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PROJECT DESCRIPTION
TETOUAN URBAN DEVELOPMENT PROJECT
608-0194

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by Bettina Brunner

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Abbreviations and Acronyms

ANHI	Agence Nationale de Lutte Contre l'Habitat Insalubre
BDCL	Banque de Développement des Collectivités Locales
CDG	Caisse de Dépôt et de Gestion
CERAU	Centre d'Etudes de Recherches en l'Aménagement et l'Urbanisme
CCA	Cellule de Concertation et d'Assistance (for the ZAC)
DCFTT	Direction de la Conservation Foncière et des Travaux Topographiques
DCI	Dynamic Computer Industries
DEA	Directorate of Water and Sanitation
DGCL	Direction Générale des Collectivités Locales
Dh	Dirhams (\$1.00 = 8.5 Dh)
EA	Environmental Assessment
ESF	Economic Support Fund
ESRI	Environmental Systems Research Institute
ERAC	Etablissement Régional d'Aménagement et de Construction
FEC	Fonds d'Équipement Communal (Municipal Investment Fund)
GIS	Geographic Information System
GOM	Government of Morocco
HG	Housing Guaranty (shelter financing program of USAID)
IBRD	International Bank for Reconstruction and Development
ICMA	International City Management Association
INAU	Institut National d'Aménagement et d'Urbanisme
IRM	Information Resource Management
Mdh	Millions of Dirhams
MHAT	Ministère de l'Habitat et de l'Aménagement de Territoire
MOH	Ministère de l'Habitat
MOI	Ministère de l'Intérieur
MOF	Ministère des Finances
MUN	Municipality of Tetouan
RDE	Régie de Distribution d'Eau et d'Electricité
RHUDO	Regional Housing and Urban Development Office
RTI	Research Triangle Institute
SDAU	Schéma Directeur d'Aménagement Urbain
SIG	Système d'Information Géographique
SIU	Système d'Information Urbain
TG/SCL	Tresorie Générale/Service des Collectivités Locales
SPA	Special Project Account (PDU)
TUM	Techniques Urbaines Maroc
USAID	United States Agency for International Development
WASH	Water and Sanitation Health Project
ZAC	Zone d'Aménagement Concerté

1.0 Summary of Project Description

Background

The Tetouan Urban Development Project consists of two parts: The Housing Guaranty Project (HG-001), approved by USAID Morocco on September 26, 1985 and the Training and Technical Assistance Project (608-0194), signed in July, 1986. While the HG-001 project is briefly discussed in the present report, it is the subject of a separate project description.

Training and technical assistance was identified in the Tetouan Urban Development Project Paper in 1985, but no specific activities were programmed. Subsequent to the HG-001 signing, the USAID/Rabat determined that the success of the project depended on the establishment of an institutional model, and made institutional development into a separate project (608-0194). HG-001 and 608-0194 work in tandem to reach infrastructure and policy objectives in Tetouan.

The Training and Technical Assistance Project originally had a five-year life of project, to 1991, but strengthening the institutional framework was found to be more time consuming and involved than originally expected. Four supplements to the Project Paper extended the life of the project to September 30, 1994 and increased funding from \$800,000 to \$5,234,000. The project was thereafter extended by official memorandum and the project completion date is now June 30, 1996. While most technical assistance activities ended in 1993, the grant was extended for the environmental part of the program, consisting of Raleigh-Tetouan twinning activities and the Sewerage Master Plan studies, which are still ongoing.

608-0194 Project Design

Since no single entity within the GOM had the combination of statutory powers, financial resources, managerial functions or personnel to manage the project, 608-0194 proposed to strengthen the capacity of those agencies involved in the Tetouan project through:

- 1) short-term expatriate technical assistance to provide consultancy, on-the-job training, and orientation through seminars addressing project management and monitoring, financial management, cost recovery, revenue generation, community services, and selected technical topics related to ongoing implementation activities.
- 2) training for land registry and titling, and computerization of implementation functions for municipal financial impact analysis, financial management, in project appraisal, in delivery of municipal services, and in sewage treatment plant design and operations.
- 3) micro-computer equipment and training assistance.
- 4) An Environmental Assessment was originally scheduled to take place in 1987, prior to implementation of the waste water treatment plant and disposal system included in the project. The Sewerage Master Plan Study later incorporated an Environmental Assessment.

In order to carry out such a diverse Technical Assistance and Training program, USAID

signed four long-term contracts with U.S. consulting firms which in turn usually had sub-contracts with Moroccan firms. These contracts were with Research Triangle Institute (RTI), Bryler-Iskane-Sheladia, the City of Raleigh through the International City Management Association (ICMA), and Environmental Services Research Institute (ESRI).

Technical Assistance and Training Provided

The Technical Assistance and Training Program had a two-tiered approach of institution building at the central and local level. A combination of management training and computer training was provided to most Moroccan agencies involved in the Tetouan Urban Development Project. While 608-0194 has concentrated on the FEC, the Municipality of Tetouan, and ANHI for in-depth technical assistance, central-level counterparts were included for all activities.

Efforts to assist the FEC began in 1988, but it was with the restructuring by royal decree in 1992 that activities increased. Several reports examined the FEC and recommended improvements, however, the project was halted at the request of the new FEC General Manager awaiting recruitment of new staff. In 1995, Price Waterhouse was engaged at the request of the new General Manager to perform a FEC evaluation. Unfortunately, Price Waterhouse's initiatives were never implemented, and assistance to the FEC has been transferred to USAID project 608-0221.

In 1990, a comprehensive technical assistance and training program was launched in the Municipality of Tetouan dealing with administrative, technical, and financial city management. RTI, a U.S. consultant, won the three-year contract, and activities began in September of that year. As project assistant for the Tetouan Urban Development Project, ANHI staff was involved at every step of the way. With the division of Tetouan into one urban community with two communes (Commune Al Azhar and Commune Sidi Al Mandri), 608-0194 activities were split between the Tetouan Urban Community and Commune Al Azhar. The Urban Community now supervises the GIS, the landfill study and the sewerage master plan, with remaining 608-0194 activities and HG-001 activities under the supervision of Commune Al Azhar. Staff and project-related equipment was distributed among the three communes, so no single unit was able to perform prior project-related activities without the input of additional training and computer equipment. After the initial division, personnel was reorganized a second time following changes in legal authority for urban communities enacted by the Parliament. Much of the project momentum was lost in these changes.

GIS

In 1990, the Third Project Paper Supplement added a GIS system to the Municipality of Tetouan's tools. Planned in July 1990, installation of the system began in 1992. The Environmental Systems Research Institute (ESRI) was engaged to conduct the pilot project in conjunction with the National Urban Planning Research Center (CERAU). ESRI's task was to conduct a user needs assessments at the Municipality and CERAU, to install hardware and software, and to provide on-going training and support in the database design, data conversion and applications development. Difficulties were encountered including lack of data available and lack of pre-existing patterns of cooperation between Moroccan agencies with data.

A second GIS system was purchased in 1992 for the Sewerage Department (Service d'Assainissement) of the Urban Community of Tetouan to take advantage of the digital and graphic information collected during the Sewerage Master Plan Study, and to provide for future sewerage management needs. A pilot project of digitalization was completed in July, 1995. Since the pilot project began, the Urban Community has been unable to devote the time and manpower required for input of baseline data, so the project has stalled.

Following the municipal reorganization, both GIS systems were transferred to the Urban Community's GIS Department, for use with the Environmental Department and other municipal departments.

Environmental Activities

As the environmental aspects of the Tetouan Program became more important to the GOM and to USAID, the environmental component of 608-0194 increased. Project activities centered on two components: a sewerage master plan study and public works management assistance. Funds were used for the intensive Sewerage Master Plan Study with additional funds later allotted for procurement of commodities to reinforce Tetouan's Environmental Services Department's delivery capacity. Public works management assistance has been provided by the City of Raleigh, North Carolina, including recommendations for re-organization and purchase of public works equipment.

Conclusion

The ambitious Tetouan Urban Development Project was meant to test a wide range of service and shelter options. Enormous institutional strengthening was required, as evidenced by the summary of 608-0194 activities on the following page.

In many cases external events such as changes in procedures, changes in political leadership, and reorganization of Tetouan undermined project success. In fact, many project elements, especially in municipal management assistance were implemented and later discarded. Similarly, the GIS systems envisioned for municipal financial management in Tetouan was moved to a separate GIS section in the Urban Community following restructuring, and is no longer used for that purpose. However, it is now available for a wider range of users within all city departments.

It would have been impossible to predict these changes, and the project should still be considered a model for future technical assistance projects. Many ideas are germinating, and will take years to flower. For example, recently staff from the Direction Générale de Cadastre (National Land Survey office) visited Tetouan to view the GIS system and determine its suitability for the national office in Rabat. Solid and liquid waste continue to be widely discussed, and it is clear that in the near future Tetouan will search for alternative funding to construct a sewage treatment plant.

Summary of Major 608-0194 activities

Subject	Contractor	Description	Status
Cost Recovery assistance	TUM 87-89	Analysis & design of property tax collection system	completed
Property Tax Information System	RTI/TUM 1-5/88	Recovery of real estate taxes by computerizing property tax rolls	interrupted
Organizational Study	RTI 1-5/88	Analysis & Diagnosis of Municipal Administrative Structures	completed
Municipal Revenues Analysis & computerization	RTI/TUM 88-91	Analysis of taxes collected by MUN, 2 reports prepared, computerization of municipal revenue office (régie)	completed
Cost Recovery Software System	RTI/TUM 88-92	Install system in MUN to keep track of beneficiary payments	installed
Computer equipment procurement	DCI 87/88	10 computers w/ software installed	completed
ZAC Land Development Strategy	PADCO/TUM 88/89	land development strategy	completed
Technical support by City of Raleigh	ICMA/RAL	Review of Tetouan's Public Works Functions & procurement of sewer-related equipment	ongoing
Solid Waste Management Services Study	ICMA	Examination of MUN's solid waste w/recommendations	completed
GIS technical assist. & training	ESRI/CERAU	Procurement of GIS equip. & training; development of computer mapping for Tetouan (Dersa); procurement of hardware, software & training	pilot project completed
MIS training for MUN personnel	DCI	4-wk. training course on computers	completed
Sewerage Master Plan Study	WASH 1/89	analysis of RFP for SMP	completed
Tetouan Sewerage Studies	BIS 90-94	Study for Sewerage Master Plan	completed
Industrial Zone Study for Samsa to increase Project revenue stream	Rocd 94	<u>Etude de faisabilité pour la Creation d'une Zone d'Activités Economique et Industrielle à Samsa-Tetouan</u>	completed

Source: Adapted from Project Paper Supplement 4, 1992.

2.0 Background and Design of 608-0194

2.1 Background

The Tetouan Urban Development Program, a USAID-sponsored project, was formulated in response to the growth of bidonvilles and clandestine housing¹ and the general lack of affordable housing for low-income families in Morocco. Since the early 1980's, the Government of Morocco (GOM) has identified regularization of clandestine housing as a major priority, along with decentralization of Moroccan institutions. Municipal revenue generation and cost recovery have also emerged as important themes.

USAID staff begin serious discussions in 1981 with the Ministry of Housing, the Ministry of Interior, the Ministry of Finance, the Direction des Collectivités Locales and others to form a comprehensive shelter project in a Moroccan city. Tetouan was proposed by the GOM following events connected with monies previously obligated under the Housing Guarantee Loan Fund HG-001. The pilot project in Tetouan took shape between 1981 and 1985, and became an ambitious effort to test a wide range of interventions in a single city. It is the first large-scale project to combine upgrading and legalization of existing neighborhoods with the timely provision of serviced plots to guide future growth and meet future housing demand. The Tetouan Urban Development Project consists of two parts: The Housing Guaranty Project (HG-001), approved by USAID Morocco on September 26, 1985 and the Training and Technical Assistance Project (608-0194), signed in July, 1986. While the HG-001 project is briefly discussed in the present report, it is the subject of a separate project description.

Training and technical assistance was identified in the Tetouan Urban Development Project Paper in 1985, but no specific activities were programmed. Subsequent to the HG-001 signing, the Mission determined that the success of the project depended on the establishment of an institutional model, both at the central and local level, and made institutional development into a separate project (608-0194). HG-001 and 608-0194 work in tandem to reach infrastructure and policy objectives in Tetouan.

The Training and Technical Assistance Project originally had a five-year life of project, to 1991, but strengthening the institutional framework was found to be more time consuming and involved than originally expected. Four supplements to the Project Paper extended the life of the project to September 30, 1994 and increased funding from \$800,000 to \$5,234,000. The project was thereafter extended by official memorandum and the project completion date is now June 30, 1996. While most technical assistance activities ended in 1993, the grant was extended for environmental activities such as the Raleigh-Tetouan twinning activities (which had an extended start-up phase) and for the Sewerage Master Plan studies.

¹ Bidonvilles are usually unserviced neighborhoods of extremely rudimentary shelter, while clandestine housing is unserviced shelter built with more substantial materials but lacking land ownership and municipal authorization.

2.2 Changes in the Tetouan Environment

A major factor affecting project implementation was the change in political leadership in the Tetouan area and the division of the Municipality of Tetouan into an Urban Community with two communes, Al Azhar and Sidi Al Mandri underneath it. At the same time many local officials and officials at national agencies were changed, resulting in a down period until staff could be added and new policies formed. The situation was particularly serious for Tetouan, because Urban Development Project activities and materials were divided among the three new entities, which resulted in a loss of approximately 3 years. More importantly, the new political leadership had not been with the project since inception and were not motivated to continue the momentum developed under the previous leadership. Thus many management activities were discontinued in 608-0194 that had been in operation prior to the municipal reorganization.

2.3 Tetouan Urban Development Project Design

The overall program goal of the Tetouan Urban Development Project (HG-001 and 608-0194) is: To improve the shelter conditions of low-income households in urban areas of Morocco. The project's overall purposes are: a) upgrade a clandestine settlement and prevent its spread; b) develop a model of a comprehensive approach to urban development. Such a demonstration will:

- 1) Support Moroccan government policies which are aimed at solving the problem of the proliferation of clandestine settlements;
- 2) Increase the availability of affordable shelter for low-income families;
- 3) Support initiatives to provide critical environmental services to major urban centers;
- 4) Create an institutional structure capable of implementing similar projects in other urban areas;
- 5) Support Moroccan government efforts to strengthen local government ability to delivery services to residents on a cost-effective basis;
- 6) Support existing financial institutions and intermediaries that will strengthen private capital market initiatives in the shelter sector.

2.4 Design Components

The Tetouan Urban Development Project assists the Municipality of Tetouan in restructuring the Dersa-Samsa neighborhood, a clandestine neighborhood on steep hills overlooking the city center. Four major components were envisioned within the Project area:

- 1) An Upgrading Component in the Dersa-Samsa with infrastructure improvements, construction of 200 low income housing units, and registry of all land titles to legalize land occupancy and tenure.

- 2) A Zone d'Aménagement Concerté (ZAC), a joint public/private planning and financing project to supply primary infrastructure to private land.
- 3) A Sites and Services component which develops serviced housing plots for low-income families and generates cross-subsidies through the sale of valuable sites.
- 4) An Off-Site Infrastructure component consisting of construction of a municipal sewer collection and treatment system.

2.5 Overview of 608-0194

In order to complete the goals of the Tetouan Urban Development Project, extensive institutional development was required. USAID Rabat contracted with Research Triangle Institute (RTI) to provide a "Technical Assistance and Training Needs Assessment" of the Tetouan Urban Development Project, completed in March 1986 and Project 608-0194 was developed under this framework. Project 608-0194 is delineated in Project Paper Supplement 1. The specific Project Purpose for 608-0194 is to:

Strengthen the institutional capacities of the GOM agencies implementing the HG-001 Tetouan Urban Development Project and to assist the GOM policy makers to address the key urbanization issues including decentralization, local government development, environmental degradation, land tenure and public/private coordination.

Policy objectives include:

- 1) mobilize private sector financing of urban development;
- 2) increase municipal revenue generation;
- 3) decentralize financial management from central to local governments;
- 4) improve coordination among implementing agencies.

The Mission found that no single entity within the GOM had the combination of statutory powers, financial resources, managerial functions or personnel, so four GOM institutions were initially chosen to work together on the Tetouan project: Fonds d'Equipement Communal (FEC), Agence Nationale Contre l'Habitat Insalubre (ANHI), the Municipality of Tetouan (MUN), and the Régie Autonome intercommunale pour la Distribution d'Eau et d'Electricité (RDE). Specifically, 608-0194 proposed to strengthen the capacity of these four implementing institutions through:

- 1) short-term expatriate technical assistance to provide consultancy, on-the-job training, and orientation through seminars addressing project management and monitoring, financial management, cost recovery, revenue generation, community services, and selected technical topics related to ongoing implementation activities.
- 2) training for land registry and titling, and computerization of implementation functions for municipal financial impact analysis (FEC, ANHI, MUN), financial management

((FEC, ANHI, MUN), in project appraisal (FEC, ANHI), in delivery of municipal services (MUN, RDE), and in sewage treatment plant design and operations (MUN, RDE).

3) micro-computer equipment and training assistance to the FEC, ANHI, and MUN.

4) An Environmental Assessment was originally scheduled to take place in 1987, prior to designed implementation of the sewage treatment plant and disposal system included in the project. The Sewerage Master Plan Study later incorporated an Environmental Assessment.

2.6 Strengthening Moroccan Institutions

The most ambitious aspect of the Tetouan Urban Development Project is the attempt to bring together agencies at the national and local level in meaningful dialogue about municipal services. Originally four agencies² implementing the Tetouan Urban Development Project were chosen for assistance, including:

Fonds d'Equipement Communal (FEC)

The FEC had a major role in the Tetouan Project, acting as the intermediary financing institution between the U.S. Government and the Municipality for the loan guarantee fund. It was restructured in 1992, although changes did not involve fundamental modifications to its structure and means. It was targeted for assistance in redefining its role in light of the 1992 restructuring.

Agence Nationale de Lutte Contre l'Habitat Insalubre (ANHI)

The ANHI managed implementation of project elements, acting as a private consultant to the Municipality of Tetouan, managing technical studies and construction. Since their role in the project was so large, they received extensive technical assistance through 608-0194 in financial management, project monitoring and evaluation, and local management of urban development projects in collaboration with local units of government and beneficiaries. They also received data processing equipment and computerization training.

Municipality of Tetouan (MUN)

The Municipality, with overall responsibility for implementing the Tetouan Urban Development Project, received equipment and extensive training in financial management, public works management, systems operations, and computerization. Their environmental services division also received assistance in sewerage operations and Sewerage Master Plan development.

² For a short explanation of the responsibilities of each agency, see the Project Description for HG-001 by the author.

Régie de Distribution d'Eau et d'Electricité (RDE)

Established in 1970 to provide water and electricity in the Tetouan area, the Régie manages its water supply sources but purchases electricity. It was to have worked closely with the Municipality on infrastructure improvement in the project area, but the Régie's role in the project was not fully realized. For this reason the training and technical assistance provided was not as extensive as originally expected. Technical assistance provided under 608-0194 was limited to provision of computers, software and training for the RDE's system for customer accounts, inventory, and personnel.

3.0 Project Amendments

As the Tetouan Urban Development Project progressed, it became evident that an increase in funding was necessary to complete project goals. Also, with a growing recognition of the environmental dangers posed by rapid urbanization, environmental goals were added and funding increased to cover these supplementary activities.

3.1 Project Paper Supplement No. 2

Supplement number 2, approved in May 1989, added \$1 million in funding through an Economic Support Fund (ESF) grant, bringing the total project amount to \$1.8 million, and the project purpose was expanded to encompass broader policy considerations. The completion date was likewise extended from 1991 to 1994 to reflect the revised Tetouan Urban Development Project schedule. The major reasons for the change in funding is that implementation of the project objectives was found to be more complex than anticipated, such as land tenure and titling and delivery of municipal services. Also, several GOM agencies not identified in the original Project Paper came to play key roles in the project, and thus needed institutional strengthening as well. These are:

Direction Générale des Collectivités Locales (DGCL)

The DGCL oversees all local government affairs to assure they are consistent with national policies for decentralization. Supplement 2 provides technical assistance for information systems development and financial analysis, and 1 microcomputer system with training to allow information dissemination of project activities to municipalities throughout Morocco.

Direction de la Conservation Foncière et des Travaux Topographiques (DCFTT)

The DCFTT is under the Ministry of Agriculture. Under this project amendment a land registry study is included, along with international training.

Service des Collectivités Locales de la Trésorie Générale (SCL/TS)

The SCL/TS monitors and provides support for local governments in budgeting, accounting and local tax collection. This amendment budgeted for a microcomputer system and training to apply the Tetouan model for cost recovery of real estate taxes to other cities.

Centre d'Etudes de Recherches en l'Aménagement et l'Urbanisme (CERAU)

The CERAU, a research institute affiliated with the Ministry of the Interior, was also included as a project beneficiary for GIS training and equipment.

Funds were also provided for a study on ZAC National Policy for the Joint Committee of the Ministry of the Interior's Directorate of Urban Planning and Environmental Protection (DGUAT), and the Ministry of Housing's Program Planning Directorate (DPP) to define national urban planning policies and housing needs and strategies. This element was later removed, as discussed below.

3.2 Project Paper Supplement No. 3

Supplement No. 3 was approved in July 1990, adding additional ESF funds to further expand technical training and assistance activities from \$1.8 million to \$3.564 million. The major uses of the additional funds are:

- 1) development of a Geographic Information System (GIS) for the Municipality of Tetouan;
- 2) financing of the foreign exchange component of the Sewerage Master Plan Study;
- 3) additional studies leading to privatization of municipal services;
- 4) expanded technical assistance and training; and
- 5) increased project management costs.

Supplement 3 noted that following PADCO's study of the ZAC, which presented key policy issues, no National ZAC Policy Study was needed, since parts of the PADCO study were incorporated into the draft national urban planning law.

Supplement 3 also added the following activities for the FEC to assist with transformation into an autonomous municipal development bank: 1) 10 studies during 3 years; 2) FEC management studies; 3) Training; and 4) a Management Information System (MIS).

3.3 Project Paper Supplement No. 4

The Fourth Project Paper Supplement increased funding from \$3.564 million to \$5.264 million, and the project life was extended to September 30, 1994. The emphasis in this supplement, signed on July 7, 1992, is on improved environmental services. This can be explained by a general USAID shift into environmental projects, and studies of the Tetouan area which showed Tetouan's aquatic environment was under significant pressure due to urban growth and municipal waste policies. Major activities for the additional funds include:

- 1) increased activities with the Sewerage Master Plan Study;
- 2) Support of the Agreement of International Cooperation between the City of Raleigh, North Carolina and the Municipality of Tetouan for technical assistance in liquid and solid

waste management;

- 3) Purchase of additional commodities, including computer equipment, five all-terrain vehicles, and a second GIS system is proposed for Tetouan's Environmental Services Department;
- 4) Funding for additional studies on solid waste management.

3.4 Extensions beyond the Fourth Amendment

In May, 1994, in an Action Memorandum to the Mission Director, the Regional Housing Officer for USAID/Rabat requested an extension of 608-0194 from September 30, 1994 to September 30, 1995 in order to assure appropriate monitoring and to make up for unanticipated delays. The project was extended by this method again from September 30 to December 31, 1995 and finally to June 30, 1996.

In 1992 an Impact Evaluation of USAID's shelter programs was carried out by a team of U.S. and Moroccan consultants. While 608-0194 is described in the report, it is not evaluated, per se. Most of the document deals with the economic impacts of shelter activities on job creation.

3.5 Consultants

In order to carry out such a diverse Technical Assistance and Training program, USAID signed four contracts with U.S. consulting firms which in turn usually had subcontracts with Moroccan firms.

- 1) Research Triangle Institute (RTI) was responsible for municipal management, computerization and training, which it undertook in coordination with Techniques Urbain Maroc, a local consulting company.
- 2) Bryler, an engineering firm, formed the American-Moroccan consortium Bryler-Iskane-Sheladia to handle environmental studies and the Sewerage Master Plan for the Municipality of Tetouan.
- 3) International City Management Association (ICMA) was responsible for coordination of the City of Raleigh, North Carolina public works assistance component.
- 4) Environmental Services Research Institute (ESRI) handled the GIS component of the Tetouan Urban Development Project.

Other short-term contracts included PADCO for a two-phase study of the Zone d'Aménagement Concerté (ZAC), Louis Berger International and Price Waterhouse for FEC studies, and local consultants such as Dynamic Computers for hardware installation.

4.0 Technical Assistance and Training Provided

The Technical Assistance and Training Program had a two-tiered approach of institution building at the central and local level. A combination of management training and computer training was provided to most Moroccan agencies involved in the Tetouan Urban

Development Project. Extensive international training was also provided through 608-0194, especially to the DEA. Annex 1 shows 608-0194 international travel and training by agency. While 608-0194 has concentrated on the FEC, the Municipality of Tetouan, and ANHI for in-depth technical assistance, central-level counterparts were included for all activities. The following section explains specific assistance to the FEC, the Municipality, and ANHI.

4.1 The FEC

Assistance to the FEC emerged as a major concern in 1988 prior to FEC restructuring by royal decree in 1992. Two reports examining the feasibility of creating a municipal development bank were undertaken by Trans-Atlantic Consulting Services. In 1990, Project Paper Supplement 3 provides a four part program to assist the FEC in its transformation into an autonomous banking institution capable of channeling increased resources to municipalities, consisting of:

- a) a study fund to finance project evaluation studies for eligible municipalities;
- b) FEC management studies to assist with internal operations and resource mobilizations;
- c) training designed to improve FEC operations;
- d) MIS including needs assessment, procurement of appropriate equipment and training.

A technical assistance program was put together to reorganize and improve operating efficiency of the FEC, begun with Louis Berger International in 1991. Outputs included two reports: Strengthening the Operational Capabilities of the FEC, 1993, and a draft Operational Procedures Manual 1993. Assistance also included procurement and installation of computers and software and a Management Information System.

The project was halted awaiting recruitment of new staff. Price Waterhouse was engaged at the request of the new FEC Director for a reorganization study in 1995, but their initiatives were never implemented, and assistance to the FEC has been transferred to USAID project 608-0221.

4.2 Municipality of Tetouan

In 1990, a comprehensive technical assistance and training program was launched in the Municipality of Tetouan dealing with administrative, technical, and financial city management. RTI, a U.S. consultant, won the three-year contract, and activities began in September of that year. ANHI, as the implementing agency for the Tetouan Urban Development Project, was involved in all municipal-related technical assistance and training. Thus ANHI staff also benefited from any activities described in this section.

Many tasks were modified following evolution of project design. For example, assistance for the Municipality of Tetouan in improving budget preparation was postponed awaiting national efforts to modify local government structures. Also, while a wide range of management functions were to have been linked by computerization, in the final design, computerization was limited to tax management, revenue management, cost recovery, and

technical services performance measurement. Since assistance to the Municipality was such a major activity in the 608-0194 project, results are given below by category.

4.2.1 Management System Studies

In 1990, RTI visited the Municipality of Tetouan to analyze organizational structures and make recommendations to optimize resources and improve effectiveness. A functionally-oriented organizational structure was advanced, in addition to modifications to local and national level policies. Reports written under this component include: Analysis of Municipal Administrative Structures (March 1991), Executive Summary (translated into Arabic), and Reorganization of Municipal Structures (1992). The feasibility of performance measures was investigated for solid waste management, wastewater management, street construction and management, and vehicle fleet management. A report was written and a seminar held in 1991.

Little was done with the RTI reports until GOM decentralization efforts led to division of municipalities throughout Morocco. At the central level, several meetings with DGCL officials took place to encourage implementation of report recommendations. However, it was following reorganization of Tetouan into an overarching Urban Community comprising two communes (Al-Azhar and Sidi Al Mandri) in 1992 that the reports were most useful. Communes Al Azhar and Sidi Al Mandri used the reports as the basis for their organizational charts and performance measures. At Sidi Al Mandri's request, RTI provided a tailored report entitled: Reorganization of Municipal Structures: City of Sidi Al Mandri (1993).

4.2.2 Cost Recovery studies

RTI developed a system for the recovery of investments following efforts to establish a consolidated beneficiary file, based on records of the RDE, and information from the land survey conducted by ANHI for the HG-001 program. Customized software was prepared to manage beneficiary files for project cost recovery. However, for political reasons beneficiary repayment was discontinued, so few beneficiary files to date have been completed.

Efforts also concentrated on the régie municipale, or municipal revenue service. Software was installed in 1992, and for six months the revenue reorganization of Tetouan, however, the original staff was divided between the two communes. Thus the application is no longer operational, although Sidi Al Mandri at one point expressed interest in completing the computerization process for both revenue and accounting functions.

4.2.3 Property Tax Software development

Managing the local property-based taxes (taxe urbaine and taxe d'édilité) had a high priority in the Tetouan Urban Development Program. RTI was engaged to produce an operational software for managing property taxes, but the system was not implemented for many reasons. One of the major reasons for the failure of this project component was that tax records are controlled at the central level, and receiving or updating information is extremely time-consuming. Another problem was that the Municipal Tax Collector, acting as an official responsible to the central government, was unable to take necessary

initiatives to identify and collect property tax in arrears. In 1993, the Ministry of the Interior modified municipal accounting procedures, and removed certain taxes from municipal domain. The property tax software developed became obsolete.

A feasibility study for an industrial development zone (Etude de faisabilité pour la Création d'une Zone d'Activités Economique et Industrielle à Samsa-Tetouan) was performed in 1994 by a Moroccan consultant at the request of Tetouan. While not directly related to the financial, technical, and administrative assistance provided by RTI, it illustrates the development of Tetouan's ability to analyze its financial situation and determine ways to improve it. An industrial zone has been picked in Samsa, with the idea of generating revenue in the Project area to subsidize other activities.

5.0 GIS Assistance

A Geographic Information System (GIS) is an organized collection of computer hardware, software, and geographic data to capture, store, update, manipulate, analyze, and display all forms of geographically referenced information. A GIS system was initially introduced into the Tetouan Urban Development Project to manage urban activities such as land use and infrastructure development as the model for GIS technology at the municipal level of government in Morocco.

5.1 GIS as Municipal Management Tool

In 1990, the Third Project Paper Supplement added a GIS system to the Municipality of Tetouan's tools. Planned in July 1990, installation of the system began by Universal Computer, a Moroccan consulting firm in 1992. The Environmental Systems Research Institute (ESRI) was engaged to conduct the pilot project in conjunction with the National Urban Planning Research Center (CERAU) in April of the same year. CERAU had already received UNDP and French Government assistance for a GIS laboratory, and was uniquely suited to provide technical assistance for the Municipality's GIS unit once they became familiar with the ARC/INFO system. USAID contracted with them for technical support, and furnished them with GIS equipment in lieu of payment.

ESRI's task was to conduct a user needs assessments at the Urban Community and CERAU, to install hardware and software, and to provide on-going training and support in the database design, data conversion and applications development. Key CERAU and Urban Community personnel also traveled to ERSI's Redlands, California training center in 1992 and again in 1993 in conjunction with the ESRI Annual Conference. Training courses included: 1) Conceptual Database Design; 2) Introduction to ARC/INFO; 3) Database Physical Design; 4) Database Automation; 5) ARC Macro Language (AML); and 6) Refresher Training.

The database layers automated as part of the pilot GIS effort were: Water pressure zones, water basins, administrative areas, voting districts, Census area boundaries, zoning and management planning, electricity network, sewer and water drainage, drinking water network, and land parcels. The pilot project covered approximately 50 hectares, with the intention of expanding to cover the entire Urban project area through time. However, difficulties were encountered including lack of data available at the Urban Community and lack of pre-existing patterns of cooperation between Moroccan agencies with data.

5.2 GIS as Environmental Management Tool

A second GIS system was purchased in 1992 for the Sewerage Department (Service d'Assainissement) of the Urban Community of Tetouan as part of the Sewerage Master Plan study undertaken by the Bryler Group. During the various phases of the Sewerage study, a vast amount of material was collected on climatology, topography, geography, hydrology, biology, socio-economics, and demographic features of Tetouan. To take advantage of this digital and graphic information, and to provide for future sewerage management needs, the same GIS system discussed above, ARC/INFO was purchased and adapted for environmental applications. A pilot project of digitalization was completed in July, 1995. Since the pilot project began, the Urban Community has been unable to devote the time and manpower required for input of baseline data, so the project has stalled.

Current Status of Two GIS Systems

Following the municipal reorganization, Tetouan's Environmental Department's GIS system became part of the Urban Community's domain, since the Urban Community was now responsible for liquid and solid waste management in Al Azhar and Sidi Al Mandri. The GIS system used for municipal management was later transferred to the Urban Community and is now housed in the GIS Department, for use with the Environmental Department and other municipal departments.

6.0 Environmental Technical Assistance

As the environmental aspects of the Tetouan Program became more important to the GOM and to USAID, the environmental component increased. The USAID/Washington-financed study of the "Impact of Urbanization on Natural Resources" (January, 1992) illustrated the level of deterioration of the Tetouan coastal zone, in particular the pollution of the Martil River and contamination of groundwater aquifers.

Project activities centered on two components: a sewerage master plan and public works management assistance. Funds were used to elaborate the terms of reference for a liquid sewerage master plan (WASH, 1989), and for the intensive Sewerage Master Plan Study by a Moroccan-American engineering consortium, Bryler-Iskane-Sheladia. Additional funds were allotted in the fourth amendment to the Project Grant for procurement of commodities to reinforce Tetouan's Environmental Services Department's delivery capacity. Included in the amendment are provisions for computer equipment, a flushing truck, laboratory equipment, GIS hardware and software (discussed above), water flow meters, and all terrain vehicles.

Twinning Program

In July, 1991, the Public Works Director of the City of Raleigh, North Carolina undertook a public works assessment in Tetouan, (Review of Tetouan's Public Works Functions/Future Wastewater Services Division) recommending reorganization of its environmental services to improve waste management. In response, the Municipality of Tetouan created the Environmental Services Department responsible for solid and liquid waste management, parks and nurseries, a first for Morocco. The following year, a delegation from the Municipality of Tetouan visited Raleigh and signed an Agreement of

International Cooperation to facilitate a twinning relationship between the two cities. The relationship allows the Municipality of Tetouan to learn techniques of liquid and solid waste disposal by a city of approximately the same size with a nationally-recognized state of the art environmental program. The Agreement has been very slow to implement due to the lack of compatibility between USAID/Washington procedures and City of Raleigh procedures. Procurement of necessary equipment was also particularly time-consuming because many U.S. vendors were unwilling to ship product based on a USAID Letter of Commitment.

The City of Raleigh was responsible for the procurement of all water quality monitoring and sewerage system maintenance equipment. Technical assistance from Raleigh personnel was mobilized through a buy-in to ICMA's centrally funded project. Purchases to date through the City of Raleigh include: 1 combination sewer jet/vacuum truck, 2 sewer jet trailers, 4 manual sewer rod trailers, tripods with hoists, gas monitors, blowers, cones, hard hats, traffic vests, gloves, protective eyewear.

In the Fall of 1994, training began on operation of public works equipment, including: 1) Fall 1994: Operation of sewer rodding units, safety equipment and safety procedures; 2) Fall 1995: Operation of trailer-mounted sewer jet flush units and vacuum unit. (This was damaged in transit from the US to Tetouan, and the City of Raleigh is pursuing a monetary settlement in lieu of repairs for approximately \$10,000.)

When the public works equipment arrived, it became clear that a 1-ton truck was needed to pull the flush trucks. Since funds remain in 608-0194, two trucks fitting the requirements are being ordered, and will arrive before project termination in June, 1996.

The Urban Community of Tetouan has reserved two houses within the Project area (part of the 200 dwellings built) for a water quality laboratory, which the City of Raleigh is to organize. Some of the laboratory materials have already arrived, and were delivered to the Environmental Department of the Urban Community of Tetouan. At this point there is no clear indication that the two houses chosen for the laboratory will in fact be converted and used. Should the water quality laboratory not become a reality in the Urban Community, discussions are underway with the Abdel Malek Essadi University in Tetouan, which is interested in housing the water quality laboratory as a functioning learning site. Details of this arrangement have yet to be worked out.

6.2 Sewerage Master Plan Study

As explained above, Tetouan's waste water situation was identified as a significant environmental risk early in 608-0194. In 1989, a Water and Sanitation for Health Project (WASH) Field report was conducted to verify the completeness and accuracy of the terms of reference for the Tetouan Sewerage Master Plan and to help finalize them. Negotiations with Groupement Bryler-Iskane-Sheladia, the U.S.-Moroccan engineering consortium, began in 1990, when the Municipality of Tetouan received their proposal. The contract was awarded and grant resources financing the foreign exchange component of the Tetouan Sewerage master Plan began in April, 1991 (\$1,057,000 out of \$1.977 million). Project Paper Supplement 4 added funds for additional waste studies and equipment, such as a teleinspection vehicle, flow meters, and water analysis equipment.

Project Paper Supplement One set aside \$50,000 for an environmental assessment of the Tetouan area. This was later put on hold pending the outcome of the Bryler Group's Sewerage Master Plan Study, which incorporated an environmental assessment within the context of the study. Called Etude du Schema Directeur d'Assainissement Liquide de la Ville de Tetouan, the studies were undertaken from 1992 to 1994. An implementation plan for the entire project is now being finalized. Activities in the studies are broken down into six major categories, with subcategories under most. Study A provides a diagnostic of existing sewage treatment. Study B presents sewage treatment options for Tetouan. Study C compares the options in order to select appropriate one. Study D concerns the establishment of a master plan for liquid waste treatment. Study E is the pre-project summary. Study F concerns institutional studies and cost recovery. While too detailed to include here, Annex 3 provides the titles in French and English of each report.

One of the issues that slowed down the Sewerage Master Plan study was the debate over whether municipalities or Régies would be responsible for sewerage services in Morocco. In 1991, Tetouan decided to keep sewerage responsibilities, but this led to friction with the RDE through time.

With the Sewerage Master Plan study coming to an end, the implementation phase should logically begin. Approximately \$7.5 million remains in the HG-001 loan fund to finance a waste water treatment plant, but the Urban Community of Tetouan failed to request the loan by the December 31, 1995 deadline, so it will not be used. The main reason for this is Tetouan's lack of funds. Also, in a recent move to consider a sewage treatment in a regional context, Tetouan Urban Community and other entities in the region have created a "syndicat de communes" in conjunction with the RDE to plan future sewage needs. At the national level, institutional arrangements for the treatment of sewage are in a state of transition. Actions have been taken to transform the Directorate of Water and Sanitation (DEA) in the Ministry of the Interior into a National Sanitation Agency.

6.3 Solid Waste

Beginning in 1990, more attention was paid to improving the solid waste situation in Tetouan. In 1991, ICMA completed a solid waste management service study to assist the Municipality of Tetouan's Public Works Department. Results of the study were to have been used to develop a privatization plan for solid waste collection and disposal services. Two other studies were performed by RTI, and a large conference was held in Rabat in 1992 bringing together officials throughout Morocco for the first time to discuss solid waste issues. From the reports, one site in Tetouan was chosen for the next solid waste landfill. Preliminary discussions were halted due to outcry from residents, and since that time the project has been shelved.

7.0 Current 608-0194 Funding Situation

One of the most difficult aspects to quantify in any USAID project is the amount of institutional development that has occurred as a result of a specific intervention, especially with the dynamic forces at play in the Moroccan equation. The above sections by subject heading serve to evaluate the level of project implementation, as a way of measuring follow-through of activities. Looking at funding at near-end of project, as of September

1995, the total Government of Morocco contribution exceeded Project Paper targets by \$.8 million, with contributions to date of approximately \$3 million, mainly through financing the costs of the Sewerage Master Plan Study and providing office space and furnishings in the Municipality of Tetouan. This is evidence of the GOM's belief in the importance of the project.

As of November 20, 1995, USAID had expended \$4.36 million of the \$5.264 Million grant. The following table provides an expenditure breakdown as of November 1995. Technical assistance was the largest spending category, following by environmental assessment, commodities, then training. With the funds remaining until June 30, 1996, the following activities are in the pipeline. (Figures are approximations): \$90,000 for the Raleigh-ICMA contract, \$200,000 for the Bryler Group contract, \$200,000 for water quality laboratory equipment, \$60,000 for two trucks for sewage equipment, and \$100,000 for the final audit.

608-0194 Financial Situation, 11-20-95

Budget Category	Expenditures to date	Percent of Total
Technical Assistance	\$1,894,544.00	43 %
Training	\$283,129.00	6.5 %
Commodities	\$824,931.00	19 %
Environmental Assessment	\$1,054,373.00	24 %
Audit	\$0.00	0
Contingencies	\$16,369.00	.05 %
Other	\$288,844.00	6.6 %
TOTAL	\$4,362,190.00	100 %

Source: USAID internal documents.

8.0 Conclusion

The ambitious Tetouan Urban Development Project was meant to test a wide range of service and shelter options. Enormous institutional strengthening was required, as evidenced by the following summary of 608-0194 activities.

Summary of Major 608-0194 Activities

Subject	Contractor	Description	Status
Cost Recovery assistance	TUM 87-89	Analysis & design of property tax collection system	completed
Property Tax Information System	RTI/TUM 1-5/88	Recovery of real estate taxes by computerizing property tax rolls	interrupted
Organizational Study	RTI 1-5/88	Analysis & Diagnosis of Municipal Administrative Structures	completed

Municipal Revenues Analysis & computerization	RTI/TUM 88-91	Analysis of taxes collected by MUN, 2 reports prepared, computerization of municipal revenue office (régie)	completed
Cost Recovery Software System	RTI/TUM 88-92	Install system in MUN to keep track of beneficiary payments	installed
Computer equipment procurement	DCI 87/88	10 computers w/ software installed	completed
ZAC Land Development Strategy	PADCO/TUM 88/89	land development strategy	completed
Technical support by City of Raleigh	ICMA/RAL	Review of Tetouan's Public Works Functions & procurement of sewer-related equipment	ongoing
Solid Waste Management Services Study	ICMA	Examination of MUN's solid waste w/recommendations	completed
GIS technical assist. & training	ESRI/CERAU	Procurement of GIS equip. & training; development of computer mapping for Tetouan (Dersa); procurement of hardware, software & training	pilot project completed
MIS training for MUN personnel	DCI	4-wk. training course on computers	completed
Sewerage Master Plan Study	WASH 1/89	analysis of RFP for SMP	completed
Tetouan Sewerage Studies	BIS 90-94	Study for Sewerage Master Plan	completed
Industrial Zone Study for Samsa to increase Project revenue stream	Rocd 94	<u>Etude de faisabilité pour la Creation d'une Zone d'Activités Economique et Industrielle à Samsa-Tetouan</u>	completed

Source: Adapted from USAID Project Paper Supplement 4, 1992.

In many cases external events such as changes in procedures, changes in political leadership, and reorganization of Tetouan undermined project success. In fact, many project elements, especially in municipal management assistance were implemented and later discarded. Similarly, the GIS systems envisioned for municipal financial management in Tetouan was moved to a separate GIS section in the Urban Community following restructuring, and is no longer used for that purpose. However, it is now available for a wider range of users within all city departments.

It would have been impossible to predict these changes, and the project should still be considered a model for future technical assistance projects. Many ideas are germinating, and will take years to flower. For example, recently staff from the Direction Générale de Cadastre (National Land Survey office) visited Tetouan to view the GIS system and determine its suitability for the national office in Rabat. Solid and liquid waste continue to be widely discussed, and Tetouan is still interested in constructing a sewage treatment plant.

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Annex 1

International Travel and Training 608-0194 from 1987 to Present

Subject of Training	Date/Place	Participants
Urban Services Delivery	July, 87/Washington, D.C.	1-RDE 1-DCL
Regional Decentralization Conference	Oct., 87/Abidjan, Ivory Coast	1-MUN 2-DCL
Property Tax Software Dev.	May, 88/Research Triangle Park, N.C.	1-TG
Regional Urban Land Workshop	June, 88/Lisbon, Portugal	1-ANHI 1-DCL
Management of Urban Development Projects	Nov, 88/Tunis, Tunisia	1-FEC 2-ANHI 2-MUN 1-Other
Cost and Price of Water in Urban Areas	Dec, 88//Paris, France	1-RDE 2-ANHI 4-MUN 1-DCL
Loan Closing/\$8.5 m HG Borrowing	May, 90/Washington, D.C.	1-FEC
Public and Private Sector Strategies for Developing Countries	June, 90/California	1-ANHI 1-MUN
Sewerage Systems training	June, 90/Florida	1-MUN
Francophone Development Management Seminar	June, 90/U. of Pittsburg	1-MUN
Tax Collection software training	Jan, 91/Raleigh, N.C.	1-MOI
Housing Finance Course	May, 91/U. of Pennsylvania	1-FEC
Municipal Financial Analysis Seminar	Oct., 91/Rabat	3-FEC 3-DGL 5-DGCL 2-MOF 1-MOI 2-TG 1-Other
Preparation for Solid Waste Seminar	Jan, 92/Washington	1-MOI
Waste water treatment training	Jan, 92/Raleigh	1-MUN
Raleigh-Tetouan Agreement Signing	March, 92/Raleigh	3-MUN
ESRI GIS User Conference	June, 92/Palm Springs CA	1-MOI 2-CERAU 3-MUN
Infrastructure Finance Seminar	May, 92/Tunisia	1-MUN 1-FEC 1-MOI
Francophone Management Dev. Seminar	July, 92/Pittsburg	2-MUN 1-ANHI

Advanced landfill management	93/Washington	1-MOI 1-Other
ARC INFO Users Conference	May, 93/Palm Springs	5-MUN 1-MOI 3-CERAU
Urban Mgt. Of household refuse	Nov, 93/Ankara, Turkey	2-MUN
Regional Waste Water Seminar	June, 94/Tunis	1-MOI 1-FEC 3-ONEP
Sustainable Urban Development Seminar	Sept., 94/Cairo	1-RED
Private sector involvement in solid waste	March, 95/Tunis	2-MUN 1-DGCL 2-Other
ESRI User Conference	May, 95/Redlands, CA	1-MOI
GIS training at ESRI labs	Oct, 95/Redlands, CA	1-MUN
Wastewater Seminar	Nov, 95/Tunis	2-MOI
Solid Waste Regulations	Jan, 96/Tunis	1-MOI

Source: USAID, Project Paper Supplement 4, 1992; Environment and Urban Programs file.

Annex 2

Sewage Master Plan Reports

From 1992 to 1994, the U.S. Moroccan engineering consortium Bryler-Sheladia-Iskane undertook a 6-part study of the Tetouan area, under the title Etude du Schema Directeur d'Assainissement Liquide de la Ville de Tetouan. Titles of each report in English are included here, with French titles in parentheses.

Report Titles:

Study A provides a diagnostic of existing sewerage treatment.

A-1 and A2 Collection and Critical Analysis of Available Information (Collecte et Analyse Critique de l'Information Disponible)

A-3 Existing Sewerage Treatment (Etude de l'Assainissement Existant,) Volume I, Volume II

A-4 Industrial Survey (Enquête Industrielle)

A-5 Pollution Study (Etudes des Pollutions)

A-6 Study of Potential Reuse of Purified Waste Water and Mud (Etude des Potentialités de Reutilisation des Eaux Usées Epurée et des Boues)

A-7 Use of Sewage and Refuse (Etudes des Usages de l'Eau et des Rejets) Volume 1, Volume II

A-8 Urban Analysis (Analyse Urbain)

A-9 Water and Refuse Purifying Sites (Etudes des Sites d'Epuration et de Rejet)

A-10 Study of Criteria for Design and Size of Works (Etude des Critères de Conception et de Dimensionnement des Ouvrages)

A-11 Establishment of Unitary Costs (Etablissement des Coûts Unitaires)

Study B presents sewerage treatment options for Tetouan.

B1 Comprehensive Study of Integrated Sewerage System (Etude Globale des Systèmes Intégrés d'Assainissement)

B-2 Identification of Sewerage Variants (Identification des Variantes d'Assainissement)

B-3 Selection of Preliminary Sewerage Variants (Première Selection des Variantes de

Systemes Envisageables)

Study C compares the options to select an appropriate one.

C-1 Technical Study of Proposed Variants (Etude Technique Préliminaire des Variantes Proposées)

C-2 Economic Comparison of Proposed Variants (Comparaison Economique des Variantes Proposées)

C-3 Selection of Best Variant (Selection de la Variante à Retenir)

Study D concerns the establishment of a master plan for liquid waste treatment.

D-1 Extensive Study of Variant Chosen (Etude Approfondie de la Variante Retenue)

D-2 Breakdown of Variant and Implementation Steps (Décomposition de la Variante en Etapes de Réalisation)

D-3 Cost Breakdown (Détermination des Coûts)

Study E is the pre-project summary.

E Technical Study of On- and Off-Site Work (Etudes Techniques des Ouvrages de l'In-Site et Hors-Site)

Study F concerns institutional studies and cost recovery.

F1 Organizational Study and Means of Sewerage Service (Etude de l'Organisation et des Moyens du Service d'Assainissement)

F2 Cost Recovery Study (Etude de Recouvrement des Coûts)