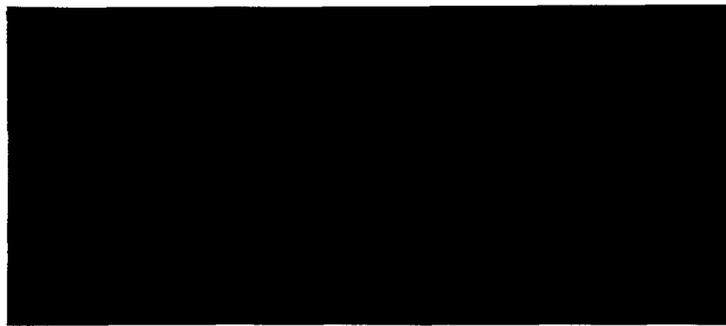


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**FORMATION AND IMPLEMENTATION OF WATER
USERS ASSOCIATIONS IN THE TADLA
PROJECT OF MOROCCO**

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FORMATION AND IMPLEMENTATION OF WATER USERS ASSOCIATIONS IN THE TADLA PROJECT OF MOROCCO

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There has been a general trend in the world of transferring the responsibility for operation, maintenance and management (OMM) of irrigation and other water systems to water user associations (WUA) after construction or rehabilitation is completed. Morocco likewise has the objective of transferring their irrigation systems to OMM by WUA. The paper will discuss the potential for formation and implementation of WUA in the Tadla Project of Morocco based on my experience in the United States, other countries of the world, and my recent experience in Morocco.

The primary experience which will be used will be that of the United States Bureau of Reclamation (USBR) in the United States. The USBR was formed in 1902 to reclaim the arid/semiarid western U.S. and since that time has constructed over 350 major water storage dams, 400 diversion dams, and thousands of miles of distribution systems including canals, laterals and pipelines. Responsibility for the OMM of at least 400 USBR projects have been transferred to various Irrigation Districts (WUA).

I believe that the WUA can be developed successfully for the OMM of irrigation systems on the Tadla Project in a similar manner in which they have been formed in the U.S. for many years, and recently in such countries as Turkey, Mexico and Portugal. As in most countries, adaption to specific conditions in Morocco will be necessary to achieve an effective transition and implementation of operations. It is necessary to have top level commitment for a successful transfer and operation of the OMM responsibility and it appeared to me that feeling is evident in Morocco, especially in the Tadla area. At the working level in ORMVAT, it appeared that some were committed to the OMM transfer process while others were more skeptical about it, which is somewhat natural for a major change such as this.

Two of the most repeated reasons I heard why this process will not work in Morocco (Tadla) are (1) that there are many more (too many) water users per area of land in Morocco than the U.S. (and other countries) and (2) that the water shortage is much more severe in Morocco than in the U.S.

In addressing (1) above, the most important principle involved in the formation and operation of WUA is participatory management, getting involvement from the water users. In

the process which I will describe, this begins by the election of a board of directors to represent water users in prescribed areas of the WUA. Whether there are numerous water users in an area or just a few, the principles remain the same: representation and involvement of the water users. Concerns or issues of individual users can be expressed to their director for consideration by the board, however, individual users are not normally involved on a frequent basis. WUA with large numbers of water users have been and are adaptable to this system.

Issue (2) above: The United States (and other countries) have good water supply while Morocco does not, therefore, this transfer process will not work properly under conditions in Morocco. Most water systems experience drought conditions at one time or another, this is true for the U.S. and most other countries, however, it is not pertinent as to whether this process will work or not. With training and experience, WUA personnel will become adept at water management because they are managing it for themselves and their livelihood depends on it.

In view of the above, a framework for the formation and implementation of WUA is recommended for the Tadla Project. This project has irrigation facilities to distribute water to about 100,000 hectares (ha). The project lands are served from three "Centers for Agricultural Development" (Arondissement) which are separable water service areas in the Tadla Project. These areas are Beni Moussa West, Beni Moussa east and Beni Amir.

Since WUA are best organized based on a separable water distribution system, the following recommendation is made:

Recommendation 1

The development and implementation of three WUA should be initiated in the Tadla Project encompassing the three Arondissement-- Beni Moussa West, Beni Moussa east and Beni Amir.

Selection of these areas for formation and implementation of WUA would have several advantages:

- 1 They are presently distinct areas which provide other related agricultural services
- 2 They have separable water distribution facilities
- 3 The areas are of sufficient size (30,000 hectares+-) for efficient utilization of equipment, personnel and supplies
- 4 The areas are large enough to hire and develop good technicians, engineers, and other required personnel

Recommendation 2

Activities for the formation of the three WUA should be initiated on a 1-2 year interval to lessen the impacts of training and other work and to use the experience gained to best advantage

Recommendation 3

The main supply canal and appurtenant facilities should continue to be OMM by ORMVAT. ORMVAT would also have continuing involvement in WUA OMM activities as described later in this paper

The following general framework and procedures is recommended for the formation and implementation of WUA in the Tadla Project. Please refer to documents entitled " Steps Needed for the Formation and Implementation of Water User Associations in Morocco " and " Why should Water User Associations be formed ? " dated November 10, 1995

Legislation

Proper legislation should be instituted , if it is not already in place, to provide legal authority for the formation and operation of WUA in the Tadla Project, including the authority to assess taxes or fees

Formation of the Water User Association

Initiation of the steps to form and implement a WUA in the Tadla Project should begin as soon as practical for one of the Arrondissement (the specific one should be selected locally) mentioned above. The selected WUA should be divided into separable districts, each of which would be represented by a director. The number of directors (districts) should reasonably represent separable areas within the WUA. A board of directors, representing the Total WUA. A board of directors, representing the total WUA should be selected at an early date in this process

The directors will provide overall policy, including financial issues for the WUA which will be carried out on a day by day basis by the manager whom they should hire. The manager, who should also be hired as soon as practical will hire and oversee development of his staff

The directors do not receive a salary, however, they may receive a small stipend for attendance at official WUA functions and expense reimbursement. The directors should be carefully selected as they should have the desire to devote time as well as the experience and knowledge to astutely provide guidance to WUA management. The directors should be closely involved in all management and policy activities associated with the formation, development, and operation of the WUA , including startup activities. They in turn should receive input from the water users in their district relative to startup, development and implementation

It is important that involved personnel from ORMVAT and the WUA communicate closely during the formation and implementation process. ORMVAT personnel should communicate the process and procedures to all water users and work closely with the directors in carrying out the transfer and implementation process.

Transfer of the OMM responsibility

As stated in recommendation 3 above, responsibility for all facilities below the main supply canal should be transferred to WUA formed in the Beni Moussa West, Beni Moussa Est and Beni Amir areas.

Conditions of transfer

All facilities which are transferred should be in satisfactory condition and should include the distribution system, equipment, shops, buildings and other related facilities. An inspection of these facilities to determine their condition should be made by involved parties prior to the transfer of the OMM responsibility. Deficiencies should be documented and provisions made for correcting them, including responsibility and funding.

An agreement should be completed which will stipulate the conditions of the transfer and the future responsibilities of ORMVAT and the WUA. These may include but not limited to the following:

- 1 Facilities involved in the transfer
- 2 Future operational and other agreements
- 3 WUA responsibility
- 4 ORMVAT responsibility and future involvement in project activities
- 5 Transition period stipulations (payments by ORMVAT, partial payments, special considerations, time, etc)
- 6 OM charges to ORMVAT for OMM of retained facilities

ORMVAT Future Responsibility

ORMVAT should remain involved in project OMM after the transfer of the basic responsibility, to protect the federal investment made in the project. This involvement will depend on local conditions but generally should include the following issues:

- 1 Approval of major changes in the system
- 2 Approval of the selection of the manager
- 3 General overview of the OMM activity
- 4 Requirement that ORMVAT perform a periodic (each 2-3 years) review of the OMM activity, including a report and requirement for correction of deficiencies by the WUA
- 5 ORMVAT will provide training and technical assistance to WUA and set technical standards and enforce conformance
- 6 Audit and provide overview of financial activities

WUA Future Responsibility

The WUA will be responsible for the OMM of the system from all aspects, including budgeting, assessment, and collection of the O&M charges from the water users. The fees collected should be used directly to pay WUA expenses for salaries, maintenance, supplies, equipment and other related costs.

The WUA will be responsible for distribution of the irrigation water after receiving it at the main canal turnout as determined by pre-established procedures between ORMVAT and the WUA. The distribution of water within the area under WUA responsibility will be at their discretion.

Financial aspects

An OMM plan should be developed by the WUA (in conjunction with ORMVAT initially) to determine the overall needs to operate the system in an efficient and effective manner. This plan should be documented and updated at least annually, perhaps with the development of the annual budget. The budget should include all anticipated costs to arrive at an assessment to the water user. An important aspect of this initially, should involve financial considerations during a transition period to assure that the WUA can establish a solid financial base and the capability to maintain it on a continual basis.

Training and Technical Assistance

Training of ORMVAT personnel will be required for the formation and implementation of WUA. In addition, after the WUA are formed ORMVAT should provide training, technical assistance, and set technical standards for the WUA on an ongoing basis to assure that a sound and satisfactory OMM program is developed and conducted. This should be more intensive during the formation stage but should remain in effect during the life of the project.

Training Format for ORMVAT/WUA Personnel

A comprehensive training program will be required for the successful formation and development of WUA on the Tadla Project. This will require training of key ORMVAT personnel who will lead the overall effort followed by specific training/orientation of directors, managers, and other staff personnel. If some ORMVAT employees transfer to similar positions in the WUA for which they are qualified, the training requirement should be fairly minimal. However, some training would be required in all cases to assure an organized effort is developed and implemented.

The following training is recommended

1. A team of 3-5 ORMVAT personnel should be selected and trained to lead this overall effort. The training should include all aspects of forming and implementing WUA by personnel who have experience in this process. Therefore, this part of the training should include a trip (s) to the United States and/or other countries such as Portugal, Turkey, Mexico, etc. Where this process has been implemented successfully. This training should include spending considerable time with an Irrigation District (WUA) to learn specific procedures and to become acquainted with the process, including why it has been implemented and why it is working (problems and benefits). At least part of this training should include higher management of ORMVAT.
2. The next step should be for an O&M expert (s) from one of the countries mentioned above, who is also experienced in the formation and implementation of WUA, to work for a period of time (perhaps 1-2 months) with the ORMVAT team to initiate and formulate this process.
3. After step 1 and during step 2 above, overall procedures for the formation and implementation of WUA in the Tadla Project of Morocco should be developed. See "Steps Needed for the Formation and Implementation of Water User Associations in Morocco".
4. Orientation and public information meetings should be scheduled and held to inform the water users of the process and procedures which will be followed.

- 5 Specific training procedures for seminars, workshops and the formation of water user organizations for ongoing training and communication on a continual basis after transfer This could be organized and facilitated by ORMVAT as all WUA formed in Morocco should eventually be involved in this effort to provide an avenue for continual awareness in the operation and maintenance field

Recommendation for further study

Since the transfer of the OMM responsibility to WUA will be a new process in Morocco, there are many issues which are unanswered at this time and speculation is high as to future happenings One burning issue is the potential layoff of ORMVAT personnel and another is the potential employment by the WUA

In view of these complex issues, the following recommendation is made

Recommendation 4

A study / evaluation be conducted to determine the various potential impacts that transferring the OMM responsibility of the Tadla Project to WUA will have on ORMVAT and others involved

Some suggested study issues may include

- 1 ORMVAT employment before/after transfer
- 2 Potential for employment of ORMVAT personnel by WUA
- 3 Employment requirements of the WUA
- 4 Water (O&M) charges---before and after transfer
- 5 Salary structure in ORMVAT and the WUA
- 6 Effect on rural area (s) in the Tadla Project

General responsibilities of a water user association

- 1 Equitably deliver water to all users
- 2 Develop, practice and promote good management
- 3 Hire and develop (train) capable employee

- 4 Develop a sound and fair fiscal policy
- 5 Recognize the importance of water conservation
- 6 Develop a safe working environment and practice safety