

**Water Resources Sustainability Project  
(WRS)**

**MARKETING STRATEGY  
FOR NAKHLA SOIL EROSION  
CONTROL PROJECT**

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

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Ministère de l'Aménagement du Territoire, de l'Urbanisme  
de l'Habitat et de l'Environnement  
United States Agency for International Development (USAID)

**WRS Project**

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## **1. Introduction**

The goal of the Water Resources Sustainability (WRS) project is to support the Ministry of Environment's (MOE) priority to protect water resources and effects of soil erosion, as outlined MOE's National Strategy for Environmental Protection, and USAID/Morocco's environmental strategic objective to improve water resources management. Much of the focus of the WRS project during the first five years has been to develop and test three pilot projects. One of these was the Nakhla soil erosion control pilot project.

At the end of 2001, this pilot project was evaluated and a final progress report prepared entitled, "Accomplishments of Nakhla Watershed Project: 1997 – 2001." The report reviews the process used to implement the Nakhla pilot project, technologies tried, and identified what worked and what didn't work.

CLIN 7 of the WRS project is to create "a marketing strategy" for handing over to Moroccan organizations the replication of the three pilot projects. This report provides the marketing strategy for the Nakhla soil erosion control pilot project.

## 2. Summary of the Nakhla Pilot Project

The Oued Nakhla watershed is located in the Rif mountains in Northern Morocco, which has among the highest rates of soil erosion in the world. The watershed is approximately 10,630 ha in size with an estimated population of 8,000 inhabitants. The dam at the lower end of the watershed impounds water destined for domestic use for the city of Tetouan. The reservoir was originally built in 1962 with a capacity of 9 million m<sup>3</sup>. The Nakhla dam has lost more than 35% of its capacity since 1962 due to siltation. One goal of this project was to employ soil erosion control programs that reduce siltation and, therefore, extend the functional life of the reservoir.

The watershed's economy is primarily rainfed agriculture of crops and livestock. Due to the small size of the landholdings, the productivity of the land is very low. Therefore, another goal was to find ways to improve incomes of farmers while reducing erosion.

### 2.1. The Methodology Used for the Pilot Project

The successful design and implementation of this pilot project were built around the following pillars of the WRS project:

- Participation of beneficiaries and stakeholders
- Identification, testing and adoption of appropriate technologies
- Establishing effective institutional partnerships

In October 1996, baseline data was collected in the watershed. In November 1996 a Participatory Landscape/Lifescape Appraisal (PLLA) was conducted which helped identify potential participants and stakeholders, develop rapport with the new partners, identify basic characteristics of the production system and ecosystem, identify key constraints and potential solutions, and to develop a set of proposed interventions to combat soil erosion. The proposed interventions were then developed into a final set of implementation actions in May 1997 during a workshop attended by farmers living in the watershed and other concerned stakeholders. The baseline survey and PLLA served as a base for a feasibility study which was completed in October 1997.

Implementing the pilot project included four direct interventions to reduce soil erosion originating from crop lands, existing gullies, ravines, and degraded matorral. The project also included indirect interventions to better manage the matorral, restore degraded areas, and prevent the further conversion of matorral for other purposes. Some of the activities involved planting olive trees, constructing cuvettes around the olive trees, stabilizing ravines, planting buffer strips along contour lines, developing water storage tanks, hiring guards to protect planted trees, introducing Spanish goats, planting forage grass, introducing improved beekeeping, planting Carob and Acacia trees, introducing efficient cook stoves, and establishing a women's cooperative for poultry, rabbits and crafts.

## 2.2. Key Stakeholders Involved

The WRS and MOE managed this pilot project. The key stakeholders involved included:

- Direction Provinciale de l’Agriculture (DPA) of Tetouan had the primary responsibility for implementing the project activities
- Centre des Travaux (Work Center of Beni Karrich) (CT) has extension agents working with local farmers in implementing project activities.
- Agence pour le Developpement des Provinces du Nord financed indirect interventions
- Wilaya of Tetouan facilitated administrative procedures
- Direction Regionale des Eaux et Forets (DREF) provided the seedlings of acacia and carob, and in monitoring the soil erosion plots
- Four village committees selected by farmers managed the distribution of olive trees and represented the farmers on other issues
- Farmer cooperators adopted the practices being promoted
- Local private contractors repaired terraces and built check dams
- ENA Meknes and IAV assisted with training and monitoring

There were a number of other organizations involved, including U.S. Peace Corps, the Tetouan Provincial Government, and others. The project also formed other groups including women’s education associations and community associations.

## 2.3. Results of the Pilot Project

During the feasibility study two primary indicators were established for this pilot project:

- Reduce soil erosion in the watershed by 12,000 tons per year which is a projected 25% reduction in erosion from the dryland cultivated fields
- Reduction of siltation, therefore water storage capacity, in the Nakhla reservoir by 2.5% per year.

The December 2001 final progress report on the Nakhla soil erosion control pilot project showed the following as the actual results for these two indicators:

- Reduction of soil erosion 92% vs. 25% target
- Reduction in siltation 14% vs. 2.5% target

A number of other success indicators were also reported on including:

- 113,885 olive trees planted vs. 38,700 target
- 762 ha cuvettes constructed vs. 387 ha target
- 12,800 fruit trees planted on terraces vs. 5,000 target
- 1,240+ farmers and families trained in conservation techniques vs. 190 target

Other accomplishments were also listed including:

- Developed productive working relationships with ministries of environment, agriculture and forests; the Beni Karrich Work Center; the Agency for the North; Tetouan Provincial Government; and many other key stakeholder groups.
- Developed a Geographic Information System (GIS) database for estimating soil erosion and its impact in Oued Nakhla watershed before and after the interventions.
- Conducted numerous workshops and meetings on a variety of subjects for farmers and stakeholder groups
- Established numerous demonstration trials concerning wheat and forage production techniques.
- Conducted a workshop for project participants on lessons learned

Most notable among the difficulties encountered by the pilot project was the inability to restore any degraded public matorral lands, institute rotational grazing management practices, or develop any significant alternative sources of animal fodder. These were largely because animal grazing activities in the matorral concern public lands, and villagers were unable to come to consensus about improved management of these lands. There were also problems with the beekeeping program due to disease and lack of food because of drought conditions.

### 3. Preparing for the Replication Program

From the beginning of the project, the WRS team knew that the experience gained with the pilot projects would serve as the base for replicating them in other areas of Morocco. Therefore, careful records were kept of the process followed as well as what was actually done, what worked and what didn't work. This involved a participatory process with local consultants, stakeholder groups, and ultimate beneficiaries. In the last two years, the WRS team began to prepare for the replication program by carrying out the following activities:

#### 3.1. WRS Dissemination Strategy Paper

In January 2000, the WRS team prepared a dissemination strategy paper which presented an overall framework for designing and implementing the replication process which included:

- **Successful pilot projects as demonstration examples** – Documenting how the pilot projects were created through a participatory approach, using appropriate technology, involving cost recovery, securing institutional partnerships and monitoring the progress. The successful pilot projects would be used as a base for preparing tools and replication manuals on lessons learned, beneficiaries to become advocates to others, technologies shown to work, and demonstration of financial viability.
- **Financing** – Using the pilot projects as demonstrations of financial viability, to encourage public, private and international financial institutions to support replication projects.
- **Training** – Identifying and building capabilities of partner institutions to replicate the pilot projects over the long term.
- **Communication** – Identifying policy makers, influential groups, partner institutions and target beneficiaries to disseminate information about the pilot projects and encourage these groups to replicate the pilot projects in their own settings.

#### 3.2. WRS Communication Strategy and Action Plan

The Communication Strategy for replicating the pilot projects was completed in October 2000. It provided an overall approach for designing and implementing communication programs for replicating the pilot projects including identifying target audience groups, primary communication tasks, and the basic tasks required to successfully implement the strategy.

Once the communication strategy was completed, an Action Plan for Communication Support to the Replication of the Nakhla Soil Erosion Control Pilot Project was developed. The action plan identified stakeholder groups to involve in the replication process and the actions they needed to take, suggested steps in supporting the replication program, and recommended what communication programs/materials that needed to be produced.

### **3.3. Lessons Learned**

In November 2000, a workshop on the Nakhla project was conducted with partners, stakeholders and beneficiaries to review what was done, successes, failures and why, and formulate revised approaches so that the replication process would be more successful. This workshop information combined with inputs by the WRS team and consultants was integrated into a lessons learned manual which will be made available to groups interested in replicating the Nakhla soil erosion control pilot project.

### **3.4. Guidelines for Establishing New Projects**

Building upon the above materials, the WRS team is in the process of producing a guidelines manual which will be used, tested and refined during the replication process, which will take place during the WPM project. The target for this guidelines manual will be the organization that will provide the leadership in replicating the Nakhla soil erosion control pilot project.

### **3.5. Geographic Information System (GIS)**

In early 2001, work was completed on creating a GIS for the Oued Nakhla watershed. The objectives of the GIS program was to visually show the capacities of various pilot project activities, to estimate the impact on erosion and sediment transport to the Nakhla Reservoir, and to assist in the dissemination of project results to policy makers, funding agencies and potential new partners.

#### 4. Overall Marketing Approach

To successfully continue the replication program over the long term a single organization needs to be identified who will carry out the functions that were performed by the WRS team. In other words, be the “engine” which drives the replication process. This group will be the “champion” of soil erosion control programs, the “facilitator” to get local community groups and key stakeholders committed to implementing these programs, and the “dealmaker” to put together the financial package and technical support required to successfully implement the soil erosion control program. There will have to be a strong incentive for this group to ensure that they put in the effort and resources needed to continue the replication process. The strongest incentive is financial. There are secondary incentives such as serving country and people, moving forward technology, being environmentally responsible, etc.

In the case of the Nakhla soil erosion control program replication, the recommended “facilitator/dealmaker” is the consulting group used from the Ecole Nationale D’Agriculture (ENA—the National Agricultural University) at Meknes. This idea has been discussed with them and they are very interested in establishing a “Center for Land and Water Resources Management” which would take over the role performed by the WRS team. The Center would operate similar to a private consulting company, but would actually be either under the university umbrella or as a Non-Governmental Organization (NGO). During the WPM project, the team will help this new Center to get established and to guide them in performing the facilitator/dealmaker role. This would provide additional income to the participating faculty members, if under the ENA umbrella the university would collect an overhead fee for handling the administrative and financial procedures, and the beneficiaries and stakeholder groups would get an experienced and talented team of Moroccans running the program. This is a win-win-win situation.

With assistance from the WPM team, the Center for Land and Water Resources Management would develop a business plan and administrative/financial procedures, prepare marketing/advertising materials, establish contracts with potential client communities, develop working relationships with financial institutions and other partners, and actually develop “deals.”

The Ministry of Environment (MOE) has been the primary partner to the WRS project and has a lot of talented staff who can contribute much to the replication program. Therefore it is envisioned that they will be involved with the Meknes Center in replicating the Nakhla soil erosion control pilot project. MOE, as other Government of Morocco (GOM) line ministries, will be partners in the replicated programs with their roles carefully spelled out. The Center should draw upon MOE staff who worked on the Nakhla pilot project with WRS. It is expected that MOE will be an advocate as well as providing technical support to the replicated projects. The Meknes Center could be well advised to establish some type of advisory board which would include MOE, ministries of agriculture and forests, financial institutions and other key stakeholders who would provide advice on and support to new potential replicated projects.

## 5. Recommended Organizational Structure for Marketing the Soil Erosion Control Program

The experience from the WRS project showed that a number of stakeholder groups had to be brought together, including the beneficiaries, to successfully design and implement a soil erosion control program. The following is a summary of the groups who will have to be involved in this marketing program. The specific organizations will vary by each replicated project, but these types of groups will have to be involved:

### 5.1. Catalyst/Dealmaker

In selecting the “engine” for the replication program the following characteristics of the organization were considered important:

- **Entrepreneurial** – The organization should be private or autonomous with a desire and ability to sell or market its services to others for pay.
- **Flexible** – It is important that the organization not be tied down with many bureaucratic constraints.
- **Quick Response** – The organization should be able to identify and respond quickly to opportunities in replicating the pilot pilots and putting together “deals.”
- **Dedicated to the Program/Technology** – The staff of the organization should be motivated and technically qualified to promote the replication program and the technologies involved.
- **Strong Management** – The funding agencies, especially, will be looking for a well managed organization that can identify and move forward replication projects, prepare proposals and budgets, oversee effective implementation, and provide the required reporting.

The Meknes Center for Land and Water Resources Management will serve as the “engine” for keeping this replication program going and the catalyst to getting the stakeholders involved. They will provide a “selling,” “technical” and “manager” role to the whole process. The Center will have to ensure that they can clearly show the benefits to the stakeholder groups and why it is essential these groups participate in the replication program.

### 5.2. Local Leaders/Advocates

There have already been other communities that have expressed interest in replicating the Nakhla pilot project program, including in the Souss-Massa region. Therefore, the Center staff will have to follow up contacting local influential groups including the Wilayas, Provincial Department of Agriculture (DPA), Regional Department of Water and Forests (DREF), community political leaders, and other stakeholder groups to get their commitment and support for establishing soil erosion control programs in their areas.

### **5.3. Financial Inputs**

Key to a successful soil erosion control project is putting together a viable financial package. This has to include cost sharing by the beneficiaries, local community, and participating GOM line ministries (especially agriculture and forests). Additional funds would most likely also be needed from outside the community sources such as parastatal funding agencies, private banks, international donor agencies (bilateral and multilateral) and other financial groups. The Meknes Center will have to perform the role of “dealmaker” to bring together the local leaders/advocates with the financial partners and help prepare the financial packages required.

### **5.4. Technical Inputs**

The Center team will provide both technical and managerial inputs to the replicated projects. However, other groups such as the ministries of agriculture, forest and environment will provide critical technical inputs and in some cases supply inputs (such as seedlings). As part of effectively diffusing practices it will also be important to have farmers establish demonstration plots to share their technical experience with other farmers.

### **5.5. Ultimate Beneficiaries**

Farmers are the ultimate beneficiaries in the soil erosion control program in terms of saving soil and increased income. Indirectly the whole watershed and communities being served by the watershed will benefit from the program, which is why it is critical that local leaders be involved and encouraged to be advocates of the soil erosion control program. It is critical that farmers participate in the design and implementation of the soil erosion control program. They must “buy in” to the program from an early stage and understand that many of the recommended activities have delayed financial returns or benefit the community rather than directly.

### **5.6. Role for WPM**

As part of implementing this marketing strategy, the WPM team will perform a different role than under WRS. Under WRS, the team performed the catalyst and dealmaker roles. Under the WPM project they will support and train the Meknes Center for Land and Water Resources Management team to become the catalyst and dealmaker.

During the WRS project, the team utilized the “process consultation model” of guiding stakeholder groups through the decision making process of identifying, designing, implementing and monitoring results of the pilot projects. Now, the WPM team will focus the process consultation model on the Center team who in turn will use this management consulting model for working with the stakeholder groups. The goal is that at the end of the WPM project the Meknes Center team will be capable of identifying projects, enlisting the required stakeholders, putting together financial packages, managing the implementation, monitoring results and reporting the results to stakeholder groups, especially the funding agencies. The marketing process will be transferred to the Meknes Center team to continue in the future.

## **6. Support to the Marketing Program**

While the WPM team will take on a new role in replicating the Nakhla soil erosion control project, they will continue to support the involved organizations.

### **6.1. To the Meknes Center for Land and Water Resources Management**

The WPM team will serve as partners to the Meknes Center. The first step will be to help establish the Center and then assist in conducting a needs assessment to determine what inputs from WPM and other resources will be needed to build the required capabilities and capacities of the Center to carry on the job. As time permits, the WPM team will backstop the Meknes Center team in identifying at least one new project and provide guidance to the Center in implementing it.

### **6.2. To the Replication Institutional System**

In this new phase the WPM will have minimal direct contact with many of the other stakeholder groups and ultimate beneficiaries, except for projects in the Souss-Massa region. Contacts with stakeholders in other regions will be through the Meknes Center. The whole approach will be to help the Center team to learn the process that WRS developed in creating the Nakhla pilot project so that the Center can continue to replicate the process successfully in the future.

## **7. Action Plan**

The following are the recommended steps which the WPM team working in partnership with the Meknes Center should carry out:

### **7.1. Formally Create the Center for Land and Water Resources Management**

The ENA team who served as consultants to the WRS project in the identification, design, implementation and monitoring of the Nakhla soil erosion control pilot project will have to take the leadership in creating the new Center. The WRS/WPM team will support this process. The Center for Land and Water Resources Management will either be a semi-autonomous center under the university umbrella or an independent NGO. This will be finalized during the process of creating the center. There are advantages and disadvantages for each form.

ENA already has examples of creating free standing centers which are outside the formal university budget, but still identified under the university umbrella. This is a common practice used by American Land-Grant universities and ENA has adapted practice to the Moroccan setting. If a university center is created, there will have to be a formal agreement prepared and approved by the university which states the structure, role and functions, financial arrangements, responsibilities of the center and university, etc. There will have to be agreements on cost sharing arrangements with participating faculty, the university and outside consultants used. Agreements will also be needed on the Center maintaining a separate budget to be used for marketing/advertising, travel, equipment and supplies, etc. Administrative procedures and approvals will have to be clearly stated in the agreement.

If the decision is made to create an NGO rather than university center, the formalities will have to be done to make sure it registered with the proper authorities. Being an NGO provides more flexibility than being under the university umbrella and having to follow certain university procedures, regulations and approvals. On the other hand, being an NGO could present an image that services are free or low cost. Among donors, NGOs also have an image of being poorly managed and are generally not entrepreneurial.

In either case – university center or an independent NGO – the new organization must be motivated to be the engine for replicating the Nakhla soil erosion control program. It must be entrepreneurial with financial incentives for its staff and consultants. It must be flexible to respond quickly and effectively to opportunities. The Center must be effectively managed and have first class financial procedures and reporting tools to meet the requirements of funding agencies.

### **7.2. Develop a Business Plan for the Center**

The WPM team and possibly a management consultant will help the Meknes Center develop a business plan. This plan will clearly state the mission of the Center, identify types of work it will perform, potential clients, services to make available, marketing/advertising materials to produce, charging rate structure for various types of services (including business development “door opener” free or subsidized services), staff (including a consultant roster), budget, and a plan of action. The business plan should be reviewed and updated every six

months. The business plan should also identify if a board of directors or advisory board should be appointed and, if so, who should be members and what would be their role.

### **7.3. Institutional Development Plan**

The business plan will serve as the base for determining what capabilities will be required. This is in terms of staffing, procedures, equipment and supplies, and other resources. The WPM team and possibly a management consultant should work with the Center to develop an institutional development plan. This plan should identify staff, prepare job descriptions, prepare a training plan, identify other consultancy inputs needed, determine facilities and equipment requirements, and identify needs for support from WRS and other groups to build the required capabilities and capacities. The plan should designate a leader/director of the Center. As common with universities, this position could be on a rotational basis where a new leader is designated every four or five years. Staff will have to be identified who will be responsible for marketing/advertising, operations and administration.

### **7.4. Establish Management, Financial and Reporting Procedures for the Center**

As part of implementing the Center's institutional development plan, it will be essential to develop effective management, financial and reporting procedures that meet the requirements of the partners, funding agencies, and clients. This is an area which universities and NGOs are traditionally weak. However, if the proposed entrepreneur approach is to be successful it will be essential that the Center is efficiently managed and that funding agencies and clients are confident that the finances are being used effectively. USAID and other donors may have programs available to help establish these procedures and train the Center staff.

### **7.5. Conduct Team Building and Other Staff Training**

Early in the launching of the Center it is recommended that an outside facilitator be brought in to conduct two team building workshops. The first would be for the core Center staff. This should be a two-three day workshop focusing on roles, responsibilities, working arrangements and communication among the core group and outsiders. The second workshop should be one day and involve the core staff and consultants from within the university and outside who the Center will be using. The purpose of this second workshop is to brief these people on the Center and its business plan, explain the financial and working arrangements with these consultants, and encourage them to become advocates and promoters of the Center's program. This last item would include providing these consultants with marketing materials and explain to them how to use them effectively. These consultants should understand that their marketing efforts will be good for the Center and them.

### **7.6. Assist in the Production of Advertising/Marketing Materials for the Center**

The business plan should include a list of marketing/advertising materials which the Center should develop. In the early days this should be a flier/brochure describing the Center and its services. There also needs to be a PowerPoint presentation with the same information which can be shown through a computer projector to large groups and as flip cards to small

groups or individuals. There needs to be “corporate image” materials such as a logo, slogan, business cards, letterhead stationary, envelopes and complimentary slips. As the program progresses, it will be important for the Center to prepare success story case studies. These case studies could be brochures and poster displays. There will also be a need to develop a basic design for report covers which on the outside contains the Center’s logo, slogan and basic information. On the inside of the cover there should be a short marketing statement promoting the Center as a service to Moroccan agriculture economic development and environmental protection. The GIS program should also be turned over to the Center so they can use it in marketing the program.

#### **7.7. Establish Working Relationships with Clients, Partners and Financial Institutions**

The business plan should identify priority sites where the Meknes Center should focus on for developing new soil erosion control projects. The WRS team should help the Center identify the first site and develop a plan for establishing the relationships with clients, local leaders, partners, governmental and non-governmental stakeholders, financial institutions and other groups who should be involved. This plan should spell out the role of each group, the benefits for their participation and a schedule for contacting them.

#### **7.8. Guide and Support First Replication Project**

As the Center team begins to establish the contacts and develop the program they should have periodic meetings with the WPM team to review progress being made and problems encountered. The WPM team should provide advice and guidance to the Center managers and determine if additional assistance is needed from WPM or other groups to move forward the project and deal making process. If possible, the first replication project should be in the Souss-Massa region where WPM will be focusing much of its energies. Other possibilities include other areas in the Nakhla region.

#### **7.9. Evaluate First Replication Project and Modify Business Plan**

Once the first replication project is launched, the Center and WPM teams should have a one day retreat to review the process used, what worked, what problems encountered, and refine the approach for the second project. It would be ideal if the second project was already identified and the work plan be developed for it as part of the retreat.

#### **7.10. Monitor the On-Going Replication Program**

During the life of the WPM project there needs to be periodic meetings—suggest quarterly—to review the Center’s program and revise the business plan and action plan. During these reviews additional institutional strengthening needs should be identified and a plan developed for WPM or another groups to provide the assistance.

#### **7.11. End-of-Project Reporting**

Before the end of the WPM project, a case study report should be made on the establishment and operations of the Meknes Center for Land and Water Resources

Management. This should contain lessons learned for establishing similar centers in the future, additional assistance the Center will need in the future and recommendations to the Center for future opportunities.