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U.S. ECONOMIC AND TECHNICAL ASSISTANCE TO MOROCCO

FYs 1975 - 1986

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TABLE OF CONTENTS

	<u>PAGE</u>
PREFACE	iii
FOREWORD	iv
<u>Chapter One: AGRICULTURE</u>	
<u>Dryland Agriculture</u>	
0131 Extended Agricultural Development	1.1.1
0136 Dryland Agriculture Applied Research	1.2.1
0145 Range Management Improvement	1.3.1
<u>Irrigated Agriculture</u>	
0126 Triffa Irrigation Loan	1.4.1
0127 Doukkala Irrigation Project	1.5.1
* 0138 Figuig Rural Development	1.6.1
<u>Agricultural Education</u>	
088 Assistance to Higher Agricultural Education	1.7.1
0122 Agricultural Research and Training	1.8.1
0134 Higher Agricultural Education	1.9.1
* 0138 Cidera School Grant	1.10.1
0160 Agronomic Institute	1.11.1
<u>Agricultural Policy and Planning</u>	
0182 Planning, Economics and Statistics for Agriculture	1.12.1
<u>Agriculture Credit</u>	
0184 Drought Recovery Credit Project	1.13.1
<u>Chapter Two: POPULATION AND FAMILY PLANNING</u>	
0109 Demographic Research Center	2.1.1
0112 Family Planning Support, Phase I	2.2.1
0155 Family Planning Support, Phase II	2.3.1
0162 Statistical Services	2.4.1
0171 Family Planning Support, Phase III	2.5.1
<u>Chapter Three: HEALTH AND NUTRITION</u>	
* 0123 Nutrition Grant	3.1.1
* 0132 Project Development and Support	3.2.1
0135 Nutrition Systems Study Unit	3.3.1
* 0141 Nutrition Grant	3.4.1
0151 Health Management Improvement	3.5.1
<u>Chapter Four: EDUCATION AND HUMAN RESOURCES DEVELOPMENT</u>	
<u>Nonformal Education</u>	
0139 Nonformal Education for Women	4.1.1
0147 Industrial and Commercial Job Training for Women	4.2.1
0157 Social Services Training	4.3.1
* 0166 Moroccan Women's Union	4.4.1

<u>Participant Training</u>	
0149	Development Training and Management Improvement 4.5.1
0178	Sector Support Training 4.6.1

<u>Research</u>	
0154	Social and Economic Research 4.7.1

<u>Community Development</u>	
0181	Small Project Assistance (Peace Corps) 4.8.1

Chapter Five: ENERGY AND NATURAL RESOURCES

0159	Renewable Energy Development 5.1.1
0176	Conventional Energy Management and Training 5.2.1
0180	Energy Planning Assistance 5.3.1
0190	Winter Snowpack Augmentation 5.4.1

Chapter Six: HOUSING AND URBAN DEVELOPMENT

0156	Low-Cost Housing Improvement 6.1.1
HG-001	Tetouan Urban Development 6.2.1
HG-002	Morocco Low-Cost Shelter Program 6.3.1
0194	Tetouan Urban Development 6.4.1

Chapter Seven: ECONOMIC POLICY AND PRIVATE ENTERPRISE DEVELOPMENT

* 0187	Small Scale Private Enterprise Development 7.1.1
0189	Private Sector Export Promotion 7.2.1
0191	Economic Policy Analysis and Support 7.3.1

Chapter Eight: PL 480 - FOOD FOR PEACE

TITLE I	8.1.1
TITLE II	8.2.1

TABLES

Table I - U.S. Economic Assistance to Morocco, 1975-1986
(Development Assistance, Food for Peace, Economic Support Funds and Housing Guaranties - Loan/Grant Split)

Table II - U.S. Economic Assistance to Morocco, 1975-1986
(By Categories of Assistance)

*Projects implemented by private voluntary organizations

PREFACE

This historical summary, U.S. Economic and Technical Assistance to Morocco: Volume II, is intended to give the reader an overview of the development activities of the U.S. Agency for International Development in Morocco during the period 1976-1986. Volume I summarized the economic and technical assistance which the United States provided to Morocco indirectly through France, 1948-1954, as well as that provided directly to Morocco in a bilateral program, 1957-1975. Both volumes provide useful information on the AID program for new Mission employees, project contractors, short-term visitors from AID/ Washington, interested parties within the Government of Morocco and other donors and researchers. Information for the compilation of Volume II has been taken from: Project Papers, Project Agreements, Country Development Strategy Statements, Annual Budget Submissions, Project Evaluation Summaries, Mission Portfolio Reviews and fiscal data reporting forms. It is hoped that this succinct presentation of AID's work in Morocco during the period 1976-1986 will provide a context within which to assess on-going as well as future development efforts. This volume is compiled in such a way so as to permit periodic updating.

FOREWORD

The United States began supporting the development of Morocco as early as 1948. As part of the Marshall Plan in Europe, the U.S. provided development grants to France that were reprogrammed for Morocco from 1948-54. On April 2, 1957, the United States and newly independent Morocco signed a bilateral agreement by which the U.S. would furnish certain economic and technical assistance to Morocco. Since then, U.S. assistance has supported programs in areas including agriculture, family planning and maternal child health, human resources development, conventional and renewable energy, low-income housing, private sector development and policy reform. During the period covered by this volume, 1975-86, assistance amounted to about \$653 million.

Volume II of U.S. Economic and Technical Assistance to Morocco begins with the mid-1970s. It is about this time that Morocco embarked upon an ambitious program of public investment because of the phosphate boom and Morocco's rapid growth in foreign exchange earnings. In the years before, Morocco had followed conservative economic policies and had manageable levels of external debt and a balanced budget. Unfortunately, the world phosphate boom was short-lived. Though lacking foreign exchange earnings, Morocco still tried to sustain its ambitious development program, focused on heavy infrastructure development, and borrowed heavily from international banks. Returns on this investment strategy, however, were not adequate to meet the nation's international debts to foreign banks and donors. Finally, in 1983-1984 the GOM concluded an agreement with the International Monetary Fund for immediate relief and rescheduling of its debts and undertook certain economic austerity measures. It has since concluded further agreements with the IMF and the World Bank to continue the process of stabilization and economic adjustment.

Because of the importance of agriculture to the Moroccan economy, more than half the total economic assistance provided to Morocco each year has historically been dedicated to efforts in this sector. With approximately 1.5 million farm families living in Morocco's dryland (or rainfed) region, which is characterized by low agricultural productivity, one major thrust of USAID's program, over the past ten years, has been directed at increasing cereals production in dryland areas. An important component of this strategy has been the establishment and development of a dryland agriculture applied research capacity. The practical application of research resulting from this effort will be increased cereals, as well as other crops and livestock, production in the years to come. Further, the Government of Morocco (GOM) and USAID have recognized the importance of creating an institutional capacity to train manpower for all levels within Morocco's agricultural sector. Toward this end, USAID has provided assistance to Hassan II Agronomic and Veterinary Institute since 1968. More recently, USAID has reinforced its focus on agriculture productivity through its involvement in the agricultural policy and planning strategy arena. In 1983, USAID initiated a 10-year project, the purpose of which is to (1) gather and improve agricultural and demographic statistics, (2) evaluate programs and conduct economic analyses in order to plan for agricultural development, and (3) improve agricultural policy.

As part of the Agricultural Strategy, the GOM and USAID decide jointly upon the uses for the funds generated by the sale of PL 480 Title I food grains. These funds have been devoted almost exclusively to investment in the

development of the agriculture sector, including USAID-assisted projects in agricultural research; planning, economic analysis and statistical studies; agricultural university development; training; and integrated rural development projects under the auspices of the World Bank. The PL 480 Title I program has also provided a forum for policy dialogue between USAID and the GOM concerning Morocco's overall agricultural policies, plans and methods for integrating the assistance received from other donors in this sector.

Inseparably tied to the need to increase food production in Morocco is the need to reduce the rate of population growth. With a population growth rate of 3.2% in the 1960s, Morocco had a very serious population problem. Since Morocco is a conservative, largely rural society, the initial USAID family planning strategy had as its basic purpose to convince both the government and the populace to understand and accept the need for family planning. The first field effort within the first family planning project was the design and implementation of a home delivery system of contraceptive information and materials in Marrakech. Though this delivery system, operating through a nutrition center sponsored by an earlier USAID project, was only marginally effective in terms of attracting contraceptive acceptors, it quietly increased awareness of the population problem within the government and contributed to breaking down the traditional barriers against contraception. This pilot project became the vehicle for disseminating information and materials on family planning. The follow-on, increasingly successful family planning projects encompassed maternal and child health, integrating treatment for diarrheal diseases, malnutrition and a referral system for vaccinations. Families developed confidence in the rural health workers and the way was open to expand family planning activities. By mid-1986, family planning activities had expanded to eighteen provinces and three major urban centers under the auspices and management of the Ministry of Public Health, with technical assistance and commodities furnished by USAID.

Several projects implemented in the late 1970s and early 1980s aimed at improving the standard of living of certain groups outside the traditional educational system. The beneficiaries of these projects - women, youth, and the handicapped - acquired skills or trades to enable them to be self-sufficient and to participate fully in the development process of the country.

In the early 1980s Morocco was spending 40% of its foreign exchange earnings on imported energy. It was clear that reduced dependence on imported fuel would help Morocco reduce its growing trade deficit. Therefore, USAID developed projects to address this need in several ways. One project provides technical assistance aimed at helping Morocco develop, exploit and manage its conventional hydrocarbon resources. Another encourages the use of renewable energy for, among other things, heating and pumping water. At the special request of His Majesty, King Hassan II, a weather modification project was initiated to create additional snowpack in the High Atlas to provide water for hydropower and irrigation in the plains below. Added to these efforts to produce more energy resources is the need to utilize available energy efficiently. Toward this end, technical assistance in energy planning and policy has been provided to the Ministry of Energy and Mines since 1980, first through a centrally-funded project, then through a bilateral project initiated in FY 1984.

By 1985, changing demographic trends resulting in greatly increased urban population required the GOM to focus on the problem of providing housing and services to low-income urban dwellers. Population has more than doubled since independence and the proportion of urban dwellers has risen from 25 to 45 percent of the total population. In light of this - and the certainty that by the end of the century Morocco will be an urban nation - the GOM has intensified its efforts to address the problems associated with clandestine housing and bidonvilles and to increase production of serviced urban land for development. With USAID technical assistance and U.S.-guaranteed loans, the GOM is attempting to increase the supply of affordable housing and services to help meet the growing demand. To do this, the government is involving domestic financial institutions and foreign capital in ways which shift the financial burden of providing urban infrastructure and services from the public sector to the private sector.

Beginning in 1984, the GOM undertook efforts to liberalize the economy, specifically to reduce its role in controlling economic activity. The International Monetary Fund, the World Bank and the Consultative Group on Morocco have supported this effort. In this new atmosphere of economic liberalization, USAID is encouraging the growth of the private sector, specifically products for exports, and providing technical assistance to help the GOM manage price deregulation and the transition to a market economy.

Looking ahead over the next several years, USAID's overall objectives are described in the Country Development Strategy Statement that was prepared in collaboration with the GOM and approved in March 1986. They are:

- 1) To increase economic growth through
 - increasing reliance on market forces
 - improving efficiency and productivity of public services
 - increasing growth in private sector export production and earnings
- 2) To increase food supply through
 - strengthening agricultural education and technical/ socioeconomic research
 - increasing availability of agricultural inputs and of production-increasing technologies
 - improving the policy environment for growth through increased reliance on market forces
- 3) To reduce population growth and to improve primary health care by
 - expanding the accessibility and acceptability of voluntary family planning
 - improving population and development planning and thus the capacity to cope with population growth
 - increasing child survival and reducing child health deficiencies
- 4) To improve the management of energy and natural resources by
 - strengthening the energy sector policy analysis, planning and management capacity
 - increasing the development and use of Morocco's renewable energy resources.

Chapter One: AGRICULTURE

EXTENDED AGRICULTURAL DEVELOPMENT (608-0131)

FY 1976-1981

A. Background

In its 1973-77 Five-Year Plan, the Government of Morocco indicated a shift in its priorities from a concentration on irrigated and mechanized farming towards greater attention to the development of its rainfed agricultural sector. This was a recognition of the importance of rainfed agriculture, which accounted for the bulk of domestic food production and supported a majority of the population. It was argued that improving domestic food production in rainfed areas would increase Morocco's economic viability and the welfare of its population. In recognition of the extensive U.S. experience in dryland farming technology, the GOM requested that the U.S. provide assistance in developing Morocco's rainfed sector.

B. Project Purpose

The overall purpose of this project was to strengthen the capability of the Government of Morocco to plan and implement programs geared to increasing food production and to improving nutrition in the dryland areas of the country. Under this project, separate studies were carried out aimed at strengthening the capability of the GOM to implement programs for food crop and livestock production in the dryland areas.

C. Project Implementation

This assistance was delivered in two phases. Phase I was designed to identify the crop production practices best suited, agronomically and economically, to Moroccan dryland agriculture, and to train Moroccans to carry out dryland crop research and to transfer the results of this research to the farmers. Phase II, a series of supporting studies, aimed at strengthening the capability of the GOM to implement programs for food crop and livestock

production in dryland areas. This was done through separate studies on: (1) the effectiveness of the agricultural extension service; (2) an assessment of the feasibility of establishing seed nurseries for range forage crops adapted to the drylands of Morocco, and (3) a report on the development potential of dryland areas. All studies were carried out by U.S. experts in these fields.

D. Impact

Under the training component of this project, two participants received long-term training in the United States and five others received short-term training. The project studies signalled the need for a permanent dryland applied research program in Morocco. This recommendation formed the basis for USAID Project 608-0136, the Dryland Agriculture Applied Research Project.

E. Lessons Learned

Several conclusions leading to follow-on projects were drawn from the studies conducted under this project. Chief among them were:

1. The yield potential of small dryland farms was seen to be higher than production levels being achieved at that time. However, since there was little information available for guiding production or infrastructure development, agronomic research was considered necessary. However, since, Morocco lacked the trained personnel needed to design and conduct research in crop production, the need for a large Masters- and PhD.-level training program for Moroccan scientists was considered a priority. USAID's Dryland Agriculture Applied Research Project (608-0136), addressed both the research and the training aspects of this need while USAID Project No. 608-088, Assistance to Higher Agriculture Education, also took up part of the training task.

2. Resident technical assistance from a U.S. university, with the short-term assistance of other specialists, was considered necessary to guide development of the applied research program. Fulfilling this need became the main thrust of Project No. 608-0136.

3. Changes in the extension service were suggested to provide extension agents with more practical agricultural training and to improve their the ability to communicate research results to small farmers. It was emphasized that, in doing this, the socioeconomic concerns of the farmers and herders would have to be considered. Subsequent USAID efforts to develop an extension program were not successful, however.

4. In addition, with regard to range management, it was concluded that forage production would have to be increased, major revegetation programs initiated, and livestock pressure on the land reduced to more sustainable levels. USAID's Range Management Improvement Project (608-0145), was subsequently designed to address these issues.

F. U.S. Contribution: \$383,000

DRYLAND AGRICULTURE APPLIED RESEARCH (608-0136)

FY 1978-1988

A. Background

Most of Morocco's cropland lies in arid or semi-arid areas (with annual rainfall of between 200 and 400 mm) where crop production is highly unstable. A previous USAID Project, Extended Agriculture Development (608-0131), examined crop production practices, dryland farming applied research efforts, and range management and agricultural extension programs. From these studies it was concluded that greater stability in crop production could be achieved by adapting modern dryland farming technology, adapted to Moroccan soil and climatic conditions. At the same time, it was evident that Morocco lacked the manpower, experience and training to carry out the agronomic and corollary socio-economic research necessary to effect this technology transfer.

B. Project Purpose

The purpose of this project was threefold: 1) to develop a permanent applied research program aimed at increasing farmer productivity, particularly in the drylands, through adaptation of existing dryland farming technology to Moroccan conditions; 2) to train adequate Moroccan staff to implement the program and to transmit the results to the farmers; and 3) to develop a program whereby suitable farming equipment could be made accessible to small farmers. An associated aim was to establish a socio-economic research program to acquire a better understanding of the behavior of farmers in rainfed areas, thereby providing a more solid basis for effective extension programs.

C. Project Implementation

To achieve the purpose of the project, a Dryland Agricultural Research Center (the Aridoculture Center) was established and staffed by thirty-two specialists from INRA. Technical assistance was provided by resident and short-term advisors from the Mid-America International Agriculture Consortium (MIAC) which includes the University of Nebraska, Kansas State University,

1.2.2

Oklahoma State University, Iowa State University, and the University of Missouri. Researchers at the Aridoculture Center carry out research at the research station and on the experimental farms. Research is being conducted in areas such as tilling practices, seed bed preparation, planting methods, rate and duration of planting, and weed control. Studies are also underway to develop improved crop varieties, soil science, disease and pest control, and storage.

D. Status As of June 1986

1. Applied research station trials and on-farm trials have been established. The agronomic research programs, i.e. on forage, food legumes, weed control and the development of pest resistant varieties of wheat and barley, are on schedule.
2. A Moroccan-made sweep tillage machine has been tested and 10 crop threshers from Egypt have been ordered for testing and adaptation to Morocco.
3. The development of the Aridoculture Center is 80 percent completed. The soil, entomology, weed science, forage and cereal breeding labs are operational.
4. The capacity of INRA satellite research stations to conduct applied research is greatly increased.
5. There are 17 PhD and 8 MS candidates have completed coursework at U.S. universities and have returned to the Aridoculture Center and the four INRA satellite research stations to conduct research relevant to Moroccan problems for their dissertations and theses. Another nine PHD candidates and one MS candidate and are completing coursework at U.S. universities. Five additional long term participants are scheduled for U.S. training.

6. The MIAC sociology team are carrying out research on cropping systems and production costs in the Abda region to enable the development of realistic farm budgets.
 7. A team of sociologists from the Hassan II Agronomic and Veterinary Institute (IAV) is conducting a multi-year research study on agricultural production practices and constraints, using sample of forty-eight farmers in the Chaouia region.
- E. U.S. Contribution: \$16,487,000

RANGE MANAGEMENT IMPROVEMENT (608-0145)

FY 1980-1986

A. Background

Rangelands comprise an important segment of Morocco's renewable resource base since over half of the 71 million hectares in Morocco are used for grazing purposes. Meat and wool production are low due to poor animal nutrition, inadequate husbandry practices, and insufficient application of disease and parasite control programs. Poor nutrition is due to the overstocking of the range and its consequent depletion. This loss of vegetative cover has led to degradation, accelerated erosion and downstream siltation. This situation has been aggravated by the expansion of cereals production into lands, previously devoted to range livestock production, that are marginal, if not totally unsuitable, for cultivation.

In 1966, the Government of Morocco requested USAID support for the development of range management perimeters. A small project (roughly \$500,000 of U.S. contribution) was initiated with an international voluntary organization. Given its relatively low level of funding, the targets for rangeland development and range reseeding (to develop twelve range management perimeters covering an area of 325,000 hectares) were unrealistic. This was indicative of the lack of knowledge available on Morocco's rangelands and the problems of extensive livestock production in the country. One major problem encountered in subsequent project implementation was the project's failure to obtain the understanding, consensus and participation of local livestock producers and provincial leaders. Nevertheless, this project laid the basis for subsequent work in the area. This initial USAID effort led to the enactment of legislation which recognized for the first time the problem of overgrazing on collective lands and to the creation of a range management service within the Ministry of Agriculture and Agrarian Reform. In 1975, the Government of Morocco again requested USAID assistance in implementing a range management project. USAID subsequently funded the Range Management Improvement Project (608-0145).

B. Project Purpose

The purpose of the Range Management Improvement Project was to strengthen the technical and administrative capacity of the Range Management Service, a division of the GOM's Livestock Directorate (Direction d'Elevage - DE) to implement its applied research, extension and rangeland development programs.

C. Project Implementation

This technical assistance was delivered through a contract with Utah State University which originally provided three range management specialists and a social anthropologist to work at the range perimeters, and a seed production specialist to help develop a Plant Materials Center. In addition, Peace Corps Volunteers were involved in the project throughout its life, as range management specialists and sociologists. Following upon the recommendations of a mid-term evaluation of the project, conducted in January of 1984, the project underwent a major redesign. Most of the progress made under the project (apart from the training component) was made during its last two years.

D. Impact

1. Eleven DE/SP personnel received Masters degree training at U.S. universities in range management, extension and forage seed production. In addition, over 80 person-months of short-term training was provided in the U.S. and several in-country workshops were carried out on range management. This, combined with the on-the-job training provided by the USU technical assistance team, made a significant contribution to the development of DE/SP as an institution. The project succeeded in improving the capacity of DE/SP to carry out and supervise range management and animal production research. However, DE/SP's capacity to conduct socioeconomic research remains relatively weak.

2. The project was only partially successful at identifying and extending new technologies to farmers. In part this was because more research than expected was necessary to identify appropriate and acceptable interventions upon which effective extension efforts could be based. The drought conditions faced by Morocco in the early years of the project also hampered the identification of extendable technologies. The initial research/extension efforts of the project were directed primarily towards range management interventions (e.g. species and variety adaptation trials, examination of alternative range seeding methods). However, progress in this area was slow due to the difficulty in implementing such improvements given the collective nature of the production system. Towards the end of the project significant progress was made in developing a program of interventions in animal production that would generate significant and easily visible results in the short term. In particular, a sheep selection program, involving the culling of marginal animals from producers' herds, was seen to be very promising.

3. Under the Project a Plant Materials Center (PMC) was established to produce and multiply the forage seed necessary to meet the needs of Moroccan agriculture. In particular, a research program to identify highly productive native Moroccan range species promises to have both national and international importance.

E. Lessons Learned

Despite the relative success of the Range Management Improvement Project, USAID decided against implementing a follow-on effort involving Morocco's range management/extensive livestock sector. This was because, in USAID's view, there existed a number of underlying socio-political problems which were not amenable to solution by DE/SP alone, even with donor assistance. Range management efforts did not appear to be high on the GOM's priorities, given the inadequate budgetary resources being allocated to range management. Nor was the GOM able to articulate a long-term strategy for collective rangelands that came to grips with the need for grazing controls to prevent further degradation and loss of communal lands. For example, at the end of the Project the role of DE/SP vis à vis local communities remained unclear.

Little attention had been given towards promoting and supporting efforts by local communities to manage their collective land, themselves. A local capacity to control grazing -- to determine who can and cannot use collective land and enforce that decision -- was needed. USAID concluded that such issues must be addressed before significant progress can be made in improving Moroccan rangelands.

F. U.S. Contribution: \$5,075,000

TRIFFA IRRIGATION LOAN (608-0126)

FY 1976

A. Background

In order for food production to keep pace with increasing domestic demand, it was essential that the Government of Morocco fully exploit the growth potential of the agricultural sector. One aspect of this endeavor involved irrigating previously unproductive land such as that of the Moulaya perimeter encompassing 70,000 hectares in northeastern Morocco. However, efforts being made to bring irrigation to the smaller farmer were hampered by a significant lag in the completion of irrigation works.

B. Project Purpose

The purpose of this project was to bring water to the 6,270 hectares in the Triffa High Service Area within the Moulaya perimeter by 1977 so that at least 77 percent of the farmers holding fewer than ten hectares would be served by the system.

C. Implementation

This assistance was provided through a loan to the Government of Morocco to finance the construction of a water system that would provide water to the Triffa High Service area and to prepare the land for irrigated farming. The system used six pumping stations to lift the water required to irrigate successively higher levels of land. Water was pumped through conduits to the main canals which, in turn, fed into secondary canals and then into ditches prepared by the farmers. A network of drains was installed and access roads were provided to permit maintenance and operation of the main canals and to give the farmer access to his land.

D. Impact

1. An irrigation system with six pumping stations was installed.
2. A water distribution system for 6, 270 hectares was in place and operational, making that area ready for conversion from desert to irrigated agriculture.
3. Agricultural yields in this area greatly increased, particularly for such crops as tangerines, vegetables, sugar beets and cotton. As the productive capacity of the region increased, it became an agro-industrial center as is indicated by the 12 banks now established in the town to serve the region.

E. Funding

U.S. contribution: \$8,000,000

DOUKKALA-ZEMMARA SPRINKLER IRRIGATION PROJECT (608-0127)
FY 1975-1982

A. Background

At the time of this loan request, 70% of Morocco's active population was engaged in farming, livestock and forestry with 75% of the total population dependent upon agriculture. The GOM was investing heavily to increase farmer income, improve income distribution and provide more adequate food supplies and thereby help remove a critical development constraint. Despite the fact that cereals and pulses occupy over 80% of the cultivated area, a succession of poor harvests, mainly due to unfavorable weather, has made Morocco a net importer of cereals. At this time, food imports made up about one-fourth of the annual value of imports. It was essential that the GOM fully exploit the growth potential of the agricultural sector to enable food production to keep pace with domestic demand.

The GOM placed high priority on increasing farm output and on benefiting small farmers, the majority of the landholders in the traditional farm sector. To do this, it was emphasizing a land distribution program, the extension of agricultural credit, government subsidies of production inputs, farmer training programs and the completion and extension of irrigated agriculture projects begun under the 1968-1972 Five Year Plan.

The Doukkala region, one of the most densely populated of Morocco, was one of the areas previously targeted for the expansion of irrigated agriculture. Moroccan and European advisors had conducted several studies of the area and had determined that the only foreseeable way of increasing income in the area was to increase the water supply by irrigation, making possible double cropping and a shift to higher value crops with a high labor demand.

In December 1973 the GOM requested USAID help on a \$22.8 million irrigation project in the Doukkala in conjunction with a similar project being funded by the World Bank for the larger Doukkala area. Ultimately, an area of 15,400 hectares of the Zemmara Subdivision was selected as the target area for the USAID loan.

B. Project Purpose

The purpose of the loan was to finance part of the foreign exchange and local currency costs of the project, as well as related services. The purposes of the project were (1) to increase agricultural production for domestic consumption and thereby reduce reliance on imports; (2) to increase agricultural exports such as cotton and vegetables which were included in the planned crop rotation, together with sugar beens, wheat and forage crops; (3) to develop agro-industries such as permitting fuller utilization of the cotton ginning plant in the area and the expansion of the sugar refinery's capacity; and (4) to increase the income of small farmers through greater land and labor productivity.

C. Project Implementation

The Office Regional de Mise en Valeur Agricole des Doukkala (ORMVAD), a semi-autonomous government agency responsible for providing services to farmers as well as for supervising the construction of irrigation facilities was responsible for implementing the project with agricultural credit being handled by the Agricultural Credit Bank and marketing by various public organizations.

D. Impact

As a result of the implementation of this project, installation of a sprinkler system of irrigation and the expansion of agricultural credit for farmers', this previously marginal land became one of the most productive agricultural regions in Morocco and has remained so.

E. Funding

U.S. contribution: \$ 12, 997,000

RURAL DEVELOPMENT GRANT (608-0138)
FY 1978-1979

A. Background

The erosion of the vital oasis of Figuiç was causing a loss of arable land, thereby creating a serious threat to agricultural production in the region.

B. Project Purpose

The purpose of this project, an Operational Program Grant to Catholic Relief Services, was to prevent soil erosion and to reclaim and protect 405 hectares of agricultural land in the province by diverting annual flood waters.

C. Project Implementation

The project was implemented through the construction of a 900 meter retaining wall, a dike and a drainage canal. Approximately 200 villagers from the seven different sections of Figuiç worked on the construction, receiving PL 480 Title II food on a self-help, food for work basis.

D. Impact

Sixty-eight hectares of pine and eucalyptus seedlings were planted in anticipation of the controlled water flow to be brought about by the construction of the dike and drainage canal. The full impact of the project could not be seen until after a season of abundant rainfall revealed how well the water had been channeled to prevent erosion of these seedlings and other sections of the arable land intended to be sustained by the construction.

E. Lessons Learned

Due to the traditional agricultural methods and outlook of the village elders, considerable time and a careful approach must be taken to implant technology to control natural forces.

It was recommended that using Title II food and construction commodities be extended to other areas seriously threatened by soil erosion, particularly Ain chouter and Beni-Tadjit.

F. U.S. Contribution: \$145,000.

ASSISTANCE TO HIGHER AGRICULTURE EDUCATION, PHASE I (608-088)

FY 1969-1977

A. Background

Since independence the Government of Morocco had relied heavily on foreign agricultural technicians, particularly those from France and Belgium for the continued development of the agricultural sector and the training of agricultural technicians. This dependency had resulted in national agricultural programs unsuited to the Morocco's climate, soil conditions and economic and social environment. Moreover, Moroccan institutions for higher education lacked the capability to prepare graduates for positions in the development of the agricultural sector. In 1968, the Government of Morocco opened a 6-year university-level agricultural education institution, the Hassan II Agronomic and Veterinary Institute (IAV), to train people to meet the country's agricultural manpower needs. The GOM required assistance in developing its plant and soil sciences departments, including the development of an indigenous faculty. France, Belgium and the United States were asked to assist with this development.

B. Project Purpose

The purpose of this project was to assist the Hassan II Agronomic and Veterinary Institute (IAV) in developing its instruction and related research activities in the fields of plant and soil sciences. Specifically, the project was designed to :

1) Train students to the MS level in Morocco and the United States in plant and soil sciences to further facilitate the Moroccanization of those faculties by 1975;

3) Assist the GOM in establishing graduate level training programs in soil and plant sciences at the Institute;

4) Assist the Institute in developing an English language instruction program; and

5) Advise the Institute on the development of an adequate library facility.

By 1973 the Institute had assumed full responsibility for English language instruction. In addition, selected 5th year students, as well as 6th year students, began to receive U.S. training. The program was extended through 1980, in order to achieve the complete the training the faculty at the MS and PhD levels.

C. Project Implementation

Through a contract with a the University of Minnesota, a contract team of professors was brought in to staff the plant and soil sciences departments, to teach English and to begin to develop a research capability at the Insitute.

D. Impact

The major accomplishments of the project were:

- 1) Establishment of a research program to develop improved and disease-resistant barley varieties;
- 2) Establishment of research and study efforts directed towards crop viruses and soil conditions in Morocco;
- 3) Development of a comprehensive soils capability map;
- 4) Preparation of a textbook on Morocco's soils, their classification and productive capabilities;
- 5) Establishment of US faculty advisors at a 1/1.6 ratio with Institute students;

E. Lessons Learned

In 1973 it was concluded that the University of Minnesota teaching staff at the Institute needed to expand its teaching role to include BS level students, in order to prepare them better for subsequent Master's level studies.

The Agronomic Institute had originally been founded on European educational principles of education, involving a relatively low emphasis on field and laboratory work. Thus, it became clear that, the development of an advanced Moroccan research capability in the agricultural sector would require a change in the Institute's educational philosophy regarding the training of agricultural faculty and manpower.

F. U.S Contribution: \$ 1, 641,000

AGRICULTURE RESEARCH AND TRAINING (608-0122)
FY 1974-1982

A. Background

In the early 1970s, Moroccan university and college graduates lacked the technical expertise required to solve many of the key problems facing Moroccan agriculture. It was evident that, in order to accelerate agricultural development and ultimately increase rural incomes, greater attention needed to be given to training and research.

B. Project Purpose

The purpose of this project was to assist the Government of Morocco to address specific bottlenecks in agricultural research, production, processing and marketing, and to assist in manpower training.

C. Project Implementation

To achieve the goals of this project, technical assistance was provided through the U.S.-based training of four agricultural specialists at the graduate level and the consultant services of American agricultural experts in food crop research, particularly plant physiology, virology, pathology and forestry.

D. Impact

In addition to the specific training provided under this project, there were several other benefits. First, specific problems in the cultivation of agricultural products such as tomatoes, citrus fruits, dates and sugar cane were solved by the U.S. consultants and the Moroccans trained under the project. Second, this opened the door for the USAID Food and Agriculture Office to handle requests for studies from the Ministry of Agriculture.

E. Lessons Learned

End of project assessment determined that while significant training had taken place and various agricultural problems solved, the project approach had been too fragmented and that future endeavors of this type should be more cohesive.

F. U.S. Contribution: \$ 308,000

22

ASSISTANCE TO HIGHER AGRICULTURAL EDUCATION, PHASE II (608-0134)

FY 1976-1982

A. Background

Like its predecessor project, 608-088, this project responded to the Government of Morocco's request for U.S. assistance to increase its agricultural manpower and to expand its research and teaching capabilities, particularly in plant and soil sciences. It had become evident in the course of the earlier project that the U.S. faculty at the Institute needed to teach at the BS level, as well as at the MS level, in order to prepare students better for graduate level work. It was also clear that greater emphasis needed to be placed on training some students immediately to the MS level, rather than to the PHD level so that the Institute's Moroccan staff could be built as quickly as possible.

B. Project Purpose

In order to improve the capability and quality of Morocco's higher agricultural education systems, the project was specifically designed to:

1) Develop a Moroccan teaching capacity and research capability geared to training students at the BS and MS levels in plant and soil sciences and other agricultural specialities, and;

2) Train extension agents who would assist Moroccan farmers in increasing food production in order to improve the nutritional status of the population.

C. Project Implementation

This assistance was provided through training faculty of the Institute to replace the U.S. teaching and research staff and training Master's level participants to work with farmers in increasing food production.

D. Impact

By the end of the project, the following accomplishments were evident:

- 1) Nine U.S.-trained faculty members had been appointed;
- 2) 75 students had been trained or were in training at US universities;
- 3) A self-contained MS level program in Soils and Forestry had been established at the Institute;
- 4) 21 faculty members of the Institute had been sent to the U.S. for doctoral studies;
- 5) The original curriculum, based on European educational principles which focused on theoretical studies, had been supplanted with U.S. educational principles emphasizing practical training as well as the theoretical studies;
- 6) 2300 students were studying at the Institute, while 100 Masters and 100 PhDs in Veterinary Medicine had been granted.
- 7) The Institute's curriculum had been expanded to include the training of veterinarians and other technicians to fill the manpower needs of the Ministry of Agriculture an Agrarian Reform; this integrated teaching, research and extension;
- 8) Foreign staff had been reduced to 40% despite a three-fold increase in faculty, staff and students.

E. Lessons Learned

After ten years of U.S. assistance to the Hassan II Agronomic and Veterinary Institute, it was evident that the project goal of replacing US and other foreign national faculty was far from realization. An extension of the project for an additional ten years was recommended, involving the training of research scientists at the PhD level, provision of research facilities and the financing of local research, and the development of linkages with other scientists and universities.

It was also felt that the benefits of U.S.-based university training would be maximized if participants:

- 1) Had more advance notice of their selection and study program;
- 2) Had greater English language proficiency before undertaking coursework in the United States;
- 3) Were degree candidates assigned to a faculty advisor according to their interests and permitted to do research dealing with Moroccan agricultural problems, and;
- 4) Remained at a single university throughout their course of study.

It was further recommended that:

- 1) A consortium of US universities with highly respected agricultural education departments undertake the expansion of the Institute by assisting with U.S.-based training and thereby broadening the Institute's linkages with scientific institutions in the United States;

- 2) Doctoral training be reinstated as one of the goals of the project;

3) Faculty assist in technical agricultural economics and extension activities in order to increase crop production;

4) The Institute receive assistance with management, administration and operations, and;

5) The project be jointly planned and reviewed by the University of Minnesota, USAID and the GOM.

F. U.S. Contribution: \$ 2,896,000

CIDERA SCHOOL GRANT-FARM DEVELOPMENT (608-0158)

FY 1979-1982

A. Background

The Centre D'Education Rurale Africain (CIDERA), a mid-level agricultural school run by French Jesuits for the Government of Morocco, faced severe financial difficulties and lacked adequate farm equipment and facilities with which to carry out the practical training in farm management and equipment repair for which it had been established.

B. Project Purpose

The purpose of the project, a grant to Catholic Relief Services, was to improve livestock production and increase agricultural yields on the Cidera School farm. This would ensure the economic viability of the farm and the school and permit its continuation as an agricultural training school whose graduates would support Morocco's agricultural development and improve the management of agricultural enterprises in Morocco.

C. Project Implementation

This assistance was rendered through a one-year grant to purchase livestock, to install drip irrigation and to finance Government of Morocco technical and supervisory personnel working at the school.

D. Impact

With the installation of drip irrigation, citrus productivity was greatly increased, gaining 30 metric tones on 11 hectares. The sprinkler system of irrigation previously used in the citrus-growing area was moved to support the breeding of hybrid corn. Ultimately, however, the French Government withdrew its support for the school and the GOM took the land back.

E. Lessons Learned

Despite these efforts, the school could not sustain itself as an independent institution and was subsumed by the Ministry of Agriculture.F.

F. U.S. contribution: \$124,000

AGRONOMIC INSTITUTE (608-0160)

FY 1980-1990

A. Background

The United States has been providing technical assistance to the Government of Morocco to develop its national agricultural university, the Hassan II Agronomic and Veterinary Institute (IAV) since 1970. This Institute was established by the GOM to train college graduates in agriculture, forestry and veterinary medicine. Some graduates subsequently taught at the Institute itself, while others pursued careers in the agricultural sector. Two predecessor USAID projects, 608-0088 and 608-0134, contributed to the development of the curriculum and the Moroccanization of the faculty by providing long- and short-term participant training and by providing U.S. professors and scientists to serve as resident faculty. Through these means, these projects had strengthened and expanded the research capabilities of the Institute in address agricultural problems indigenous to Morocco. In 1978, evaluators concluded that the progress to date justified USAID's continuing its efforts with a follow-on project.

B. Project Purpose

The purpose of the Agronomic Institute Project is to complete the institutional development of the Hassan II Agronomic and Veterinary Institute into a modern college of agriculture. By doing this, USAID hoped to increase the number of trained managers, technicians and scientists in Morocco. The Institute itself will ultimately be staffed by Moroccan faculty. Thus, the Project concentrates on training additional Moroccan agricultural teaching staff for the IAV and for other agricultural institutions in Morocco.

29

C. Project Implementation

Faculty members from a consortium of U.S. universities, under the leadership of the University of Minnesota, are involved in implementing this project. Gradually, U.S. faculty at the Institute are being replaced by a faculty of Moroccans that are trained to the MS and PhD levels in the US. Of great significance is the fact that the Moroccan faculty-in-training do their doctoral coursework in the United States and their thesis research in Morocco on problems critical to Moroccan agriculture. Doctorates are subsequently granted in by IAV.

D. Status as of June 1986

The project is being implemented as anticipated, in that participant training, training at the Institute and commodities have all been provided as planned. The faculty members of the Agadir campus of the Agronomic Institute, the National School of Agriculture of Meknes, the School of Forestry and the main campus of the Agronomic Institute in Rabat are being trained under this project in over 25 universities in the United States. Sixteen persons have completed their doctoral programs and returned to teach at the Institute or to take up posts in other agricultural institutions in Morocco. Another 79 participants are engaged in doctoral programs and 24 persons have completed, or are in, Master's programs.

To date, over 100 short-term visits to Morocco have been made by U.S. professors in order to advise doctoral participants, give seminars and provide expert technical advice to the Institute and to other agricultural institutions in Morocco. These visits have also expanded the linkages between Moroccan and U.S. agricultural scientists and institutions.

Increasingly, IAV has been conducting cooperative research and teaching activities with other research and educational institutions in Morocco. This is most evident with respect to the research conducted by Institute Nationale de Recherche Agronomique (INRA) and U.S. scientists under the USAID-funded Dryland Agriculture Applied Research Project (608-0136). It is also noteworthy that graduates of the Agronomic Institute are frequently hired by INRA, while INRA staff are being accepted into graduate programs at the Institute.

Further, there is a growing appreciation for the value of the U.S. approach to scientific training, with its applied, rather than theoretical, orientation. The number of U.S.-trained technicians in the Ministry of Agriculture is growing.

E. U.S. Contribution: \$ 19,176,000

PLANNING, ECONOMICS AND STATISTICS FOR AGRICULTURE (608-0182)

FY 1983-1993

A. Background

Long-term concerns about the economic, social and political future of Morocco are closely linked to food security issues. The Government of Morocco is concerned about the decrease in cereal production, the worsening agricultural trade balance and rural income disparities. The Ministry of Agriculture (MARA), assisted by the United Nations Food and Agriculture Organization, has a plan to increase cereal production in the rainfed areas. The plan calls for a well-coordinated effort to increase cereal production from approximately 4 million metric tons annually to 7.1 million by the year 2000. To meet this goal, and to bring about improved agricultural policy decisions and sound agricultural planning, a comprehensive program is required to provide detailed basic information on the country's agriculture. This program must include not only the basic data on agriculture, (the accuracy and timeliness of which is extremely important and needs to be improved in Morocco), but provide for the utilization of this information in development planning and decisionmaking.

B. Project Purpose

The purpose of this project is to improve the GOM's ability to collect agricultural statistics, undertake economic analysis and monitor and evaluate agricultural projects.

C. Implementation

The major elements of the project include:

1) Academic training to the PhD level in the areas of statistics, agricultural economics, crop and livestock production, forecasting, monitoring and analysis; econometrics, public policy economics, statistics and computer science;

- 2) On-the-job training and short-term in-country training;
- 3) Nine person years of long-term and over 200 person weeks of short-term technical assistance in a wide range of areas;
- 4) Commodities, including computer equipment, an equipment for an aerial photography and an objective yield analysis laboratory.

D. Status as of June 1986

Objective yield and aerial sampling frame methodologies are being developed. Aerial photography is 60% complete to date, with the remaining nine million hectares being photographed in 1987. A training plan has been developed in conjunction with PNAP. Those trained under this project will be able to carry out the project design and monitor and evaluate the project. One candidate is currently in the United States for training in photo interpretation remote sensing techniques. His instruction will utilize satellite and aerial photography imagery of selected Moroccan provinces for use in land classification.

A sector model for Morocco is being discussed within the Ministry of Agriculture and Agrarian Reform (MARA) using the IBRD cereals sector model and the model used by the "Strategie Alimentaire". Further, a study on how the production/marketing system works is underway.

After the aerial photography laboratory is installed in Spring 1986 and the related training has been done, it will be possible to undertake objective yield surveys of major crops.

In regard to project management, it is thought that a clarification of roles between the AIRD and the IBRD is needed. Recently, a steering committee and an advisory committee have been formed to monitor project progress and to concern themselves with higher policy and program issues, respectively.

Although the Ministry of Agriculture and Agrarian Reform (MARA) has not been able to provide the financial support agreed to in the project, it has not been adversely affected. However, this could present a problem if operating funds were not available to finance the gathering of agricultural statistics in a timely and controlled environment.

E. U.S. Contribution: \$12, 567,000

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E. U.S. Contribution: \$12, 567,000

DROUGHT RECOVERY CREDIT (608-0184)

FY 1985-1988

A. Background

In 1980/81 Morocco suffered its worst drought in 40 years. In the years that followed, many areas of the country continued to suffer from severe drought, undermining the ability of many farmers, particularly cereal producers in the more arid regions of the country, to repay loans from the Caisse Nationale de Credit Agricole (CNCA), the principal source of agricultural credit in Morocco. This situation threatened to exclude many farmers from receiving credit for the 1984/85 and subsequent crop seasons. In addition, the prospect of increasing default levels in the wake of the drought seriously threatened the long-term financial viability of the CNCA, which could neither collect the unpaid loans caused by such a widespread natural disaster nor afford to forgive these debts.

B. Project Purpose

The purpose of the Drought Recovery Credit Project is:

1) To assist drought-stricken farmers to restore the productive capacity of their farming operations by providing them with temporary relief on their unpaid loans and with access to fresh credit; and

2) To strengthen the capacity of the CNCA to promote and assist the development of small- and medium-scale dryland farming operations by providing it with additional lending capital for drought-stricken farmers and with appropriate technical assistance.

C. Project Implementation

The project consists of a \$13.5 million loan to enable the CNCA to reschedule overdue production loans. In rescheduling production loans, the CNCA extends the period within which farmers must repay their overdue loans, thus reducing the size of their periodic payments. The \$13.5 million will enable the CNCA to maintain its lending program to drought-stricken farmers.

The AID project also provides a \$1.5 million grant for technical assistance, training, and commodities to further strengthen capacity of the CNCA as a lending institution. In particular, the grant provides two resident advisors to the CNCA, an agribusiness specialist and a management information specialist. In addition, the grant supports the costs of several selected studies of credit issues of importance to the CNCA and USAID.

D. Status as of June 1986

The \$13.5 million dollar loan to CNCA was completely onlent to farmers in drought-stricken areas in 1985. The \$1.5 million dollar grant is being disbursed over a three-year period.

E U.S. Contribution: \$ 13,500,000 (loan)
 \$ 1,500,000 (grant)

Chapter Two: POPULATION AND FAMILY PLANNING

DEMOGRAPHIC RESEARCH CENTER (608-0109)

FY 1970-1976

A. Background

The Demographic Research Center project began in Morocco in 1970 as part of USAID's global involvement in population planning, including a program for establishing "population laboratories" in various regions of the world. Regional funding for this experimental project was phased out in 1974 and replaced by this bilateral project oriented to the development planning needs of the Government of Morocco. The GOM created the Centre de Recherche d'Etudes Demographique (CERED) as an experimental research unit related to the Statistics Division within the Secretariat of Planning and Regional Development.

B. Purpose

The purpose of this follow-on project was to assist the GOM in establishing a demographic research institution which would conduct research in population dynamics such as birth and death rates, population growth and demographic measurements, thereby providing data for planning purposes.

C. Project Implementation

This technical assistance was carried out through a contract with the University of North Carolina.

D. Impact

The CERED was established as a permanent demographic analytical unit within the Ministry of Plan's newly created Bureau of the Census. Its purpose was to research and analyze demographic patterns and trends. The CERED had delineated sampling areas, carried out a baseline population count and established population registration procedures for births and deaths. The

Center also conducted a second survey providing comparative data for demographic research and establishing birth, fertility, migration and population growth rates for the sampling area. These studies were of utmost importance to the GOM in preparing the 1978-1982 Five-Year Plan.

E. Lessons Learned

Since the GOM recognized only French degrees at this time, no long-term training could take place in the United States even though the GOM thought highly of the contractor, the University of North Carolina, and valued all the in-country training accomplished under this contract.

During the life of the project, recommendations were made that technical consultations, short-term management consultations and other short-term training be implemented for a wide range of CERED staff and that key statistical officials be exposed to US methods of data dissemination.

F. U. S. Contribution \$877,000

FAMILY PLANNING SUPPORT, PHASE I (608-0112)
FY 1969-1977

A. Background

In 1966 the Government of Morocco established a High Commission on Population and, assisted by the Ford Foundation and the Population Council, began a small-scale family planning program. This effort suffered from poor management and uneven government support. Family planning administrators lacked trained personnel, material support and a sufficient data base from which to guide and expand their programs. Population control statistics then being collected were not very useful due to inadequacies in the type of information collected and delays in gathering and reporting the data. Compounding these obstacles, many government and private opinion leaders remained convinced that a larger population was required for economic development.

In 1968 the GOM officially requested USAID project assistance to expand these family planning activities into a program which could meet the objectives of the Five-Year Plan, that is, reduce the birthrate from 50 to 45 per thousand by the end of 1972. Thus, three related projects grew out of the earlier USAID support for the GOM's family planning endeavors. These three projects were the continuation of the census taking (608-089), the start-up of the first named family planning project (608-0112), and a project to establish a demographic research center (608-0109).

B. Project Purpose

The purpose of this project was:

- 1) to establish and demonstrate within the public and private sectors a capability to plan, implement and evaluate cost-effective family planning programs;
- 2) to increase contraceptive prevalence;
- 3) to raise levels of awareness of population problems and commitment to their resolution among key GOM officials and opinion leaders; and
- 4) to foster an increased demand for family planning services through increased availability of services.

C. Project Implementation

This six-year project consisted of grants, technical advisory assistance participant training and commodities to increase the effectiveness of family planning activities in Morocco. This assistance was delivered through the Ministry of Health with assistance from U.S. technical advisors, providing a wide variety of both public and private family planning activities. A U.S. consultant team studied the feasibility of a commercial contraceptive marketing system. The project continued the Marrakech household distribution project which had begun under the GOM's earlier project funded by the Ford Foundation and the Population Council. In this program oral contraceptives and condoms were distributed directly to homes and data was collected regarding cost-effectiveness and contraceptive prevalence statistics for all women aged 15-44 in that area.

D. Impact

Thirteen additional family planning referral centers were opened in populous provinces, taking patients on referral and serving as centers for research and experimentation. A private family planning association, Association Marocaine de Planification Familiale (AMPF), established a nationwide information, education and communication program; AID and other donors provided technical, material and financial support. A comprehensive training program was instituted for paramedics, nurses, physicians and key public officials.

E. Lessons Learned

National figures and evaluations showed that after ten years of the GOM's family planning program, it had had almost no demographic effect. There was a high drop out rate among initial acceptors. However, on the positive side, it was seen that there was potential within the Ministry of Health to increase the effectiveness of this program. The principal objectives of any follow-on project were ascertained to include:

- 1) making family planning a government priority;
- 2) creating an effectively managed organizational structure;
- 3) providing more information, training and educational materials;
- 4) creating more reference centers, and
- 5) considering the problems of the status of women.

E. U.S. Contribution: \$16,063,000

FAMILY PLANNING SUPPORT, PHASE II (608-155)
FY 1978-1982

A. Background

This project was a continuation and redirection of USAID Project No. 608-0112, begun in 1971 with an average yearly funding of \$300,000 to \$400,000. In the framework of that predecessor project, AID had financed the construction of 13 provincial referral centers and construction of the family planning headquarters building. AID had also financed contraceptives, supplies and equipment for use in the national family planning program. In 1978 an evaluation of the previous project recommended project design changes which would overcome weaknesses in population policy awareness, program planning, management and administration, technical skills and program evaluation. These weaknesses were causing severe constraints in the implementation of family planning programs.

B. Project Purpose

The purpose of this project was to establish and to demonstrate within both the public and the private sectors a capability to plan, implement and evaluate cost-effective family planning programs while increasing contraceptive prevalence. The project had three specific sub-purposes aimed at:

- 1) increasing contraceptive prevalence by 143%;
- 2) increasing awareness of and commitment to family planning among key GOM officials and opinion leaders; and
- 3) generating new demand for contraceptive services through an expanded information, education and communication program within the Ministry of Health

C. Project Implementation

This technical assistance was provided through a grant to the Government of Morocco for assistance in

- 1) constructing and equipping family planning referral centers;
- 2) providing in-country, US and third-country training to medical and health personnel at all levels;
- 3) expanding the home visit program to motivate acceptors and deliver contraceptives
- 4) commodity support for family planning services;
- 5) establishing a commercial distribution system of contraceptives in addition to the public sector system;
- 6) assisting the GOM's information, education and communication program;
- 7) helping with the National Fertility Survey, the Moroccan portion of the World Fertility Survey; and
- 8) providing technical assistance to the National Training Center for Reproductive Health.

D. Impact

This project was successful primarily because the official Government attitude towards family planning became increasingly more positive over the project period. This was reflected in contraceptive prevalence which more than doubled from 12% of married women in 1978 to 27% of married women in 1983. Moreover, in the three provinces where household distribution of contraceptive methods was carried out, the prevalence was in the range of 41%-53% by 1983. These dramatic changes occurred largely as a result of public sector activities, particularly activities within the Ministry of Health which in 1978 began allocating ever greater support for family planning as a component of reproductive maternal-child health. The Ministry of Health's Five-Year Health Development Plan (1981-1985) included a goal of 24% contraceptive prevalence among married women of reproductive age (MWRA) by 1985.

The following were specific successes of the project.

1. The National Contraceptive Prevalence Survey was completed in 1984 showing that the rate of acceptance was 27% of married women of reproductive age. This figure surpassed the GOM's goal of 25% by 1985.

2. Seven family planning referral centers were constructed and equipped. Moreover, oral contraceptives and condoms were available at 1200 Ministry of Public Health facilities throughout Morocco.

3. The home visit program was expanded to 13 provinces and was scheduled to cover approximately 40% of the Moroccan population by the time field visits were extended throughout all 13 provinces in early 1984. Statistics available from this program indicate substantial client acceptance of all available methods of family planning (pill, condom, and referral for IUD and sterilization).

4 The National Training Center for Reproductive Health began operations in 1982, providing a referral hospital for gynecological and obstetrical cases and serving as an international training center for persons from other Francophone, Arabic-speaking countries in the region.

5. Information, education and communication materials were being produced by the Health Education Division of the Ministry of Health and by the Moroccan Association for Family Planning. These included two seminars for "Education of the Young," several seminars of varying duration on family planning, a weekly radio broadcast and development and frequent broadcasting of two family planning songs.

6. Training in the U.S., Morocco and third-countries had been provided for medical students, physicians, nurses, educators, administrators and statistician/demographers. These training efforts were essential to the successful implementation of all elements of the project but particularly to the home visit motivation and delivery program and to the National Training Center for Reproductive Health.

7. The National Fertility Survey had been completed and reviewed by representatives from several ministries, including those of Plan, Housing and Public Health.

E. Lessons Learned

During the life of the project it could easily be seen that despite the lack of an official GOM family planning policy, the GOM was committed to the notion of population control. It had been shown to be prudent, in the Moroccan context, to put the system in place quietly and to expand services once the system was in place and the availability of contraceptives had been established as a basic service of the Ministry of Public Health. Though unannounced, evidence of GOM support for a family planning program could be seen from specific links to project activity. First, the King chose population as one of his three topics for discussion before the Royal Academy in 1982. Second, the home visitation program of discussion and distribution of contraceptives was widely expanded. Third, the paramedical system within the country supported family planning activities and reported substantially increased demand for family planning services. Lastly, the Ministry of Information permitted the Ministry of Public Health and a private family planning organization to broadcast family planning messages and films and to have stalls with published materials at local fairs and exhibits.

Evaluations done during the life of the project and at the end of the project indicated that the following should be taken into account in continuing assistance to the family planning program of Morocco.

1. The home visit program should be extended to five more provinces for a total of 18 due to its apparent success in the 13 provinces where it was underway.
2. Additional efforts should be made to streamline data collection and analysis for all family planning activities at the local, provincial and national levels.
3. Given the success of the home delivery system, there was no need to construct more than the originally planned number of family planning centers.
4. The objectives of the information, education and communication program should be clarified and its materials pre-tested and evaluated for their comprehensibility, acceptability and potential impact.

5. Efforts should continue to increase collaboration between other government ministries (Social Affairs, Youth and Sports and Agriculture, for example) in regard to encouraging the promotion and delivery of family planning services.

6. Mechanisms for increasing the self-financing capabilities of family planning services in Morocco should be devised.

7. The Ministry of Public Health should be encouraged to support the commercial distribution of contraceptives.

8. USAID should provide support for family planning in-service training at all levels of the MOPH.

9. The VDMS outreach should be extended to the urban slum areas of Morocco's major cities.

10. A nationwide capability to provide sterilization services and in-service family planning training should be established.

F. U.S. Contribution: \$ 4,995,000

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STATISTICAL SERVICES (608-0162)

FY 1980-1982

A. Background

In earlier projects dealing with family planning concerns as well as other social and economic issues, it had been seen that the GOM's efforts to expand or sharpen the focus of its development programs would require demographic data that was accurate and up-to-date. The economic and social face of Morocco had changed dramatically since the 1971 census for which the U.S. had provided limited short-term technical assistance and a long-term data processing advisor. Population growth had quickened; patterns of income, employment and consumption had shifted; and personnel from the GOM's Bureau of Statistics lacked experience and training. Such training was needed to expand and refine the data base to include household level surveys not only on population but also on consumption, expenditures, nutrition and on business, artisan and agricultural establishments. The GOM needed this data to analyze in the impending 1982 Census to enable GOM and donor agencies to define the nature and scope of the economic and social problems facing the country and to design projects to address them.

Prior to project design, four Moroccan specialists, including the Director of the Census, had visited the United States to work with U.S. Bureau of the Census experts, to identify GOM needs and to design a program of assistance. The team recommended a combination of short-term participant training and technical assistance in various census and survey design, implementation and analysis techniques as well as computer support for processing results.

51

B. Project Purpose

The purpose of this project was to provide an available data base and analytical capability for the planning, operation and evaluation of specific project requirements in agriculture, education, employment, health and population, low-income housing and public services. A subpurpose of the project was to improve the quality of census and survey data, the speed with which it became available and the form in which it was collected. A second subpurpose, to improve the GOM capability to utilize survey data effectively in the GOM planning process, was added in July 1983.

C. Project Implementation

This technology transfer and institutional development initiative is being implemented by the Ministry of Plan's Office of Statistics and the International Statistical Programs Center of the U.S. Bureau of the Census. The grant covers the costs of technical assistance by short-term advisors and resident advisors in all aspects of data collection and analysis, the installation of computer software and participant training involved in conducting the census and a number of follow-on surveys.

D. Status as of June 1986

The project was on schedule to attain the original objectives. Specifically, the 1982 Census results were published in April 1983; the sampling frame had been completed; and post-census surveys were an on-going activity under the guidance of Bureau of the Census short- and long-term technical advisors; microcomputer equipment and accessories had been procured, and training for its use by statisticians in the Ministry of Plan had been scheduled.

E. Lessons Learned

Mid-course project evaluation recommendations pointed out:

1) the importance of frequent in-country site visits by the contractor and the benefits of having a technically-qualified project manager within USAID;

2) the need for continuing refresher courses for GOM personnel to insure that census and survey results be used effectively;

3) that successful completion of the project depended on capitalizing on the improved data base and analytical tools developed with an emphasis on economic analysis, modelling and forecasting using such tools as the cost-of-living index, national accounts and an input-output matrix;

4) the need for upgrading the skills of the Moroccan analysts; and finally

5) that future emphasis should be placed on assisting the GOM to analyze the census and survey data and to prepare pertinent analyses for GOM policy makers in the various sectors.

F. U.S. contribution: \$1,500,000

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FAMILY PLANNING SUPPORT, PHASE III (608-171)
FY 1984-1989

A. Background

One of Morocco's most serious problems is a rate of population growth (approximately 2.7% per annum) which erodes many economic development gains. This project continues USAID support designed to strengthen the Government of Morocco's capacity to plan, implement and evaluate cost-effective family planning programs. Under this project, the activities begun under Phase I (USAID Project No. 608-112) and Phase II (USAID Project No. 608-155) are expanded to consolidate the program base thereby established and to ensure the effective institutionalization of these elements in the GOM family planning program. Drawing on the recommendations from the evaluations of those predecessor projects, this project will emphasize:

- 1) further expansion of the household delivery techniques developed;
- 2) increasing the availability of family planning services in the private sector;
- 3) introducing population planning, analysis, modelling and forecasting methods into the GOM development planning process; and
- 4) initiating a long-term training component as a means of building a cadre of professionals with skills relevant to population and family planning programs.

B. Project Purpose

The purpose of this project is to extend the regular availability of a full range of family planning information and services and the home delivery system so as to reach seventy percent of the eligible couples in the Moroccan population and thereby to attain contraceptive prevalence of thirty-five

54

percent of married women of reproductive age (MWRA) by 1988. Further, the project will introduce population planning, analysis, modelling and forecasting methods into the GOM development planning process. Finally, the program will improve the health status of mothers and children through an expanded program of immunization.

C. Project Implementation

This project will be implemented in the form of a grant and technical assistance to twelve sub-project activities, short- and long-term training, in-country training in family planning and commodity support.

D. Status as of June 1986

The expansion of the rural home delivery system into six additional provinces is scheduled along with the start-up of an urban variant of this program in nine prefectures.

Regional training programs have been held at the National Training Center for Reproductive Health. A five-year workplan to expand the availability of surgical contraception there and at 30 provincial Moroccan hospitals has been developed along with a plan for technical support for the training, repair and maintenance of the programs of the Center.

A communications training program has been developed, and seminars and media broadcasts sponsored by the Ministry of Public Health are continuing.

Operations Research and Data Analysis has begun with the analysis and presentation of key results obtained from data collected during the Moroccan National Fertility and Contraceptive Prevalence Surveys.

To encourage the development of population policy, the Ministries of Public Health and Plan are receiving assistance with economic and demographic modelling techniques and with incorporating population concerns more effectively into the GOM development planning process.

In-country training in family planning and in management has been agreed upon by the Ministry of Public Health.

Family planning promotion will continue in the Ministries of Youth and Sports, Social Affairs, Education and Radio-TV Morocco with some training and support provided by the project.

Data collection, market research, and program activities leading to the development of a social marketing program in Morocco are underway.

E. U.S. Contribution: \$19,890,000

Chapter Three: HEALTH AND NUTRITION

CATHOLIC RELIEF SERVICES NUTRITION GRANT (608-0123)
FY 1975-1977

A. Background

According to a 1974 study conducted by the Government of Morocco Ministry of Public Health (MOPH), 40% of the children aged six months to four years were suffering from protein/caloric malnutrition. To address this problem, the government had undertaken several programs, one of which was the establishment of maternal-child health centers throughout the country. Convinced that the solution to Morocco's poor nutrition status lay in adopting a unified approach to the problem, USAID offered its assistance in the formulation of a national nutrition strategy. Pending the Government's realization of its plans for a permanent nutrition study group, USAID provided a grant to Catholic Relief Services (CRS) to strengthen and upgrade the existing maternal-child centers since they had an immediate impact on the most vulnerable age group, namely, children under five.

B. Project Purpose

The purpose of this project was to establish a basic nutrition education program by December 1976 in the 200 social education centers of the Entraide Nationale. Specifically, the project was designed to improve the effectiveness of the 400 monitrices in these centers through in-country training and professional supervision. Those monitrices demonstrating leadership ability and other qualities would be selected to become supervisors after training. They would then provide regular guidance and supervision of the monitrices in each of the 21 provinces.

C. Project Implementation

This assistance was provided through a grant to CRS to improve nutrition education programs within over 200 social education centers in Morocco. Two technical advisors provided by CRS trained 400 monitrices in the Entraide Nationale social education centers in a basic understanding of the nutrition process as it affects pregnant women, lactating mothers and pre-school aged children.

D. Project Impact

Monitrices acquired knowledge, teaching methods and techniques through their training within the scope of this project and transferred these to nutrition teachers at social education centers throughout the country. Twenty-five monitrices then attended a three-month follow-on nutrition education training program held at the National Institute of Nutrition in Tunisia. This training, USAID Project No. 608-0141, was the second phase of the nutrition grant and is discussed elsewhere in this volume.

E. U. S. Contribution: \$283, 000

PROJECT DEVELOPMENT AND SUPPORT (608-0132)

FY 1975-1977

A. Background

While considering projects to improve the nutritional well-being of the Moroccan population, donors had found that the lack of baseline data severely hindered the design and planning of a national nutrition planning project for the country.

B. Project Purpose

The purpose of this project was to develop a workable strategy through which to alleviate Morocco's nutrition problems.

C. Project Implementation

This technical assistance was provided through a grant to Catholic Relief Services who provided a nutrition expert from the United States to help the GOM identify parameters within which a nutrition study group could develop a workable national nutrition strategy for Morocco. Specific project tasks focused on identifying resources and linkages between health, education and welfare services and between the food production and marketing systems. The project also sought to establish alternative institutional linkages that could increase the effectiveness of the GOM's efforts to improve the nutritional status of the population.

D. Impact

Guidelines for a nutrition strategy were drawn up under this project, but a policy decision within the Ministry of Public Health resulted in their not being executed.

E. U.S. Contribution: \$11,000

69

NUTRITION SYSTEMS STUDY UNIT (608-0135)
FY 1975-1977

A. Background

A 1974 Ministry of Public Health study had identified malnutrition, especially among children aged six months to four years, as a serious problem in Morocco. With assistance from international donors, the Ministry had instituted programs to address the problem. USAID Project No. 608-0123, a grant to Catholic Relief Services to train the teachers in the MOPH's maternal health centers, was one of these initial responses to the problem. In 1974, a nutrition planning team, invited by the GOM and funded by USAID, recommended the establishment of a permanent inter-ministerial nutrition study group to develop and implement a nutrition strategy.

B. Project Purpose

The purpose of this project was to develop the capability within the Moroccan government to design and implement a flexible nutrition strategy.

C. Project Implementation

The project established a nutrition unit, Cellule de Planification et d'Etudes Nutritionelle, (CEPEN) within the Ministry of Plan (MOP), provided on-the-job training for staff and trained participants in nutrition planning and systems analyses. Long-term technical advisors were provided to the MOP to develop relevant research, gather and analyze data and develop the methodology and ability to implement and evaluate interventions in the nutrition sector.

60

D. Impact

A documentation center was established and a national nutrition methodology determined at a national conference in 1978, but due to a policy change within the Ministry of Public Health, these were not implemented, similar to the treatment accorded the nutrition strategy guidelines prepared under USAID Project No. 608-0132 discussed elsewhere in this volume.

E. U.S. contribution: \$544,000

NUTRITION EDUCATION PHASE II (608-0141)

FY 1976-1978

A. Background

This project was a continuation of USAID Project No. 608-0123 in which a grant had been provided to Catholic Relief Services to train the teachers, or monitrices, at the Government of Morocco's maternal-child health programs in over 200 social education centers. This program had been established to attempt to alleviate the problem of malnutrition affecting 40% of children aged six months to five years. Under the predecessor project, monitrices had been trained in the fundamentals of nutrition and maternal and child health and twenty-five of the most successful in the course had been selected for supervisory training (USAID Project No. 608-0141) in order to continue to teach and guide the development of the basic nutrition program throughout the country.

B. Project Purpose

The purpose of the project was to provide supervisors trained in basic nutrition and maternal and child health for Entraide Nationale Social Education Centers in Morocco.

C. Project Implementation

Catholic Relief Services trained 25 supervisors of Entraide Nationale social education centers for three months at the National Nutrition Institute in Tunisia so that they could provide correct advice on matters of hygiene and nutrition to visitors to these centers and throughout the area. Their coursework included (1) a basic understanding of the nutrition process as it affects pregnant women, lactating mothers and pre-school aged children and (2) the basic elements of adequate nutrition intake and other fundamentals for the maintenance of good health of mothers and children.

D. Impact

Twenty-one of the supervisors thus trained were then assigned to provincial Entraide Nationale centers in Morocco where they continued to be guided by CRS and EN staff. Four of those trained replaced the foreign staff at the National School of Nutrition in Marrakesh from which the first home visit family planning program was later launched.

E. Lessons Learned

Arabic, not French, should be the language of instruction in rural areas and class size should be kept small to maximize learning.

F. U.S. Contribution: \$171,000

HEALTH MANAGEMENT IMPROVEMENT (608-0151)
FY 1981-1987

A. Background

The Ministry of Public Health (MOPH) in Morocco is responsible for providing basic health services to the majority of the population. At the time of project design, the MOPH was using management and information systems designed many years previously for a staff of 3,000 to administer a delivery system which includes over 1,200 health facilities and employs more than 35,000 people. In recognition of the role U.S. management experts have played in developing and improving management and information systems throughout the world, the Government of Morocco requested assistance in this domain from USAID.

B. Project Purpose

The purpose of the Moroccan Health Management project is to increase the quality and quantity of basic health services by improving the effectiveness and efficiency of the health delivery system. Three specific project objectives are:

- 1) to establish a technical resource within the Ministry of Public Health for program and management analysis;
- 2) to identify, prioritize and implement improvements in specific administrative areas; and
- 3) to provide formal and on-the-job training at all levels of the health system as a means of institutionalizing the administrative improvements introduced.

64

C. Project Implementation

Through a direct AID contract, a U.S. firm, Management Sciences for Health (MSH), provided technical assistance supporting AID-financed pilot improvements in the following MOPH management systems: personnel, pharmaceutical logistics, vehicle logistics and finance. Computer equipment, including both mini- and micro-computers, has been provided to the MOPH to augment data processing capacity. Both long- and short-term training are provided to improve the existing human resource capacities in administration, management and data processing. Personnel, administrative and logistical support for project activities are provided by the Government of Morocco.

D. Project Status

In the area of human resources management, the project's achievements have been nearly fully met: a pilot personnel information management system for the bureau of medical personnel has been computerized; an application for the much larger para-medical personnel system put in place; and an administrative procedures manual developed.

Accomplishments related to pharmaceutical logistics include revision of the drug nomenclature and compilation and distribution of basic drug lists, preparation of standard treatment protocols for paramedical personnel, a training manual for use of the protocols, and a methodology for provincial procurement of drugs.

In the area of motor pool management, a new data base was developed and computerized. A national data management system in this area was developed and implemented. A central computer system consisting of a mini-computer and 13 micro-computers has been installed and personnel recruited and trained in their use. Two participants in health administration received training at the Master's level in the United States.

In the area of financial management, a summary financial sheet for each service unit in the provinces now tracks costs associated with service provided.

E. U.S. Contribution: \$2, 685,000

Chapter Four: EDUCATION AND HUMAN RESOURCES DEVELOPMENT

NON-FORMAL EDUCATION FOR WOMEN (608-0139)

FY 1978-1983

A. Background

At the time of project design, economic pressures and a changing society had placed increased and unprecedented financial responsibilities upon Moroccan women. Factors contributing to this included male migration, increased divorce, widowhood, and the breakdown of the extended family. At the same time, Moroccan women were hindered from entering the labor force by high nationwide unemployment, their lack of skills and a dearth of opportunities for practical job training through which to acquire marketable skills. As a result, their ability to improve their economic status and participate in national development was stifled.

B. Project Purpose

The purpose of this project was to strengthen the infrastructure of the Government of Morocco's official women's division, the Promotion Feminine, to enable it to develop and implement a program to foster vocational training and job development for Moroccan women.

C. Project Implementation

This assistance was provided through a grant, technical assistance and participant training. The first step was to establish baseline data on potential economic roles for Moroccan women throughout the country and on the provincial and national operations of the Promotion Feminine itself. Of particular interest were the nature of individual job responsibilities, staff capacity and training possibilities. The Promotion Feminine managerial staff was trained in techniques of management, program development and community outreach while its instructional staff (1,052 people) were trained in modern techniques of vocational training and non-formal education for women. The

curriculum used in the Promotion Feminine's locations was revised to meet the job-training and basic education needs of the 45,000 women participating in them. Staff and coursework were added to the Promotion Feminine's training center to permit the addition of 210 new teachers to the program and a job development unit established to identify and promote employment opportunities for women both in rural and urban areas. USAID provided a social scientist/educator team leader, two job development experts, four trainers, and five short-term consultants. U.S. graduate training was provided to six Promotion Feminine employees to enable them to return to serve in the job development unit and on the staff of the training center. The grant was in the form of a small development supply fund to provide small grants to new enterprises and job opportunities for women.

D. Project Impact

As a result of managerial problems involving the U.S. team, the project was terminated before its completion date at the request of the Secretary General of the Ministry of Youth and Sports.

E. U.S. Contribution: \$ 2,291,000

INDUSTRIAL AND COMMERCIAL JOB TRAINING FOR WOMEN (608-0147)
FY 1978-1982

A. Background

Unemployment among Moroccan women had been increasing as more of them sought entry into the job market. In many cases, women interested in employment were disqualified from job consideration because they had limited access to job placement services or to industrial and commercial training programs. Thus, they were effectively excluded from participation in national development.

B. Project Purpose

The purpose of the project was to integrate women trainees into the Labor Ministry's Office of Technical Training and Job Development (OFPPT) industrial and commercial training centers, to prepare them with marketable skills and to assist them in obtaining jobs appropriate to their training.

C. Project Implementation

This project was executed under a host country contract with American Friends of the Middle East (AMIDEAST) as the contractor. Through AMIDEAST, USAID provided the contract services of a qualified administrator, a human resources economist, a social psychologist, instructors in electricity/electronics, drafting and commercial/secretarial skills. USAID also sponsored U.S. participant training for nine long-term, ten one-year and four short-term participants.

D. Impact

The positive impact of this project had many aspects.

1. The number of female trainees in OFPPT Centers increased ten-fold during the life of the project, from 783 in 1980 to 8210 in 1984. The Project's target of 435 women trained and placed had been surpassed as 660 women were trained and entered the job market.

2. Counseling and orientation had been provided to women during their training and early months of employment. Out-reach pre-training had been conducted in high schools to sensitize officials and women students to potential technical training and job possibilities.

3. Seventy percent of the OFPPT graduates found jobs even though in most cases this was due to their own efforts rather than to the efforts of the Placement Bureau of the Ministry of Labor. In addition, the OFPPT conducted surveys to determine where OFPPT graduates would have the best placement opportunities and designed the training curricula to teach the skills needed by those firms.

4. Within the Project, significant curricula improvements were made in training in the skills of drafting, electronics, and commercial/secretarial skills.

5. U.S. participant training was very successful in that 17 of the 23 candidates completed their training and joined the OFPPT staff as vocational education trainers and non-technical staff.

E. Lessons Learned

The end-of-project evaluation made the following recommendations for a future project of this nature.

1. Not including U.S.-trained participants, who became efficient vocational trainers, there remained a notable deficiency in the quality of the teacher training. Therefore, future teacher training should not be limited, as it was here, to short on-the-job sessions. Rather, it should be extended to one more year after graduation to allow the new trainers to upgrade their skills and reinforce their pedagogical capabilities.

2. Continued assistance in the form of manpower will be needed to permit OFPPT insitutionalize follow-up surveys on the job performance of its graduates.

3. Careful selection of the participants for U.S.-based training should be done jointly by the GOM and the contractor to ensure successful training and the commitment to return to the OFPPT.

4. With respect to in-country vocational education training provided under the project, USAID and the GOM should establish a follow-up procedure to determine whether or not trainees were appropriately placed in positions commensurate with their skills.

F. U.S. Contribution: \$3,236,000

SOCIAL SERVICES TRAINING (608-0157)
FY 1980-1985

A. Background

Large numbers of low-income Moroccan youth never participate or do so only briefly in Morocco's formal education system. The Ministry of Social Affairs and Handicrafts (MAAS) was established in 1977 to develop nonformal, vocational education programs for these youth. At that time, MAAS lacked sufficiently trained mid- and low-level staff who could provide a range of skill training opportunities for low-income Moroccan youth, including young women, thereby increasing their employability.

B. Project Purpose

The purpose of this project was to improve the quality and range of skill-training opportunities for low-income Moroccan youth by (1) improving the Ministry of Social Affairs and Handicrafts (MAAS) administrative and management capabilities; (2) upgrading and extending the skill-training capabilities of MAAS instructors; (3) providing innovative skills training for women in five pilot centers; and (4) providing vocational skills training in 13 centers.

C. Project Implementation

This assistance was provided through a grant which enabled the Ministry of Social Affairs and Handicrafts to create a social service training institute in Tangiers which would accommodate 176 live-in students. This institute was administered by a five-member contract staff from a U.S. consulting firm. At the beginning of the project five Moroccans went to France for long-term studies and later returned to staff the institute. The contract staff developed a 2-year training program to train professional staff to augment the MAAS staff. This long-term training program was open to approximately 50 students per year chosen competitively from applicants. A total of 150 students completed this long-term training under the project.

Short-term, in-service training sessions were also offered. Approximately 1,000 skills instructors received training focused on Moroccan society and government, Moroccan women and society, basic literacy and mathematics. The institute also provided short-term training for 260 mid-level MAAS employees responsible for social action and non-formal education programs. These courses concerned practical problem-solving approaches in administration and management and other areas. Five mid-level managers were also sent for training in job counseling.

In addition, five pilot training centers for girls were established to train young women in skills not previously taught by MAAS. Such training was in agricultural processing, typewriter repair, leather work, carpentry and welding, and child care administration.

Finally, fifty-two Peace Corps Volunteers taught welding, mechanics, woodworking and electricity in thirteen vocational education centers for boys, created and equipped by the project, throughout Morocco.

D. Impact

The most significant achievement of this project was the establishment of the Institut de l'Action Sociale, which the Directorate of Social Affairs hailed as a critical event in the future of social work in Morocco and committed itself to support. Training social workers was an innovative idea when the project was developed since the profession of social work does not have a long history in Morocco. The specific achievements of this project were:

1. A national institute for social action (Institut National de l'Action Sociale) was established by the GOM, institutionalizing social work education. Diplomas from INAS are recognized as equivalent to Grade 8 in the Moroccan administration. Following the departure of the contract team, the Institute is directed and staffed by Moroccan professionals.

2. 143 students have graduated from the 2-year course, meeting the project target. Two-thirds of these are now employed by the Entraide Nationale, the social services implementation arm of the Ministry of Social Affairs and Handicrafts.

3. 1100 entry- and mid-level staff received short-term training at INAS, again meeting the project goal.

4. Three of the five persons sent to France under the project for long-term training returned to teach at the Institute; two others completed Master of Social Work programs in the United States.

5. In conjunction with MAAS and the US Peace Corps, thirteen vocational training centers for young men and five for young women were established and equipped with all curricula, materials and a management program.

6. A library of 10,000 books was donated to MAAS headquarters and to INAS.

E. Lessons Learned

In order to reach and to train those outside the formal education system, increased efforts must be made to make potential trainees aware of the opportunities that exist for them in these vocational training centers. Questions of job-training profile, curriculum development, career advancement and appropriate job identification are key to long-term viability of both INAS and vocational education. Graduates and potential trainees indicated that more practical experience should be added to the curricula to increase job opportunities. Even with more practical training, it is evident that job placement will remain the most difficult aspect of the program, given the continuing national economic crisis.

F. Funding

U.S. contribution: \$3,880,000

MOROCCAN WOMEN'S UNION (608-0166)

FY 1982-1983

A. Background

Prior to project design, it was evident that opportunities for low-income Moroccan women to improve their socio-economic conditions and to participate in the development of their country were severely limited. Thus, there was a need for projects providing technical and life skills as well as support services to expand the opportunities available to women in this income group. Earlier USAID projects had addressed this problem in various ways, assisting the GOM organize nonformal education for women, industrial and commercial job training for women, and social services training (USAID Project Nos. 608-0139, 608-0147 and 608-0154, respectively). However, due to limited national resources, the public sector alone could not respond to all these needs; private sector involvement was indicated. In Morocco, the only private sector women's group then potentially capable of implementing such projects was the Union Nationale des Femmes Marocaines (UFM). Improving technical and organizational capabilities there would enable the UFM to contribute to the development of Morocco by increasing opportunities available to low-income women..

B. Project Purpose

The purpose of this project was to improve the economic and social conditions of low-income women in the bidonvilles and environs of cities and provincial towns in Morocco through strengthening the Moroccan Women's Union. Specific objectives of the project were: (1) to strengthen the capabilities of the UFM provincial chapters to plan, implement and evaluate programs which would meet the needs of low-income women; (2) to enable low-income women to learn or upgrade marketable technical skills and life skills needed for increasing their incomes; and (3) to enable low-income women to identify and create opportunities for earning and to work together to solve common problems which were inhibiting their earning potential.

75

C. Project Implementation

This assistance was rendered through an operational program grant to the Overseas Education Fund (OEF) which delivered the technical assistance through an expatriate project director and a technical advisor and the short-term assistance of two expatriate consultants in fund-raising and other needed areas. All other staff were Moroccan.

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D. Impact

Under this grant, the OEF trained the members of one provincial UFM center in needs assessment, project design and evaluation and the training of community organizers. This pilot center, in turn, implemented an income-generating pilot project in doll-making and beekeeping. Over 40 members from the provincial UFM centers participated in a series of workshops on project planning and cooperation held at the pilot center during the course of this eighteen-month project. However, the major activity under this project, planning and running workshops for UFM chapter members in the provinces to familiarize them with the methodology and results of the pilot project did not take place. Therefore, strengthening the capabilities of UFM provincial chapters and the national committee to plan, implement, and evaluate programs to meet the needs of low-income women was not as successful as anticipated in the project design.

E. Lessons Learned

Due to the extraordinarily high costs per beneficiary (approximately \$6,000 per trainee), the economic viability and replicability of this project were seriously questioned. An additional factor militating against continuation of AID support for a follow-on project of a similar nature was the fact that this project was a discrete women's project whereas USAID's policy on women in development was to develop projects which would integrate women into large-scale development efforts in their countries.

F. U.S. Contribution: \$ 341,756

DEVELOPMENT TRAINING AND MANAGEMENT IMPROVEMENT (608-0149)

FY 1978-1983

A. Background

At the time of project design, there was a shortage of well-qualified, middle-level management personnel in Moroccan development-related agencies. As a result, development projects originating from these agencies were often poorly planned and administered and the budgets of these agencies mismanaged.

B. Project Purpose

The purpose of this project was to upgrade, through training, the managerial and analytical expertise of key Government of Morocco officials in public and semi-public institutions which were furnishing complementary support to development programs in Morocco.

C. Project Implementation

Project design anticipated that 140 middle-level management personnel from government and semi-government, development-related agencies would receive long-term graduate level training in the United States and 80 others would participate in short-term U.S., in-country or third-country training tailored to each participant's needs in the areas of planning, management, budget and financial administration and in various technical disciplines. Eight short-term consultants assisted various local institutions with the analysis and development of project-pertinent, specialty training programs.

D. Impact

Although short-term U.S. training targets were met under the project, long-term U.S. training fell far short of original expectations in that 60 of the planned 140 slots were left unfilled. The causes of this were seen to be frequent extensions of participants' programs due to lack of English proficiency, non-acceptance at U.S. universities of Moroccan master's degrees for PhD training (which necessitated participants taking additional coursework) and the participants' lack of incentive, often approved by their academic advisors, to complete training quickly. Eighteen participants who had begun, but not finished their academic programs under this program, were carried over to the follow-on project, Sector Support Training (608-0178).

E. Lessons Learned

A special evaluation of this project and its successor, the Sector Training Project, made several recommendations for the implementation of the follow-on project as follows.

1) All participants must score a minimum of 500 on the Test of English as a Second Language before undertaking coursework in the United States.

2) The academic credentials, specifically Moroccan master's, of all participants must be fully acceptable to the university concerned without additional coursework required for full admission to their planned programs.

3) Participants must be required to take full academic loads and their progress must be monitored for timely completion of programs.

4) Participant training must follow the manpower training needs as identified by the GOM Annual Project Implementation Plan.

5) Members of the joint selection committee must each have a full vote in the selection process.

6) It must be understood that realistically up to three years may be required for completion of a Master's degree and up to four-and-one half for a PhD. The number of participants to be funded must take this into account.

F. U.S. Contribution: \$4, 503,000

78

SECTOR SUPPORT TRAINING (608-0178)
FY 1983-1989

A. Background

Higher education and the number of university graduates have expanded enormously in the past twenty years in Morocco. Whereas in the early 1960s approximately 5,000 students received university education, over 110,000 have this opportunity at present. This achievement in the field of education has created its own problems, chief among which are unemployment and the inefficient distribution of skills in the various government and private institutions. The GOM determined that access to universities should be based on a planning strategy considering the country's education and training needs and employment opportunities.

Under a predecessor training project, Development Training and Management Improvement (608-0149), personnel from various ministries had been successfully trained for key management and technical positions. However, the number of participants had fallen short of those anticipated by the project design to meet GOM needs. The current project was designed with this and other recommendations from the predecessor project in mind in order to build on its successes.

B. Project Purpose

The principal purpose of this project is to upgrade the managerial, analytical and technological expertise of Moroccans from the public and private sectors who are involved in planning, developing, and implementing social and economic programs.

C. Project Implemenation

Within the scope of this project, 110 persons (at least 20 of whom must be women), occupying key middle and upper level positions in the GOM ministries, agencies, and parastatals will be trained to the MA/MS or PhD levels in the United States. Others will share in 585 person months (p/m) of technical short-term training in the United States, 105 p/m of in-country training in Morocco and 96 p/m in a third country. Candidates for all training are persons involved in the planning, development and implementation of Morocco's social and economic programs. Training focuses on economics, management, business administration, financial management, public policy and administration, science and technology. In-country English language training is funded for candidates as required for admittance to U.S. training programs and commodities needed for in-country training are provided.

D. Status as of June 1986

Academic Training:

To date, all of the ten PhD candidates, three of whom are women, have been selected along with 96 of the MA/MS candidates (17 women). (In addition, the project has financed carry-over participants from USAID Projects Nos. 608-0147 and 608-0149) The greatest number of participants selected under this project come from the following Ministries: Equipment (11); Plan (10); Education (9); with from one to five each from the Ministries of Interior, Fisheries, Agriculture, Foreign Affaris, Tourism, Finance, Labor, Handicrafts and Social Affairs, Transport, Health, Youth and Sports, Commerce and Industry and Energy. Some sixteen participants have been nominated by various banks and parastatals.

Short-term Training:

More than one hundred participants have completed short-term training programs in the United States and third countries. Programs have included seminars, workshops, study tours, and others. In-country training to date has included a series of two-week seminars on project design and implementation.

followed by two-week practicums for Moroccans thus trained. Further, in connection with the National Training Program in Project Appraisal and Management, USAID has financed the production of teaching and training modules, case studies and equipment for seminars on Infrastructure and Agriculture.

English-language training:

Sixty-one future academic participants and five short-term participants are currently enrolled in intensive special English language classes. Approximately forty GOM officials who need to be able to read and understand English are currently in regular English language classes financed by the project.

E. U.S. Contribution: \$ 18,000,000

SOCIAL AND ECONOMIC RESEARCH (608-0154)

FY 1979-1986

A. Background

Though many books and articles have been written about Morocco, policies, planning and programs for social and economic development in Morocco are often hampered by an inadequate data base and a lack of systematic analysis. As a result, real social and economic problems can be inaccurately identified and improperly addressed, and available resources misdirected or ineffectively used. Moroccan social scientists at the universities and in the private sector who are in the ideal position to be able to explore these problems lack the financial support to do so. At the same time, foreign consultants, often unfamiliar with Moroccan conditions, are employed by the Moroccan Government and foreign aid donors at considerable cost to perform occasional social and economic analysis which is often superficial and incomplete.

B. Project Purpose

The purpose of this project is to encourage and support Moroccan experts in undertaking social and economic research which can help provide an analytical and institutional basis for economic and social development programs designed to reach the poor majority.

C. Project Implementation

Under this project, funds were provided to the Rectorate of Mohamed V University and later transferred to the National Center for Coordination and Planning of Scientific and Technical Research (CNCPRST) to support 40 small research grants of up to \$5,000 each for selected social and economic studies by Moroccan scholars and advanced students in areas of concern to economic

development planners and program designers. Particular attention was given to sectors in which AID activities are focused, namely, human resources development, improving the status of women, family planning, nutrition and public health, urban and rural development and education. These research results will be publicly available to Moroccan Government and foreign donors as aids in identifying strategic priorities within these various sectors, any possible socio-economic constraints to effective implementation of development programs and ways to cope with those constraints.

D. Status as of June 1986

To date, 16 research reports have been completed while 23 will be completed in 1986 along with one multi-disciplinary activity. A seminar to evaluate completed research works was held in November, 1985.

E. U.S. Contribution \$450,000

PEACE CORPS SMALL PROJECT ACTIVITIES (608-0181)

FY 1983-

A. Background

In early 1983 USAID and the Peace Corps signed a Memorandum of Understanding whereby USAID would lend support world-wide to the implementation of small projects at the village level. A maximum of \$40,000 per year was available for such use in each participating country. Projects would be identified by local community groups with which Peace Corps was working and would meet certain criteria intended to enhance the quality of life at the village level in the areas of food production, renewable energy and small enterprise development. Peace Corps and USAID Morocco were among the first to enter into a Country Agreement regarding this small project activities assistance.

B. Project Purpose

The purpose of this agreement is to provide the seed money necessary to begin the implementation of various small projects at the village level conceived of by community workers working with Peace Corps Volunteers. Projects authorized must 1) be scheduled for completion within one year of the date of signature; 2) involve development in the broad areas of food, energy, competitive enterprise development or income-generating activities; 3) be conceived and implemented within a local community organization; 4) be self-sufficient beyond the grant; and 5) result, within one to three years, in quantifiable benefits to the recipient group in terms of improved economic or social conditions. The organization to which the grant is awarded must contribute to the project in funds, personnel, commodities or some other way and must have the demonstrated capacity to manage and sustain the project.

C. Project Implementation

All activities under this umbrella project are implemented directly by Peace Corps Volunteers within various local community groups. USAID provides grant money, not to exceed a total of \$10,000 per project, directly to the community organizations to help them finance materials and other costs connected to the activities. Documentation relating to project design, costs, implementation and potential impact is reviewed by USAID and Peace Corps prior to awarding each grant.

D. Status as of June 1986

Since May 1983 the following sixteen Individual Activity Agreements (IAAs) have been been financed in part by USAID..

1. Milk Products Enterprise, Marrakesh (\$4,000). To assist in the expansion of an already successful enterprise for the production, distribution, and sale of milk products USAID provided partially funding for refrigeration, solar and heating equipment. The two solar energy heating systems also promoted and demonstrated the ability to use solar energy for heating water and cooking food. Local contribution consisted of the planning, development and management of this enterprise by qualified Moroccan personnel and handicapped youth of the area and their wages.

2. Cage Culture Project, Ouarzazate (\$1,000). A joint Peace Corps/ Service of Waters and Forests carp culture project, intended to introduce a new source of protein and to create a new source of revenue for local farmers, had been abandoned due to the unavailability of water caused by a severe drought. However, the marketability of carp had earlier been demonstrated and local interest was high. USAID committed funds for materials with which to build carp cages, modelled after those in use in the United States, for raising fresh fish for the Ouarzazate market in the "captured waters" of the Eddahbi Reservoir near that town. In this way, the potential fish culturist could learn how to build his own cages out of local material at little or no cost. The Service of Waters and Forests contributed funding to this project.

3. Welding Classroom for the Youth and Sports Vocational School, Marrakesh (\$9,000). Various small tools and other commodities were provided so that the growing number of unemployed youth seeking to learn welding and other mechanical skills could be accommodated. The Youth and Sports Ministry provided the classroom for this class as well as administrative and logistical support and maintenance and accountability for the tools.

4. Municipal Library, Inezgane (\$3,300). Under this as yet uncompleted project, USAID committed funds for the purchase of construction materials for the renovation of a city-owned building. When completed, this regional library of over 3000 books now held in storage will encourage and expand educational and business opportunities. The local contribution consisted of land, labor, planning, building and books for the library.

5. Fishing Cooperative, Essaouira (\$2,700). For this as yet uncompleted project, USAID provided funding with which the cooperative Chabab El Bahri could purchase fishing supplies and equipment necessary to rehabilitate its once-prosperous enterprise, ease high unemployment in the area and promote a cheap source of protein. The National Fisheries Office provided a fishing boat plus a portion of the fishing material to be used in the implementation of the project.

6. Rolling Water Pump Service Station, Ouarzazate (\$8,600). A Rural Water Program, the purpose of which was to install, repair and maintain wind, hand and motor pumps for irrigation and drinking water, was initiated in 1983 in this province. However, the project vehicles were 1) not always available and 2) not suitably equipped to carry the necessary tools and equipment. To overcome these problems USAID provided funding to a Peace Corps/ Provincial Government of Ouarzazate project to equip and maintain a rolling water pump service station. The local government donated the truck and the drive chain. Through the assistance provided by this rolling workshop, water pumps were installed, repaired and maintained in isolated areas from the High Atlas to the Sahara.

7. Woodworking Classroom, Hanan School for the Handicapped, Tetouan. (\$650.00) USAID provided funding for the purchase of basic woodworking tools to supply the woodshop of this school. This woodworking training teaches the handicapped a trade and generates income for the Association Hanan School for the Deaf. The Association Hanan provides an assistant responsible for the maintenance and accountability of the tools.

8. Fish Culture Station, Beni Mellal (\$7,500). USAID provided funding towards construction and equipment costs for additional ponds to complete a five-pond pilot fish culture station which had been established by the Ministry of Water and Forests, the Ministry of Agriculture and the Peace Corps as a regional base for the distribution and extension of fish culture and related technical expertise to the farmers of the area. The Ministry of Water and Forests supplied the labor, machinery, tools and equipment for the project. They also undertook responsibility for completing the well system and for ongoing management of the project.

9. Foyer Koutoubia, Marrakesh (\$1,600). USAID funds supported the purchase of a Wagner apparatus for an orthopedic surgeon at this Cheshire Home so that he could more effectively treat the 25 boys with infantile paralysis being cared for in this home as well as others similarly afflicted in the region.

10. Women's Welding and Woodworking Cooperative, Marrakesh (\$5,000). Funding was provided for the purchase of raw materials so that young women who had completed a two-year training program in woodwork at the Entraide Nationale Technical Training Center in Marrakesh could start a cooperative business making crutches, braces and other orthopedic equipment. The Entraide Nationale provided the cooperative with two equipped shops and administrative support. Income generated from this increased production was expected to cover the cooperative's operating costs and make it financially independent.

11. Organization Alaouite for the Protection of the Blind, Rabat (\$3,500). USAID provided funding for practical classroom materials and special reproduction equipment for the academic and vocational education of the blind to enhance their marketable skills. The Organization provided a room for the equipment and one staff member to be trained in the Braille duplicating process so that he could assume that responsibility for the Organization.

12. Lalla Fatima Zohra Cooperative, Souk Sebt, Temara (\$9,500). This women's cooperative began as an Operational Program Grant to the Overseas Education Fund (OEF) to establish a bee-keeping, honey-producing cooperative through which unemployed, indigent Moroccan women could learn a trade, support themselves and acquire certain administrative and organizational skills. After OEF funding ended, this small projects assistance grant financed materials and staff to ensure the viability and profitability of the cooperative until it could become administratively and economically self-sufficient. The local contribution included government land for the placement of beehives, administrative assistance in the establishment of the cooperative and training for its leaders.

13. Moroccan Women's Union, Temara Women's Center (\$6,800). In 1981 the Temara Women's Center housing the Temara ElJadida Cooperative was established through an AID operational program grant (OPG) coordinated by the Overseas Education Fund (OEF) and the Union des Femmes Marocaines (UFM) (USAID Project No. 608-0166). The participating women made dolls reflecting the dress of the various regions of Morocco, and learned administrative and organizational skills enhancing their capacity to function as forces for development in the home and the community. When OPG program funding ceased, the Moroccan administrative and technical staff assumed full responsibility in these areas and for training cooperative members to fill these roles as well. At that time, the cooperative had just received a large order for their dolls to be sold at the Mediterranean Games held in Morocco. Funding was provided for the purchase of two knitting machines and to meet other continuing needs so that the cooperative would be able to reach higher levels of production and sales to meet orders for the Mediterranean Games, thereby increasing profitability

and moving towards financial independence. The local contribution to this project included the cooperative building, rental and staffing of a childcare center for the participants' children, a vehicle, training, advisory services and below-cost marketing consultant services.

14. Ain Borja Orthopedic Center, Casablanca. (\$10,000) Save the Children had established here a workshop for the manufacture and fitting of orthopedic braces and other aids. Under this grant funds were provided to purchase tools, machines and materials so that the welding workshop, a training project for handicapped and other needy teenagers, could be enlarged. Over a two-year period participants would acquire a solid background in general welding and metal fabrication and receive the diploma of "Formation Professionnelle." This project had a commercial element, too, in that the Center could sell the iron furniture, decorative items, and braces it manufactured.

15. Infant Therapy Room, Centre Lalla Meriem, Rabat (10,000). In 1985 two Peace Corps Volunteers serving as childcare specialists at the Lalla Meriem Orphanage developed and instituted a specific infant stimulation program directed at resolving three main issues: 1) shortening the development delay gap of the orphaned infants caused by their living in an institutional setting; 2) giving the infants an opportunity to spend time away from the large group setting; and 3) creating an environment that allows for experiences occurring normally in the home but unavailable in an institutional setting. The USAID contribution of \$10,000 funded the building of an infant therapy room at the orphanage to house this program.

16. Biogas Digester/ Carp Breeding Project, Deroua (\$420.00). In 1981 the Peace Corps and the GOM's Water and Forest Service launched what has become a very successful carp breeding project. The goal of this project was to provide access to a reasonable source of protein and to increase farmers' revenue. The Service provided staff, food and fuel for the maintenance of the station. In 1986 USAID financed the construction of a biogas digester. This digester will provide more fertilizer for the ponds and the plant nursery as well as gas for cooking and lighting for the two assistants who live at the station. In this way the digester will serve as a demonstration tool from which farmers in the area can learn about its functions and techniques and gain encouragement to construct their own.

E. U.S. Contribution: \$130,000

90

Chapter Five: ENERGY AND NATURAL RESOURCES

RENEWABLE ENERGY DEVELOPMENT (608-0159)
FY 1980-1987

A. Background

With over 47 percent of Morocco's export earnings used in 1984 to purchase imported petroleum, energy development is a high priority. Even if the recent decline in world market prices provides some short-term financial relief, Morocco will continue to be heavily dependent on imported sources of energy and on rapidly depleting wood and non-wood natural resources in the 1987-1991 period. This situation will continue to be a significant constraint to industrial and agricultural development.

Energy demand levels increasing about 3 percent per annum over the past five years coupled with a continued decline of natural resources, notably hydroelectric, have caused Morocco to increase petroleum imports. To reduce its energy bill, the GOM has embraced the two pronged policy of raising petroleum prices to curb demand and promoting energy conservation.

Renewable energy presently constitutes a substantial portion of both energy supply and energy demand in Morocco. Renewable fuels accounted for 37% of total energy supply in 1984 and 85% of domestic primary production. Renewable-energy resources constituted 43% of total energy consumption in 1984, and 82% of household-sector consumption.

These statistics mainly represent wood-fuel use since non-wood renewables figure insignificantly in Morocco's energy balance. Yet the nation possesses both the resources and the desire to change this situation. Solar radiation is high; average windspeeds over much of the country are in the useful range; and large quantities of agricultural residues are present over much of the nation. Domestic production and distribution of equipment to use many of these resources exists on a small, but expandable, commercial scale.

90

In urban areas, non-biomass-based renewable-energy technologies have the potential to provide process heat and electricity for a variety of household, commercial, and industrial applications. Contributions of renewable-energy-derived electricity to the national electricity grid are also possible. Renewable-energy technology application in these cases could either substitute for or reduce commercial fuels consumption, and in most instances, would replace imported petroleum products.

Similarly, in rural areas, non-biomass-based renewable-energy technologies can help in water pumping, cooking, lighting, and the provision of other basic services for isolated communities. It seems likely that renewable-energy resources can meet existing energy demand at a lower economic cost and with greater practicality than the diesel, butagaz, and conventional electric systems used in many rural areas. Even in the poorest, most remote regions which will probably remain outside national electricity grid in the near future, these technologies can provide pumped water, vaccine refrigeration, and other important services.

B. Project Purpose

The Project was conceived in 1981 with the purpose of assisting the Ministry of Energy and Mines (MEM) to create a Center for Renewable Energy Development (CDER) with the professional staff and facilities, studies and analyses to identify the most effective ways to exploit Morocco's renewable energy potential and develop programs to encourage its efficient use throughout the country.

In addition, the project includes a variety of activities that covered essentially all aspects of renewable energy use, and proposed a variety of interagency cooperative programs.

C. Project Implementation

U.S. assistance is being delivered through a long-term grant in two phases (Phases I, 1980-1982; Phase II, 1982-1987).

During the initial years of its existence, CDER was created as a fully autonomous parastatal of the MFM. It has an organizational structure, a staff, and an operating budget. Construction of a permanent building is underway, technical staff has been trained, and practical field experience has been gained. The establishment of collaborative arrangements with educational institutions and other government agencies has begun. On the technical side, it has initiated several pilot projects, involving both field trials and basic measurements, and has begun to gather data from them.

A Project Reformulation effort occurred in July 1986. Its recommendations after negotiations with CDER will provide the basis for continuing the project beyond its present completion date (3/87). These recommendations address the following types of activities:

1. Market-Development Programs, which represents the major emphasis, will concentrate on Solar Water Heating and Windmill Pumping as well as work in remote village energy supply for delivering products and services (eg. water, vaccine preservation) that are both technically and socially important at the village level.
2. Technology assessments to ascertain the economic potential of a number of Renewable Energy Technologies, such as Biomethanation, Solar Crop Drying and Windmill Electricity Generation.
3. Institutional Development to allow the CDER to play an essential role in supporting other implementation activities, particularly those involved in market development. The most important aspects of this institutional development are the establishment of the Documentation Center, construction of, and procurement of equipment for the CDER building, and the establishment and strengthening of institutional linkages between CDER and public and private bodies to support and encourage renewable-energy equipment production and use.

94

These recommendations will be part of a Project Agreement Amendment extending the life of Project for about three years to allow the CDER to carry out its new workplan.

D. Status as of June 1986

During the first five years of project implementation, CDER has become a fully autonomous parastatal of the Ministry of Energy and Mines. Over 50% of the staffing goal has been met, with short-term training continuing, though at a level lower than anticipated. The wind, solar and biomass pilot projects are mainly completed. The biodigester pilot project is operating and 40 others of varying types are in the implementation stages.

E. U.S. Contribution \$9,200,000

CONVENTIONAL ENERGY MANAGEMENT AND TRAINING (608-0176)

FY 1984-1988

A. Background

In the 1980s, only 2% of Morocco's primary production of energy derived from domestic hydrocarbon production. But a modest natural gas discovery in Essaouira Province and increased exploration by major petroleum companies has lent credence to the hypothesis that Morocco has commercially viable hydrocarbon deposits. The World Bank is providing substantial funding to help Morocco's national petroleum exploration and development agency, Office National de Recherches et d'Exploitations Pétroliers (ONAREP), accelerate its appraisal program of the Essaouira discovery and others. Further, ONAREP's General Directorate and an IBRD-funded management review in 1984 identified management and operating reforms necessary within ONAREP if the company wished to conform to international standards and to conduct petroleum exploration and development in accordance with cost-effective principles. The mid-point evaluation of the project, completed in June 1986, recommended that the project purpose be narrowed to focus on the exploration and promotion aspects of the project as a necessary step to attracting private investment and joint venture partners to Morocco.

B. Project Purpose

The original purpose of the project was to build the internal capabilities of the National Petroleum Exploration and Development Agency (ONAREP) (1) to apply cost-effective private sector management principles and techniques; (2) to strengthen its ties to potential private sector partners in petroleum activities and investments; and (3) to explore, develop and produce hydrocarbon resources. In essence, the project was to help develop the institutional capabilities of ONAREP to manage what appeared to be the

imminent development of a producing oil and gas field in the Essaouira Basin (Meskala) and to promote interest on the part of the international oil community expected to result therefrom. The disappointment on the extent of the Meskala reserves has greatly changed the complexion of oil and gas development in Morocco and, combined with significantly lower international oil prices, has resulted in a refocus of the USAID technical assistance effort.

C. Project Implementation

This technical assistance is being delivered primarily through a contract with Williams Brothers Engineering Company and consists of long and short-term technical advisors, long and short-term training, and commodity support. Six long-term technical advisors are presently in country: a senior planner, a reservoir engineer, a regional geologist, a geophysicist, a surface facilities engineer, and a joint venture promotions specialists. Approximately 26.5 person months of combined short-term consultants and U.S.-based technical support are being provided and approximately 130 participant months of training involving 173 ONAREP employees has taken place. Commodities and materials provided to ONAREP under the project include computer equipment/software, office equipment, and technical books.

D. Status as of June 1986

Systems have been established to implement and follow-up on ONAREP's long-term development plan, to appraise personnel performance and to carry on continuous internal auditing. Four of the eight technical promotion reports scheduled for completion by 1986 have been completed. ONAREP's senior management has begun implementation of the contract team's proposal to incorporate interdisciplinary cooperation in developing drilling prospects and in analyzing the geological and economic risk associated with them. Computerized petroleum reservoir estimating services are installed and are fully operational within ONAREP with three engineers trained in the use of the

programs. The project design, bid evaluation and contract-awarding stages of the Meskala gas project have been completed, with construction to begin in late 1986. On-the-job training continues in all aspects of the project, English language training, U.S. training and internships have begun, and five in-country seminars have been conducted.

At the mid-point in the project the technical assistance effort will be undergoing a change. Whereas the original purpose was to strengthen ONAREP's management procedures and techniques across a relatively broad spectrum of planning, exploration, promotion, production, and reservoir technology activities, the revised purpose of the project involves a concentration on strengthening the internal capabilities of ONAREP to attract private investment and joint venture partners to Morocco.

A new configuration of inputs and outputs, which reflects this refocused project purpose, results from a consensual determination that the generation and promotion of "saleable" exploration prospects can be effective in helping attract private sector investment for petroleum exploration and development in Morocco. Under the modified project the configuration of the long-term technical assistance will include a joint venture promotion advisor, three explorationists, and a surface facility engineer.

E. U.S. Contribution: \$4,000,000

ENERGY PLANNING ASSISTANCE (608-0180)
FY 1984-1986

A. Background

Through the centrally-funded worldwide Energy Policy and Planning Project (No. 936-5703) and Energy Policy Development and Conservation (No. 936-5728), AID has worked actively with the Ministry of Energy and Mines since 1979, addressing the potential for renewable energy development. It is evident that a broad energy sector planning capability, based on an expanded data base, must be developed so that the GOM can address the full range of its energy options (conventional fossil fuels, hydropower, oil shale, renewable and traditional resources), and can examine these options in light of broader Moroccan economic development plans and fiscal constraints. These constraints are such that Morocco imports over 85% of its commercial fuel needs and in 1984 spent almost 50% of its export earnings on energy imports, one of the major reasons for a marked deterioration in its economic performance in the past several years. Because of this, the Government of Morocco is attempting to curb the growth of energy demand through price increases and an active campaign to induce energy savings. It has also begun to implement a number of important investments in petroleum exploration, expansion of hydroelectric power generation capacity, development of oil shale deposits and reforestation for fuelwood.

The GOM's energy policy controlling these changes is established largely through a political process at the highest levels, particularly through government activities to control consumer prices, generate and assure supplies, and more recently, to encourage investment through fiscal reform. For the period 1984-1994, the GOM espouses three main policy objectives for the energy sector: (1) promotion of domestic production for energy import substitution; (2) promotion of efficient energy use; and (3) increasing domestic resource mobilization and budgetary savings through reductions in subsidies. The GOM seeks to institute these improvements through several institutional and policy measures. To do this, an analytical framework for evaluating multiple energy options in an environment where initial assumptions and variables cannot be treated as givens is required.

B. Project Purpose

The purpose of this project is to strengthen the analysis available to GOM officials charged with making energy policy and investment and conservation decisions. Specifically, the project will strengthen the analytical and advisory capabilities of the Energy Directorate and its Energy Planning and Information Service within the GOM's Ministry of Energy and Mines.

C. Project Implementation

This technical assistance is being delivered through a contract with the International Science and Technology Institute who, through long- and short-term advisors and various modes of training, carry out the following project activities: (1) energy policy analysis, including issues of energy pricing; 2) national energy investment planning; 3) review of specific energy project proposals received or generated by the MEM for funding consideration; 4) promotion of energy efficiency in key economic sectors; 5) critical energy studies; 6) strengthening of the MEM's information systems, including maintenance of a data base; 7) management development, training, and institutional strengthening through academic study, practical training in energy-related skills and disciplines, attendance at energy seminars and workshops and other professional support activities, and 8) inter-ministerial energy policy dialogue.

D. Status as of June 1986

The project is in its early stage of implementation; the chief tasks to be undertaken within the first year workplan include the following:

- 1) Energy Modelling: The contractor is installing several software modules which, taken together, provide an operational modelling capacity for MEM. Six computers have been installed and training provided on relevant software. The model will be operational by the fourth quarter 1986.

2) Household Energy Survey: USAID has agreed with the MEM and the World Bank to participate in the three-year demand and supply study leading to a Moroccan strategy to address energy issues in the household sector.

3) Energy Demand Management: The GOM, the World Bank and USAID have together established short-term objectives and planned meetings in Washington to formulate a long-term Energy Demand Management Action Program. Auditing in specific sectors has been carried out, and GOM experts will participate actively in the Energy Conservation and Private Power Generation Workshop to be held in Bangkok, Thailand, Fall 1986.

E. U.S. Contribution: \$4,000,000

WINTER SNOWPACK AUGMENTATION PROJECT (608-0190)
FY 1984-1989

A. Background

Morocco has been subject to below-normal rainfall conditions since 1976, culminating in a serious drought from 1981 to 1985. This has required water rationing among hydro-electric power generation, irrigation and industrial and domestic demands. The consequences of this have included electrical power load shedding, increased electric generation costs due to imported fuel substitution, declines in foreign exchange earnings from agricultural and industrial sectors, and social stress due to severe water shortages and water rationing.

In November 1983 a "Weather Modification Assessment" concluded that a weather modification program could help reduce the economic and social impacts of the drought by increasing natural precipitation and that a long-term precipitation enhancement program could help meet future water requirements and cushion the impact of future droughts.

B. Project Purpose

The purpose of the project is to develop the GOM's capacity to design, plan, implement and evaluate scientifically-based weather modification programs in the context of water resources management.

C. Project Implementation

The project has two major components: winter snowpack augmentation in the High Atlas Mountains and baseline data collection on Moroccan meteorology and cloud physics as reference for current and future weather modification

activities. Project activities include: expert U.S. scientific and technical assistance; scientific equipment and training for Moroccan personnel in its use and maintenance; training Moroccan personnel in the design, planning and management of scientifically-based weather modification programs and expendable materials for data collection and analysis. This technical assistance is being implemented under a Participating Agency Service Agreement with the U.S. Bureau of Reclamation. The Government of Morocco's National Steering Committee for Weather Modification is providing policy direction and coordination while its National Meteorological Organization participates in the planning, design, scientific implementation, scientific and economic evaluation and applied research connected to the project. The Royal Moroccan Air Force provides the required operational expertise, aircraft, pilots, seeding equipment and materials, and logistical support for cloud physics aircraft. English language training has been provided by one Peace Corps Volunteer assigned to the National Meteorological Organization.

D. Status as of June 1986

The Second Annual Monitoring Review (April 1986) found that continued progress has been achieved in the implementation of the Project in terms of both operational and institutional development objectives. The First External Evaluation conducted in April 1985 recognized the excellent progress being made by the project and noted that a well-coordinated team effort between the Governments of Morocco and the United States had been established. Institutionalization of the project has proceeded at a rapid rate. Operations are being implemented routinely and the Moroccan implementing agency is moving toward improving both the efficiency and the scientific sophistication of the seeding operations.

In addition, strengthening the long-term scientific foundation and personnel structure of the program is underway. Most notably, a professional project team has been established and is effectively operating out of project headquarters in Casablanca and from field sites in Khouribga and Beni Mellal. Project personnel have applied managerial, scientific and technical skills developed under the project to the solution of practical operational problems and in scientific studies.

Major Government of Morocco supported project activities conducted include:

- o Two king Air-100 aircraft have been outfitted with seeding generators and A.I.D. furnished VLF Omega Navigation Systems which will greatly enhance aircraft seeding operations.
- o Thirteen ground seeding generators have been acquired and plans for their deployment developed. Implementation of the ground generator seeding system will result in a dramatic improvement in operational seeding efficiency.
- o A full-time staff has been assigned to the project in accordance with a well-conceived organizational chart.

Comprehension of English and Science content by Al Ghait personnel has been steadily improving. This has been greatly strengthened by the immersion of key personnel scheduled for training in the United States into intensive English language training at the Royal Moroccan Air Force Language School in Rabat.

- o Two Al Ghait scientists started long term university training leading to a Masters' Degree at the South Dakota School of Mines and Technology. They have adopted Master's thesis topics closely related to project objectives. These include an operational cloud seeding model using an Al Ghait seeding case study, and a satellite-radar-rainfall estimation study.
- o Al Ghait technicians have accepted maintenance responsibility for the satellite receiving system and will assume responsibility for all other project equipment after they receive training in the United States during the summer or 1986.
- o Al Ghait operational procedures have adhered strictly to the established project suspension criteria.

- o The World Meteorological Organization is planning to convene the Fifth International Scientific Conference on Weather Modification in Morocco during 1988 pending approval by the Government of Morocco.

The contribution of the Government of the United States to the project includes:

- o Clarification and focusing of project objectives to assure project success within available funds.
- o Refinement of suspension criteria to make them site specific to the target basin.
- o Resolution of logistical and maintenance problems encountered during the previous year including the establishment of a spare parts inventory for the key components backed up by an on call system of ready access to all components as needed.
- o Provision of five IBM-PC-AT computers for project data management and analysis.
- o Establishment of a comprehensive plan of training in the United States and Morocco covering in-depth equipment maintenance and the planning, design, implementation, monitoring and evaluation of scientific weather modification operations as a water management tool.
- o Implementation of elements of the "Physical and Economic Evaluation Program."

E. U.S. Contribution: \$6,000,000

Chapter Six: HOUSING AND URBAN DEVELOPMENT

LOW-COST HOUSING IMPROVEMENT (608-0156)
FY 1980-1983

A. Background

The bidonville Ben M'Sik is located in one of the five governates created in 1981 in the city of Casablanca. Prior to project design, 72,000 inhabitants were living in 11,400 houses, at a density of about 850 persons per hectare in a neighborhood without such city services as schools, garbage collection, sanitary facilities or utilities. Since the mid-1960s the GOM's attempts to confront the shelter problems of the poor by building core housing has been unsuccessful since the projects were very small scale and construction costs were high, raising down payment requirements for housing and effectively excluding the poor.

In 1978, recognizing that their programs to date had been unsuccessful chiefly due to lack of funding, the GOM turned to the World Bank for a loan to upgrade the large Rabat-Sale bidonville. In 1979 the GOM requested similar assistance from USAID in support of its revised upgrading policy in Casablanca, which would also include resource mobilization and shelter finance practices.

B. Project Purpose

The purpose of this project was to provide technical assistance to the Ministry of Housing and Regional Development (MHAT) in its efforts to upgrade the Ben M'Sik squatter area. The upgrading itself, to be funded by a U.S.-guaranteed loan, subsumed the following goals: (1) providing infrastructure services such as sewage disposal facilities, water, a road and pedestrian network and street lights; (2) establishing community facilities including schools, dispensaries and day-care centers; (3) securing land tenure for the bidonville residents; (4) improving municipal services such as garbage collection and general upkeep of the area; and (5) establishing employment

training facilities and job creation facilities. The project also aimed to develop an integrated core of new housing and community service buildings such as schools, libraries, shops, etc. to which bidonville residents could move. The grant-funded technical assistance portion of the project was intended to strengthen the Ministry of Housing's ability to manage this and similar housing improvement programs; to demonstrate, through innovative cost recovery techniques and lowered construction standards, the advantages of developing integrated programs (replicability and affordability by extremely low-income households); and to help the GOM identify other shelter issues and develop programs to respond to them.

C. Project Implementation

For a variety of reasons, while the upgrading was still in the planning stages, the GOM decided to abandon the upgrading approach in favor of large-scale demolition, new construction and relocation of bidonville households. USAID elected not to participate in this approach and the loan authorization of \$25,000,000, intended to have supported upgrading, was never used. However, the \$600,000 technical assistance grant was utilized. Three resident advisors and some short-term advisors conducted studies and worked with the Ministry on various shelter policy issues and, most importantly, advised the Ministry of Housing on matters relating to meeting conditions precedent in order to qualify for another housing guarantee loan with which to finance the upgrading of several small and medium-sized slum areas and the construction of urban core housing projects. Specific issues addressed by these long- and short-term consultants included policy analysis and project management, upgrading considerations, community development, provision of municipal services, program evaluation, housing finance and cost recovery. Technical assistance contractors also participated in the early phases of the design of a replacement project for the Ben M'Sik housing guaranty loan authorization which later became the Tetouan Urban Development Project.

D. Impact

Assistance provided by the advisors under the technical assistance grant component of USAID Project 608-0156 eventually enabled the Ministry of Housing to acquire loan funding for the upgrading of eight slum areas and construction of eight core housing sites (USAID Project No.608- HG-002). The assistance also advanced the design of the Tetouan project, now USAID Project No. 608-HG-001 and provided training experience for Ministry of Housing technicians and planners in addressing such low-income housing issues as design standards, affordability, land tenure and cost recovery.

E. U.S. Contribution: \$899,500

TETOUAN URBAN DEVELOPMENT (HG-001)

FY 1985-1990

A. Background

The inability of the formal housing sector in Morocco to meet the shelter needs of low-income families in the rapidly expanding urban centers had given rise both to neighborhoods of rudimentary shelters and to those of more substantial housing. These latter neighborhoods are composed of homes without registered titles and are built on underviced land lacking utilities and other community facilities. The GOM has made regularization of this so-called "clandestine" housing one of its top priorities, addressing the spectrum of urban development issues rather than only housing. To do this and all else related to dealing with the housing needs of low-income population, the GOM needs to regain public control over urban development so that private sector investment in the housing sector will be encouraged.

B. Project Purpose

The purpose of this project is 1) to upgrade a clandestine settlement and prevent its spread in a major Moroccan secondary city and 2) to develop a model of a comprehensive approach to urban development and shelter financing for low-income families by bringing together a number of agencies at both

central and local levels.

C. Project Implementation

This project will be implemented by a U.S. government-guaranteed loan to the GOM to finance several related undertakings which will be managed by the several Moroccan agencies involved in the effort to upgrade clandestine housing. First, the Fonds d'Equipment Communale (FEC) will finance the upgrading of two neighborhoods by providing roads, running water, electricity, drainage and sewage, municipal services and legal tenure for all homeowners in the area. The municipality of Tetouan will contract for the actual construction work, with overall project technical management provided by the Ministry of Housing's Agence Nationale de la Lutte Contre l'Habitat Insalubre (ANHI). Project costs will be recovered through down payments and a monthly assessment fee to be collected through the utility billing process. Second, over a five-year period another area will be developed into serviced lots of low- and middle-income plots, commercial and apartment building sites. A third area will have primary infrastructure installed with costs borne by current land owners. In addition, two primary sewerage/ storm water collectors and a sewage treatment plant for the city of Tetouan will be constructed.

Finally, in connection with this guaranteed loan, USAID/ Morocco will provide grant funding to support project implementation, e.g, to help the municipality of Tetouan improve its overall financial management, provide land registration to project beneficiaries and increase the rate of general revenue collections. Additional grant funding will be given to the FEC for project appraisal and financial management and to ANHI for project management..

D. Current Status

The HG loan project's socio-economic survey, project unit design, design of the evaluation plan and an update of the financial plan are being carried on by various consultants. The loan's Project Agreement will be negotiated in July 1986. The technical assistance and training grant program, based on a recently completed needs assessment, has been approved. Project start-up is scheduled for August 1986.

E. Funding

U.S. contribution: \$25,000,000

MOROCCO LOW-COST HOUSING (HG-002)

FY 1981-1986

A. Background

Morocco's annual rate of population growth is approximately 2.7% with the urban growth rate even higher. It is expected that by the year 2000, 60 percent of the total population will be clustered in urban centers. With its present high growth and in the absence of housing alternatives to meet the needs of the largely poor population, Morocco's housing shortage has increased and will continue to increase dramatically. To provide basic shelter and services and to prevent social problems, the GOM has made housing one of its priorities. The two-prongs of this endeavor to provide housing and basic services have focused on upgrading the bidonvilles, urban areas of shelters constructed from scrap materials and on providing additional improved housing in areas experiencing economic growth resulting from GOM and private sector activity. As early as 1973, the GOM requested and received a USAID Housing Guaranty loan to fund their endeavors. Later, the GOM decided to fund its program from other sources, so this loan was never disbursed. In 1978 the GOM again sought, received and did not use a Housing Guaranty loan to upgrade the bidonville of Ben M'Sik in Casablanca (USAID Project No. 608-0156); the technical assistance grant for project studies was utilized, however.

B. Project Purpose

This loan program is designed to assist the GOM in implementing projects to increase the availability of low-cost shelter and related services for below median income households. Within the framework of this project, the GOM will also focus on designing and implementing cost recovery mechanisms thereby strengthening its financial and administrative capacity to generate resources for and manage similar low-income housing projects in the future.

C. Project Implementation

This program is being implemented through three components. The first, technical support, includes studies, contracts for services and other activities to strengthen the program and the capacity of the implementing agencies. In the second, essential infrastructure and community facilities to upgrade small and medium-sized bidonvilles will be provided. The third relates to the construction of core housing, including on-site infrastructure and community facilities.

D. Status as of June 1986

To date, the project is not being implemented as envisaged by the project design. First, the upgrading of eight small bidonvilles through the addition of municipal sanitation services and land tenure has not taken place; only 8% of total funding for this component has been expended since 1981. Second, although a few of the nine core housing projects intended to house 6300 beneficiaries are nearing completion, most are delayed due to insufficient funding. Third, implementation of the technical assistance and training program is pending resolution of agreements between two of the Moroccan entities charged with implementation of this component. This slowdown in implementation and disbursement of GOM funding in support of this project, while partially explained by the larger GOM financial crisis, is also a reflection of technical difficulties on some sites, variability in the capacity of the implementing Ministry's regional staffs, changes in housing demand patterns, and overall GOM project management procedures. The key Ministries of Housing and Finance have recognized the implementation difficulties and have recently taken steps to speed up disbursements. Also, a 1986 review of the project sites indicated that several are nearing completion in spite of the funding difficulties.

E. U.S. Contribution: \$17,000,000 USAID-guaranteed loan

TETOUAN URBAN DEVELOPMENT GRANT (608-0194)

FY 1986-1988

A. Background

This project provides grant funding to support implementation of the centrally-funded USAID Project HG-001 (Tetouan Urban Development).

B. Project Purpose

The purpose of this project is to strengthen the institutional capacities of the Government of Morocco's agencies in implementing the loan-funded Tetouan Urban Development Project. The purpose of the combined projects is to upgrade a clandestine housing settlement and to develop a model for a comprehensive approach to urban development and shelter financing for low-income families.

C. Project Implementation

This project is being implemented through short-term technical assistance provided by a U.S. contractor, short-term training and procurement of microcomputer equipment.

D. Current Status

The Project Agreement was signed in August 1986; the project is awaiting fulfillment of conditions precedent for disbursement.

E. U.S. Contribution \$800,000

Chapter Seven: ECONOMIC POLICY AND PRIVATE ENTERPRISE DEVELOPMENT

CATHOLIC RELIEF SERVICES SMALL-SCALE ENTERPRISE DEVELOPMENT (608-0187)
FY 1985-1988

A. Background

Catholic Relief Services (CRS) recognized that small-business owners (seven to ten employees) did not have access to GOM facilities with which to develop the management capabilities to deal with internal and external constraints to their long-term growth. In a larger sense, this situation is damaging to the growth of the private sector in Morocco since the ability of companies this size to adopt better management skills is crucial to long-term growth and profitability. Therefore, CRS requested a grant from USAID in support of its activities to promote long-term growth of small businesses through the introduction of improved management techniques.

B. Project Purpose

The project goal is to promote the long-term growth of small businesses in Morocco through introducing better management skills and developing the capability to take advantage of existing GOM programs to aid small-business development. More specifically, the project is a pilot program to provide management extension outreach to 40 firms in the Casablanca area.

C. Project Implementation

This project is being managed and the advisory assistance delivered by Catholic Relief Services and the Institut Supérieur de Commerce et d'Administration des Entreprises (ISCAE). The former provides project management, external technical assistance and logistics while the latter contributes program management personnel, training, research and analysis and policy formulation support. The USAID grant is used to fund technical assistance, project personnel, commodities and some other administrative costs.

D. Status as of June 1986

A small business management services program has been established at ISCAE. Sectoral studies have been completed for use in determining where best to focus assistance; a manager of the program has been selected; and six consultants, all graduates of ISCAE have been engaged and completed a formal classroom training program. Using the sectoral studies conducted within the framework of this project, they are developing a list of 40 firms which will be chosen for managerial and technical assistance. Thirteen firms have been chosen to participate in the program. Most of these had already been receiving management counseling from the consultants.

E. Funding

USAID contribution:	\$300,000 (58% of total)
CRS contribution:	\$133,900 (26% of total)
ISCAE contribution:	\$ 86,000 (16% of total)

PRIVATE SECTOR EXPORT PROMOTION (608-0189)

FY 1986-1991

A. Background

During the 1970s, Morocco adopted an ambitious growth strategy based on phosphate exports, import-substitution policies and extensive public investment in physical and social infrastructure. Due to unfavorable commodity price movements and world recession, this strategy created severe balance of payments problems, causing Morocco to borrow heavily in international markets in order to maintain its public spending programs. Confronted with diminishing foreign exchange reserves and large debts, the GOM has been reforming its economic policies under guidelines negotiated with the IMF and IBRD. The GOM views the development of the export sector as crucial to economic reform since exports can provide a sustainable source of foreign exchange to service the external debt and to finance imports and investments for long-term development. While the incentives and opportunities for export production have improved, significant constraints to its success remain: weaknesses in the export insurance program; conservative export-financing procedures; export production problems; insufficient knowledge of overseas markets; and language barriers.

B. Project Purpose

The purpose of this project is to increase exports by Morocco's private sector, thereby strengthening Morocco's capacity to service its debts and finance its investments for development. Related to this are three sub-purposes: (1) to expand credit insurance coverage; (2) to expand export pre-financing credit; and (3) to improve the export production and marketing capacity of beneficiary firms as well as the capacity of the Moroccan Center for Export Promotion to service private exporters.

C. Project Implementation

This project is implemented through three major components:

1) an \$8 million loan and a \$1.2 million grant to help Morocco establish a new autonomous export credit insurance organization with funded reserves and private sector participation in ownership and management;

2) an \$8 million dollar loan for the creation of an export pre-financing facility for small and medium-sized exporters and those who have not used the existing prefinancing facility; and

3) a \$2.8 million Cooperative Agreement with the International Executive Service Corps (IESC) whose volunteers will provide expert technical and managerial assistance to improve the export production and marketing capacity of beneficiary firms.

D. Status as of June 1986

The export credit insurance and technical components were obligated through agreements with the GOM and the IESC in June 1986. USAID plans to negotiate an agreement with the GOM for the export pre-financing component by the end of calendar year 1986.

E. U.S. Contribution: \$20,000,000

ECONOMIC POLICY ANALYSIS AND SUPPORT (608-0191)
FY 1985-1989

A. Background

With the help of the international donor community, the Government of Morocco is attempting to master a severe economic crisis and to lay the foundation for better economic performance in the future. In doing this, it is focusing on shifting the economy away from excessive regulation and government control toward greater reliance on market forces. Part of this strategy is to dismantle incentives to invest in import substitution activities. The GOM is also focusing on re-orienting the private sector toward export markets (see USAID Project No. 608-0189). Pursuing stabilization and structural adjustment simultaneously presents a difficult challenge. The need to maintain a balance and avoid social disruptions places a premium on the ability to develop specific policy alternatives, to appraise their consequences and to carry out new policies swiftly and effectively. The GOM has pledged to strengthen this policy analysis and management capability, a position long endorsed by USAID in its policy dialogue with GOM officials.

B. Project Purpose

The purpose of this project is to contribute to the successful reorientation of the Moroccan economy toward greater reliance on market forces by supporting the development of institutional capabilities of Moroccan government agencies in economic policy analysis and implementation.

C. Project Implementation

This project will pursue its overall objectives through a series of subprojects, each addressing specific opportunities and needs identified by GOM agencies in cooperation with the Mission staff. During the life of the project, each of these subprojects will mold and support institutional efforts contributing directly to improving GOM capabilities to develop and implement sound economic policies. Each subproject will also contribute to an increased market orientation of the economy and to better conditions for private sector ownership and management of productive assets. Subprojects will also be designed to show clear potential for creating lasting impacts on institutional capabilities in economic policy formulation and implementation.

D. Current Status

The first subproject to have started provides assistance to the Pricing Directorate in the Ministry of Economic Affairs to carry out a sweeping reform of Morocco's pricing policies. Getting prices right is the first step in establishing proper incentives and allowing markets to function. The Pricing Directorate, until recently instrumental in pervasive price regulation, has been given key responsibilities in managing the transition and in monitoring market performance. Technical assistance, provided by a team from the Harvard Institute of International Development, will provide the staff of the Pricing Directorate with access to a body of knowledge, both empirical and theoretical, necessary to master such tasks as developing alternatives to existing consumer subsidies and controlling restrictive business practices. Training and microcomputer hardware and software to enhance data base management and analytical capabilities complement this technical assistance.

A second subproject under development will involve USAID assistance to the Ministries of Finance and Plan to implement a more comprehensive approach to improved planning and budgeting. This focus will be complemented by technical assistance and related support to selected units in technical

Ministries to raise the quality of investment project appraisal. The subproject will seek to complement USAID technical assistance projects 608-0180 (Energy Planning and Conservation), 608-0182 (Planning, Economics and Statistics for Agriculture) and 608-0151 (Health Management Improvement).

E. U.S. Contribution: \$8,600,000

Chapter Eight: PL 480: FOOD FOR PEACE

PL 480 TITLE I

Under PL 480 Agreements worldwide, the U.S. Government sells wheat and other agricultural commodities in accordance with loan agreements with very favorable terms to eligible countries. The program enables the U.S. to dispose of surplus agricultural commodities by moving food supplies to countries which are not self-sufficient in food production and which have difficulty paying for imported food with their limited foreign exchange resources. These agreements encourage the expansion of trade for the United States while safeguarding normal patterns of commerce. The major benefits to each recipient country are increased food supplies for the population and revenues for the government's budget. Further, such loans and deliveries are intended to help countries toward greater self-reliance in solving their problems of food production and its storage and distribution as well as those related to population and improved nutritional status.

Morocco has been a major PL 480 recipient since the mid-1960s. The PL 480 program has become a fully integrated component within the U.S. assistance program to Morocco with agricultural products valued at \$40 million annually currently being delivered to Morocco. Wheat has been the principal commodity of this assistance with small quantities of rice and barley provided on an exceptional basis following a long drought in 1984/85. Under the terms of the Title I program in Morocco, the GOM can purchase food commodities on long term, low-interest loans which typically have a grace period of three to seven years during which only very concessional interest is paid (2-3%), followed by a repayment period of 25 or more years at a rate of interest slightly higher. In theory, good investments made through the government's capital budget will yield profits to the society which will enable the repayment of this foreign debt.

In Morocco, the Title I program works in the following manner. A U.S. team, headed by the USAID mission, meets with representatives of the Ministries of Finance, Agriculture and Economic Affairs and of the National Cereals Office to: 1) identify food commodity requirements; 2) agree upon specific policy measures (called self-help measures) which will improve agricultural productivity; and 3) program the local currency proceeds which will be generated from the sale of U. S. commodities in Morocco. Once the agreement is signed, the government calls for bids from suppliers; the lowest bidder then ships the agreed agricultural commodities on designated ships which are always 50% U.S.-owned. When the commodities arrive in Morocco, the government sells them (e.g., wheat to flour millers), thus generating revenues for its budget. In keeping with the agreement, the GOM programs the dirhams thus generated in the investment budget predominantly (e.g., to finance new agricultural projects in the agricultural sector) and, to a lesser extent, in the ordinary budget (e.g., to pay for salaries, gasoline and expendable supplies).

Historically, Title I imports in Morocco, their related self-help measures and decisions regarding the uses of local currency generated by the sale of this wheat have developed as described below.

Import Trends

From 1976-1979, Title I grain sales totalled 100,000 metric tons with a market value of approximately \$11 million per year. In 1980, the program shrank to \$6.5 million chiefly because the GOM did not complete the required negotiations on self-help measures and local currency uses. Later, the severe drought conditions of the 1980-1984 period significantly lowered domestic food grain production, requiring enormous outlays of foreign exchange for food imports to meet domestic demand. Therefore, Title I assistance was increased in 1981 to \$25 million and in 1982 to \$35 million, falling back a bit to \$27.5 million in 1983. The culmination of the severe drought conditions from which Morocco continued to suffer resulted in a sharp increase of Title I wheat

sales to \$45 million in 1984 and to \$55 million in 1985. In 1986, a good harvest reduced the need for wheat imports; nonetheless, Morocco still required 1,500,000 tons, of which PL 480 Title I provided about 350,000 tons valued at \$40 million.

Self-help Measures

Policymakers within the Government of Morocco regard the PL 480 program as essential for meeting annual cereal consumption requirements and are increasingly willing to negotiate meaningful policy-related self-help measures requisite for continuation of the program. In Morocco, these significant development measures are most often supportive of USAID's technical assistance in agriculture and consonant with policy reforms recommended by the International Bank for Reconstruction and Development. Self-help measures are in addition to those development efforts that would have been undertaken regardless of PL 480 aid, but they may include measures previously considered which required the impetus of a PL 480 agreement for implementation.

Since 1976 the self-help measures have focused on:

- sponsoring dryland research responsive to the specific problems facing farmers in the rainfed areas;
- building an agricultural extension capacity and training extension agents and other agricultural technicians;
- perfecting programs to improve range management practices;
- improving linkages between research programs and the extension service operating in rainfed areas; and
- supporting the establishment of schools of agriculture and horticulture.

In the period 1980-1985, the focus of the self-help measures was further refined towards:

- increasing the allocation of public investment in dryland agriculture as an investment priority;
- examining the policy context of the agricultural sector to improve the farmer's incentive structure and to increase the role of markets in stimulating efficient resource use in the sector; and
- expanding the availability of needed production inputs to farmers through improving the conditions of availability and utilization of agricultural credit and direct subsidies in favor of small farmers and agricultural cooperatives.

Since 1984 the primary self-help measure in the agriculture sector strongly endorsed by USAID has been the examination of existing pricing policies in an effort to improve the farmer's incentive structure and to increase the role of markets in stimulating efficient resource use in the sector.

Local Currency Generation

In addition to instituting self help measures in the development process, the GOM also agrees to use local currency generated by Title I grain sales to finance development projects. With the self-help measures, the uses of local currency reflect the on-going policy dialogue between USAID/ Morocco and the GOM and focus on USAID's assistance strategy of improving the rainfed agriculture sector in order to produce social and economic benefits in these areas, thereby improving the standard of living of the rural poor. Local currency operations are directed to an increase in cereals production, the expansion of integrated agricultural projects, the production and distribution of seed stocks to farmers, reforestation efforts, training activities, and to small and medium-sized water works support activities. The local currency needs of USAID projects are met in this way, providing the assurance that their continuation will be relatively immune from budget reductions necessitated by the GOM's austerity program.

During the years 1980-1985, local currency earned from the sale of Title I wheat and grains was returned to the economy chiefly in the form of agricultural investment by the GOM's contribution to USAID-financed projects, World Bank-financed integrated rural development projects, and a host of other activities, including seed production, reforestation, soil conservation and small-scale irrigation works among others.

Specific efforts are being undertaken, both as the focus of USAID technical assistance projects in Morocco and as other GOM development efforts. In the realm of agricultural research, experimental stations, studies and research, plant production, cattle breeding and soil mapping continue to expand. Specifically, USAID Project No. 608-0136 Dryland Agriculture Applied Research helps the GOM implement these activities.

As may be seen from the above discussion, it is somewhat artificial to differentiate between self-help measures and local currency programming since the two are inter-twined and reinforcing. They also reflect the evolving macro-economic situation in Morocco and the connection between the Government's plans and investment priorities. For example, the 1986 self-help measures feature policy reforms which are intended to help liberalize the marketing of agricultural inputs and production. These reforms stem from measures which have been agreed upon between the GOM and the World Bank but which, in turn, were founded on analytical work financed by USAID. The 1986 measures also reflect the GOM's new-found concern to divest itself of operations which are better addressed by the private sector, e.g., divesting itself of a large seed farm. On the local currency side, as government purse strings are drawn tighter and tighter in the wake of needed austerity measures to bring the budget into balance, the choices with respect to the investment budget become more important and more difficult. As a matter of priority, USAID and the GOM have agreed to protect on-going investments in agricultural higher education (USAID Project No. 608-0160), dryland agricultural research (USAID Project No. 608-0136) and improved agricultural planning (USAID Project No. 608-0182). These investments form the core of the agreed dryland cereals grain strategy which is meant to increase Morocco's food self-sufficiency and hence reduce the importation of food, including commodities financed under PL 480 Title I.

PL 480 TITLE II

A. Background

The Title II program in Morocco has long been one of the most visible and valued examples of the U.S. presence. The program had its greatest impetus between 1975 and 1978 when USAID/Rabat combined a \$450,000 grant with PL 460 Title II commodities to support a comprehensive mother child health (MCH) program. The U.S. Government has continued to provide this assistance, delivered by programs of Catholic Relief Services (CRS) and the American Joint Distribution Committee (AJDC) to the Government of Morocco. This assistance, in the form of foodstuffs, is distributed to indigent women, children and families through the social services facilities of Entraide Nationale and the Ministry of Handicrafts and Social Affairs (MAAS) Between 1981 and 1986 Title II aid ran at annual levels of 30,000-35,000 metric tons of flour, vegetable oil, and non-fat dry milk.

B. Project Implementation

The distribution of Title II foodstuffs takes place through the Entraide National network which includes about 900 centers, comprised of 300 child feeding centers, 141 orphanages, 136 day-care centers, 212 handicraft cooperatives and 96 cooperatives for abandoned or divorced women. The latter two operate on a food-for-work basis. Together, these facilities provide supplemental food rations to approximately 567,000 children, indigents or handicapped beneficiaries.

In the maternal child health centers throughout the country, the GOM is making an effort to educate mothers on the importance of improved nutrition while providing Title II food supplements for children aged 2-5. A 1980 AID Impact Study concluded that the strategy of combining food donations with nutrition education proved highly effective in reducing the incidence of

malnutrition in infants and children. After 2 1/2 years only 11 % of children whose mothers participated in the program were found to be malnourished, whereas the incidence of malnutrition was as high as 33% in children whose mothers received only food. Overall, the program achieved a 69 % reduction in moderate and severe malnutrition among program participants. Dietary supplements are also offered to children in orphanages.

Other recipients, including older male and female youth, divorced or abandoned women with no marketable skills and the handicapped, receive food supplements through food-for-work programs. Historically, these programs have included training workshops in skills (such as metal- and wood-working, handicrafts and bee-keeping)) which provide an alternative to formal education, offer job opportunities and often serve as a first step in the establishment of a self-sustaining cooperative.

C. Impact

The humanitarian and social services assistance provided through U.S. Title II commodity assistance program has long been one of the most valued and the most visible efforts of the U.S. presence in Morocco. They have also been development oriented in that they have frequently led to productive employment for the uneducated or undereducated who would otherwise have become public charges. This is true even in the area of handicraft cooperatives, support for which is not usually considered a development effort, since in Morocco the handicraft industry is the third largest employer and the fourth largest foreign exchange earner. Moreover, the handicraft industry, as the foreign exchange earner with the highest rate of growth, makes the poor productive and offers one of the few avenues of employment open to the majority of Moroccan women.

Through Title II programs the U.S. tempts the GOM to make changes in its development policy by allocating resources away from the modern sector to the interior, away from sophisticated educational institutions to those serving the poor and essentially rural poor and away from industry to agriculture. Moreover, Entraide Nationale, through which Title II aid is administered, is the only Moroccan government organization which reaches out throughout the country to address the economic and social needs of the have nots.

D. Lessons Learned

In 1983 USAID began postulating a gradual re-structuring of the Title II program to facilitate the GOM's assuming full responsibility for these activities by 1988. (It was envisaged that the GOM could use local currency generated by the sale of Title I wheat imports to finance this new responsibility.) Key elements of the re-structuring effort were: tightening of eligibility criteria for entry into and duration of participation in the feeding programs; adjustment of food rations; closer targetting of food resources on most-vulnerable groups; and increased integration of domestic food products into the feeding program. The drought, and ensuing crop disaster, delayed the restructuring prerequisite to an eventual phase-over of the Title II programs to the GOM. By FY 1986, however, an important complementarity had been established between the PL 480 Title I Sales Agreements and the initiation of a progressive phase-down of the level of PL 480, Title II Commodity Assistance. A portion of the proceeds generated from Title I sales began to be used to purchase foodstuffs on the domestic market to offset the first of a series of gradual annual reductions in the Title II commodity assistance program. The GOM's agreement in principle to this usage of local currency proceeds has facilitated acceptance of the initial implementation steps in the complete phase-over of the Title II program to GOM responsibility.

ASO THRU P81 (VOL II)
DECEMBER 18, 1986

U.S. ECONOMIC ASSISTANCE TO MOROCCO - FYS 1975-1986 (IN MILLIONS DOLLARS)

YEAR	DEVELOPMENT ASSISTANCE		FOOD FOR PEACE		ECONOMIC SUPPORT		HOUSING GUARANTIES LOANS	TOTAL		GRAND TOTALS
	LOANS	GRANTS	TITLE I LOANS	TITLE II GRANTS	FUND LOANS	GRANTS		LOANS	GRANTS	
1975	8.0	1.3	-	12.7				8.0	14.0	22.0
1976	13.0	1.3	11.8	17.2	ESF			24.8	18.5	43.3
1977	-	2.6	8.0	17.9	PROGRAM			8.0	20.5	28.5
1978	-	10.0	8.8	15.7	INITIATED			8.8	25.7	34.5
1979	-	4.1	9.7	11.2	IN			9.7	15.3	25.0
1980	-	9.1	5.6	9.9	FY			5.6	19.0	24.6
1981	-	12.1	25.0	16.2	1984					
1982	-	11.7	35.0	13.4			17.0	42.0	28.3	70.3
1983	-	11.1	27.5	12.7				35.0	25.1	60.1
1984	-	19.5	45.0	9.5				27.5	23.6	51.3
1985	4.5	19.6	55.0	8.9	-	7.0		45.0	36.0	81.0
1986	-	21.7	40.0	6.1	13.5	1.5	25.0	58.0	30.0	128.0
					12.5	4.0		52.5	31.8	84.3
TOTALS	25.5	124.1	271.6	151.4	26.0	12.5	42.0	365.1	289.0	653.1

133

AI THRU 533 (VOL III)
DECEMBER 19, 1986

U.S. ECONOMIC ASSISTANCE TO MOROCCO - FYE 1975 THRU 1986 (\$000'S)
BY CATEGORIES OF ASSISTANCE

	AGRICULTURE	POPULATION AND FAMILY PLANNING	HEALTH AND NUTRITION	EDUCATION AND HUMAN RESOURCES	ENERGY AND NATURAL RESOURCES	HOUSING AND URBAN DEVELOPMENT	ECONOMIC POLICY AND PRIVATE ENTERPRISE	PL 480	TOTAL
1975	8,480	325	495	-	-	-	-	12,700	22,000
1976	13,000	1,100	193	-	-	-	-	29,600	43,293
1977	1,350	730	460	-	-	-	-	25,900	28,460
1978	2,596	501	-	6,866	-	-	-	24,500	34,463
1979	1,575	2,063	-	450	-	-	-	20,800	24,888
1980	2,600	3,020	-	2,272	600	600	-	15,700	24,792
1981	3,370	2,500	925	3,580	1,494	17,200	-	41,200	70,269
1982	5,100	1,700	560	1,786	2,425	100	-	48,400	60,071
1983	5,357	1,000	700	2,560	1,500	-	-	40,200	51,317
1984	8,900	5,260	-	3,145	9,130	-	50	54,500	80,985
1985	24,975	3,850	500	1,850	2,000	25,000	5,920	63,900	127,995
1986	9,800	6,200	-	2,373	3,100	700	16,034	46,100	84,307
TOTAL	87,103	28,249	3,853	24,882	20,249	43,600	22,004	423,000	652,940

134