



ESTABLISHING WATER USER ASSOCIATIONS IN IFAD PROJECTS

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SUMMARY

1. The development of irrigated schemes has for a long time been contingent upon a centrally- planned and controlled policy emphasizing the importance of the investments carried out by the state in the sector. However, in the eighties, this centrally-planned development path in force was no longer considered appropriate particularly within the specific context of a free enterprise economy and state's disengagement from direct involvement. Fresh alternatives were considered involving a series of measures to delegate users increasing responsibility in matters pertaining to the maintenance of irrigation networks, direct management of farms, liberalisation of land left fallow, establishing Water User Associations (WUAs) and promoting water conservation systems.
2. Hence a new legislation better adapted to boost organization of Water User Associations was promulgated by the public authorities (Act N°2-84 on Water User Associations of December 21, 1990). Besides, the strategies put in place by rural development projects funded by the International Fund for Agricultural Development (IFAD) provide a concrete example to ease implementation of the participatory approach, with a view to upgrading locally-based development and management skills through training provision.
3. The report presents three examples in connection with IFAD- based projects whose main bullet points bring to bear on the following (i) the innovative capacity of the rural world with regard to inheritance of traditional lore and know-how;(ii) the increasingly important capacity of the farming world to open up and integrate innovative methods when they are deemed useful and profitable and (iii) the role of training programs, though in their simplest forms, can be considerably instrumental in enhancing capacity building of associations and ensuring long- term sustainability of irrigation infrastructures.

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I. INTRODUCTION

- 1- Considerable efforts have been invested by the government of Morocco to harvest underground and surface water resources for irrigation purposes resulting in the construction of many storage dams throughout the country.
- 2- The development of irrigated schemes has for a long time been contingent upon a centrally planned and state-run policy on account of the investments made in the sector. In the preliminary stages, the state, as was often the case, substituted farmers in the decision-making processes. These extensive efforts exerted by the state in the field resulted in a dramatic increase of production in irrigated systems.
- 3- However in the eighties new developments occurred and it was noticed that this centrally-planned irrigation development pattern was no longer viable particularly within the context of a free market economy and the state's disengagement from direct involvement. New development-related paths were considered involving taking a series of measures, particularly those pertaining to increased users' responsibility in matters, such as maintenance of irrigation infrastructures, direct farm management through fallow liberalisation, establishing Water User Associations (WUAs) and promotion of water conservation systems.
- 4- These new orientations have not as yet contributed to fully attain the set goals, basically due to lack of reallocating the means available on the basis of newly identified goals and because of resistances inherited from past practices.
- 5- The current paper will give a brief overview on the development of Participatory Irrigation Management (PIM) through (i) the Water User Associations Act (ii) the strategies put forth by rural-based development projects funded by the International Fund for Agricultural Development (IFAD).

II. BRIEF OVERVIEW ON WATER USER ASSOCIATIONS ACT

- 6- In the small and medium-scale irrigation systems, renovation of traditional irrigation networks is generally compounded by a complex management system based on water rights still in use in the scattered farm holds. This practice of water rights is performed on the basis of community-pre-established and accepted criteria, with every grower receiving his share of water under the supervision of an official monitoring the smooth flow of work in each irrigation system. However, maintenance of community irrigation infrastructure in the districts is not always efficient (i.e. intake structures, primary and secondary canals). To offset these shortcomings, a new legislation on Water User Associations, better adapted to cope with the situation, was drafted and promulgated by the public authorities (Act N°2-84 on Water User Associations of December 21, 1990).
- 7- Hence, responsibility to manage renovated irrigation networks is entirely borne by farmers operating within WUAs. These associations of irrigation farmers are often made up of groups with previous existences in most of the conventionally-run irrigated systems and operate in compliance with the legal framework of the WUAs' Act.

- 8- The act provides for establishing WUAs in all irrigated systems where the state has created or developed facilities with a view to using the harvested waters for agricultural purposes. With this aim in mind, the basin agency proposes to the assembly of irrigation farmers the program of the works to be carried out in the district. It defines the financial and technical contributions it will make and the deadlines for work completion. The agency equally determines the expenses to be shouldered by the association, namely the water fees, the investments to be performed and the costs incurred by maintenance and operation of irrigation infrastructures.
- 9- Agreement of the eligible parties to set up associations is a prerequisite for project establishment in the small and medium-scale irrigation systems. Subsequent to the agreement reached between the WUA's general assembly and the basin agency on the work program to be carried out, the association is eventually created and is therefore empowered to sign contracts with the public authorities to start equipping the irrigation system.
- 10- When infrastructure-based projects are completed, minutes are signed between the association and the agency to transfer management of the irrigation system to the WUAs. From that moment onwards, the system will be run and maintained exclusively by the association. The agreement subsequent to the establishment of the WUAs provides for certain accommodating clauses and measures designed to cope with all the modalities pertaining to the management of irrigation systems, such as water distribution (water turns) and operation and maintenance of the infrastructure. Operation and maintenance tasks of the network basically encompass ensuring proper work –flow of water supply, efficient operation of irrigation structures and distribution (i.e. organizing water turns, cleaning irrigation canals, restoring to good condition of deteriorated simple civil-engineering structures and ensuring maximum protection of the irrigation system, etc.).
- 11- Through its governing board, the WUA is called upon to list down high priority actions and the modus operandi relating to maintenance works in accordance with the level of their importance (either to be carried out by the beneficiaries themselves or through outsourcing). Therefore, it is a requirement for the association to develop a good understanding and knowledge of the conditions of the irrigation infrastructure and of the network as a whole.
- 12- Costs incurred by operation and maintenance of the infrastructure will be met by the WUAs. All members of the association are expected to pay an annual fixed fee. This fee will feed into a fund in order to pay for specific maintenance works (i.e. concrete paving, masonry) and for staff compensations. Ordinary maintenance work (i.e. earth moving and canal cleaning) will be performed by the users themselves. Specific works, however, such as masonry or concrete paving will have to be performed by a mason who is a user resident in the district or through recruitment of a mason from outside the district (labour and construction materials bills are paid for from the community-based fund).

III. WUAS DEVELOPMENT STRATEGY IN IFAD PROJECTS

A. OVERALL OBJECTIVE AND POLICY STRATEGY OF IFAD PROJECTS

- 13- IFAD projects have been designed in such a way as to fit within government policies. Their overall objective is to contribute to eradicate poverty in the rural world through diversifying and increasing incomes of the rural populations in a sustainable manner and contributing to restoration and sustainable management of natural resource bases.
- 14- In the context of the participatory approach which is a key characteristic of IFAD project implementation, the proposals put forth to improve small scale irrigation are considered a top priority by the beneficiaries. Therefore, engaging in dialogue with them on this specific topic is quite smooth and not difficult.
- 15- Also, rehabilitation of irrigation networks will basically allow achieving the following: (i) increasing crop yields through increased and better distributed water volumes, (ii) increasing the share of water volumes made available to downstream areas of the main irrigation scheme, which do not very often receive irrigation water during peak or low stream flow periods and (iii) introducing highly productive crop varieties or even samples of new farm crops.
- 16- Implementing an approach based on strengthening training on all levels, including enhancing community-level awareness, outreach and counselling necessary to attain the goals of poverty eradication, to achieve sustainable development and ensure conservation of natural resources in project-based areas. The training of growers will bring to bear on utilisation, management and maintenance of farm implements and on upgrading farming techniques, without which water use efficiency will remain an empty slogan.

B. WUAS TRAINING IN IFAD PROJECTS

- 17- The strategic objective of IFAD projects is to consolidate management-based capacities and to prompt local development of rural populations with a view to improving their incomes, standards of living and ensuring their food security, with the overriding concern of achieving sustainable utilization of natural resources. This objective fits within the 2020 rural development strategy worked out by the Ministry of Agriculture, Rural Development and Marine Fisheries, and which calls for the adoption of a participatory approach involving village-based teams to carry out the inventory work, ranging from soil analysis, establishing diagnosis, considering assets and constraints, defining and prioritizing relevant actions to be undertaken, exploring appropriate paths for their implementation including participatory management. Along those lines, the program consists in working out Village or Community-based Development Plans (VCDP), which can be derived by striking up a balance between the technician logic and the participatory approach calling for greater involvement of the grassroots' population.
- 18- In order to suitably play their role in operation and maintenance of rehabilitated and modernized irrigation systems, WUAs should receive direct backstopping and permanent advisory services provided by a close proximity department at least during the first years from their inception. This technical support should not only

cover aspects pertaining to irrigation water management , but also should lead to improving agricultural productivity and intensifying production systems.

- 19- The establishment of associations is one of the most critical and necessary actions to perform for ensuring the lastingness of irrigation infrastructures. In compliance with the programs put forth by the Ministry of Agriculture, Rural Development and Marine Fisheries, IFAD projects have scheduled a training program to be delivered by a consultant-trainer recruited through competitive bidding open to the private contractors. The successful bidder will either be an engineering and design department, an NGO with expertise in the activity sector or possibly Moroccans with recognized skill qualifications.
- 20- The proposed training program will relate to the five following sessions: (i) to kick-start, focus will bring to bear on the participatory diagnosis to systematically identify most salient weaknesses and to facilitate educational group activities according to the needs and key characteristics of the irrigated district; (ii) community-based administrative and financial management (Record keeping and the WUAs secretariat, budgeting of operations, management of current accounts and funds, financial follow-up and financial statements); (iii) rational distribution of water among users in the district and water use at field plot-level taking account of factors, such as soil, crop requirements, plot layout and site preparation for irrigation water; (iv) establishing sound maintenance practices likely to ensure sustainability of irrigation infrastructures; (v) protecting water resources from pollution; and (vi) methods, instruments and procedures for setting goals to be attained in addition to medium-term planning of actions to be performed by the WUAs.
- 21- To complement the five sessions, a specialized session will be hosted to sharpen the skills needed by treasurers and secretaries. This sixth session will deal with issues related to financial management of WUAs for the benefit of treasurers and management of administrative problems for secretaries.
- 22- The training course will take place over the span of 4 days for each WUA, with a 2-day course in-situ (i.e. the local headquarters of the association for example) and a 2-day field trip. Between each session, a 5-week period is extended to the trained members to carry out a mini action project which they have been able to design during the session and to share the multiplier effects with the users in the course of the meetings they will have with them.

C. WUAS DEVELOPMENT EXAMPLES IN THREE IFAD PROJECTS

Case 1: Rural Development Project of the Eastern Middle Atlas (PDRMO)

- 23- Community-based traditional organization of the populations in the villages of the project area is still predominant in several places. It is reflected through the simultaneous performance of a multiplicity of tasks (i.e. tillage, crop harvesting, house construction, laying out of irrigation canals, etc), management of irrigation water, conflict settlement between village members or between villages themselves on issues pertaining to defining the boundaries of the farm holds or of the villages.

However, the community (jmaa) does not have existence in law and cannot, therefore, engage in any partnership-related scheme with the administration or deal with management of public funds. Its members provide memory support services to the community with regard to irrigation water distribution methods, water share for each user as well as the boundaries of the farmsteads and villages.

- 24- In parallel to this, the area has witnessed an increasing development pattern in the form of village-based associative and co-operative movements which have been gaining ground. Indeed since 1999, 31 development-driven associations have been created in the project area and are quite active, particularly in matters relating to agricultural development, livestock -breeding and environmental protection. In addition, some WUAs, operating at district level, have proven their worth in ensuring maintenance of irrigation networks, water management and for conducting follow-up of rehabilitation work.
- 25- Within this framework, 73 WUAs are operational in the Boulemane province, of which 20 are located in the project area, discharging work particularly in the communes of Sarghine, Enjil and Skoura. Sometimes, the leadership in charge of these associations (i.e. the President, the Secretary General, and some Board members) are university graduates.
- 26- In this regard, it is particularly important to underscore the fact that several of these WUAs are the brainchild of the jmaa (traditional community-based form of organization). Several have been created subsequent to a request filed by the jmaa to take advantage of the development programmes extended by the government. Indeed, the IFAD project has been able to notice that the leadership of several associations is mainly made up of members of the jmaa and their relatives. The decisions are collectively taken in agreement with the jmaa's standpoint. Support to formally-set up associations, particularly those involved in rural development and management of the socio-economic infrastructures, seeks to respond to the following (i) the national policy to strengthen capacity-building of civil society components and increase population involvement in national development-based issues; (ii) the strategy put in place by IFAD and (iii) the requests expressed by the associations and the jmaas to benefit from development projects.

Case 2: Rural Development Project in the Mountainous Area of Al-Haouz Province (PDRMH)

- 27- 17 rural communes are targeted by the rural development project of the mountain areas of Al- Haouz province (PDRMH) .To give concrete substance to villagers' involvement in the work, an Annual Contract Program (ACP) is signed with project management. This ACP encompasses all actions identified and defined by the village population including the rights and obligations of the concerned parties. The activities listed in the action plan are scheduled for implementation and can be financed by the PDRMH.
- 28- Rehabilitation of the small and medium-scale irrigation is very crucial, since the latter is a very important project component expanding over 4,000 ha area, of which 25% in high and 40% in medium valleys and 35% on the foothill.

- 29- The project has adopted the participatory approach as a basic strategy within the context of a sustainable development perspective to better allow the populations to identify their needs and structure their actions accordingly. Hence, in discharging its duties, the project has benefited from partnerships established with development-driven associations for implementing the action programs. The numbers of associations recorded in the Al- Haouz province as well as the growth pattern of associative demography highlight the increasingly important role of the associative movement.
- 30- In addition, the wealth of information derived from the participatory culture of the local populations is a considerable asset for the project. Indeed, in these 'so-called' marginal areas (especially those of the Talat N' Yacoub commune) local citizenry have learnt to close ranks, work cooperatively and adopt traditional patterns of organization in order to respond to unmet needs by the public sector. Consequently, they are more flexible to adapt to the community-based form of organization put forth by the project.
- 31- **Association Involvement.** The contribution of recipient populations is multifaceted. Initially the PDRMH provides a framework for the populations to express their dissatisfaction. In this preliminary stage, focus is on formulating the needs in an exhaustive manner.
- 32- In general, in the course of the preparation of the study files of irrigation networks, the association takes part in the choice of the layout and negotiates with the engineering and design department the type of irrigation canal it deems suitable. During the execution of the work contract, the association also takes part in monitoring the work, in particular the proportioning of concrete and steel reinforcement.
- 33- Usually, the association appoints one or two people (often masons or people with experience in the construction sector) to monitor concreting. The discussions initiated with some associations showed that they had sufficient information on the quantity of concrete proportioning they wanted (the required number of wheelbarrows of aggregates per cement bag), the number and diameter of steel bars to be used and the type of cement.
- 34- It is a pity; however, that the association is not able to receive the execution plans prior to work implementation so that it can participate in monitoring the work rigorously. The availability of the execution plans as well as the orientation training that can be provided to the association to help it read these plans will be extremely helpful to the project. The people working within the association are the ones with a permanent presence on the construction site, in contrast with the technicians or the people from the engineering and design department who undertake periodic visits to the area.
- 35- The contribution of various associations is often carried out in the form of labour to do the earthworks, the pitching and concrete laying. The price units of the various contracts applied to these quantities allow computing the amounts payable by the beneficiaries. The table hereafter synthesizes the results by commune.

Rural Commune	Work Amouts	Kind of Contribution			Contribution Amount (Dh)	Contribution Rate (%)
		Earthwors (m3)	Pitching (m ²)	Concrete (m3)		
Azgour	7 101 441	820	365	62	159 316	2.2
Ighil	4 857 926	377	753	-	59 350	1.2
Imgdal	3 823 139	1 385	523	-	46 764	1.2
Ijoukak	2 839 597	841	523	39	132 890	4.7
Total	18 622 104	3 422,85	216 475	10 135	39 832 101	2.1

- 36- It seems that labour contribution ranges between 1.2 % and 4.7 % among the 4 communes of the high valleys; the average is 2.1 %. This apparent low rate of contribution is indeed very significant and reflects the degree of population involvement. It is directly linked with the poverty level of the populations who do not have the base resources to take part in the work. In this regard, it is worth recalling that the project strategy focuses initially on and targets support for the most destitute and underprivileged villages in the project area.
- 37- **Capacity-Building of Associations: Work Monitoring.** In this regard, increasing capacity-building of associations to monitor conducted work is one of the most practical project recommendations since it will make it possible to back the work initiated by the technical departments of the ministry. Indeed, the human and material resources available (cars, travelling expenses) do not allow the engineering department to engage in an ongoing type of assessment given the limited staff number, on the one hand, and the number of construction sites scattered over a vast area with difficult points of access, on the other. The major constraint is the multitude and dispersion of the irrigation systems in the project area. Conducting a regular and constant follow-up of the various construction sites is therefore impossible to perform mainly because the sites are scattered all along the high valleys of Ighil and Aghbar, the Piedmont and mountain region of Amizmiz and the middle valleys of Asni.
- 38- A solution to the problem consists in involving the beneficiaries themselves through their associations to take part in monitoring and follow-up of work. Thus, within the framework of the Association - Project partnership, it is possible to consider giving increased responsibility to the association to discharge follow-up and monitoring of the work on a permanent basis. This will require training association members to upgrade the skills in connection with the reading of plans, sizes and concrete proportioning (cement, aggregates) and reinforcements.
- 39- This task is within reach and is not a problem since there are always masons or workmen in the village with sufficient skills in the construction sector. Moreover, associations have expressed their readiness to perform such a task. In fact, in many localities this monitoring has already been put in place. What is most needed is a

contract to formalize this relationship, and especially the provision of training to members of the association to discharge monitoring efficiently. Associations are, therefore, capable of assimilating these technical aspects if training is engineered and administered adequately.

- 40- The benefits accruing from such an approach are vast and varied. There is no question that it is the best way to enhance responsibility of the beneficiaries and increase their involvement in the project. It is also a form of contribution in work delivery. Finally, it is a kind of training and an initial preparation for shouldering prospective maintenance work of the irrigation infrastructure.

Case3. Rural development project in the mountainous area of Errachidia province (PDRME)

- 41- This project is still at the formulation stage. However, provision of training to the WUAs, as has been stated earlier, is a fundamental component in IFAD's project implementation strategy. In addition to this, fresh proposals are suggested for action.
- 42- The thrust of the action is to be able to determine on the basis of measurements using stream gauging, i.e. to be provided by the project, the discharges transiting through the traditional irrigation canals or séguías. For all of the irrigation systems, measurement of de facto discharges and of the volumes conveyed by the network transport and distribution systems is a key element in the decision-making process relating to irrigation network operation. The set goals to be achieved are the following: (i) gain complete mastery of water transport in the networks; (ii) initiate and kick-start maintenance and rehabilitation works (a priori) and their assessment (a posteriori); (iii) address water shortage management issues; (iv) develop conflict arbitration procedures; (v) council exemption; (vi) provision of a database on discharges and water volumes; and (viii) ensure efficient water resource management within a participatory framework.
- 43- There is an absolute requirement for the technical departments of the Tafilalet regional office of agricultural development (ORMVATf) and the local user organizations to have tools available for measuring water discharge. Decision on the location of these measurement points will be made in close collaboration with the local institutions and the beneficiaries (WUAs and ORMVATf). The ultimate goal of such a system is to make it possible for the various stakeholders to have a database on discharges and on water volumes to ensure efficient water management within a participatory framework.
- 44- For implementing such a system, it is necessary to provide training for proper installation and operation of the system to the ORMVATf technicians and to those in charge of the WUAs.
- 45- The WUAs will be gradually involved in the process. Initial work will be started with those which are available and express a real interest into this type of activity. Most importantly, focus will be on involving WUAs with users who are literate and have a school background.

- 46- The discharge measurement activity (and therefore of water volumes) is of a strategic nature, because its success (i.e. involvement and project ownership by the WUAs) will be a breakthrough in the role played by WUAs, which will then be in a position to take over the prerogatives shouldered by the Jmaa previously (i.e. role of managing irrigation networks, water shortages and conflict settlement). Consolidating the role and the legal entity of WUAs is the best course of action to ensure sustainability of irrigation infrastructures.

IV. CONCLUSION

- 47- The innovative capacity of the rural world combines perfectly with heritage of traditional lore. The farming world is quite open to innovative methods when they are useful and profitable. Training courses, though quite simple in their design, can contribute considerably to enhance capacity building of associations, the best guarantor of the sustainability of irrigation facilities. This should lead to increasing soil productivity and boosting agricultural production efficiency.