



**Sustainable Water
Integrated Management (SWIM) -
Support Mechanism**



Project funded by
the European Union

Water is too precious to waste

Summary of the main characteristics of the M&E system

WIM-SM Regional Workshop of the Pilot implementation for the M&E System for the PIM/IMT process. Athens 17-18 November 2014

Juan Antonio Sagardoy, Senior Water Management Consultant (SWIM-SM), Suzan Taha, Water Expert, SWIM-SM, Roula Khadra, Senior Researcher (IAMB) and Mauro Daurù, IT Specialist

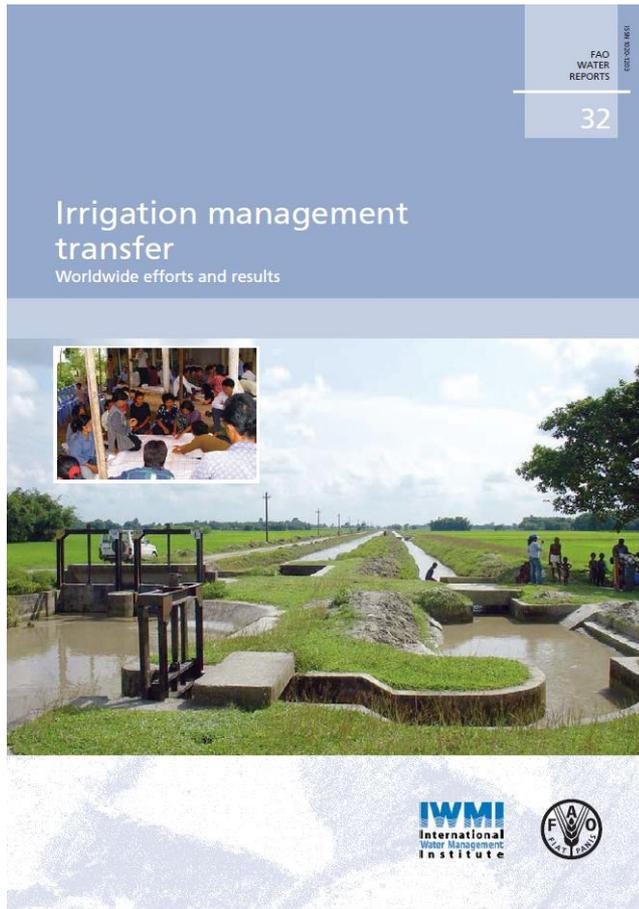
About team work



“My model for business is The Beatles. They were four guys who kept each other’s kind negative tendencies in check. They balanced each other and the total was greater than the sum of the parts. That’s how I see business: **great things in business are never done by one person, they’re done by a team of people**”.

Steve Jobs

Why do we need a M&E system for the PIM/IMT process?



“Overall, the results of the IMT process undertaken across the globe can be perceived as a mixture of successes and failures. Now that the process is better understood and its implementation has taken hold, efforts should concentrate on the M&E component of the process. This will allow feedback to make corrections for both past and ongoing IMT efforts”. (FAO;IWMI; 2007)

Why M&E systems for the PIM/IMT process have not developed as expected ?

In spite of the fact that PIM/IMT reforms are implemented in more than 60 countries the experience shows that fully developed M&E systems are a rare companion of these processes although some data are often available.



The reasons for this state of affairs are not entirely clear but some of the following factors may have contributed:

1. **With few exceptions, countries are pretty insecure about the objectives to be reached in the long run and much less about the outcomes and outputs to attain in shorter periods.**
2. The time required for the implementation of the necessary **legislative reforms is often unpredictable.**
3. **Uncertainty regarding the subject of evaluation:** the actions of government agency and regional offices or the performance of the WUAs or both.
4. **The data collection and processing from a great diversity of WUAs (size, productivity, remote locations)**

The main challenges of the proposed M&E system

1. Defining a set of outputs and outcomes that could fit the great diversity of PIM/IMT processes was a major challenge.
2. Developing an evaluation system that would eliminate the subjectivity of the evaluation
3. Developing a friendly interface that will allow a large range of users to have easy access to the system.
4. The M&E system must integrate the three levels of main stakeholders: Government Agency, Regional offices and WUAs in a single system.
5. The M&E system should have a high degree of flexibility since it will be apply under very different conditions.
6. A good number of WUAs have limited ability and knowledge in the use of computers
7. Most of the leaders of the WUAs speak Arabic language and have limited knowledge of other foreign languages

The 4 modules of the proposed system

The first step in the definition of the outputs and outcomes was the establishment of 4 different modules that were addressed to assess the performance of the three main stakeholders: national agency, regional offices and WUAs, the political commitment and the impact of the establishment of the WUAs. The 4 modules were:



- **Module A:** assesses the degree of **political commitment** towards the PIM/IMT process and the adequacy of the existing institutional arrangements in support of the establishment of the WUAs
- **Module B:** assesses **the performance of the responsible irrigation agencies in the implementation of the PIM/IMT program** particularly at the national and regional level
- **Module C:** Assesses the institutional, financial and technical **performance of Water Users Associations**
- **Module D:** Assesses the **impact of WUAs' establishment**

The outputs and outcomes of the M&E system

- Within each module a **number of outcomes were defined** based mostly on the international and regional literature review undertaken by SWIM-SM and the experience of the SWIM-SM consultants
- To achieve the mentioned outcomes, **a set of outputs** needed to achieve the stated outcomes were also defined
- To verify if the outputs were achieved **a set of indicators** were also defined for each output
- All this material was structured in large tables that were presented to all the participants of the **Experts Group Meeting (EGM) in Athens (September 2013)**, who reviewed the material in workgroups and made a substantial number of modifications, improvements and deletions.
- Those tables as reviewed and modified by the EGM have been the bases for the development of the proposed M&E system called **MONEVA**.

Example of Outcomes , outputs and indicators (Module B)

Module B			
Number of outcome	Assumed Outcomes	Outputs	Number of Indicators
B.1	WUAs are established according to plan	1. PIM targets of equipped area have been achieved	2
B.2	Water users are supportive of the PIM/IMT program	1. Awareness needs assessment carried out	1
		2. Information and communication materials produced and available	1
		3. Awareness campaigns carried out	1
		4. Water users contacted and informed of roles and responsibilities	1
B.3	WUAs receive guidance and support from the irrigation agency Support Units	1. Support Units formed , staffed and functioning effectively	2
		2. Staff of the Support Units adequately trained	1
B.4	WUAs leaders and staff know their responsibilities and have the necessary skills to carry out their work	1. Training needs assessment for the WUAs leaders and staff is carried out	1
		2. Training for the WUAs leaders and staff is implemented	2
		3. Training evaluated	1
B.5	Financial management capacity of WUAs developed and operative	1. Financial training implemented	3
		2. Financial system installed and operated by trained accountants	1
		3. Financial systems of WUAs operate according to the established procedures	1
		Subtotal 5 outcomes module B	18

The evaluation component of a M&E system

- The **evaluation is the most important part of a M&E system** and monitoring has only sense if followed by evaluation. Unfortunately, the evaluation part is often treated with much less attention than the monitoring one
- In a M&E system the **relations between gathering of information and evaluation should be structured in an inseparable manner** but often the evaluation part remains open to the criteria of the evaluator .
- The evaluation should **permit to analyse why intended outputs, outcomes and results were or were not achieved** and to identify specific causal contributions of activities to outputs
- **The periodicity of the evaluation should not be less that once a year** and use essentially the data provided in the monitoring. For certain purposes the periodicity could go down to quarterly periods
- Normally M&E systems concentrate in assessing the achievements of outcomes and outputs. However in the MONEVA system **an effort has been made to assess the possible impact** of the PIM/IMT process in several aspects of performance of the WUAs. However it should be kept in mind that the evaluation of impact is a complex subject.
- The evaluation should be **a participatory exercise** where the stakeholder involved directly in the M&E system must participate
- The main purpose of the evaluation is to **provides lessons, highlight significant accomplishments or program potential, and offer recommendations for improvement.**

The evaluation system of MONEVA

- For the MONEVAS M&E system a simple evaluation system has been designed based in point system where the maximum score is 2 points, the minimum is 0 points and for intermediate situations 1 point. The system is similar to the traffic lights system
- In theory, some indicators are more important than others and therefore one could think of a system where certain indicators could have higher scores than others. However the associate problems is to define the relative importance of indicators which is always a largely subjective matter. For this reason in MONEVA all indicators have the same maximum and minimum.
- The proposed system largely eliminates the subjectivity factor in the evaluation process.

The scoring system of the evaluation

There are essentially 3 types of indicators: logical, numerical and qualitative.

- For the **logical indicators**, the possible answers are only YES or NO and the number of points 2 or 0. The assignment of points uses is based in international experience and logic.
- For the **numerical indicators**, the score can be 2, 1, 0 depending of the range of values. The rages of values used are largely based in international experience. It is possible that some of these values may not fit an specific country or region. Example:

Indicator	Acron ym	Unit	2 points	1 point	0 point
No. of General Assembly Meetings held in last year	GAM	No. of meetings per year	GAM >2	GAM= 1	GAM = 0

- For the **qualitative indicators** the ranges provided were those considered reasonable by the SWIM team but like with any other indicator the **National Administrator can modify them in the MONEVA system.**

The evaluation by points and the analysis of the results

- The purpose of the point system is to identify the activities that have not been carried out, or carried out in less than a satisfactory manner. Therefore **users must concentrate their attention in how to correct or improve them in the future. These improvements constitute the Action Plan.**
- **The proposed evaluation system is in reality a decision support system since it helps the concerned stakeholders to identify the actions needed.**
- The second consideration is that **the M&E system is organized by the achievements of outputs and outcomes.** So the total number of points obtained respectively indicate **the degree of achievement of the outputs and outcomes** (expressed in percentage of the maximum number of points possible).
- **The total score obtained** for each WUA, regional office and central level of the irrigation agency provides an overall assessment of the performance of the respective organization but this **is only a generic indication and its use for comparative purposes must be made with caution.**

Assessing outcomes and outputs

Outcomes	Outputs	Indicators	2 points	1 point	0 points	Total	% achiv.	
O U T C O M E 1	Output 1	Indicator 1		1		1		
		Indicator 2	2			2		
		Indicator 3			0	0		
		Indicator 4	2			2		
		Indicator 5	2			2		
		Total output 1	6	1	0	7	7/10= 70%	
	Output 2	Indicator 6	2			2		
		Indicator 7	2			2		
		Indicator 8		1		1		
		Total output 2	4	1	0	5	5/6= 83%	
	Total outcome 1			10	2	0	12	12/16 = ¹³ 75%

The two levels of evaluation

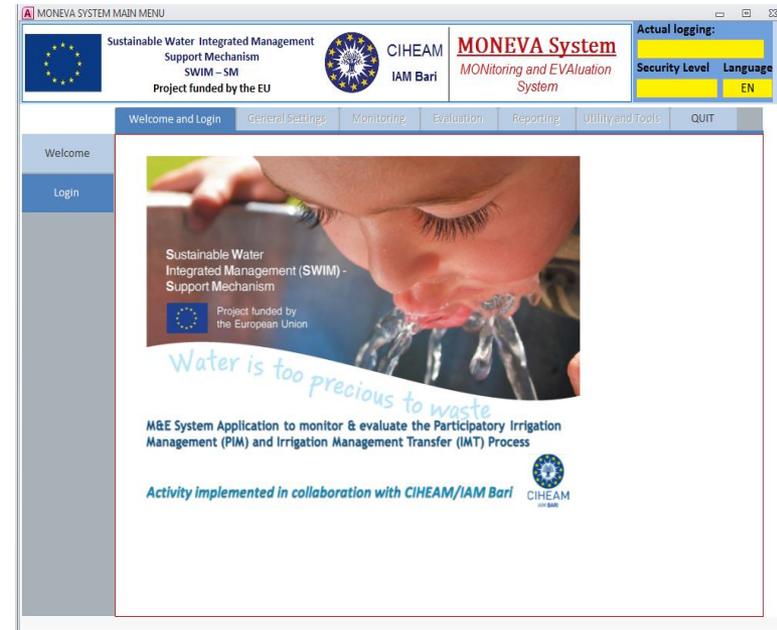
The evaluation system of MONEVAS foresees two levels of evaluation.

1. **The evaluation form (results) for each outcome** where users can see the scoring that user have got for each indicator, output and outcome as result of the data that they have entered and the application of the scoring criteria.
2. **The reports for specific numerical indicators.** These reports provide a variety of information including graphs, tables, statistical data (maximum , minimum, average) and some other interesting features for a deeper analysis of the selected indicator but the most important part is that permit **to see historical data.** **The development of this facility has required time inputs much higher than anticipated.**

The above information will be expanded during the subsequent presentations

The M&E system interface

- Based on the principles above stated, a contract was signed with the *International Centre for Advanced Mediterranean Agronomic Studies – the Agronomic Mediterranean Institute of Bari* ([CIHEAM](#) /[IAMB](#)) to develop the computer application now called MONEVA System.
- The MONEVA will store & process large amounts of data which can only be managed under one of the existing data base software. Microsoft Access has been chosen because its facility to distribute the application under open access.
- The MONEVA interface is only the part of a complex system that allow users to enter , retrieve, process and manage many data in a relative simple manner



Integration of the main stakeholders in one single system

- In the PIM/IMT process, three main kinds of stakeholders are always involved:
 - the national/central irrigation agency and other governmental organizations related to the process,
 - the regional offices of the governmental offices that are often the main implementers of the PIM/IMT process and
 - the local level made of the new farmers' organizations

The M&E system must integrate the three levels otherwise some of the stakeholders will not be involved in a process that directly concerns them.

- MONEVA integrates the 3 levels into one single system that permits the evaluation of the performance of these 3 main stakeholders in an independent manner but at the same time the system integrates at each level the information coming from the local level to regional and national levels
- This is a very important characteristic of the proposed M&E system that to our knowledge has not been attempted before.

The customization of the system to each country conditions

Two important features of the MONEVA system permit its adaptation to the national situations different conditions:

1. The scoring criteria:

- This setting permits the National Administrator to change the scoring criteria for any indicator to reflect the local experience of the country.
- In addition, it allows changing the period setting; which refers to the number of years after which the scoring criteria for an indicator might vary.

Indicator or Variable CODE: M03020R
Unit: %
PERIOD SETTING (years): 10 Type: CA

DEFINITION
Percentage of the annual budget allocated by the irrigation agency for the PIM/IMT programme last year with respect to the budget of two years ago

Period	Score	Operator	Value	Logic	Value
First period	SCORE = 2	>=	100		
	SCORE = 1	>=	90	and	< 100
	SCORE = 0	<	90		
Second period	SCORE = 2	>=	100		
	SCORE = 1	>=	90	and	< 100
	SCORE = 0	<	90		

The customization of the system to each country conditions (2)

Applicable indicators:

- This is another remarkable feature of the MONEVA System
- The National Administrator can select those indicators that are considered more appropriate or applicable to his/her country.
- Figure below illustrates the screen where this selection can be made it shows that for every indicator, there are two buttons with the headings: “active” and “scored”.

The screenshot shows a 'Field settings' window with a table of indicators. At the top, there are two buttons: a blue 'Active' button and a red 'Not Active' button. The table has the following columns: Active, Scored, CODE, Freq, Type, AggrLevel, AggrType, and Unit. Each row represents an indicator with its corresponding settings.

Active	Scored	CODE	Freq	Type	AggrLevel	AggrType	Unit
<input type="checkbox"/>	<input type="checkbox"/>	A01010	12	IL	No aggreg	No Aggreg	adimensional
<input type="checkbox"/>	<input type="checkbox"/>	A02010N	36	IL	No aggreg	No Aggreg	adimensional
<input type="checkbox"/>	<input type="checkbox"/>	A02010R	36	IL	Nat	Count	adimensional
<input type="checkbox"/>	<input type="checkbox"/>	A02020N	12	IQ	No aggreg	No Aggreg	adimensional
<input type="checkbox"/>	<input type="checkbox"/>	A02020R	12	IQ	Nat	Count	adimensional
<input type="checkbox"/>	<input type="checkbox"/>	A02030N	36	IL	No aggreg	No Aggreg	adimensional

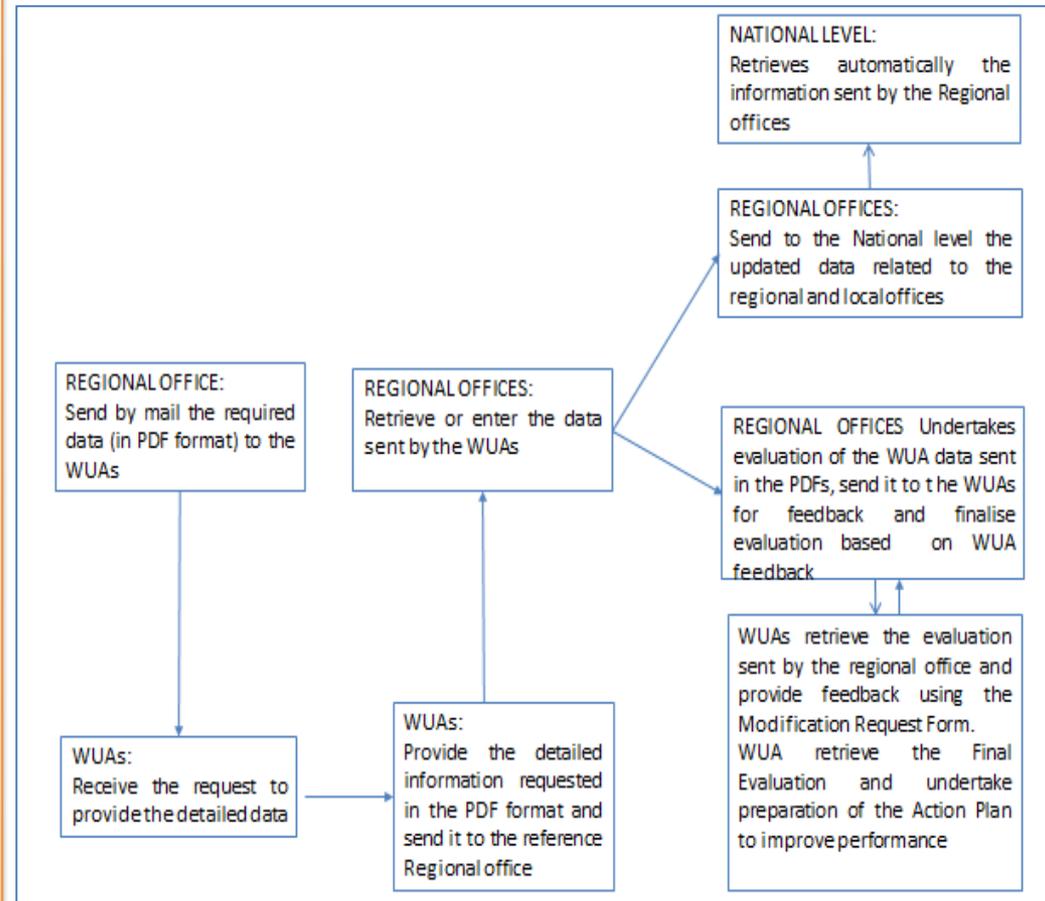
The data flow for the WUAs

Considering that some of the WUAs may have limited knowledge of computer applications and even in some cases no computer facilities at all a special procedure has been developed for the collection of monitoring data and the evaluation results

The procedure consist basically in filling the requested data in a form (under **pdf** format) and send the information to the regional office.

The regional office will check the incoming data and integrate it in MONEVA system.

The Regional office will undertake the evaluation and send the forms back to the WUA for analysis and preparation of the Action plan of the WUA.



The language facility of MONEVA

- Given the fact that the leaders of the WUAs, and even some staff of the irrigation agency, may not speak other language than **Arabic, it was considered very important** that the MONEVA could have a facility that permits its use in other languages beyond English.
- At the present the MONEVA system is available in **English and Arabic** as per contractual bases.
- Should the SWIM-SM Project continue its activities the **development of the French version** appears as an important priority.

Main steps in the implementation of the activity

1. Selection of the Pilot Countries
2. Kick-off Meetings with the National representatives
3. Selection of the indicators at country level
4. Prepare the TOR for the system developer and development of the computer application
5. System installation and testing
6. Apply the system in the two pilot areas (includes training and follow up)
7. Conduct in each pilot area a 3-days self-evaluation workshop
8. Modify the M&E system and its application to account for the experience of the partners

The above activities will be subject of more detailed description during the course of the event

Thank you for your kind
attention