions of the inter-ministerial steering committee	Meeting of the inter-ministerial steering committee to present the WRS project to members of the steering committee, discuss the objectives of the project, the Year 1 activities, the role of the steering committee and the cooperation of the different ministries with the project

Date	Meeting With	Purpose of Meeting
October 3	USAID, Caisse Française de Développement (CFD)	Meeting with Mr. Moulignat of the CFD to discuss the activities of the CFD with tanneries in Fes, and the potential synergies between the two projects
October 4	Ministère des Travaux Publics, Administration Générale de l'Hydraulique (AGH)	Meeting with Mr. Jellali (Director of the AGH) and members of his staff to present the WRS project and discuss the cooperation between his administration and the project.
October 10	Province of El Jadida	Attended a workshop in El Jadida on environmental problems and initiatives in the province. This workshop focuses on wastewater treatment issues in the province of El Jadida.
October 24	RADEEF, Wilaya of Fes, Ministry of Industry	Meeting to discuss how the WRS project can fit within the sewage master plan for Fes managed by the RADEEF and to present the choice of Dokkarat for the WRS pilot project.
October 24	Tannery Saiss	Visit to the tannery Saiss in Dokkarat to view process improvements made by the owner after a visit to the U.S. sponsored under the PRIDE project.
October 25	Ecole Nationale d'Agriculture de Meknes	Meeting with ENA Meknes administration and scholars to discuss their involvement in the soil erosion control feasibility study.
November 8& 9	ENA Meknes, MOE	Workshop at ENA Meknes on PLLA and PRA techniques and methods.
November 11	MOE	Meeting of the internal monitoring committee
November 13	USAID	Meeting of USAID's environmental strategic objective team to discuss performance indicators
November 23- 26	Workshop of Sewage Treatment - Agadir	Attended a workshop on sewage treatment and reuse in Agadir
November 27	USAID	Debriefing on the PLLA conducted in the Nakhla watershed
November 27	Agadir communes	Meeting of the Demonstration Activity Coordinator with representatives of communes in the Agadir area on potential sites for the wastewater treatment and reuse pilot project

Date	Meeting With	Purpose of Meeting
December 2	MOE	Attended a meeting on urban environmental problems organized by MOE for elected officials at the local level
December 6	MOE	Meeting of the internal monitoring committee on the feasibility studies
December 12	Ministry of Agriculture	Attended a conference sponsored by the Ministry of Agriculture (MAMVA) on the Moroccan strategy for watershed management
December 17	Governor of El Jadida	Meeting with the Governor of El Jadida to discuss wastewater treatment activities planned by the province

ANNEX 3
DELIVERABLES

The following deliverables were submitted by the project team to USAID

- **Professional Development Plan Outline.** This outline, submitted on September 1, presented the main features of the professional development program planned under WRS.
- **Draft Annual Work Plan.** The first annual work plan was submitted on September 7 and presented the activities to be undertaken by the WRS project from July 1996 to June 1997. Specifically, the work plan discussed the approach proposed by the WRS project team to conduct the three feasibility studies for the pilot demonstration projects, the components of the policy assessment study, and the institutional development activities planned in the first year of the project. A revised work plan was submitted in December 1996, incorporating comments received on the first draft.
- **Draft Policy Assessment Study.** The draft policy assessment study, prepared by Dr. Joy Hecht and Dr. Driss Messaho, presented an analysis of the current water policy in Morocco, discussed expected changes from the new Water Law, highlighted roles for the Ministry of Environment, raised policy issues to be considered in the demonstration projects, and provided recommendations for improving water policy in Morocco.
- **Rapport de Pre-Audit des Tanneries de Dokkarat.** This report, prepared by Dr. Said Bouanani and Dr. Driss Messaho, presented information on size, work methods, and effluents released from all the operating tanneries in the Dokkarat industrial area of Fes. This report will be used to prepare the more detailed characterization of the tanneries to develop options for the industrial pollution prevention pilot project.
- **Mode de Mesure et de Determination du Taux d'Erosion.** This report, prepared by Dr. M'hamed Tayaa, presented the methodology that will be used to measure soil erosion rates in the Nakhla watershed, based on experimental plots.
- **Nakhla Watershed Site Selection.** This report, prepared by Dr. David Swift, presented the rationale for selecting the Nakhla watershed for the soil erosion control pilot demonstration project.

ANNEX 4
BUDGET EXPENDITURES

Table 4-1 shows budget expenditures by Contract Line Items (CLINS) and Table 4-2 shows budget expenditures by indicators of performance². Because many of the expenditures incurred in the first three months of the project were related to project start-up and office set up, they do not directly relate to indicators of performance. Therefore, we have included a management category in which several expenditure items were included. Specifically included in this category is 40% of the Chief or Party time, 10% of the Demonstration Activity Coordinator time, support staff and home office project administration expenses, as well as allowances and some other direct costs. The allocation of expenditures to specific indicators of performance is based on the relative time spent on different project activities that relate to specific indicators.

Table 4-3 shows the time spent in 1996 by project staff on different indicators and on project management.

². The expenditure estimates are based on the invoices submitted by EAU in 1996. Certain expenditures incurred in 1996 will be submitted in the January 1997 invoice and are not reflected here.