



MEASURING SUSTAINABILITY: MONITORING & EVALUATION OF THE PERFORMANCE OF WATER USER ASSOCIATIONS

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ABSTRACT

Participatory Irrigation Management (PIM) has been introduced in a large number of countries worldwide. In many cases much attention was given to establishing or developing water user associations (WUAs). Many resources have been spent on analyzing and standardizing an approach to introducing PIM. However few resources have been allocated to developing indicators for monitoring and evaluation (M&E) of the performance of WUAs. The sustainability of WUAs within the specific socio-cultural context of the countries in which they have been introduced/developed requires more consideration.

This paper consists of three consecutive themes. These themes are, (i) international experience with measuring performance of WUAs, based upon the experience of the author and other relevant case studies, (ii) common pitfalls for sustainability of WUAs, and (iii) main technical and institutional indicators for measuring WUA performance.

The paper presents concrete and practical indicators for measuring WUA performance, and links these to the sustainability of WUAs and PIM. The objective of the paper and the presentation is to share these indicators and to generate discussion on the feasibility of the indicators in light of the specific socio-cultural circumstances in different countries.

The paper finally presents institutional arrangements for M&E of WUA performance, such as Federations of WUAs, the role of national, regional and local authorities in measuring WUA performance and the maturing of PIM as a process of development. This paper puts forward a hands-on approach for policy makers, implementation experts, academics and consultants for ensuring and improving the sustainability of PIM.

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INTRODUCTION

Participatory Irrigation Management (PIM) has been introduced in a large number of countries worldwide, with mixed success. PIM was developed by the World Bank as a workable concept to introduce community based participatory management of irrigation infrastructure. However, community based development and management of irrigation infrastructure has been practiced in many countries of the Middle East and South Asia region for centuries. One beautiful example is the construction of Kheftara's¹ in Morocco, Syria & Pakistan (Balochistan), which were built and maintained by communities centuries ago. Families actually attained water rights on the basis of the comparative effort or resources they invested in the construction and maintenance.

Whereas much time and effort has been invested by a large number of donors and development organizations in the establishment of Water User Associations (WUAs) as a manifestation of PIM, less time and effort was attributed to the post-intervention period, during which continued institutional and technical assistance to WUAs is required. Furthermore, WUAs are placed within an institutional framework that is usually dominated by the public sector. Whereas WUAs are non-governmental organizations (NGOs) they are given an important chunk of tasks and responsibilities that were initially owned by the public sector. It is therefore important that the performance of WUAs is monitored periodically. However, monitoring of performance of NGOs by the public sector can lead to serious complications due to different frames of reference and modes of operation.

This paper presents three themes: (i) international experience with measuring performance of WUAs, based upon the experience of the author and other relevant case studies, (ii) common pitfalls for sustainability of WUAs, and (iii) main technical and institutional indicators for measuring WUA performance. The paper attempts to make a case for increased attention to the post-intervention phase of introductory processes of PIM and for fair and effective monitoring and evaluation of the performance of WUAs.

INTERNATIONAL EXPERIENCE WITH M&E OF WUAs

Performance and sustainability of WUAs can be measured on the basis of two key determinants; (i) legitimacy, and (ii) relevance. Legitimacy is defined as, "organisations that are recognised by all third parties with which they interact and are considered the legitimate organisation for its' defined purpose."ⁱ Relevance is defined as, "organisations are accepted by their beneficiaries as the organisations representing their interests and address issues that are recognised and considered relevant for and by the beneficiaries (are addressing "actually felt needs")"ⁱⁱ. Through monitoring of these two key determinants, many other determinants and parameters can be extrapolated. Some of these are autonomy, legality and accountability.

In Egypt, the Netherlands Development Cooperation has been funding a series of projects aimed at developing and institutionalizing concepts of PIM. The Waterboards Project has developed a complex system of monitoring and evaluation (M&E) of

1- A system of vertical wells in the alluvial fans at the foot of the mountains interconnected by a horizontal underground tunnel that intercepts the water table near the head of the alluvium, and provides a dependable source of water flowing under gravity to valley alluviums where agriculture is mostly practiced. They are also known as Karez or Qana'at in Balochistan and the Middle East.

Waterboards on the basis of the two key determinants described above. They are currently in the process of field-testing the M&E system. Problems have arisen regarding calibration, as those WUAs established by the project score better than those established by government or other projects.

The International Fund for Agricultural Development (IFAD) has financed a four year programme called, "Action Research Programme on the Identification and Testing of Methodologies and Approaches for Effective Introduction of Participatory Irrigation Management". This programme was implemented by the International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM) in Bari, Italy. The main objective of the programme was to help member countries (of IFAD) to take advantage of proven lessons emanating from international experience with PIM to contribute to sustainable rural development. The four countries in which the programme was implemented were Morocco, Tunisia, Egypt and Armenia. In Armenia, special attention was given to the development of indicators for monitoring of performance of WUAs.

The main constraint identified when measuring the performance of WUAs in Armenia was that there was a gap in terms of understanding, expectations and feasibility of the tasks and responsibilities. This gap existed between the monitoring party, i.e. government, and the object of monitoring, the WUAs. Whereas the WUAs were established by law within a very short period of time, government divested itself of its tasks to maintain irrigation infrastructure and simultaneously imposed Value Added tax on water sales. The WUAs did not have the experience and capacity to generate sufficient revenue to initiate the necessary O&M, as a result of which the whole process came to a standstill, especially in the poorer upland regions of the country. Performance indicators measured unacceptably dismal performances, as a result of which the process of introducing PIM was questioned. This example illustrates quite nicely how a government apparatus can be convinced by external donors and consultants to expect unrealistic benefits of introducing PIM, as a result thereof develops ambitious plans and finds that after the projects introducing PIM are finished that things are not as expected. Often the result is that governments subvert WUAs by minimising their legal status and their options for revenue generation. As a result these WUAs lose their legitimacy and relevance and become unsustainable.

M&E of WUAs has to take place within a context of mutual understanding and cooperation between the monitor and the object of monitoring. This in turn pleads the case for continued institutional support for WUAs after establishment. This institutional support has to be embedded within the national structures to ensure that the support provider grows along with the WUAs. This will ensure that support will always be geared to the needs of the WUAs.

COMMON PITFALLS FOR SUSTAINABILITY OF WUAs

To enable WUAs to be and remain sustainable, legitimacy and relevance are crucial. Since WUAs are usually membership organisations, their interventions must be credible and seen to provide a beneficial service to (a large number of) members. Government policies for maintenance of irrigation infrastructure are often of the "Build – Neglect – Rebuild" kind. This has caused most users of the irrigation infrastructure to lose faith in government policies and interventions.

For WUAs to become accepted as the legitimate and relevant organisation within the community to take charge of O&M of the irrigation infrastructure, which is so crucial to their daily survival, they must be able to provide better and more timely services than government did. This means that they must be able to generate sufficient revenue to sustain these services. To generate this revenue they must be paid for the service that they provide. Instilling a sense of payment for service in rural communities is often difficult, as water is seen as a free commodity and often as a gift from God. A second crucial element of sustainable WUAs to enable them to attain and maintain their legitimacy and relevance is a conflict resolution mechanism. A common pitfall during the establishment of WUAs is to limit their revenue generation capacity and their legal status, whereby the attainment of legitimacy and relevance is much more difficult.

On the other hand, if during establishment of the WUAs the focus is too much on legal and financial issues, other crucial elements of the functioning of WUAs can be neglected, such as social mobilisation and conflict resolution.¹

Another common pitfall for the introduction of PIM is the, “Rehabilitation – Dependency – Deterioration Trap”.ⁱⁱⁱ This trap is sprung when selected WUAs are given financial support by external parties such as donors. Infrastructure is rehabilitated and the operational basis the WUA is optimised. As a result water provision to beneficiaries is improved and a process of payment for service is either initiated or re-instituted. However, peripheral WUAs that were not selected for additional financing still have to struggle along the traditional ways. As a result government often steps in to help them solve their immediate problems and a dependency on government continues. Very often beneficiaries of these systems are disgruntled and pay little or nothing to the WUA. A situation of perceived inequity arises, whereby the beneficiaries of the operational systems ask why they have to pay so much for a service that the government is providing (more or less) free of charge for neighbouring WUAs. As a result they start reducing payments and the rehabilitated infrastructure deteriorates and the situation is back to square one after a few years. This trap again shows how important it is to continue support to WUAs, including awareness and continued assistance.

MAIN TECHNICAL AND INSTITUTIONAL INDICATORS FOR MEASURING WUA PERFORMANCE

The measuring of performance of WUAs can be sub-divided into three areas: (i) efficiency of services, (ii) institutional and financial sustainability, and (iii) impact of services. The first area measures whether the WUA is “doing things right”. The second area measures whether the WUA is institutionally and financially sustainable. The third set of indicators measures whether the WUA is “doing the rights things”.

For the development of indicators on efficiency of services a performance variable has to be compared to the “cost” of the performance. For efficiency the question, “are we doing things right” in terms of cost (financial, organisational, societal, etc.) is relevant. The indicators are therefore by nature often compound indicators that associate a

1- A case in point is Egypt, where WUAs at present do not have a legal status that allows them to generate revenues, but nonetheless they are active in conflict resolution and water use optimization activities.

number of phenomena. Two of the most common indicators for efficiency of services are:

1. The actual cost per m³ of irrigation water provided;
2. Labour costs of the WUA vs. irrigated area.

For indicators that measure institutional and financial sustainability, reference is made to the two key determinants of legitimacy and relevance mentioned above. Two indicators that can measure institutional and financial sustainability are:

1. An increase in farmers that refer to the WUAs as the relevant organisation for water management in their area;
2. Increased cash flow (payments for water and/or membership fees) to the WUAs.

Finally, indicators that measure performance of WUAs in terms of impact of services have to be compared to targets to analyse changes over time. Two indicators for impact of services of WUAs are:

1. Changes in the ratio of irrigated vs. irrigable area;
2. Changes in water use (m³/crop/ha).

A final note on the validity and relevance of the indicators is essential. It must be kept in mind that the performance of WUAs is affected by a large number of variables. More indicators are needed as “checks and balances” and triangulation indicators to ensure validity and relevance. Furthermore the performance of WUAs should always be seen in the socio-economic context in which they operate.

INSTITUTIONAL ARRANGEMENTS FOR M&E OF WUA PERFORMANCE.

As already indicated in earlier sections, the post-intervention phase following the introduction of PIM is crucial for sustainability of WUAs and PIM. Whereas PIM can be a very effective tool for divestment of task and responsibilities, if not followed-up properly it can fail dismally.

In many developing countries there is a general apprehension of privatization and commoditization of natural resource management services. This is especially true for water provision. Once the introductory process of PIM has overcome the initial hurdles and apprehensions of civil society it has to prove its case. The risk is that if the introduction fails, adversaries of PIM will be able to prove their case, as can be seen in Pakistan, where initial introduction was difficult and both donors and the government more or less abandoned WUAs and Farmer Organisations after the initial introduction. At present it is likely that the complete process of Irrigation Management Transfer will be abandoned as a failure and the management of irrigation will revert back to the centralized provincial system.

To continue providing support to WUAs there are several options that can be followed:

1. Establishment of a “Federation of WUAs” that would pursue the interests of WUAs and would be a direct “window” for government to address WUAs. Such a Federation would also provide continued capacity building support and relevant training.

2. A cell within the relevant regional or national governments that has as its main task the support and capacity building of WUAs, without being a top-down control mechanism;
3. Private sector M&E of WUA performance linked to a multi-stakeholder platform consisting of civil society and government organizations that periodically review WUA performance and advise the government on capacity building and support activities for WUAs.

To conclude, M&E of WUAs is crucial for their legitimacy and to provide information on performance. However, M&E has to take place within a context of joint efforts and interests to improve irrigation and water management to alleviate poverty in rural areas, and not as an objective as such.

i- Royal Haskoning, 2002, Waterboards Project.

ii- Royal Haskoning, 2002, Waterboards Project

iii- Vermillion & Sagardoy, 1999, Transfer of Irrigation Management Services, FAO, Irrigation and Drainage Paper 58: 28.