

**PROJECT ASSISTANCE COMPLETION REPORT (PACR)**

**RURAL POTABLE WATER INSTITUTIONS PROJECT NO. 664-0337**

**I. INTRODUCTION**

This PACR for the Tunisia Rural Potable Water Institutions Project relies heavily on two written sources of data: (1) Synthesis Report made in February 1992 by IDA staff - The Central Tunisia Rural Potable Water Institutions Project/Period 1986-1991; and (2) Summary Report made in June 1992 by WASH staff - Summary Report of the Action Plan to Develop the National Strategy to Create and Monitor Water User Associations (WUAs). This report is prepared by DH FSN Assistant HPN Officer who took over the project in its last year of PACD.

**II. PROJECT DATA**

- A. Title and Number: Rural Potable Water Institutions Project  
No. 664-0337
- B. Grant Agreement Date: April 30, 1986  
Mid-Term Evaluation Date: January 23 to February 24, 1989  
PACD: March 31, 1991 - extended to June 30, 1992  
TDD: March 31, 1993  
EOP Evaluation: None planned
- C. Funding: \$6,500,000  
Expenditures: \$5,594,873 (as of 3/31/93)  
GOT contribution: TD 3,200,500 (as of 3/31/1993)
- D. Implementation/Organization: Commissariat Regional pour  
le Developpement Agricole (CRDA) and Genie Rural  
(GR)/Ministry of Agriculture.
- E. Project Status: Bilateral support completed 6/30/92.

**III. EXECUTIVE SUMMARY**

Both the Government of Tunisia and USAID/Tunisia consider the Rural Potable Water Institutions Project in Central Tunisia (Kasserine and Gafsa governorates) highly successful, since the project achieved its stated objectives, and provided a model for development initiatives and other positive interventions in other parts of Tunisia and perhaps elsewhere.

This Project Assistance consisted of (1) Establishing and refining a coordinated and decentralized institutional approach to Central Tunisia rural water operations and maintenance, with user participation and user fees, demonstrating a model to the GOT which would be appropriate for adoption as a nationwide strategy; (2) Maximizing water investments by improving site selection for new and improved water systems; and (3) Providing improved access to potable water for underserved rural populations.

Designed to address specific problems that had plagued earlier rural potable water programs in Central Tunisia, the project achieved its stated objectives and provides presently a model for future development interventions in Tunisia and elsewhere. The problems addressed included water point selection based on political criteria rather than on the basis of need, waste of both energy and water, a high frequency of water system breakdowns, and a lack of health education programs to ensure hygienic use of potable water. The project instituted an equity-based site selection methodology and reduced water system operation inefficiencies by promoting community participation through the creation of water user associations (WUAs). These associations also became the focus of a variety of health education interventions. The project visibly reveals the effectiveness of, and the need for, community participation and local management of local water resources.

The project accomplishments demonstrate the central role of the social sciences taken in the design and implementation of rural development policy. Coinciding in the 1980s with a major shift toward political decentralization and economic liberalization in the overall context of Tunisian development, the project was executed by Tunisian engineers, social scientists, and health education specialists, committed to its community-participation focus. With some short-term expatriate assistance, these Tunisians made the project an impressive success, a development model that is rapidly being disseminated to other regions and development sectors throughout the country.

A. Technical Assistance

- Applied Studies -

1. Comparative Analysis
2. Cost Benefit Study
3. Policies and Procedures for Maintenance
4. Institutional Analysis
5. Assessment of WUA capacity for other community activities

B. Training

1. Asian Study Tour
2. Development of Training Materials
  - Pump Operators
  - Presidents
  - Treasurers
  - WUA members
  - Health Educators
3. Training of Trainers
  - Engineers and Technicians
  - WUA agents in GR
  - Health Educators

4. Refresher Training
  - Engineers and Technicians
  - WUA agents
5. Development of a Training System
6. Workshops to Raise Awareness and Plan Integration of Hygiene Education into WUA Promotion
7. Development of social marketing plan

C. Finalization/Synthesis

1. Midterm evaluation of Action Plan
2. Procedures Manual for WUA Program
3. Development of National Strategy Statement
4. National and Regional Seminars

IV. PROJECT DESCRIPTION

This project was designed and agreed to by USAID and GOT in order to improve the quality of life of the rural poor in Central Tunisia (Kasserine and Northern Gafsa).

A. Background

Since the mid-1970s USAID began to take a special interest in Central Tunisia as a place in which to try out various approaches to rural development. Part of the rationale for doing so was an effort to find a role for USAID in Central Tunisia which represented the backward interior of the country, whose poverty stood in glaring contrast to the impressive developments on the coast. Calculation of per capita income for Central Tunisia showed that the level of poverty was sufficient to justify continued aid. Furthermore, it was judged politically useful to show concern for this area whose inhabitants often complained of neglect by contrast with the coastal strip.

Therefore, a Potable Water Policy was prepared by the Central Tunisia Development Authority (CTDA) with U.S. technical assistance. The policy, designed to help the CTDA plan potable water interventions to support the regional development strategy for Central Tunisia, includes considerations to ensure water availability throughout the year, to help those with least access first, to ensure Ministry of Public Health responsibility for health education and sanitation activities, and to incorporate the CTDA as program manager. It also contains a detailed analysis of site-selection criteria, including distance/access, number of beneficiaries, cost, quantity and quality of water, drainage, proximity to other public services, accessibility, and possible damage to archaeological and historical sites. Finally, a detailed site-selection methodology was spelled out to take into consideration "extant demographic, topographical and hydrogeological factors." The methodology also specified a role

for beneficiaries as participants in the selection process and postulated that the selection of sites might reflect both administrative (governmental) and social (traditional social organizational) configurations to avoid rivalry over control of sites.

An agreement between the two governments described the Rural Potable Water Institutions project as follows:

This project is aimed at (1) improving the access to potable water of the rural, predominantly dispersed, population of the project area, including as many of the most disadvantaged as possible; (2) testing and demonstrating under Central Tunisia conditions lower-cost technologies for providing potable water to dispersed populations; and (3) encouraging the CTDA to undertake water activities at sites selected through the application of an agreed set of criteria.

The agreement spelled out the criteria for potable water interventions, and stressed the importance of health concerns.

Access to potable water was to be improved under the project by improving a certain number of existing water points -- capturing springs, and cleaning and motorizing old wells -- and by drilling and motorizing new wells in areas where no other source of potable water was conveniently available. The drilling of new wells in particular was to serve as an occasion to demonstrate the use of lower-cost technologies previously unfamiliar in Tunisia. In practice this meant the introduction of a truck-mounted drill, the TH-60, and the suggestion that well sites should be chosen with respect to population distribution and the likelihood of water being available at accessible depths, rather than solely in response to political pressures, as had previously been the case.

#### B. Project Purpose and Goal

To meet the needs of increasing access to potable water and to improve the quality of life for the dispersed rural poor in Central Tunisia.

#### C. Project Implementation

The project (AID Project No. 664-0337) began in August 1986. Funding for the project was provided by both USAID and the GOT.

The implemented activities of the project included the following:

1. Technology transfer aspects
  - Establishment of a GIS-based water point selection methodology
  - Creation of 30 new boreholes and civil works
  - Extension of four existing potable water systems
  - A pilot project of house connections (in one community)

2. Institutional development at the central and regional levels
  - Establishment of a national strategy for rural community WUAs
3. Institutional development at the regional level
  - Improved planning and coordination for the Water Affairs Group (WAG)
  - Creation and operation of the Unité d'Autogestion (UAG), or regional WUA support unit
  - Creation of the Rural Health Education Team (RHET)
  - Reorganization of the regional support program for water point operation and maintenance (O&M)
  - Training of project administrators
4. Institutional development at the community level
  - Creation and initial support of community Water User Associations (WUAs)
  - Recruitment and training of Village Health Workers (VHWS)
  - Creation of Women's Interest Groups (WIGs)
5. Construction Achievements

The civil works accomplished by the project included the drilling of 30 new boreholes and their associated equipment and distribution systems; the extension of four existing systems; and the completion of one pilot project to install potable water connections to individual houses in one community.

Borehole Location

Governorate

Chabiba	Gafsa
Bouibet	Kasserine
Dhouaouda	Kasserine
Boulaaba	Kasserine
Zannouche	Gafsa
Jadida	Gafsa
Ouled Boualleg	Gafsa
Ouled Zid	Gafsa
Biadha	Gafsa (Negative)
Ouled Ahmed	Kasserine
Koudiet Tricha	Kasserine (Negative)
Karouchoun	Kasserine
Nadhour	Kasserine
Serg Lahmar	Kasserine
El Bnenna	Kasserine
El Hazza	Kasserine
Fidh El Methnan	Kasserine
Boukef Lafrache	Kasserine
Henchir El Kheima	Kasserine
Dhraa Jdid	Kasserine
Toualbia	Kasserine
Koutira	Kasserine

Henchir Gallal  
Khangat Sgallas  
Boughanem  
Magsem Abdessadok  
Menzel Gammoudi  
Boulahnach  
Alim  
Ouled Saleh

Kasserine  
Kasserine  
Kasserine  
Gafsa  
Gafsa  
Kasserine  
Gafsa  
Gafsa

#### System Extensions

Alleg Rassou  
Majel Akrouf  
Garaa  
Sray

Kasserine  
Kasserine  
Kasserine  
Kasserine

#### House Connections

Khmoda II

Kasserine

#### D. Project Activities

The major activities of the project included the following:

1. Technology transfer activities
  - Establishment of a water point selection methodology
  - Creation of 30 new boreholes and civil works  
Extension of four existing potable water systems
  - A pilot project of house connections in one community
2. Institutional development at the central and regional levels
  - Improved planning and coordination for the Water Affairs Group (WAG)
  - Creation and operation of the Unité d'Autogestion (UAG), or WUA support unit
  - Creation of the Rural Health Education Team (RHET)
  - Reorganization of the regional support program for water point operation and maintenance (O&M)
  - Training of project administrators
  - Establishment of a national strategy for rural community WUAs
3. Institutional Development at the community level
  - Creation and initial support of community Water User Associations (WUAs)
  - Recruitment and training of Village Health Workers (VHWs)
  - Creation of Women's Interest Groups (WIG)

#### E. Project Inputs

The implementation of AID project No. 664-0337 began in August 1986, and funding for activities in Central Tunisia ended on 30 June 1991, although project funding continued for the national strategy work through 30 June 1992.

Funding for the project was provided by both USAID with US\$5,594,873 and the GOT with Tunisian Dinars 3,200,500.

#### F. Project Outputs

This Project was completed in June 1992: (1) its broad objective was to improve the quality of life of the rural poor in Central Tunisia; (2) its purpose was (a) to establish and refine a coordinated and decentralized institutional approach to rural water operations and maintenance, with user participation and user fees, demonstrating a model to the GOT which would be appropriate for adoption as a nationwide strategy; (b) maximize water investments with improved water systems; and (c) provide improved access to potable water for underserved rural populations. The project was designed to address specific problems that had plagued earlier rural potable water programs in Central Tunisia. These included (1) selection of water points utilizing political criteria rather than need; (2) waste of both energy and lack of health education programs to ensure hygienic use of potable water. To solve these problems the project instituted an equity-based site selection methodology and reduced water system operation inefficiencies by promoting community participation through the creation of Water User Associations (WUAs). These associations also became the focus of a variety of health education activities.

In addition to the physical construction of 28 (positive) deep wells, other contributions included: (1) The project's social/community orientation; (2) the high degree of collaboration achieved between different GOT Ministries and various project participants; and (3) the role of the project in helping to define a national, rural potable water sector development policy and the establishment of a National Strategy for WUAs.

The Project's success in creating WUAs in Central Tunisia sparked interest at the national level, where the changing political and economic climate has moved toward greater decentralization. The agency responsible for most of the water systems in rural Tunisia, Genie Rural (GR) of the Ministry of Agriculture, has promoted a national strategy for the creation of WUAs throughout Tunisia, and instructed the governorate-level GR offices to organize communities to assume responsibility for operating and maintaining water systems. Besides USAID support to the project, another major bilateral donor involved in the installation of potable water systems in rural Tunisia, the German Kreditanstalt fur Wiederaufbau (KfW), has now taken over the support for the WUA concept and more associations are being formed in communities where KfW-funded water systems are operating. WUAs now exist in all rural governorates of Tunisia and the Tunisian Government is committed to extending

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community management of local water resources to the entire country.

## V. END OF PROJECT STATUS

Section IV. D. provides details on project activities.

### A. Institutional Status and Sustainability

The project employed a multi-disciplinary, equity-based approach to a development sector -- rural potable water supply -- that has in the past been dominated by technical and engineering concerns. In this project, as much if not more attention was paid to the development of human institutions that would operate and support the water systems than to the creation of the systems themselves. Social science methodology and expertise were crucial, indeed central, to the project design and implementation. The project was executed by a broad mix of Tunisian engineers, social scientists, and health education specialists. All were committed to the community-participation focus of the project and they, together with regular, short-term expatriate assistance from individuals with a similar range of credentials, made the central Tunisia project a laudable success-story and provided a development model that is rapidly being disseminated to other regions and development sectors throughout Tunisia. Women interest groups were formed in several communities and the concept of directly encouraging female participation has been adopted in all governorates.

### B. Lessons Learned

Both the Government of Tunisia and the United States Agency for International Development consider the Rural Potable Water Institutions project in Kasserine and Gafsa governorates highly successful, since the project achieved its stated objectives, and provided a model for development initiatives and other positive interventions in other parts of Tunisia and perhaps elsewhere. The project was designed to address specific problems that had plagued earlier rural potable water programs in Central Tunisia. These included water point selection utilizing political criteria rather than uniquely on the basis of need, waste of both energy and water, a high frequency of water system breakdowns, and a lack of health education programs to ensure higienic use of potable water. To solve these problems the project instituted an equity-based site selection methodology and reduced water system operation inefficiencies by promoting community participation through the creation of WUAs. These associations also became th focus of a variety of health education interventions. The project visibly revealed the effectiveness of, and the need for, community participation and local management of local water resources. Additionally, the project accomplishments demonstrated that the social sciences should take a central position in the design and implementation of rural development policy. The project also

established the high degree of collaboration between the various project participants and played an important role in helping to define a national, rural potable water sector development policy. These participants, who never cooperated so closely in the past, are the Ministries of Agriculture, Public Health, Finances, Interior and Social Affairs.

### C. Recommendations

The Rural Potable Water Institutions Project successfully completed all of the construction objectives that were included in the project design. The project, and a previous USAID-supported potable water subproject, greatly increased the percentage of the rural population served by improved potable water systems in the Kasserine and north Gafsa regions. Although the financial cost of the construction interventions was higher than initially anticipated, this was due to hydrogeological constraints and not improper management of project funds. In fact, by employing a new, sophisticated site selection methodology, the project made optimal use of the funds spent for potable water system construction. There are no recommendations regarding wells construction and management of project: successful closure in record time documented in a RIG/Dakar audit undertaken in Feb/March 1990. The audit gave high marks for overall project management as well as the mid-term evaluation made in January-February 1989.

Thus, the only recommendations related to the Project are presented below. These concern the essential actions that each concerned ministry or department is responsible for carrying out in order for the National Strategy to be effectively implemented. They incorporate the changes that were suggested and agreed upon by the participants who attended the two interregional seminars and one national seminar. These recommendations reflect the consensus of the participants:

#### **MINISTRY OF AGRICULTURE**

##### **- Division of Rural Engineering (DGGR)**

- Strengthen the WUA Promotion Service of the DGGR by increasing the number of staff with the necessary skills.
- Implement the communication and social marketing program (designed during the Action Plan) in collaboration with the Agence de Vulgarisation et de Formation Agricole (AVFA) and the CRDA.
- Assist in creating an inter-ministerial coordinating committee to promote WUAs.
- Implement the monitoring and evaluation system (proposed in the National Strategy) at the national level.

- Organize training-of-trainer workshops for the technicians of the Arrondissement de la Maintenance des Equipements (AME) and the WUA Promotion Unit (Cellule des AIC) in the 13 governorates that have not yet benefitted from Action Plan Training activities.
  - Assure the use and the follow-up of the five training guides and the procedures manuals.
- Regional Agricultural Development Organization (CRDA)**
- Strengthen the WUA Promotion Units of each CRDA with adequate staff, budget, and means of transport.
  - Assign the responsibility for all backup maintenance to the maintenance unit or division (AME) of each CRDA.
  - Improve the coordination between the offices of rural engineering, GR; maintenance, (AME); and water resources, Arrondissement des Ressources en Eau (DRE) of each CRDA in order to better promote WUAs.
  - Organize periodic consciousness-raising and coordination meetings for representatives of concerned ministries.
  - Plan and implement an extension and training program destined for WUA presidents, treasurers, technicians, and members.
  - Implement the WUA monitoring and evaluation system at the regional level.

**MINISTRY OF PUBLIC HEALTH**

**- Department of Hygiene and Environmental Protection (DHMPE)**

- Strengthen the regional offices of the DHMPE with adequate staff budget, and means of transport to carry out its role in WUA promotion.
- Organize workshops in each governorate to reinforce the skills of staff responsible for hygiene education programs.
- In collaboration with the CRDAs, develop annual plans in each governorate to coordinate hygiene education activities with WUA promotion.
- Involve the DHMPE in the choice of sites and the design of potable water supply and sanitation systems.

**MINISTRY OF INTERIOR**

- Strengthen the role of the regional Water Affairs Group, Groupement d'Intérêt Hydraulique (GIH) and assure the

administrative and political support for WUA promotion.

- Encourage self-financing and promote WUA financial autonomy while at the same time maintaining the possibility of some exceptional assistance for WUAs in trouble.
- Strengthen the potable water program in the context of integrated rural development projects.

**MINISTRY OF FINANCE**

- In collaboration with the Ministries of Agriculture and Interior, agree on and implement a new, simplified system for conducting WUA financial audits.

**MINISTRY OF SOCIAL AFFAIRS**

- Participate in WUA promotion activities through information and the training of rural female extension workers in order to develop social service activities, especially for rural women.

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PROJET DES INSTITUTIONS D'EAU POTABLE

DANS LE MILIEU RURAL US-AID

N° 664-0337

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PARTICIPATION DU GOUVERNEMENT TUNISIEN

AU FINANCEMENT DU PROJET

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A L'ATTENTION DE

M. Abdelhameed LAKHAR

US-AID - 23, rue Suffex.  
 Notre dame - TUNIS

FAX: 01- 462 464

Situation au 31/12/1992

C O M P O S A N T E S

DEPENSES

en D.T

en D.T

1. INVESTISSEMENT :

- 1.1. Achat d'équipement de pompage pour 20 forages positifs
- 1.2. Achat de voitures pour l'UAG et le suivi de l'exécution des forages :

1300 000	1040 000
126 000	100 800

2. ASSISTANCE TECHNIQUE :

- 2.1. Recrutement et paiement salaire personnel de l'UAG et des Techniciens chargés de l'exécution du Projet ( A.H.A, D.R.E etc...)
- 2.2. Frais de fonctionnement des véhicules de l'UAG et d'exécution du Projet, taxes, frais de bureau, matériel didactique etc...
- 2.3. Contribution des AICs pour l'exploitation, l'entretien et maintenance des points d'Eau
- 2.4. Frais de formation à court et à long terme des membres de l'UAG, personnel du Projet, membres des AICs, personnel de l'éducation sanitaire etc...

830 000	674 000
182 500	144 000
740 000	592 000
22 000	17 600

T O T A L : ...

3200 000 2560 000

Ministère de l'Agriculture  
 Commission Régionale  
 de l'UAG - 23, rue Suffex  
 Notre Dame - KASSERINE

Ministère de l'Agriculture  
 C.R.D.A. DE KASSERINE

*Re chef de projet*

HAJJ MOBAH

10 FEV. 1993

PROJET DES INSTITUTIONS D'EAU POTABLE  
DANS LE MILIEU RURAL  
US-aid No 664-0337

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PARTICIPATION DU GOUVERNEMENT  
TUNISIEN AU FINANCEMENT DU  
PROJET

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Le projet des institutions d'eau potable dans le milieu rural finance avec la participation de l'US-aid ( projet No. 664-0337) vise:

- l'établissement et la mise au point d'une approche institutionnelle décentralisée et coordonnée pour l'exploitation et l'entretien des points d'eau potable ruraux avec la participation des usagers par le paiement des redevances.

- La rentabilisation des investissements dans le secteur d'eau potable par l'amélioration de la sélection des sites.

- Permettre aux populations rurales insuffisamment approvisionnées en eau un meilleur accès à l'eau potable

L'exécution et la mise en oeuvre du projet qui a démarrée en 1987 a été achevée en juillet 1991, Toutes les composantes du projet ont été réalisées, dans la zone d'intervention (gouvernerats de kasserine et gafsa )

\* SUR LE PLAN INVESTISSEMENT :

- 26 forages ont été creusés dont 23 positifs et 03 négatifs (voir liste ci jointe en annexe)

- 23 équipements de pompage appropriés ont été achetés sur le budget du gouvernement tunisien et installés dans les sites positifs, sans actuellement fonctionnels.

- 23 ouvrages en génie civil (réservoirs, conduites, bornes fontaines, potences etc.....) ont été construits et aménagés autour des sites positifs qui sont actuellement fonctionnels et exploités ..

- 01 projet modele de branchement a domicile a ete realise a khmouda II

- Un equipement complet de carottage electrique a ete a qui sur le projet et il est actuellement fonctionnel

- Un ensemble de materiel a ete egalement aqui pour l'education sanifaire autours des sites d'eau

- 09 vehicules ont ete acquises (dont 06 sur le budget du gouvernement tunisien) pour le suivi de l'execution de forages; l'encadrement et le suivi des AIC par les membres de l'unite d'auto gestion

#### \* SUR LE PLAN ASSISTANCE TECHNIQUE:

- L'etude cartographique des ressources humaines et en eau a ete elaboree par l'IDA pour la selection des nouveau sites

- Un bureau d'etude et de supervision(AUI) de la construction des ouvrages de genie civil et d'aménagement des forages du projet a assiste le C.R.D.A. Kasserine et l'EX-ODTC durant 30 mois

- 02 contrats de maintenance des equipements des points d'eau ont ete egalement conclus avec 02 equipes privees(APLICO et YAHYAOUI BOUBAKER) pour une duree de 36 mois

- Une assistance technique pour l'utilisation des conduites en PVC pour l'adduction d'eau a ete egalement realisee .

- Plusieurs stages de formation de court ou longterme ont ete dispenses aux personel de l'unite d'auto gestion, au personnel technique charges de l'execution et le suivi du projet ainsi qu'au profit des membres des AIC(president,tresorier,pompistes etc...).les frais des billets et taxes ont ete payes sur le budget du gouvernement tunisien

- En plus de l'evaluation final du projet,une evaluation a mis-parcours et plusieurs audits technique et financier ont ete effectuees et ont permis d'apporter des rectifications, des adaptations selon les circonstances et des remedes qui ont contribues a la reussite totale du projet

- Le gouvernement tunisien a pri egalement a la charge de son budget les frais de recrutement du personel de l'unite d'auto gestion et le paiement des salaires et indemnites du personel charge totalement ou partiellement de l'execution, suivi et gestion du projet (Ingenieurs , techniciens administrateurs, ouvriers,mecaniciens, pompistes etc..) ainsi que les frais de fonctionnement des moyens physiques destines pour le projet (carburant, lubrifiant, entretien, reparation , achat de pieces,taxes etc..des vehicules du projet, fournitures

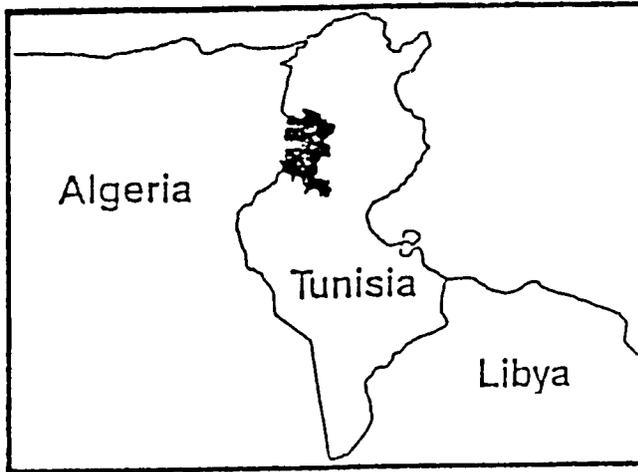
de bureau, matériel didactique, etc.) et les frais de formation à court et à long terme du personnel du projet et des membres des AIC.

- Le paiement des frais d'exploitation d'entretien et de maintenance des points d'eau par les AIC avec le concours de l'état (paiement pompistes, lubrifiant pour les équipements de pompage etc..) fait partie également de la contribution du gouvernement tunisien au financement du projet -

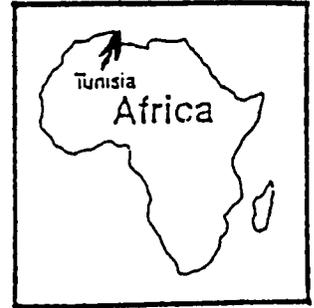
Le Chef du Projet

**MOUSSA MOSBAH**  
**LENTA MEUR**  
**CHEF DU FONDISEMENT**  
**P.P.**

The Project Area

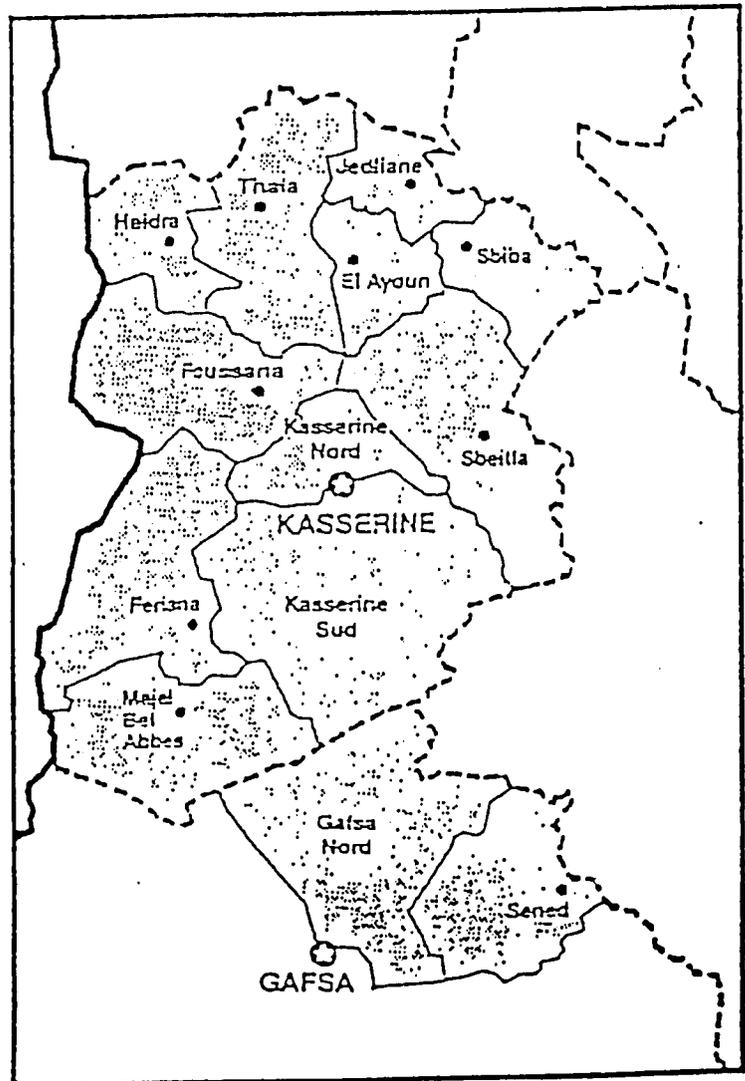


Region Map



Location Map

- Legend
-  Project Area
  -  Governorate Boundary
  -  Delegation Boundary
  -  Capital of Governorate
  -  Capital of Delegation



Project Area Map