



Sustainable Water Integrated Management
Support Mechanism
SWIM – SM
Project funded by the EU



CIHEAM
IAM Bari

MONEVA System
MONitoring and EVALuation
System



M&E System Application to monitor & evaluate the Participatory Irrigation Management (PIM) and Irrigation Management Transfer (IMT) Process

Activity implemented in collaboration with CIHEAM/IAM Bari



M&E Users' Guide Database for Regional Office

Rev. 1.3

Copyright © 2014

Table of Content

1.	Introduction.....	4
1.1	First level evaluation	6
1.2	Second level evaluation.....	6
1.3	Third level evaluation	6
2.	System prerequisites.....	7
2.1	Hardware prerequisites.....	7
2.2	Software prerequisites	7
3.	Installing MONEVA System	7
3.1	Potential errors	8
4.	The database interface, welcoming and logging in.....	9
5.	'General Settings' Function.....	12
5.1	Section 'PIM/IMT important dates'	13
5.1.1	Field 'Date of last update of settings'	13
5.1.2	Field 'Year PIM/IMT actually started'	14
5.1.3	Field 'Expected duration of PIM/IMT'	14
5.1.4	Field 'Reference year'	14
5.1.5	Field 'Number of years for which the PIM is extended'	14
5.1.6	Calculated indicators	14
5.2	Section 'Currency'	15
5.3	Section 'Scoring criteria'	16
5.4	Section 'Regional Office Registry'	17
5.5	Section 'Local Office Registry'	19
5.6	Section 'Applicable indicator'	22
5.6.1	Setting the indicators application status	23
5.7	Section 'Users and Passwords'	24
5.7.1	Editing/modifying existing profiles.....	25
5.7.2	Adding a new profile.....	25
6.	Function 'Monitoring'	27

6.1	Once at M&E start	28
6.2	Starting a 12 months step monitoring process.....	29
6.3	Starting a 36 step monitoring process	30
7.	Function 'Evaluation'	32
7.1	Regional evaluation per Outcome 12/36 months steps	32
7.2	Regional evaluation per Outcome once at the end.....	36
8.	Function 'Reporting'	37
8.1	Section 'Statistical calculation'	37
8.2	Section 'Graphics'	40
8.3	'Monitoring data exporting' Section.....	42
9.	Function 'Utility and tools'	43
9.1	Section 'Retrieve data – Regional tool'	43
9.1.1	Retrieve settings from National Office	44
9.1.2	Retrieve monitoring data from Local Offices.....	45
9.1.3	Retrieve detailed information from local offices	47
9.1.4	View WUA comments on Local Evaluation report	48
9.1.5	Send Regional and Aggregated Local monitoring data to National Office.....	49
9.2	Section 'PDF doc archive'	51
9.3	Section 'Migration and data export tool'	53
9.4	Section 'Structure'	54

1. Introduction

The Regional Monitoring and Evaluation (M&E) System for Participatory Irrigation Management (PIM) and Irrigation Management Transfer (IMT) Process developed under the framework of SWIM-SM comprises four modules as follows:

1. **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.
2. **Module B** - Assesses the performance of irrigation agencies in the implementation of the PIM/IMT program.
3. **Module C** - Assesses the institutional, financial and technical performance of Water Users Associations.
4. **Module D** - Assesses the impact of WUAs' establishment.

The system includes a list of output indicators representing the main elements to be monitored and evaluated and corresponding to a set of expected outcomes and is intended and conceived as a Decision Support System.

This users' guide illustrates the features of MONEVA System software and details the functions to be performed at Regional Level; MONEVA System being a user-friendly computer application developed, based on and integrating the above, and customized to suit the conditions of the different countries of the Region.

MONEVA System is provided with two types of installation which refer to two different levels of application, use and management in a Country that is the **National/Central level** and **the Regional level**, in its turn direct interlocutor of the Local Offices/WUAs established in a certain area.

Each level provides access to its own database through two different profiles of users: Administrator profile and User profile with different privileges of use. An administrator can access/edit/operate the entire system while a generic user can only access the system to navigate through its different features, data sets and generated reports.

Each outcome is assigned a code which recalls the corresponding affinity module (A, B, C or D). This applies as well to the outputs, which are assigned codes recalling the corresponding affinity outcome, for example Outcome A.3 is evaluated through two Outputs A.3.1 and A.3.2.

The codification of the output variables/indicators is more complicated, as a variable/indicator may be directly or indirectly evaluated. In the first case the

corresponding affinity module shows in the code, in the second another sequence of letters is used as shown in Table 1.

Table 1 – Codification of variables and indicators: Affinity with M&E modules

LETTER USED FOR CODIFICATION	AFFINITY
A	Module A
B	Module B
C	Module C
D	Module D
M	Calculated from monitoring data of Module A
N	Calculated from monitoring data of Module B
P	Calculated from monitoring data of Module C
T	Calculated from monitoring data of Module D
R	Retrieved; already existing in the system and used after applying different criteria for aggregation.

For example Output A.3.1 is evaluated through the scores achieved by the variables/indicators A03010; M03020; M03032; M03033; M03040; and Output A.3.2 is evaluated through the scores achieved by the variables/indicators M03050; M03063 and M03064.

The Final Letter "N" or "R" which affects in some cases a variable/indicator indicates the level at which this variable/indicator is monitored/evaluated i.e. National or Regional.

This is necessary as in many cases, the same variable/indicator is monitored at different levels, allowing for different typologies of evaluation reports as detailed in the sections: 1.1; 1.2 and 1.3.

At the local level, Monitoring is performed through simple PDF modules consisting of fields that allow for a pre-guided compilation by the Water Users Associations (WUAs) and for their transmission to the Regional offices they are affiliated to. The Regional offices provided with a M&E system with Data Base having the ability to check and incorporate the data/info collected by the local offices (WUAs), and for their subsequent evaluation with no interference on the result, are responsible for

providing the WUAs with the executed Evaluation (see Users' Guide for Local Offices).

1.1 First level evaluation

It is performed at National, Regional and Local level. This is a standard evaluation generated per output/outcome showing its relative level of achievement which is assessed, by assigning scores to the corresponding variables/indicators according to preset scoring criteria, and is compared to a Maximum Number of Points (MNP) that can be scored.

The system distinguishes among four levels of achievement:

1. The Total number of points scored is = 100% MNP then the outcome/output is fully achieved.
2. The Total number of points scored is $\geq 70\%$ and $< 100\%$ MNP then the progress is satisfactory but improvements are needed.
3. The Total number of points scored is $\geq 30\%$ and $< 70\%$ MNP then the progress is medium and considerable improvements are needed.
4. The Total number of points scored is $< 30\%$ MNP then the progress is low and important improvements are needed.

1.2 Second level evaluation

It is performed at National and Regional level and reports aggregated data:

1. Regional and/or Local data are aggregated at National level and statistics are shown, comparing where it applies the National data to the aggregated Regional and/or Local data: Sum, Average, Maximum and Minimum apply for numerical variables and simple count for logical indicators.
2. Local data are aggregated at Regional level and statistics are shown, comparing where it applies the Regional data to the aggregated Local data: Sum, Average, Maximum and Minimum apply for numerical variables and simple count for logical indicators.

1.3 Third level evaluation

It is performed at National and Regional level and shows trend graphs of some correlated parameters.

2. System prerequisites

MONEVA System intended to perform all the activities related to the Monitoring and Evaluation processes was developed with Microsoft Access 2010 Runtime. Microsoft Access 2010 Runtime enables to distribute Access 2010 applications to the users who do not possess the full version of MS Access 2010.

2.1 Hardware prerequisites

The minimum hardware requirements for the installation and running of MONEVA system are specified below:

- ✓ CPU 1GHz x86 or x64 bit architecture with SSE2 instruction set.
- ✓ 1 GB of RAM (32 bit) or 2 GB of RAM (64 bit).
- ✓ 3 GB of available Hard Disk space.
- ✓ Graphics hardware acceleration with a Direct X10 graphics card capable of 1024 x 576 resolution.

2.2 Software prerequisites

The operating systems supported by Microsoft Access 2010 Runtime are the following: Windows 7; Windows 8; Windows Server 2003 R2 (32-Bit x86); Windows Server 2003 R2 x64 editions; Windows Server 2008 R2; Windows Server 2008 Service Pack 2; Windows Vista Service Pack 1; Windows XP Service Pack 3.

In Windows XP Service Pack 3, only Access 2010 Runtime 32 bit is supported.

It is also necessary to update the system libraries with the software .NET version 3.5, 4.0 or 4.5 that can be downloaded and installed via the Windows Update utility.

3. Installing MONEVA System

The installation is divided into two parts:

The first covers Microsoft Access 2010 Runtime and the second the database application itself, performed by Microsoft Access 2010 Runtime.

For both, the software should be installed with administrator privileges in order to make available the application to all users.

The following links allow to download Microsoft Access 2010 Runtime depending on the available system:

- ✓ For a 32 bit system chose the following:

<http://download.microsoft.com/download/2/6/0/260AA63A-A275-4A92-950D-CE20B490D0B9/AccessRuntime.exe>

- ✓ For a 64-bit system choose the following:

http://download.microsoft.com/download/2/6/0/260AA63A-A275-4A92-950D-CE20B490D0B9/AccessRuntime_X64.exe

Once the file is downloaded and saved into the hard disk, double-click on the AccessRuntime.exe or AccessRuntime_X64.exe file to start the Setup program, and follow the instructions to complete the installation.

When Access Runtime is correctly installed,, launch and install the file called MEVS.exe provided with this guide, following the installation wizard and entering the information related to your Institution when prompted. At the end of the installation process, a shortcut on the computer desktop will be created .

Before launching the software, download the file 'mscomct2.ocx' from the following link <http://support.microsoft.com/kb/297381/> (the last available version to date of 'mscomct2.ocx' can be also found in C:\MEVS\SYSTEM\DLL) and copy it into one of the following paths depending on the hardware and software configuration of your system:

- a. C:\Windows\System (Windows 95/98/Me)
- b. C:\WINNT\System32 (Windows NT/2000)
- c. C:\Windows\System32 (Windows XP, Vista, 7)
- d. C:\Windows\SysWOW64 (Windows 7 or 8, 64-bit version)

3.1 Potential errors

The error message shown in Figure 1 occurs when MS Office 2010 is not installed or when a different system than MS Office 2010 is installed in your computer.

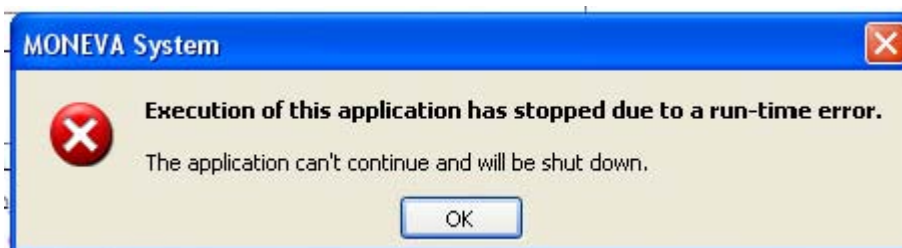


Fig. 1 - Errors that may occur when launching MONEVA System

4. The database interface, welcoming and logging in

Once launched, the database start-up screen is displayed as shown in Fig. 2.

The software interface shows two bars (a horizontal one and a vertical one) which provide access to the functions of MONEVA System that distinguishes between National and Regional level. Please note that all the buttons of the main bar are "ghost" and not clickable until a session is started.

The selection of a specific button on the main horizontal bar determines the buttons to show on the vertical left sidebar, offering various functionalities/features to the user.

For didactics purposes, this guide assumes that the top horizontal bar makes available a series of "functions". Each function includes a variety of "sections" accessible through the appropriate buttons on the vertical bar.

To start a new session, click on "**Login**" button. A new window will open (Fig. 3) allowing to perform the following steps:



Fig. 2 - Database welcoming start-up screen

1. Select the interface language.
2. Choose the appropriate user profile from the '**Login ID**' combo box. Two different profiles are available at a Regional Office: Regional Administrator or Regional User
3. Enter the default associated password in the '**Password**' text field (see Table 2).
4. Click on '**Login**' button to start the session.

Table 2 – Default Login IDs and Passwords provided by the system at Regional level

LOGIN ID	PASSWORD
RegAdm	Abcde
RegUser	Fghil

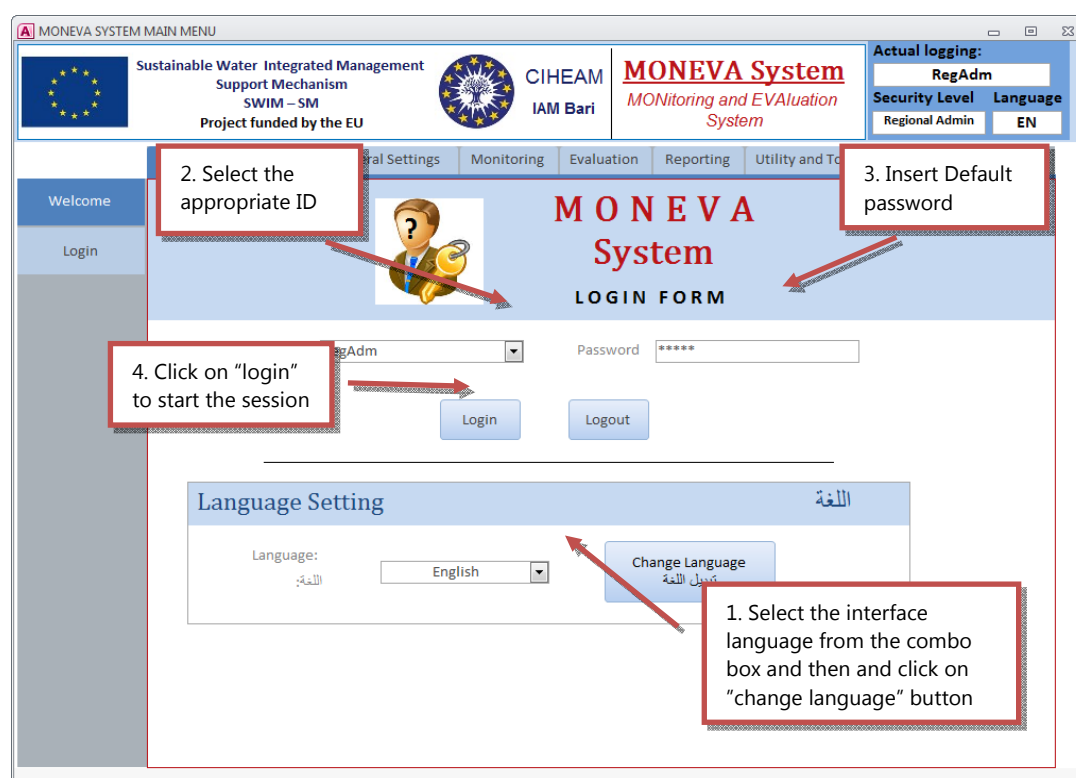


Fig. 3 – Database login screen

Once logged in, a welcome message appears on the screen and the user name, the associated security level and the selected language show on the upper right corner. At this stage, the buttons in the main bar are active and clickable (Fig. 4)



Fig. 4 - Main bar activated after successful logging in

A Regional administrator can access/edit/operate the system while a generic user can only access the system and navigate through its different features, data sets and generated reports.

'QUIT' button closes the database. When clicked, a confirmation window will appear in order to prevent any accidental closing of the program.

5. 'General Settings' Function

The 'General Settings' are the database main settings, intended to be the reference basic common settings across a country i.e. at National level and among all Regions and affiliated WUAs/local offices. A National Administrator is the only profile/security level which allows for editing/updating the 'General Settings' and for distributing the common sections to all Regional Offices. However, it is the duty of each Regional office to accept and incorporate into its data base the received settings before starting any M&E activity as described under "Utility and tools" function of this database.

An exception is the Section 'Local Office Registry', (section 5.5 Section 'Local Office Registry') that is visible and editable only by Regional Administrators.

By clicking on '**General Settings**' of the main horizontal bar, the side vertical bar displays the buttons shown in Fig. 5.

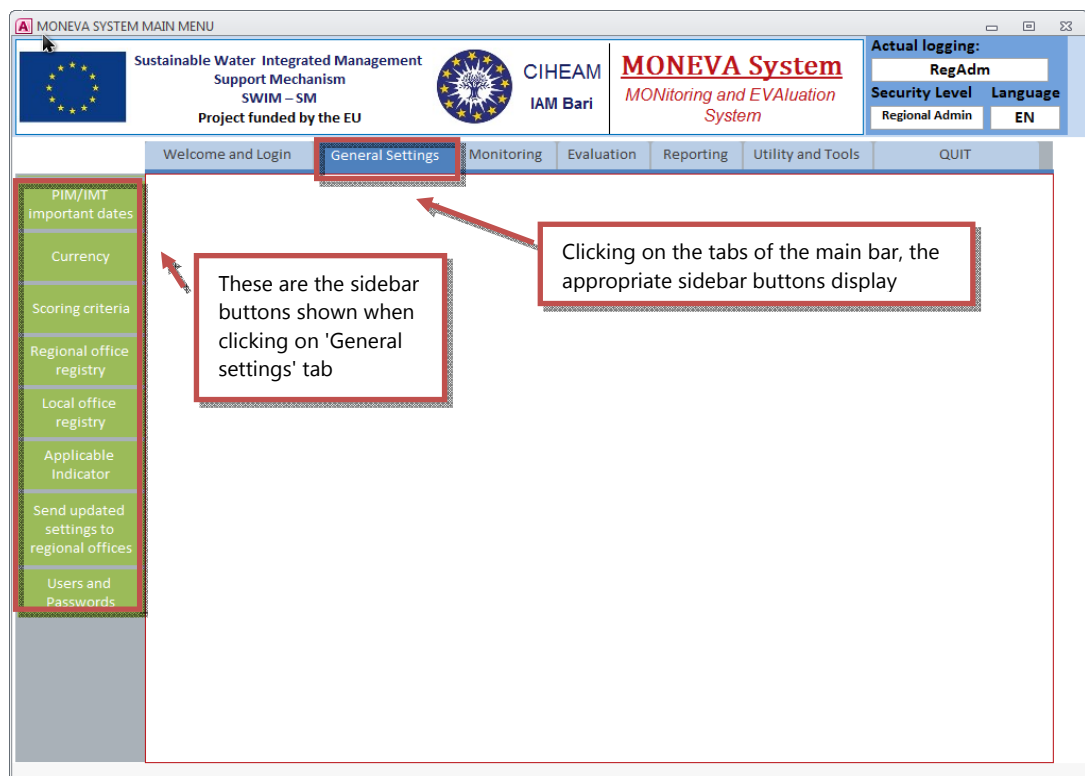


Fig. 5 – Sidebar buttons associated to the 'General Settings' section

The General Settings include the following: **PIM/IMT important dates; Currency; Scoring Criteria; 'Regional Office Registry'; 'Local Office Registry'** (active only at

Regional level and editable by Regional Administrators) and **Applicable Indicator; Send updated settings to Regional Offices; Users and Passwords.**

When defined and/or updated, the General Settings are distributed by e mail (or using any available digital support) to the Regional Offices through an internal procedure of MONEVA System installed at the Central/National level. The Regional Offices in turn, have the duty to integrate the settings received as XML files into their data base (see Utility and Tools).

In the following, the specific functions of each section associated to the 'General Settings' are described.

5.1 Section 'PIM/IMT important dates'

Regional Administrators and Users can only view this section which defines a series of important dates related to the PIM/IMT programme. These dates define the startup, the duration and the end of the Monitoring and Evaluation process as well as the associated features (Fig. 6).

The screenshot shows the 'MONEVA SYSTEM MAIN MENU' window. The top navigation bar includes 'Welcome and Login', 'General Settings', 'Monitoring', 'Evaluation', 'Reporting', 'Utility and Tools', and 'QUIT'. The 'General Settings' section is active, displaying the 'PIM/IMT Timing Setting' page. The page features a left-hand navigation menu with the following items: 'PIM/IMT important dates' (highlighted), 'Currency', 'Scoring criteria', 'Regional office registry', 'Local office registry', 'Applicable Indicator', 'Send updated settings to regional offices', and 'Users and Passwords'. The main content area contains the following fields and options:

- Date of last update of settings:** 15/10/2014
- Y0: Year PIM/IMT actually started:** 2000
- DY: Expected Duration of PIM/IMT (years):** 10,00
- Ry: the Reference year is the starting year of PIM/IMT or the year before which the annual data start to get entered:** 2004
- NYEXT: Number of years for which the PIM is extended:** 10,00
- Expected Year of Completion (Y0+(DY*365)):** 2010
- Revised Year of Completion (YN+(NYEXT*365)):** 2020
- Buttons:** 'Past date' (yellow) and 'Future date' (blue)
- TIME: Time elapsed since PIM/IMT started (+ACTUAL YEAR-1-Y0):** 13

Fig. 6 – Settings associated to section 'PIM/IMT important dates'

5.1.1 Field 'Date of last update of settings'

It defines the date when the last update of the database settings was performed.

5.1.2 Field 'Year PIM/IMT actually started'

This is the starting year (Y0) of the PIM/IMT programme. It can be set up by typing the date in the format DD/MM/YYYY, however, only the year will be displayed.

5.1.3 Field 'Expected duration of PIM/IMT'

The number of years (DY) expected for the entire duration of PIM/IMT programme is entered in this field.

5.1.4 Field 'Reference year'

The concept of Reference Year was introduced in order to account for cases where a country starts using the M&E system application after the start of the PIM/IMT and thus perform M&E in retrospective. Generally, the reference year could be either (1) the year when PIM/IMT started, or (2) the year before which the data start to get entered. In the latter case, the cumulative figures of specific monitoring variables should be inputted up to the year preceding that for which data starts to get entered.

Example on 1: Assuming that the PIM/IMT process started in early 2014 and data for a variable starts to get collected and entered early 2015, then the reference year is early 2014 (the time when PIM/IMT started).

Example on 2: If PIM/IMT started early 2000, and the M&E system starts getting populated with data only in 2005 and onwards, then the reference year would be 2004 for which the cumulative figures of specific variables should be obtained and entered into the system for that year. Hence these figures will be entered once, and then the application would start accumulating the data as more annual data get entered. Ry can be set up by typing the date in the format DD/MM/YYYY, however, only the year will be displayed.

5.1.5 Field 'Number of years for which the PIM is extended'

It may happen that PIM/IMT programme gets extended beyond the expected duration. This field is intended to account for this eventual situation. NYEXT represents the number of years for which the PIM/IMT programme is extended.

5.1.6 Calculated indicators

In the lower part of the window a series of indicators calculated on the basis of the previously described fields is shown.

YN is the expected year of completion of the PIM/IMT programme in days, and thus the M&E; it is calculated with the following formula $YN = (Y0 + (DY * 365))$.

YNR is the Revised Year of Completion (after extension), calculated with the following formula $YNR = (YN + (NYEXT * 365))$.

TIME is the time elapsed since PIM/IMT started, and is issued through the formula $TIME = ACTUAL YEAR - 1 - Y0$.

Please note that the YN and YNR are highlighted in different colors if they refer to past (yellow) or future (blue) date i.e. after extension.

For example (see Fig. 6):

Assuming that the current/actual year is 2014 and that the PIM/IMT started in year 2000 (Y0) and was expected to last 10 years (DY), then YN, the expected year of completion of PIM/IMT would be:

$$YN = (Y0 + (DY * 365)) = 2010$$

If the programme got extended for additional 10 years (NYEXT), then the revised year of completion would be:

$$YNR = (YN + (NYEXT * 365)) = 2020$$




And the time elapsed since PIM/IMT started would be:

$$TIME = ACTUAL YEAR - 1 - Y0 = 13 \text{ years}$$

5.2 Section 'Currency'

Regional Administrators and Users can only view this section. The '**Currency**' section (Fig. 7) allows for setting the conversion rates of the local currencies against the US Dollar (USD). New values can be entered to update the rates to be used in the M&E system when it applies. The first step to compute is to enter the reference date of collection of a rate in the '**Date of collection**' field and then to select the proper currency from the '**Code**' combo box and finally to enter the exchange rate in the '**Rate vs. USD**' field.

The graph in the lower part of the window shows the mean exchange rate per year for the available period of years. This is particularly important when a local currency is subject to irregular fluctuations.

The three buttons located above the graph allow to refresh it  when a new rate is entered, and to export data as Excel  or text file .

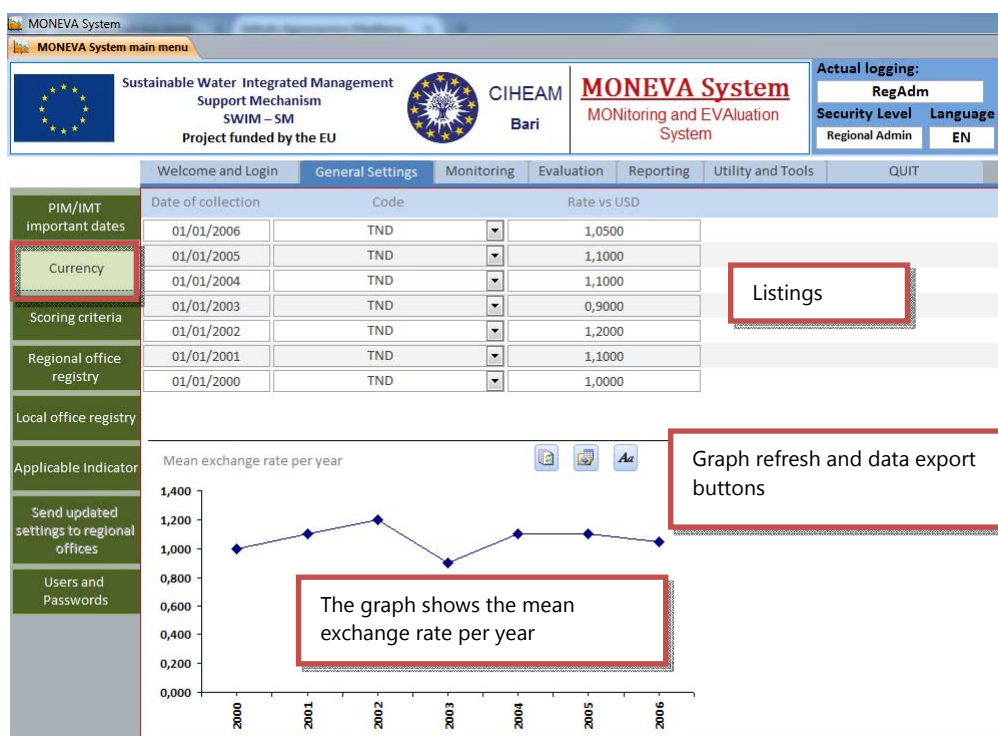




Fig. 7 – Functions associated to section 'Currency'

5.3 Section 'Scoring criteria'

Regional Administrators and Users can only view this section. In this section, the National Authorities can modify the built-in default scoring criteria of each single indicator in order to fulfill the evaluation programme according to local conditions. Fig. 8 shows the various elements that define the criteria; only the ones highlighted in yellow are editable.

1. **Indicator or variable CODE** – it represents the unique ID of a specific indicator/variable of the M&E system.
2. **Unit** – it represents the measurement unit of the variable/indicator (e.g. l/s, kg, %).
3. **Period Setting (years)** – it represents the number of years for which the scoring criteria relative to the first period apply.
4. **Type** – it represents the type of indicator: IL (Logical); IN (Numerical); IQ (Qualitative); CA (Calculated).
5. **Definition** – it is the verbose description of the variable/indicator.
6. **First period** – it refers to the scoring criteria to apply on the specific variable/indicator during the first period of years.
7. **Second period** – it refers to the scoring criteria to apply on the specific variable/indicator during the second period of years (after the number of years entered in the field Period Setting elapsed).

The 'Navigation menu' in the upper right corner allows for browsing variables/indicators in the entire database, showing the information associated with each one of them. The buttons allow for backward  and forward  browsing.

The Filter combo box can ease this procedure, as variables/indicators are grouped in categories and can be browsed accordingly (see Table 1).

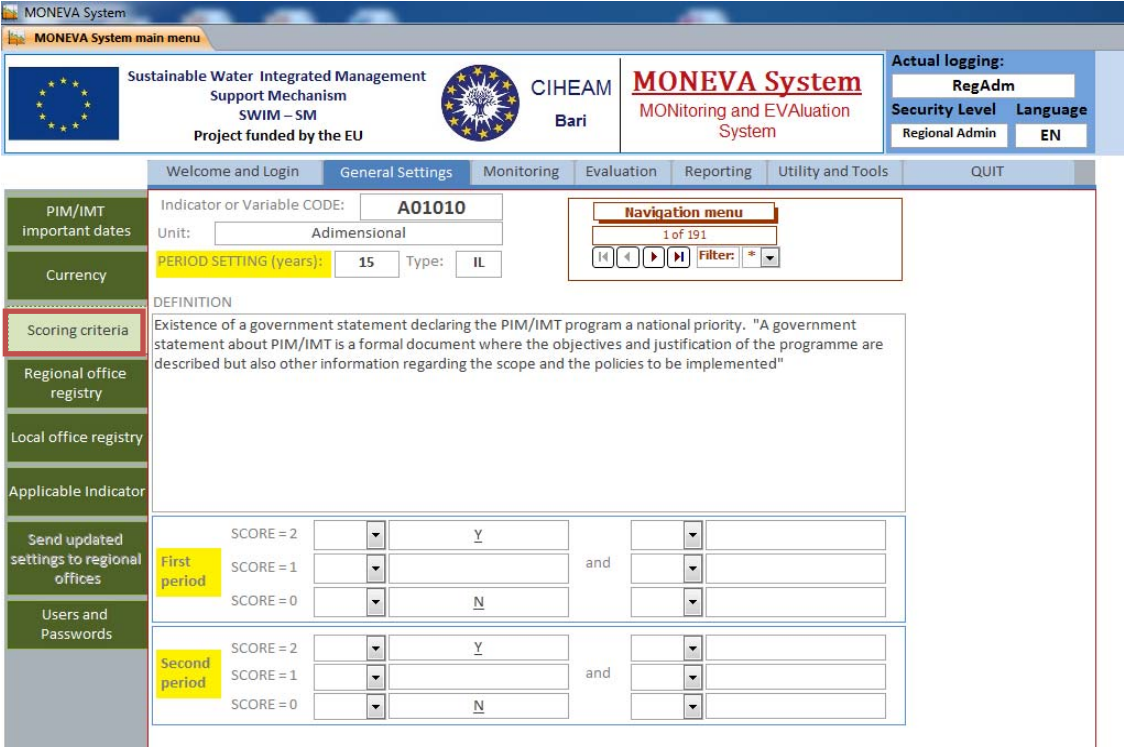







Fig. 8 - 'General Settings' function: Scoring criteria associated sidebar section

5.4 Section 'Regional Office Registry'

At National/Central level, a Registry of all the Regional Offices should be available. Regional Administrators and Users can only view this section by clicking on '**Regional office registry**' button on the sidebar. Each Regional office is identified with a Unique Code (numerical) shown in the upper left corner of the form. To this Unique Code is associated the name of the Regional irrigation Agency responsible for the PIM/IMT Program. The 'Navigation menu' on the upper right corner allows for browsing the entire database of the Regional Offices by using the backward  and forward  buttons, and for showing the information associated to each of them.

The button  is used to export the Regional Office registry to a PDF file, the  button to print it and the  button to exit the form (Fig. 9).

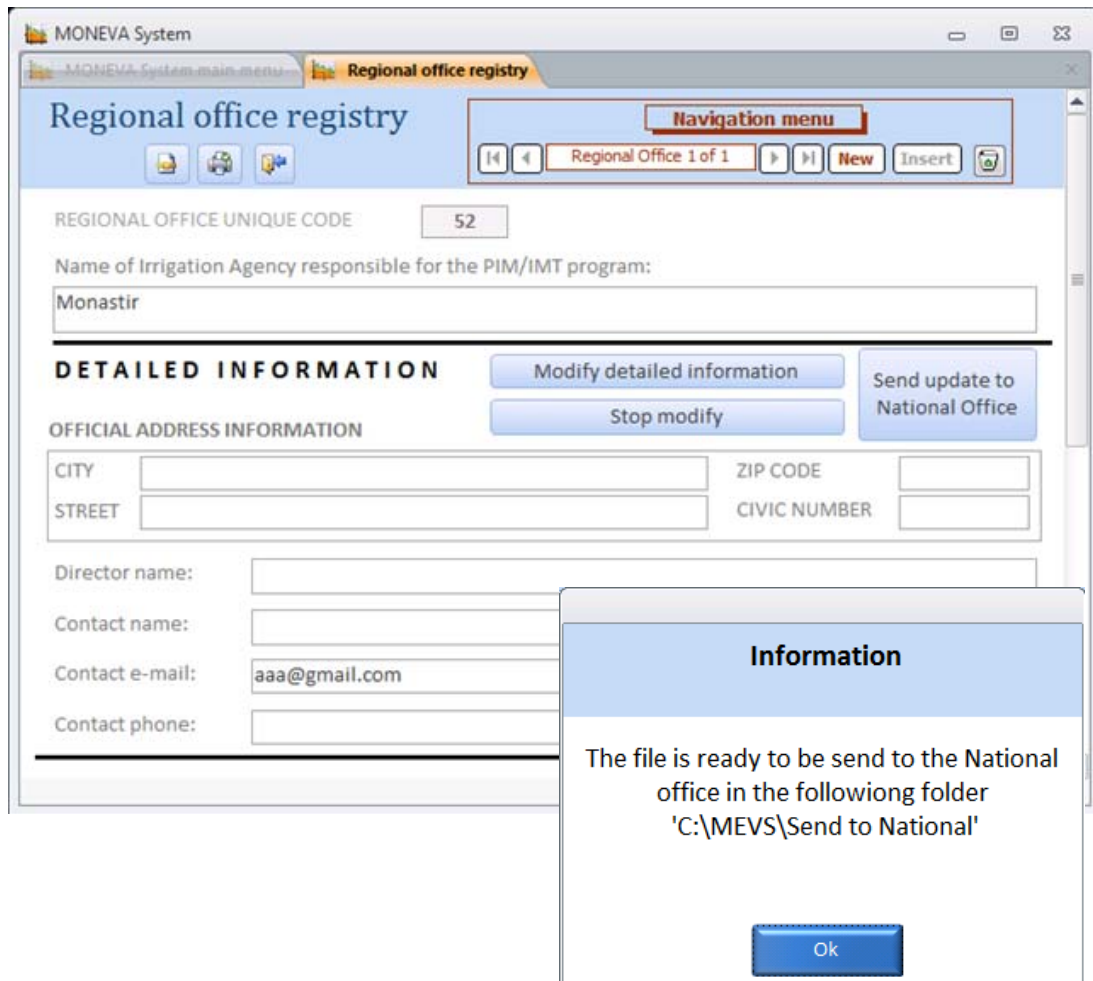


Fig. 9 – 'General Settings' function: Regional office registry associated section

The National Administrator prepares a full registry of the Country Regional Offices assigning a unique code to each Regional Office and editing its name and its official e-mail. These are the prerequisites to allow the flow of information between the National and the Regional levels. The Registry, duly compiled, is sent (together with all the General Settings defined at National level) to the list of e mail addresses included in the Regional Registry, through a simple internal procedure of MONEVA System, executed at National level.

The Regional Office has the duty to incorporate to its database the Info sent (as XML file; see section Utility and Tools) with another simple internal procedure.





The Detailed Information section of the form includes the address of the Regional Office, the name of its Director, the contact person who may be different from the




director, the phone number and the official e-mail account through which communication between the National and the Regional Office takes place.


Once received and incorporated, each Regional Office shall browse its dedicated page and compile the lacking detailed info. Moreover, every time a Regional Office updates its detailed info, this registry has to be sent to the National level: by clicking on the button " Send update to National office" an XML of the detailed info section is saved into the path C:\MEVS\Send to National" and can be delivered to the National/Central Office by e mail or on any available digital support (USB, CD/DVD...)

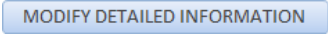
The General Info section attached to this form reports eventual further info data automatically retrieved from the monitoring data and is of only Regional interest.


5.5 Section 'Local Office Registry'

At Regional level, a Registry of all the affiliated WUAs (Local Offices) should be available. By Clicking on '**Local office registry**' button on the sidebar, a section that allows Regional Administrators to manage the Local Offices (WUAs) registry opens (**Errore. L'origine riferimento non è stata trovata.**). Each Local office is identified with a Unique Code (numerical) conferred by the Regional Office. The WUA code is composed of 6 digits where the first one identifies the Country/State/Nation, the 2nd and 3rd the Regional office and the last three identify the local office or the WUA. The system can handle a maximum 999 local offices/WUAs affiliated to one regional office. To this Unique Code is associated the Official name of the Association and the Reference Regional Office. The 'Navigation menu' on the upper right corner allows for browsing the entire database of the Local Offices by using the backward   and forward   buttons, and for showing the information associated to each of them (Fig. 10).

The button  is used to export the entire Local Office registry to a PDF file, the  button to print it and the  button to exit the form.

Deleting an existing Local Office/WUA – To delete an existing Local Office record, browse it and click on  button. A confirmation window will appear.

Editing an existing Local Office/WUA – Browse the database to find the Local Office you want to edit, then click on  button. Now you can edit all the fields shown in DETAILED INFORMATION section. Browsing another Local Office saves automatically the changes and ends the editing session.

Adding a new Local Office/WUA – Click on  button. A Unique Code will be automatically assigned to the office as a progressive number, but it can be as well

manually edited if needed. At this stage, the Detailed Information can be compiled. At the end of the editing process, press **Insert** button to definitely save the new record into your database. Make sure that at least the mandatory fields i.e. the WUA unique code and the official name of the association are filled in to be able to proceed with the new record saving. It is as well mandatory to communicate the Unique Code to the Local Office.

When the info/data is available, the text and date fields and combo boxes, can be filled in by the Regional Office. Moreover, the PDF form "Local office – Detailed info module" that is compiled by each single WUA provides the same info.

As a matter of fact, once the Regional Office creates the Registry and communicates the unique code to the WUAs, the local office will be able to compile the module and to send the information to the Regional Office: i) by email, ii) as XML file saved on a CD, USB...or iii) simply as a print out (see Users' Guide – Local Office: Working with PDF Forms). In the first two cases, the regional data base is able to read, check and incorporate the info with an internal procedure detailed under "Utility and tools" function of this guide; in the third case, the Regional Office has to directly edit the received data/info and to update the registry using the feature "Editing an existing Local office/WUA" as described above. General Info section reports any additional info automatically retrieved from the local monitoring data.

Navigation menu

WUA 1 of 3 | New | Insert

DETAILED INFORMATION

OFFICIAL NAME OF THE ASSOCIATION:

CHOOSE YOUR REFERENCE REGIONAL OFFICE: Tunis

WUA CODE:

OFFICIAL ADDRESS

City: ZIP CODE:

Street: Civic number:

President name:

Contact mail:

Contact phone:

WUA model (PIM/IMT):

Year in which the handing over agreement was signed:

Date of the creation of the WUA:

If the equipped area of the WUA is part of a larger irrigation system please indicate the name of the larger system:

Main field crops expressed in % of total irrigated area	
	%
Cereals	20%
Forages	10%
Legumes	50%

Main vegetables expressed in % of total irrigated area	
	%
Seasonal	40%
Off-season	60%

Main fruits and trees expressed in % of total irrigated area	
Fruit and Trees types	%
<input type="text"/>	25%
<input type="text"/>	30%
<input type="text"/>	27%
<input type="text"/>	
<input type="text"/>	

General info data

YEAR 2005			
C02011	<input type="text" value="1"/>	C03104	<input type="text" value="22"/>
C03071	<input type="text" value="16"/>		
C03091	<input type="text" value="18"/>		
C03101	<input type="text" value="19"/>		
C03102	<input type="text" value="20"/>		
C03103	<input type="text" value="21"/>		

Help: Complete definition of Outcome - Output - Variable/Indicator

Outcome:
Governance bodies of the WUA functioning adequately

Output:
General Assembly functioning regularly

C02011:
Actual registered number of farmers in the Association


Fig. 10 - Local Office Registry management

5.6 Section 'Applicable indicator'

Regional Administrators and Users can only view this section. It actually allows the National Administrators to set the indicators applicable to their National context and thus to deactivate a variable/indicator which will be hidden from the monitoring forms and consequently from the evaluation; or just to suspend the applicability of a variable/indicator in the evaluation stage even though the variable is still monitored. By clicking on the button "Applicable indicator" on the sidebar, the section shown in Fig. 11 will be displayed.

	Active	Scored	Code	Freq	Type	Aggreg. Level	Aggreg. Type	Unit
Currency	<input type="checkbox"/>	<input type="checkbox"/>	B09053	888	IN	No aggregation	No aggregation	no. of WUAs
Scoring criteria	<input type="checkbox"/>	<input type="checkbox"/>	N09054	12	CA	No aggregation	No aggregation	no. of WUAs
	<input type="checkbox"/>	<input type="checkbox"/>	N09055	999	CA	No aggregation	No aggregation	%
Regional office registry	<input type="checkbox"/>	<input type="checkbox"/>	C01010	36	IL	No aggregation	No aggregation	Adimensional
	<input type="checkbox"/>	<input type="checkbox"/>	C01011	36	IL	Nat & Reg	Count	Adimensional
Local office registry	<input type="checkbox"/>	<input type="checkbox"/>	C02011	12	IN	Nat & Reg	Sum	no. of People
	<input type="checkbox"/>	<input type="checkbox"/>	C02012	12	IN	No aggregation	No aggregation	no. of People
Applicable Indicators	<input type="checkbox"/>	<input type="checkbox"/>	P02010	12	CA	No aggregation	No aggregation	%
	<input type="checkbox"/>	<input type="checkbox"/>	C02020	12	IN	No aggregation	No aggregation	no. of Meetings
Send updated settings to regional offices	<input type="checkbox"/>	<input type="checkbox"/>	C02031	12	IN	No aggregation	No aggregation	no. of People
	<input type="checkbox"/>	<input type="checkbox"/>	P02030	12	CA	Regional	Average	%
Users and Passwords	<input type="checkbox"/>	<input type="checkbox"/>	C02041	12	IN	No aggregation	No aggregation	no. of Meetings
	<input type="checkbox"/>	<input type="checkbox"/>	C02042	12	IN	No aggregation	No aggregation	no. of Meetings
	<input type="checkbox"/>	<input type="checkbox"/>	P02040	12	CA	Regional	Average	%
	<input type="checkbox"/>	<input type="checkbox"/>	C02050	12	IQ	Regional	Count	Adimensional
	<input type="checkbox"/>	<input type="checkbox"/>	C02061	12	IN	Nat & Reg	Sum	no. of Women

Fig. 11 – 'General Settings' function: Applicable indicators associated section

The selected applicable/non applicable variables/indicators are represented by their codes. By clicking on  button a dialog box showing the output and the outcome to which refers the variable/indicator identified by its code and its short and extended definition will appear (Fig. 12).

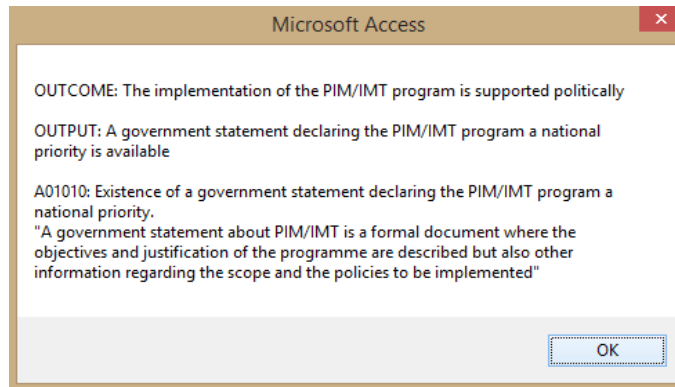


Fig. 12 - Help and info dialogue box of a specific indicator

5.6.1 Setting the indicators application status

By acting on the '**Active**' switch, the National Authorities can activate (blue)/deactivate (red) in the monitoring phase, and thus consider/not consider for evaluation every single indicator. By acting on '**Scored**' switch of a variable/indicator (turning it to red), the National administrator chooses to monitor a variable/indicator but not to score/evaluate it, at least for a certain period.

This procedure helps customizing the process to the country context accounting for the different stages of PIM/IMT program, as a variable/indicator may be applicable in a phase and not in another phase and vice versa. This procedure can be repeated every time it is necessary, however the National Administrator has always to generate the settings updated files and distribute them to the Regions.

For every variable/indicator shown in rows, the following is displayed from left to right (Fig. 13):

- The "Active/Scored" switches,
- The unique identification "CODE"
- The associated frequency of monitoring "Freq" in months (12 or 36); once at the start of M&E (code 888)
- The "Type" of the variable/indicator: 'IL' for logic, 'IN' for numerical, 'IQ' for qualitative, 'CA' for calculated,
- The "Aggregation level": 'Nat' for national, 'Reg' for regional, 'N-R' for national and regional, 'No aggreg' for no aggregation.
- The "Aggregation type". 'Sum', 'Count', 'Average' or 'No aggregation'.
- The measurement "Unit"

Field settings		Active		Not Active			
Active	Scored	CODE	Freq	Type	Aggreg. Level	Aggreg. Type	Unit
<input type="checkbox"/>	<input type="checkbox"/>	A01010	12	IL	No aggreg	No Aggreg	3
<input type="checkbox"/>	<input type="checkbox"/>	A02010N	36	IL	No aggreg	No Aggreg	3

Fig. 13 - 'General Settings' function: applicable indicators section

Below are described the three possible combinations of the two switches and the consequences on the monitoring and evaluation processes.

5.6.1.1 'Active' switched ON, 'Scored' switched ON

Active Scored The variable/indicator will be monitored and evaluated at the level where it applies: National, Regional or Local.

5.6.1.2 'Active' switched OFF, 'Scored' switched OFF

Active Scored The variable/indicator will not be monitored nor evaluated. Consequently, the Maximum Number of Points in an output/outcome will be reduced by the number of deactivated indicators multiplied by 2 (maximum score that can be attributed to a variable/indicator).

5.6.1.3 'Active' switched ON, 'Scored' switched OFF

Active Scored The indicator will be only monitored, it will not be scored and thus not evaluated at the level where it applies: National, Regional or Local. Consequently, the Maximum Number of Points in an output/outcome will be reduced by the number of deactivated indicators multiplied by 2 (maximum score that can be attributed to a variable/indicator).

Settings are automatically saved into the database when the switches are operated.



NOTE: THIS FUNCTION HAS BEEN DEVELOPED TO MAKE THE SYSTEM EASY TO ADAPT/CUSTOMIZE AND ACCREDITABLE IN THE COUNTRIES OF THE REGION AS A WHOLE.

HOWEVER, IT IS RECOMMENDED TO CROSS-CHECK THE VALIDITY OF THE SELECTION OF THE APPLICABLE INDICATORS WITH AN IT, THROUGH THE SYSTEM STRUCTURE, SINCE IN MANY CASES THE SAME VARIABLE IS USED TO CALCULATE VARIOUS INDICATORS.

5.7 Section 'Users and Passwords'

This section allows the Regional administrators for the management of the system users' profiles.

New profiles can be added and existing profiles can be edited/modified/updated or cancelled. The lower part of the window shows the list of existing users' profiles.

The 'Navigation menu' in the upper right corner allows for browsing the entire database of the existing users' profiles by using the backward  and forward  buttons. The information associated to each profile will show under the section 'Current user profile' (Fig. 14).

5.7.1 Editing/modifying existing profiles

To edit/modify/update the features of an existing profile, browse the database until it is displayed and then click on 'Start' button under 'Modify' on the upper right corner. Now it is possible to update all of its associated fields, such as the complete name, the user login and the password. This is a must step after the first login is achieved through the default password (see Table 2 – Default Login IDs and Passwords provided by the system). 'User Security Level' can be updated as well by choosing the appropriate level from the dedicated combo box. The Regional system distinguishes two different security levels: Regional Administrators and Regional Users.

5.7.2 Adding a new profile

To add a new profile, simply click on 'New' button in the 'Navigation menu'. Now it is possible to compile the displayed empty fields: Complete user name, user login, and password and to choose the appropriate 'User Security Level' from the combo box. Once the new user profile is complete of all the needed information, click on 'Insert' button under the 'Navigation menu'. A new row with the newly added profile features will integrate the Users' list (Fig. 14).

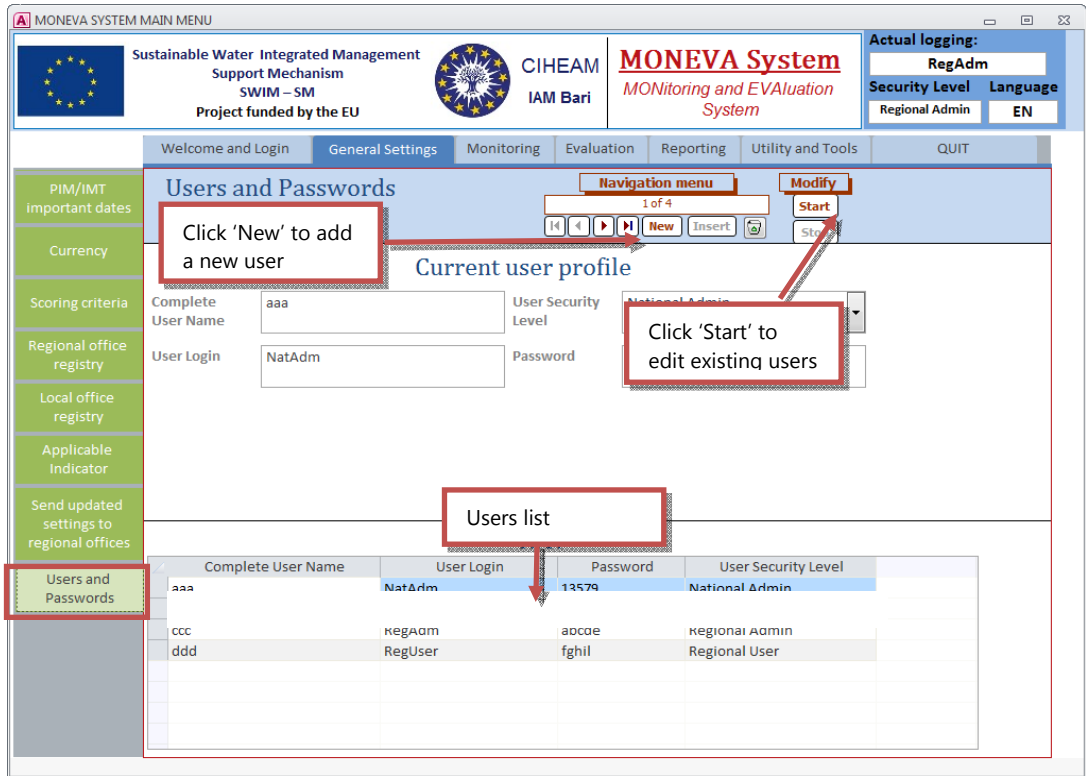


Fig. 14 – General Settings' function: Users & Passwords associated section

6. Function 'Monitoring'

This function makes available a series of sections which enable the monitoring process. Being logged in as Regional administrator or user, only the sections applicable at Regional level are activated (Fig. 15).

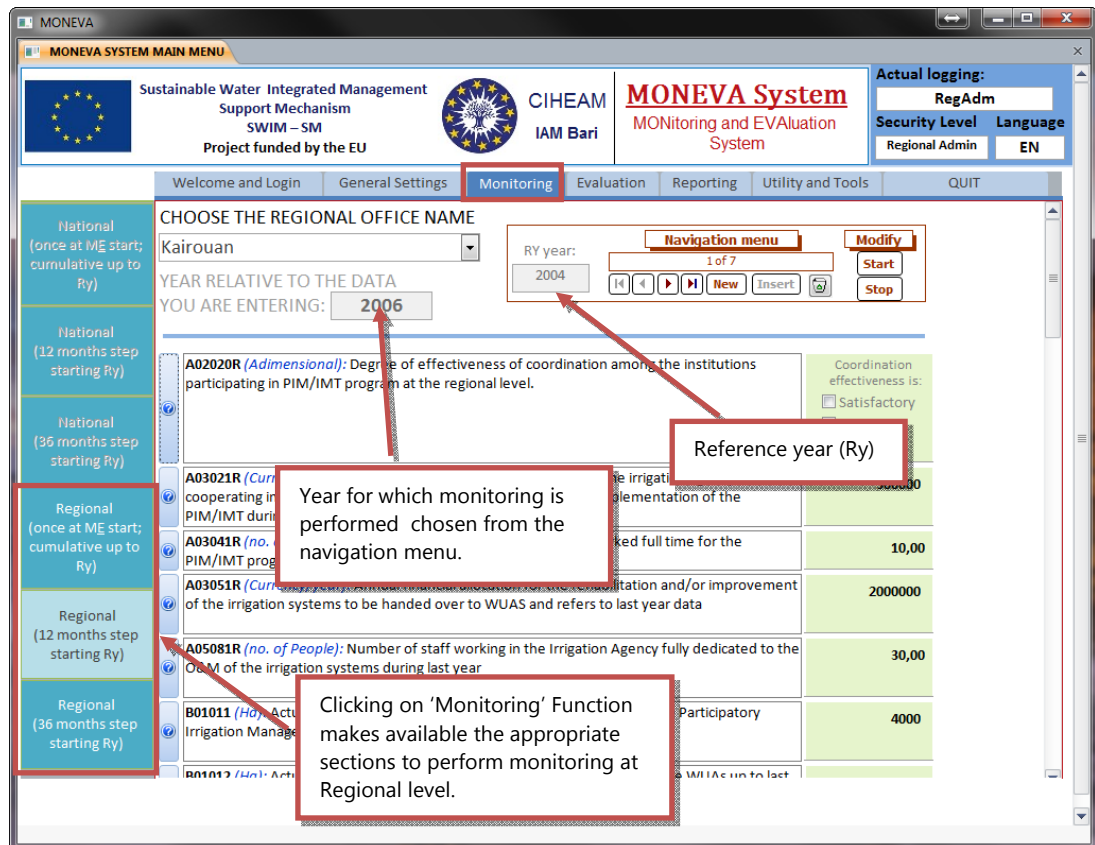





Fig. 15 - 'Monitoring' function and associated sections

The system distinguishes among three types of variables as per the frequency of their monitoring:

1. 12 months step starting from Reference Year (Ry): Refers to the variables to be monitored yearly.
2. 36 months step starting from Reference Year (Ry): Refers to the variables to monitor once each three years; these are usually variables which are not subject to frequent change and thus updating the datum once each three years is enough to keep reliable the evaluation process.
3. Once at M&E start, cumulative up to Ry: Refers to the variables that are inputted just once during the lifetime of the M&E System i.e. the year the M&E system is used for the first time (see section 5.1.4 Field 'Reference year')

The 'Navigation menu' in the upper right corner allows for browsing the years for which monitoring has been performed and thus to display the available monitoring data using the backward  and forward  buttons with the relative year shown in the left side box (see Fig. 15). To eliminate an existing year and the associated monitoring data, browse it and then click on  button.

Please note that the first time the M&E system is used, all categories of variables as per their frequency of update are monitored, starting with the section "Once at M&E start" as shown in the following.

6.1 Once at M&E start

Activate this section with a simple click and select the appropriate Regional Office from the combo box. The Reference year (Ry) is shown by default in the upper part of the window.

The upper right corner shows the button 'Start' under 'Modify', click it and then start inputting the numerical monitoring data or ticking the appropriate answer for qualitative and logical indicators (Fig. 16).

Please note that the deactivated indicators (see 5.6 "Applicable Indicator" section) are unavailable and grey colored. To end the editing session click on 'Stop' under 'Modify'.

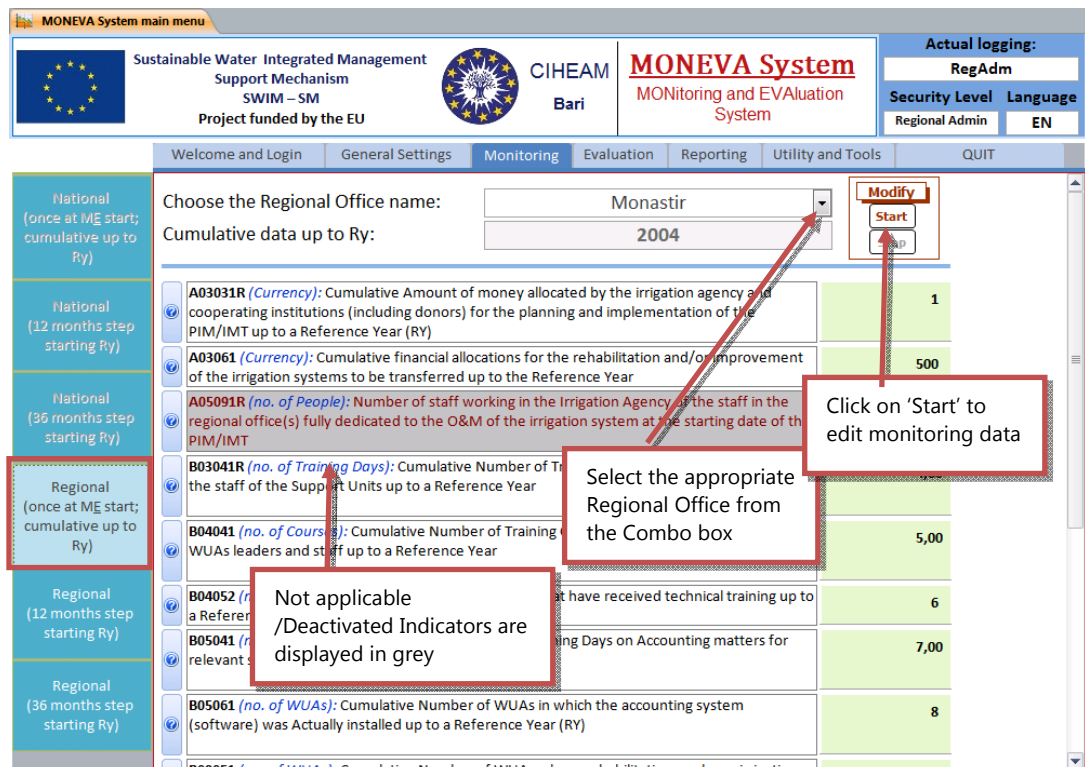





Fig. 16 - Once at the start monitoring

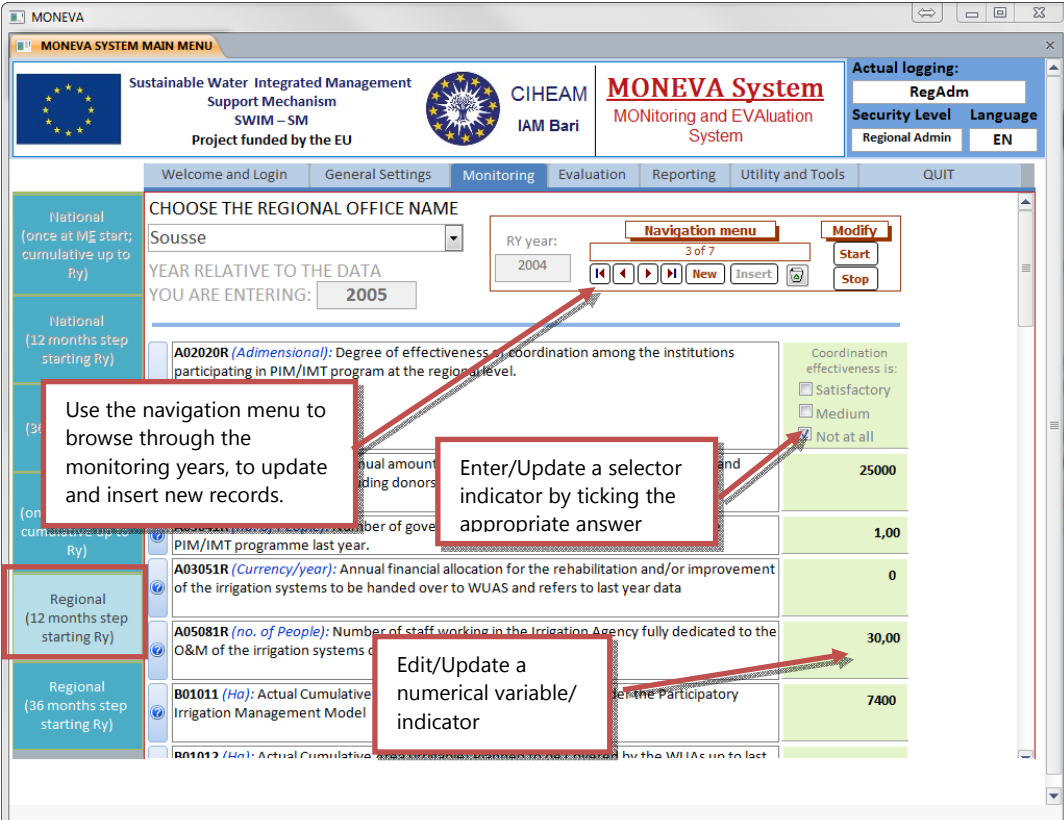
6.2 Starting a 12 months step monitoring process

Activate this section with a simple click and select the appropriate Regional Office from the combo box. The Reference year (Ry) will display. If the system is used for the first time, then the year for which the user will input the annual data (i.e. Ry+1) will automatically display in its appropriate box.

If not, the 'Navigation menu' in the upper right corner allows for browsing the years for which monitoring has been performed and thus to display the available monitoring data using the backward  and forward  buttons.

To access a specific monitoring year and modify or update the existing data, browse it through the 'Navigation menu', click on the 'Start' button under 'Modify' in the upper right corner of the window and start the editing process (Fig. 17). A warning message will display to remind you that you are overwriting existing data and to make sure you are not modifying data already evaluated.

To eliminate an existing year and the associated monitoring data, browse it and then click on the button .



The screenshot shows the MONEVA System Main Menu interface. The header includes the European Union logo, CIHEAM IAM Bari logo, and the MONEVA System logo. The main menu has tabs for Welcome and Login, General Settings, Monitoring, Evaluation, Reporting, Utility and Tools, and QUIT. The 'Monitoring' tab is active, showing a 'CHOOSE THE REGIONAL OFFICE NAME' dropdown set to 'Sousse'. Below this, the 'RY year' is set to '2004' and the 'YEAR RELATIVE TO THE DATA YOU ARE ENTERING' is set to '2005'. A 'Navigation menu' is visible with buttons for 'New', 'Insert', and 'Start'. A table of monitoring indicators is displayed, with columns for indicator name, description, and value. Red boxes and arrows highlight specific elements: 'Use the navigation menu to browse through the monitoring years, to update and insert new records.', 'Enter/Update a selector indicator by ticking the appropriate answer', and 'Edit/Update a numerical variable/indicator'.

Indicator	Description	Value
A02020R (Adimensional)	Degree of effectiveness of coordination among the institutions participating in PIM/IMT program at the regional level.	25000
A03051R (Currency/year)	Annual financial allocation for the rehabilitation and/or improvement of the irrigation systems to be handed over to WUAS and refers to last year data	1,00
A05081R (no. of People)	Number of staff working in the Irrigation Agency fully dedicated to the O&M of the irrigation systems	0
B01011 (Ha)	Actual Cumulative Irrigation Management Model	30,00
B01012 (Ha)	Actual Cumulative Irrigation Management Model	7400

Fig. 17 - Performing the 12 months monitoring process

To input monitoring data of a new year, click on 'New' button in the 'Navigation menu' and select the appropriate Regional Office from the combo box (Fig. 18). The

appropriate box will be automatically populated with the year following the last available in the system.

The upper right corner shows the button 'Start' under 'Modify', click it and then start inputting the numerical monitoring data or ticking the appropriate answer for qualitative and logical indicators (Fig. 18).

Please note that the deactivated indicators are unavailable and grey colored (see 5.6 Section 'Applicable indicator'). To end the editing session and save entered data click on 'Insert' button.

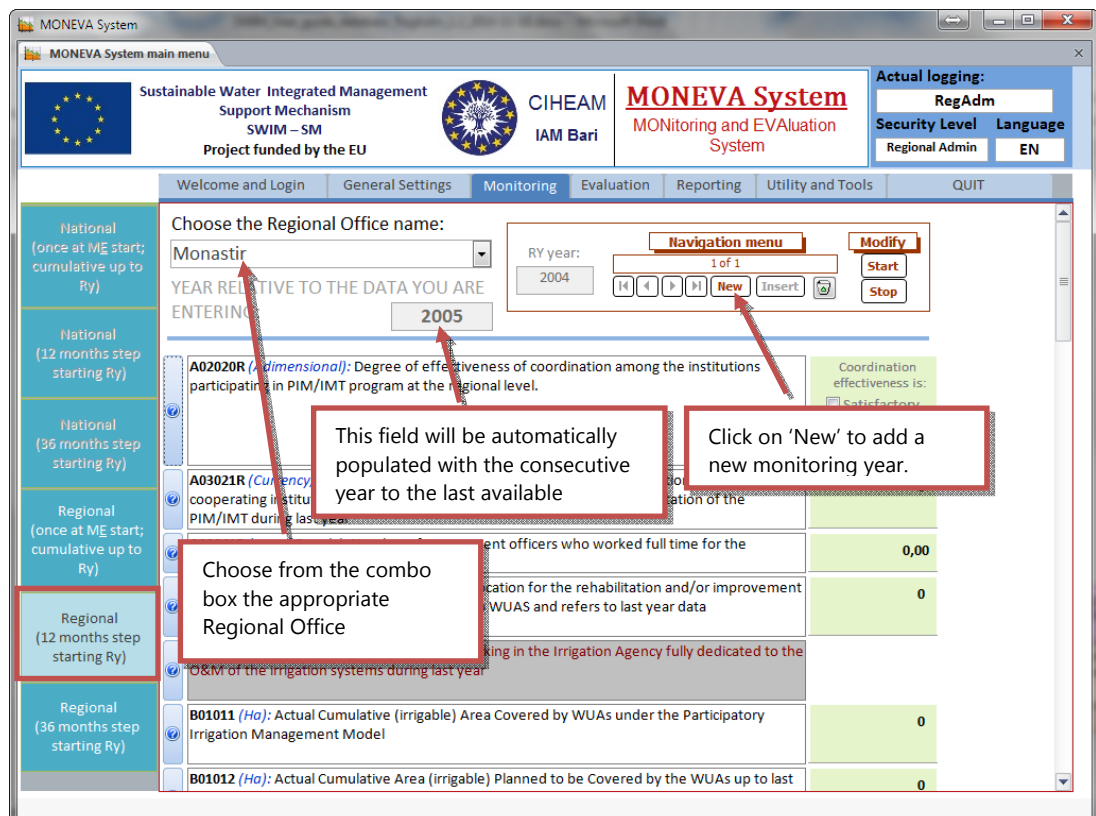


Fig. 18 – 12 Months step : Monitoring a new year

6.3 Starting a 36 step monitoring process

Activate this section with a simple click and select the appropriate Regional Office from the combo box. This section has the same functions and features as the previous one (12 months step starting Ry), except for the frequency of update (36 months step starting Ry). For example, if Ry is 2004, then the cumulative figures (up to 2004) which respond to the section "once at M&E Start" are entered and 2005 is the first year for which the 12 months and the 36 months step monitoring are performed and evaluation is executed. The consecutive year (2006), only the 12 months step monitoring will be updated and accordingly, evaluation will be executed, whereas the variables/indicators which respond to the section 36 months

step will carry the same evaluation results up to 2007. A first update of the 36 months step monitoring should be executed in 2008 (Fig. 19).

The screenshot shows the MONEVA System interface. At the top, there is a header with logos for the European Union, CIHEAM IAM Bari, and the MONEVA System. Below the header, there are tabs for 'Welcome and Login', 'General Settings', 'Monitoring', 'Evaluation', 'Reporting', 'Utility and Tools', and 'QUIT'. The 'Monitoring' tab is active.

On the left side, there is a vertical menu with categories: 'National (once at ME start; cumulative up to Ry)', 'National (12 months step starting Ry)', 'National (36 months step starting Ry)', 'Regional (once at ME start; cumulative up to Ry)', 'Regional (12 months step starting Ry)', and 'Regional (36 months step starting Ry)'. The 'Regional (36 months step starting Ry)' category is highlighted with a red box.

The main content area shows a form for entering monitoring data. It includes a dropdown menu for 'Choose the Regional Office name:' with 'Monastir' selected. Below this is a 'YEAR RELATIVE TO THE DATA YOU ARE ENTERING:' field with '2005' entered. To the right, there is a 'Navigation menu' with buttons for 'New Record', 'New', 'Insert', and 'Modify'. The 'Modify' button has sub-buttons for 'Start' and 'Stop'. A red box highlights the 'New' button in the navigation menu, with an annotation: 'Enter/Update a selector indicator by ticking the appropriate answer'. Another red box highlights the 'Choose the Regional Office name:' dropdown, with an annotation: 'Select the appropriate Regional Office from the combo box'.

Below the form is a table of indicators. The table has columns for 'Indicator', 'Yes', and 'No'. The indicators listed are:

Indicator	Yes	No
A02010R (Adimensional): A coordination mechanism...	<input checked="" type="checkbox"/>	<input type="checkbox"/>
A02030R (Adimensional): Roles and responsibilities of...	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B04010R (Adimensional): Training needs assessment...	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B04020R (Adimensional): Training material is available	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B04060R (Adimensional): WUAs Training events were evaluated	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B05020R (Adimensional): ...	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B05051 (no. of WUAs installed last year. No...		0
B05052 (no. of WUAs): Number of WUAs in which the accounting system (software) was planned to be installed last year. Note: WUAs include in this case both those operating both		0
B05070 (Adimensional): Financial accounts of WUAs are periodically audited by independent		

Fig. 19 - Performing the 36 months monitoring process

To input monitoring data of a new year, click on 'New' button in the 'Navigation menu' (Fig. 20). The appropriate box will be automatically populated with the year following the last available in the database.

The upper right corner shows the button 'Start' under 'Modify', click it and then start inputting the numerical monitoring data or ticking the appropriate answer for qualitative and logical indicators (Fig. 20).

Please note that the deactivated indicators under 'General Settings' are unavailable and grey colored (see 5.6 Section 'Applicable indicator'). To end the editing session and save entered data click on 'Insert' button.

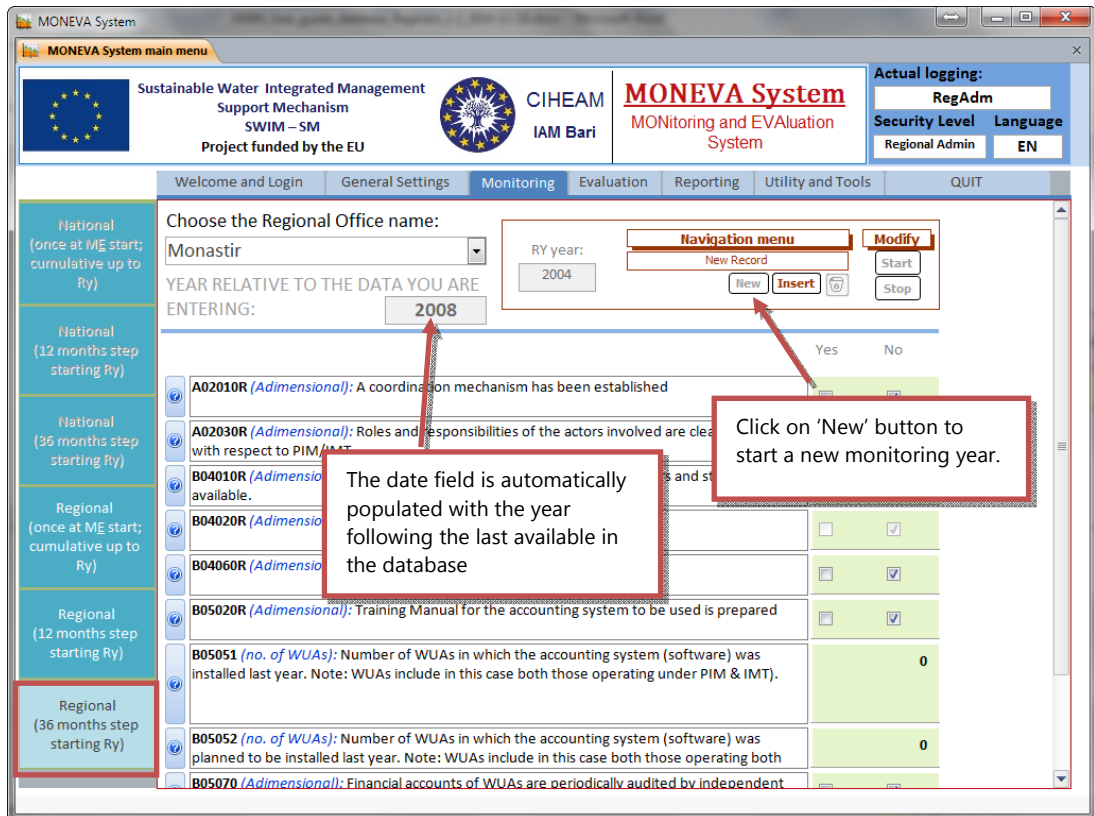


Fig. 20 – 36 Months step: Monitoring a new year

7. Function 'Evaluation'

It refers to "the first level evaluation" generated per outcome and showing the level of achievement per outcome and output. It is assessed by assigning scores to the corresponding variables/indicators according to preset scoring criteria as described in the Introduction.

Evaluation is performed once the monitoring phase is completed. The system distinguishes between two levels: National and Regional.

The national level can perform only its own evaluation and access to the Outcomes A and Bn, in reference to modules A and B (see Introduction).

The regional level can perform and access its own evaluation through the Outcomes Br and the one of the affiliated WUAs through the Outcomes C and D, in reference to modules C and D (see Introduction).

7.1 Regional evaluation per Outcome 12/36 months steps

Clicking on the section Regional evaluation per Outcome (12/36 months steps) under the Evaluation function (Fig. 21), a grid of outcomes will be displayed.

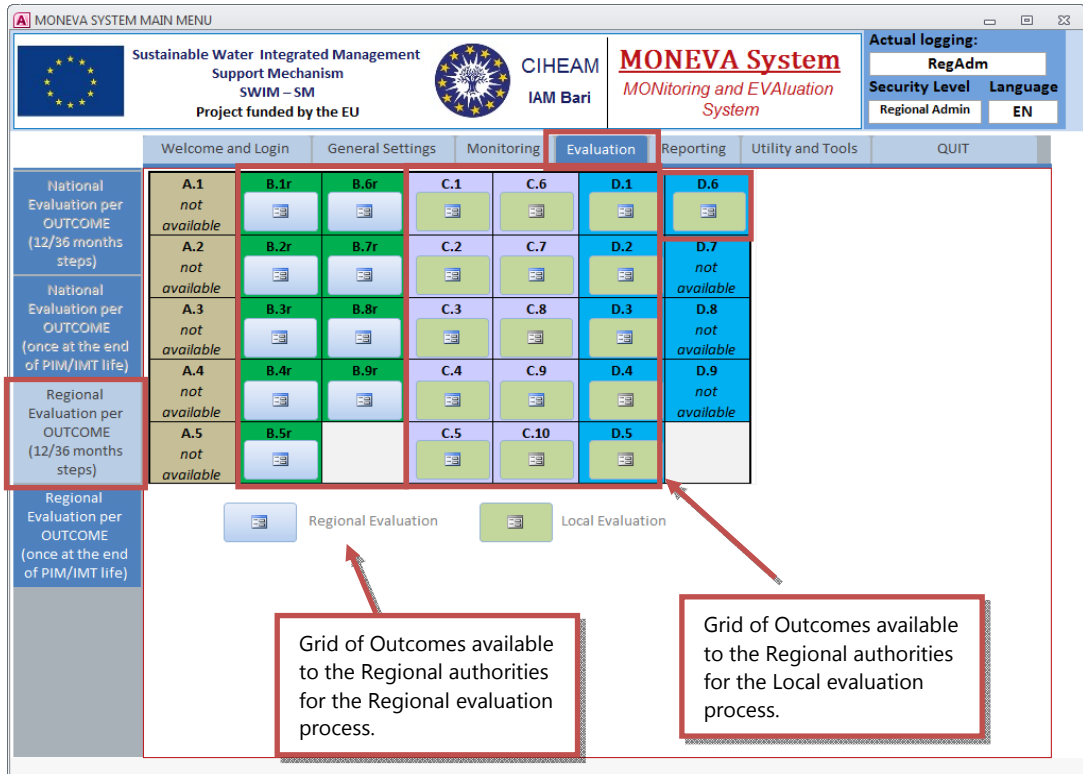


Fig. 21 - The Regional and Local evaluation process per Outcome 12/36 months steps

Clicking on one of the buttons will open a new window to “the first level evaluation” of the selected Outcome (Fig. 22).

The user should first select the appropriate **Regional Office** from the combo box, then set the variable “**Year**” in the upper part to specify the year for which the evaluation of the selected Outcome should be executed, and last click on the button “**Evaluate**”.

The first level evaluation form is divided into two parts: the Monitoring part and the Evaluation part.

OFFICE: 41 Kairouan Year: 2008 Evaluate Regional evaluation Model B04R 17/11/2014

MONITORING							EVALUATION	
Output	Indicator	Graphics	Evaluation criteria (in Points)			Value entered	Sub Total	
			2	1	0			
B04 - WUAs leaders and staff know their responsibilities and have the necessary skills to carry out								
B0401 - Training needs assessment for the WUAs leaders and staff is carried out and training material is available								
B04010R				N	Y	2		4/4 = 100%
(Adimensional) - Training needs assessment for the WUAs leaders and staff is available.								
B04020R				N	Y	2		
(Adimensional) - Training material is available.								
B0402 - Training for the WUAs leaders and staff is implemented								
N04030			>= 90	>= 70 and <90	< 70	0	0	
This indicator measures if the number of training courses carried out for the WUAs leaders and staff last year with respect to those planned.								
B0403 - Training evaluated								
B04060R			Y			Y	2	2/2 = 100%
(Adimensional) - WUAs Training events were evaluated								

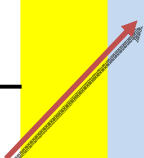
Fig. 22 – Overview of the evaluation window

The monitoring part shows the following (Fig. 22):

1. **The Outcome** – the relative code (B04) and definition are reported in the light blue bar.
2. **The Output(s)** – the relative code(s) (B0401, B0402 and B0403) and definition(s) are reported in the yellow bar.
3. **The Indicator(s)** – the identification code (B04010R, B04020R, N04030, B04060R), definition and measurement unit, are displayed.
4. **Graphics** – If a graphic representation of the indicator/variable is generated and made available then the appropriate cell is white colored otherwise it is grey colored.
5. **Evaluation criteria (in Points)** – represented with three columns correlating the points that can be scored (2, 1, 0) to the preset specific criteria of each variable/indicator. For example, the logical indicator B04010R of Fig. 22 may score 2 points for 'Y' and 0 for 'N'; score 1 is not considered. The numerical indicator N04030 may score 2 for a value greater or equal to 90, 1 for a value smaller than 100 but greater or equal to 70, and 0 for a value smaller than 70.
6. **Value entered** – represents the inputted value of the variable/indicator during the monitoring phase and according to which the score is assigned.
7. **Sub Total** – it is the number of points scored by each variable/indicator as per the entered value and based on the evaluation criteria.




The evaluation part shows the following (Fig. 23):

8. **Indicator** – This column verbosely explains what does the indicator represent/evaluate, what indications it can provide and how to interpret the result.
9. **Output Total/MNP** – This yellow column represents the total number of points scored by an Output i.e. the sum of the scores achieved by all the output indicators over the maximum number of points (MNP) that can be achieved. The example shown in Fig. 23 refers to Output B0401 which achieved 4 points over a MNP of 4 (Maximum of 2 points per 2 indicators) i.e. the level of achievement of the output is 100%.
10. **Outcome Total/MNP** – This light blue column represents the total number of points scored by an Outcome i.e. the sum of the scores achieved by all the Outputs over the maximum number of points (MNP) that can be achieved. The example shown in Fig. 23 refers to Outcome B04 which achieved 6 points out of a MNP of 8. Actually, this Outcome is evaluated through three Outputs B0401, B0402 and B0403; the first achieved 4 points out of a MNP of 4, the second 0 points out of 2 MNP and the third 2 points out of 2 MNP, setting the total level of achievement of the outcome at 75%.

Outcome	Output	MONITORING						EVALUATION			
		Indicator	Graphics	Evaluation criteria (in Points)			Value entered	Sub Total	Indicator	Output Total/MNP	Outcome Total/MNP
				2	1	0					
B04 - WUAs leaders and staff know their responsibilities and have the necessary skills to carry out their work											
B0401 - Training needs assessment for the WUAs leaders and staff is carried out and training material is available											
	B04010R	Y		N	Y	2	The indicator checks if the training needs of the WUAs leaders and staff was carried out.	4/4 = 100%	6/8 = 75%		
(Adimensional) - Training needs assessment for the WUAs leaders and staff is available.											
	B04020R	Y		N	Y	2	The indicator checks if the training material for the WUAs leaders was prepared and if it is available				
(Adimensional) - Taining material is available											
B0402 - Training for the WUAs leaders and staff is implemented											
	N04030		>= 90	>= 70 and <90	< 70	0	0	This indicators measures if the nu for the WUAs leaders and staff we			
(%) - Percentage of the number of training courses carried out for the WUAs leaders and staff last year with respect to those planned.											
B0403 - Training evaluated											
	B04060R	Y		N	Y	2	The indicator checks if the training events were evaluated	2/2 = 100%			
(Adimensional) - WUAs Training events were evaluated											

Overall scores per Output and Outcome as compared to a MNP to achieve

Fig. 23 – Details of the evaluation window

The three buttons    shown in the upper part of the window allow respectively to export the evaluation sheet as a PDF file, to print it out or to close it.

7.2 Regional evaluation per Outcome once at the end

By clicking on the section Regional evaluation per Outcome (once at the end of PIM/IMT life) (Fig. 24), a grid of outcomes displays. The functions are similar to the ones described in the previous paragraph, except that the cells are made available only the year PIM/IMT programme is completed i.e. Actual year = year of completion/end of PIM/IM,T according to the dates defined by the National/Central Office under the PIM/IMT Important dates section of the General Settings.

The screenshot shows the MONEVA System main menu with the 'Evaluation' tab selected. The interface displays a grid of outcomes for evaluation. The grid is organized into rows (A.1 to A.5) and columns (B.1 to B.9). The status of each cell is either 'not available' or 'available'. A red box highlights the 'Regional and Local Evaluation per Outcome (once at the end of PIM/IMT life)' section, and another red box highlights the grid. A callout box points to the grid with the text: 'Grid of Outcomes available to the Regional authorities for evaluation only once i.e. at the end of the process'.

A.1 not available	B.1 not available	B.6 not available	C.1 not available	C.6 not available	D.1 not available	D.6 not available
A.2 not available	B.2 not available	B.7 not available	C.2 not available	C.7 not available	D.2 not available	D.7 not available
A.3 not available	B.3 not available	B.8 not available	C.3 not available	C.8 not available	D.3 not available	D.8 not available
A.4 not available	B.4 not available	B.9 not available	C.4 not available	C.9 not available	D.4 not available	D.9 not available
A.5 not available	B.5 not available		C.5 not available	C.10 not available	D.5 not available	

Fig. 24 - The Regional and local evaluation process per Outcome once at the end

NOTE: THE FOLLOWING INDICATORS COMPARE 2 CONSECUTIVE YEARS; SO PLEASE BE AWARE THAT WHEN YOU APPLY THE SYSTEM FOR A FIRST ANNUAL EVALUATION I.E. FOR THE YEAR RY+1, THESE INDICATORS WILL BE "NULL". YOU CAN ACCOUNT FOR THEIR RESULTS STARTING RY+2.

M03020N; M03020R; M03040N; M03040R; M03050N; M03050R; M05080N;
M05080R; N07021; P07060; P08010; P08020; R05010; R05020; R06020.

8. Function 'Reporting'

This function provides for a series of tools enabling the user to perform the second and third level evaluation and allows for completing the evaluation figure, conferring to the M&E system the characteristics of a DSS.

8.1 Section 'Statistical calculation'


This section allows for the second level evaluation as reported in the introduction. Where it applies, local monitoring data are aggregated at Regional level and/or National level, and Regional data at National Level.

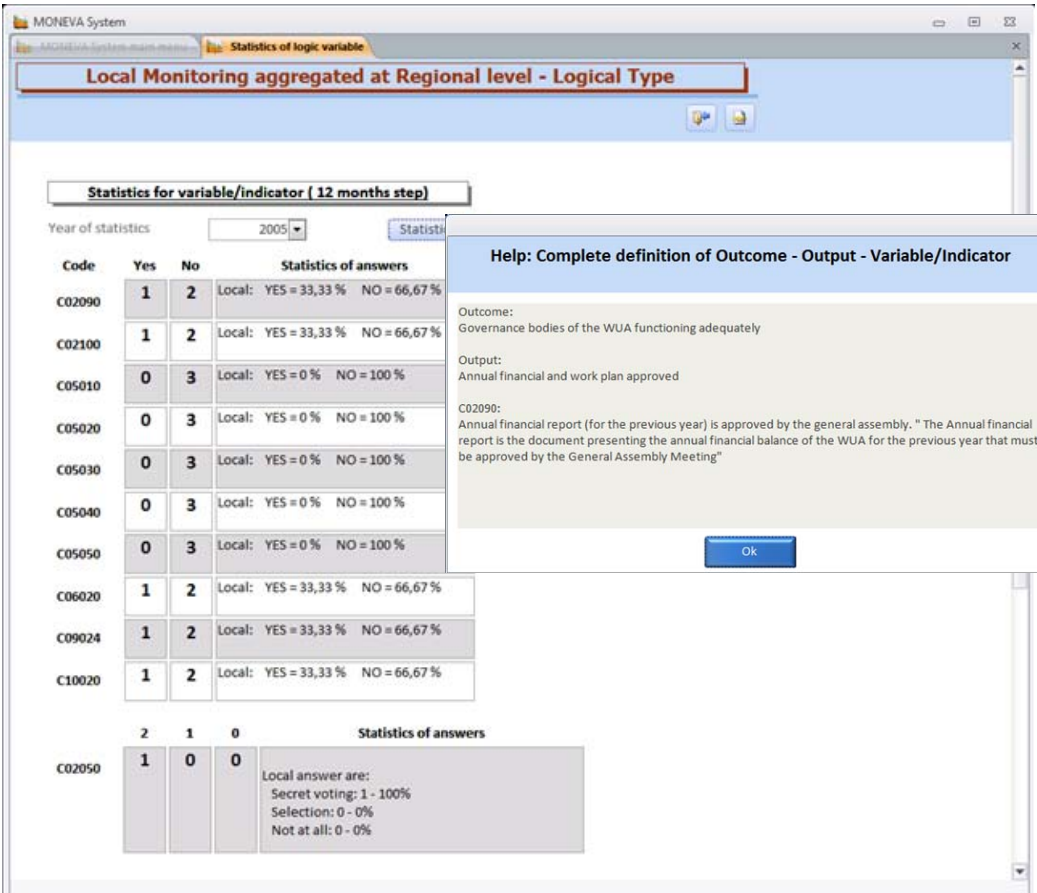
For the Regional Offices only the Local statistics are accessible and are executed on Logical (Count) and Numerical (Sum, Average, Minimum and Maximum) variables/indicators (Fig. 25).



Fig. 25 - Statistical calculation on aggregated data

Clicking on one of the available buttons for the second level evaluation, a new window opens where the year for which the statistics are needed should be selected from the Combo box. Clicking on 'Statistics', the calculations are executed for the

appropriate variables/indicators which codes are displayed. Clicking on any code will enable a help function which reports the definition of the variable/indicator as well as the relative outcome/output. Fig. 26 reports on the statistics for year 2005, of the Local Logical variables updated yearly and aggregated at Regional level. The Count and the percentage of the different answers (YES/NO) given by all the WUAs affiliated to the specific Regional Office are reported. These Statistics can be exported to a PDF file clicking on the  button in the upper right corner of the window.



The screenshot displays the MONEVA System interface. The main window is titled "Local Monitoring aggregated at Regional level - Logical Type". Below this, there is a section for "Statistics for variable/indicator (12 months step)" for the year 2005. A table lists various codes with their respective "Yes" and "No" counts and percentages. A help window is open over the code C02090, providing a detailed definition of the variable.

Code	Yes	No	Statistics of answers
C02090	1	2	Local: YES = 33,33 % NO = 66,67 %
C02100	1	2	Local: YES = 33,33 % NO = 66,67 %
C05010	0	3	Local: YES = 0 % NO = 100 %
C05020	0	3	Local: YES = 0 % NO = 100 %
C05030	0	3	Local: YES = 0 % NO = 100 %
C05040	0	3	Local: YES = 0 % NO = 100 %
C05050	0	3	Local: YES = 0 % NO = 100 %
C06020	1	2	Local: YES = 33,33 % NO = 66,67 %
C09024	1	2	Local: YES = 33,33 % NO = 66,67 %
C10020	1	2	Local: YES = 33,33 % NO = 66,67 %

Help: Complete definition of Outcome - Output - Variable/Indicator

Outcome:
Governance bodies of the WUA functioning adequately

Output:
Annual financial and work plan approved

C02090:
Annual financial report (for the previous year) is approved by the general assembly. " The Annual financial report is the document presenting the annual financial balance of the WUA for the previous year that must be approved by the General Assembly Meeting"

Ok

Fig. 26 - Local statistics aggregated at Regional level for logical indicators with frequency 12 months and the help function associated to the variable with code C02090

The statistics for local numerical monitoring aggregated at regional level, with frequency once at the beginning, are shown in Fig. 27. In the upper part of the window are displayed the values for 4 numerical indicators (columns) related to the WUAs (rows) identified by their respective codes.

The lower part of the window shows some basic statistics applied on these variables/indicators i.e. sum, average, maximum and minimum.

Local Monitoring aggregated at Regional level
Type: Numerical - Frequency: once at the beginning

Local monitoring data

Local CODE	C03024	C03072	D09012	D09022
141001	13	8	11	20
152001	10	10	12	13

Aggregation of Local monitoring data at Regional level

Sum	23	18	23	33
Average	11,5	9	11,5	16,5
Maximum	13	10	12	20
Minimum	10	8	11	13

Fig. 27 - Statistics for Local numerical variables with frequency of update once at the beginning aggregated at Regional level

The statistics for local numerical monitoring aggregated at regional level, with frequency 12 and 36 months, are shown in Fig. 28. In the upper part of the window are displayed the values for 6 numerical indicators (columns) related to the WUAs (rows) identified by their respective codes.

The lower part of the window shows some basic statistics applied on these variables/indicators i.e. sum, average, maximum and minimum.

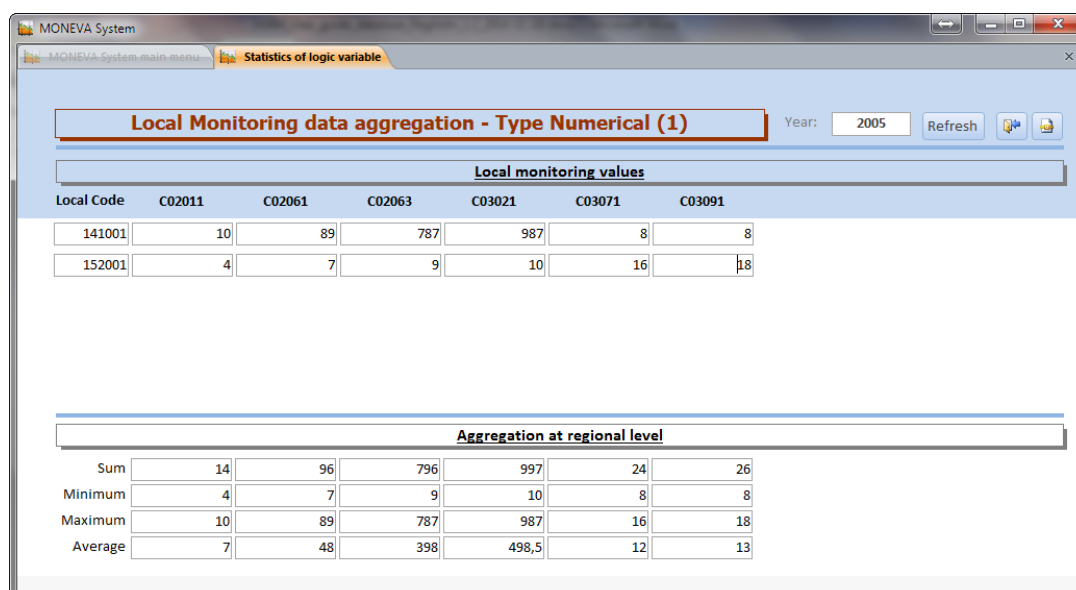


Fig. 28 – Statistics for Local numerical variables with 12 months frequency aggregated at Regional level

8.2 Section 'Graphics'

This function allows for the visualization of trend graphs of correlated variables and/or indicators, using the data stored in the database. Each graph is assigned a unique code which starts with the letter "G", followed by the letter which represents the affinity module i.e. A, B, C or D and four digits (Fig. 29).

A series of available buttons allow to browse the existing graphs, to view them, and to show the related values organized in tables. The generated graph can be as well exported and thus embedded in an external document (Fig. 29).

By clicking on **View Graph** button a window is generated with graph in which each variable/indicator represented occupies a field and is reported as per its unique code and detailed definition as shown in Fig 30.

By clicking on **View Table** button, a window shows with the numerical values of the graph organized in a table (Fig. 31).

By clicking on **Export Graph** button, an Excel file is saved to the path C:\MEVS\REPORTS\GRAPHS AND TABLES and ready for further elaboration.

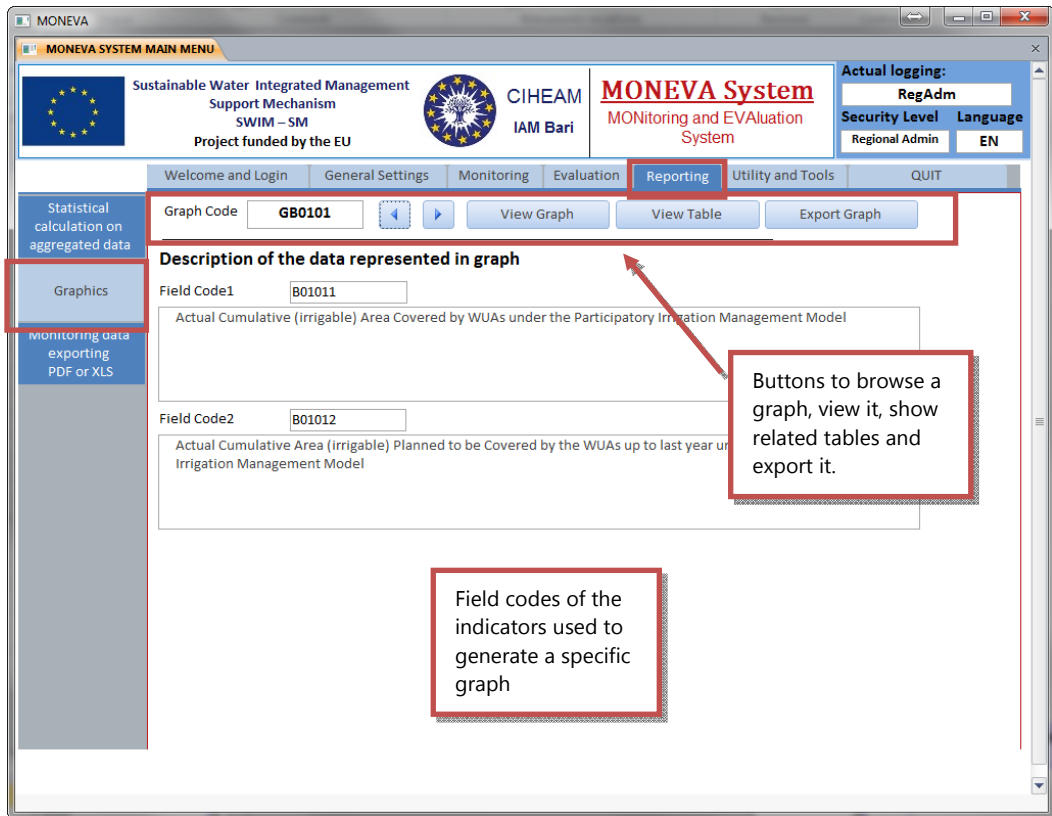


Fig. 29 - Graphics section and features

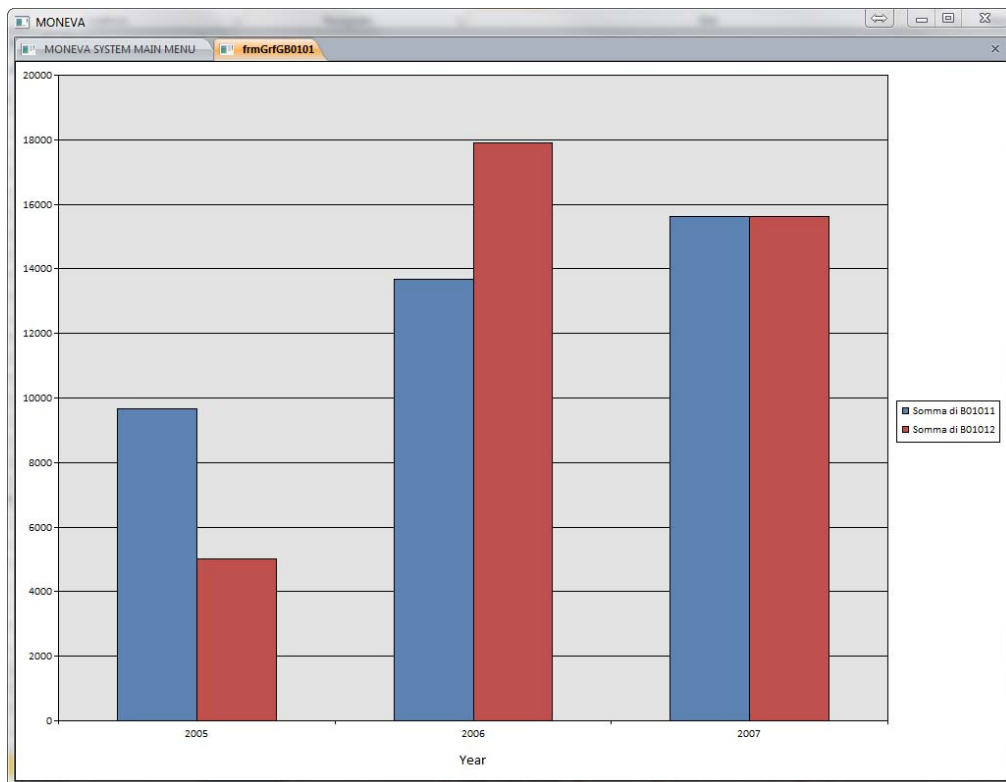
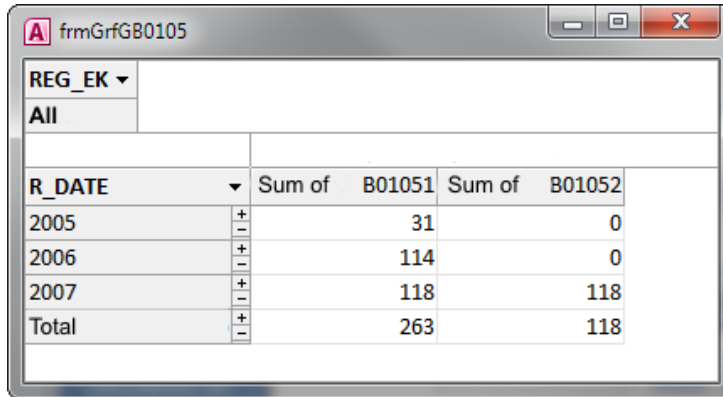


Fig. 30 - Window showing the generated graph



R_DATE	Sum of B01051	Sum of B01052
2005	31	0
2006	114	0
2007	118	118
Total	263	118

Fig. 31 - Window showing the graph values organized in a table

8.3 'Monitoring data exporting' Section

This section makes available, to a Regional Administrator and/or User, the Regional and Local monitoring data of the database, organized per level and per frequency of update (i.e. 12 months and 36 months step and once at M&E start) (Fig. 32).



MONEVA System main menu

Sustainable Water Integrated Management Support Mechanism SWIM – SM Project funded by the EU

CIHEAM Bari

MONEVA System MONitoring and EVALuation System

Actual logging: RegAdm

Security Level: Regional Admin Language: EN

Welcome and Login | General Settings | Monitoring | Evaluation | **Reporting** | Utility and Tools | QUIT

Statistical calculation on aggregated data

Graphics

Monitoring data exporting PDF or XLS

Select the data you want to export

PDF	XLS	Object
		National Monitoring Data (step 12 months)
		National Monitoring Data (step 36 months)
		National Monitoring Data (only at the start)
		Regional Monitoring Data (step 12 months)
		Regional Monitoring Data (step 36 months)
		Regional Monitoring Data (only at the start)
		Local Monitoring Data (step 12 months)
		Local Monitoring Data (step 36 months)
		Local Monitoring Data (only at the start)

Fig. 32 - Monitoring data exporting section

These data can be exported as PDF or Excel files, respectively to the following destinations: C:\MEVS\REPORTS\ and C:\MEVS\REPORTS\GRAPHS AND TABLES.

9. Function 'Utility and tools'

This function provides for a variety of tools, essential to facilitate the management of the system, but most of all to ensure the data retrieving and sending between the Regional level and the National and Local levels.

9.1 Section 'Retrieve data – Regional tool'

This section allows the Regional Office to retrieve (Fig. 33):

- i) the System settings defined at National level and sent to the Regional Offices (for more details see M&E Users' Guide for National/Central Office)
- ii) check and incorporate into the database the local monitoring data with different frequencies (12 months, 36 months and Once at the start) and the local detailed info performed by the WUAs and sent to the appropriate Regional Office (for more details see Users' Guide for Local Office)
- iii) and view and archive the WUAs comments on local evaluation (for more details see Users' Guide for Local Office)

and to send to the National/Central office:

- i) the Regional monitoring data and
- ii) the aggregated Local monitoring data

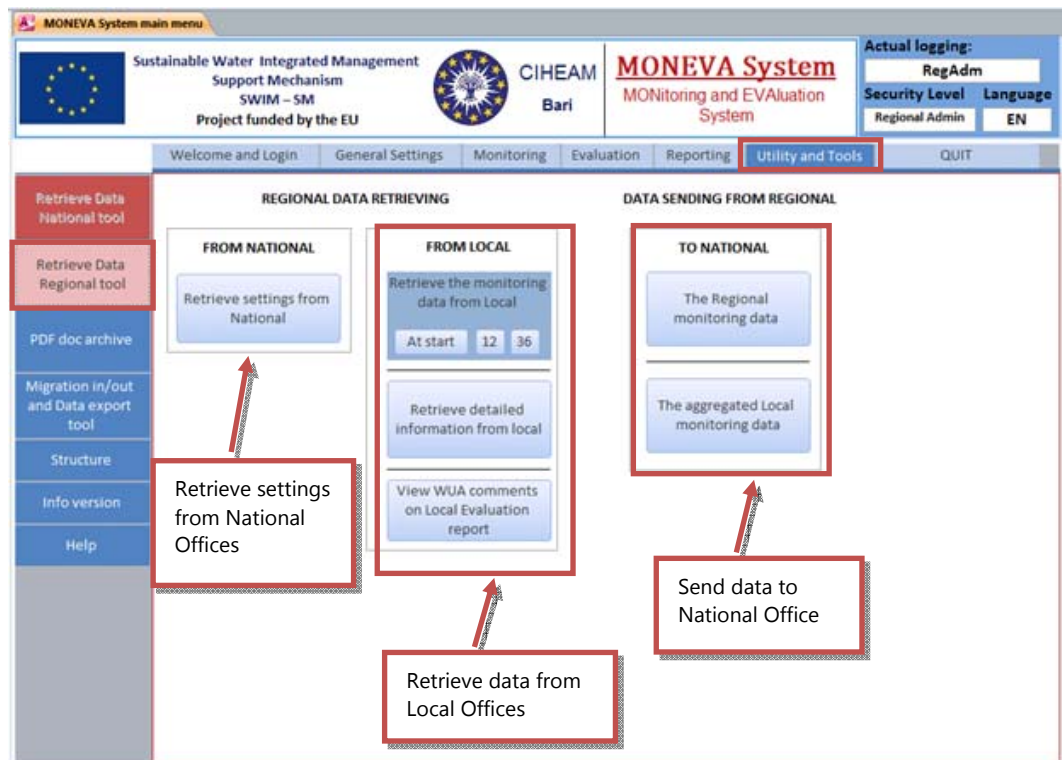


Fig. 33 - Function "Utility and Tools"- 'Retrieve data – Regional tool' associated section

9.1.1 Retrieve settings from National Office

This is the first step to be performed by any Regional Office before starting the M&E system use.

The System Settings defined at National/Central level are sent and distributed to the Regional Offices by e mail and/or using any digital support as XML files. A total of six XML files are generated and distributed:

1. 'tblCropType.xml' defines the list of crops available in the system and the attributed codification; these crops are the ones expressed in the Detailed Info module compiled at Local Level (see Users' Guide for Local Offices). This is intended for ITs responsible to modify/integrate the crops listing if requested by a Country;
2. 'tblScore.xml' defines the adopted scoring criteria per variable/indicator;
3. 'Z_ANCRDA.xml' defines the registry of Regional Offices;
4. 'Z_CURRENCY.xml' defines the currency and the attributed exchange rate vs. USD;
5. 'Z_DEF.xml' defines the activated/scored indicators for M&E;
6. 'Z_TIMING.xml' defines the PIM/IMT important years.

Before starting the settings retrieve procedure, please make sure that all the above cited files are saved into the path C:\MEVS\SETTINGS with their exact names. A warning message will notify you about the correct retrieving procedure when the appropriate button is clicked. When the procedure is completed, the System settings will be incorporated into your database.

9.1.2 Retrieve monitoring data from Local Offices

Local Offices send to the Appropriate Regional Office (by e-mail or using any digital support) the monitoring (as XML files) performed using the PDF modules with the following frequencies of update: 12 months, 36 months and Once at the start (Fig. 33).

The following has to be performed by each Regional Office for all the affiliated Local Offices, taking one office at once:

Make sure that only the XML files of Local Office/WUA number 1 are saved into the following path: C:\MEVS\Retrieve Local Monitoring Data.

The same procedure is foreseen to retrieve the Local monitoring data of different frequencies (12 and 36 months and One at the start). By clicking on the button 12, 36 or at start, a new window will open (Fig. 34) allowing to select the XML file to import. Select the appropriate XML corresponding to the section you are updating i.e. 12, 36 or at the start.

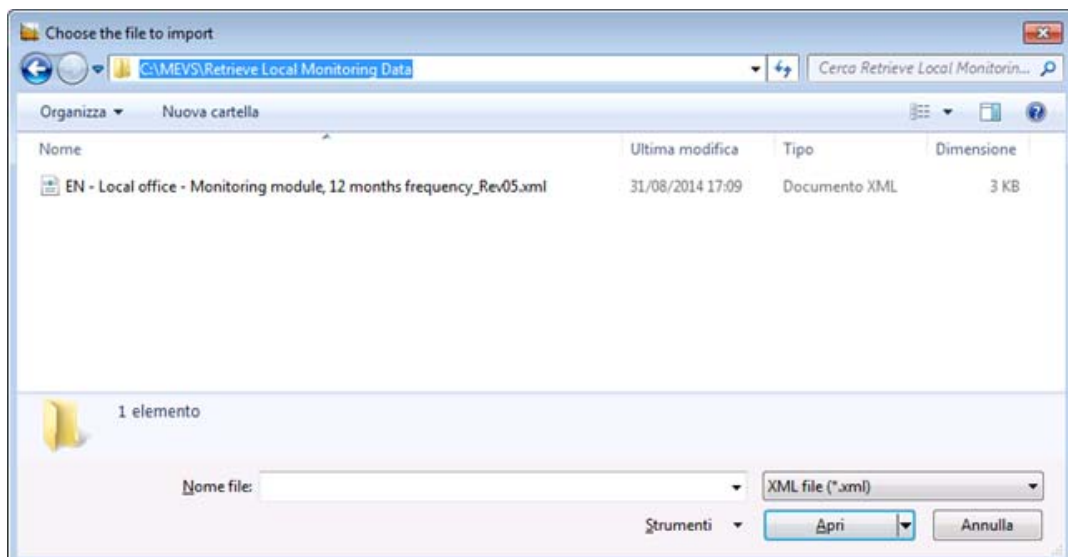


Fig. 34 – Selecting the 12 months frequency local monitoring XML

When the file is selected, a new window will open where data review and editing are possible before they are imported into the database; an info message will remind you of this option (Fig. 35).

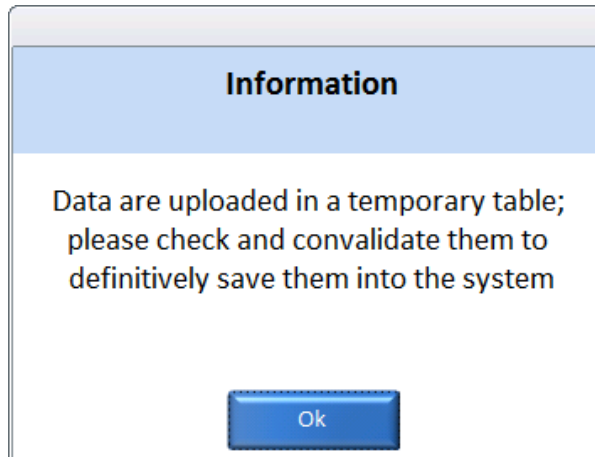


Fig. 35 – An info message reminding the user about the validation of the local monitoring data before their final saving into the system

The variables are reported with their codes and values and differentiated by outcome to ease their editing/updating; to incorporate the checked data into the database, just click on "Insert Monitoring Data" button (Fig. 36).

When this procedure is completed, the original file is automatically moved from the current folder and archived in another path C:\MEVS\ORIGINAL DATA STORE to avoid any overwriting.

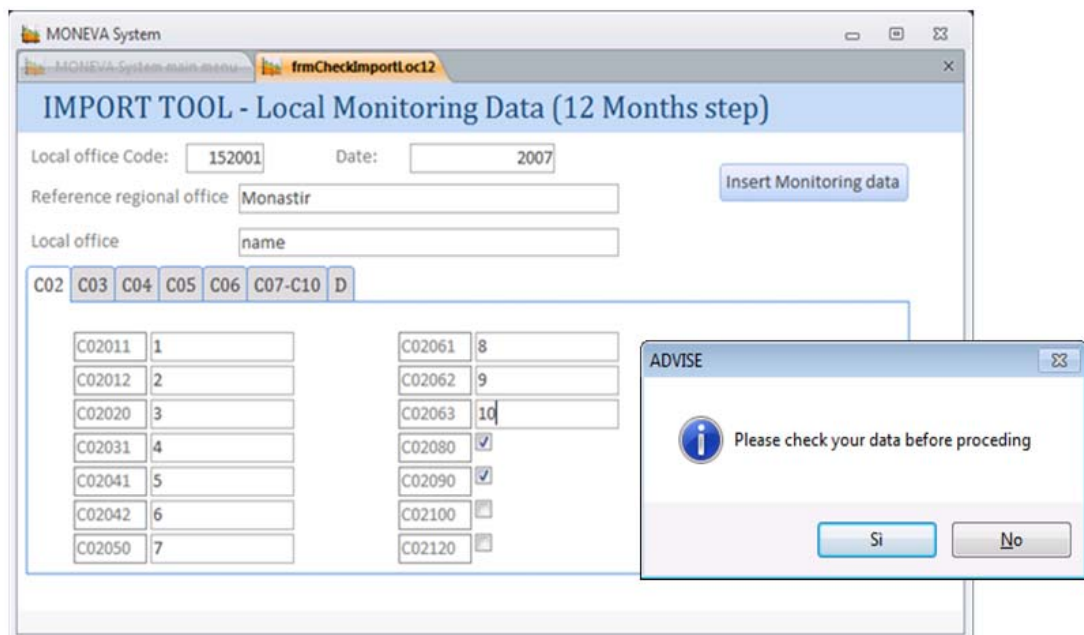


Fig. 36 - Local monitoring data are made available and can be modified before their saving into the data base – example of 12 months step frequency

9.1.3 Retrieve detailed information from local offices

Local Offices send to the Appropriate Regional Office (by e-mail or using any digital support) the Detailed Info module (as XML files) compiled by the WUAs .

The following has to be performed by each Regional Office for all affiliated Local Offices taking one office at once:

Make sure that only the XML files of Local Office/WUA number 1 are saved into the following path: C:\MEVS\Retrieve Local Monitoring Data and then click on "Retrieve detailed info from local" button (Fig. 33) to open a new window which allows to select the XML file to import. Select the appropriate XML corresponding to the section you are updating i.e. Detailed Info.

When the file is selected, a new window will open where data review and editing are possible before they are imported into the database; to incorporate the checked data into the database, just click on "Update detailed info" button (Fig. 37).

When this procedure is completed, the original file is automatically deleted from the path.

Fig. 37 - Importing detailed info of Local offices (WUAs)

9.1.4 View WUA comments on Local Evaluation report

Local Offices send to the Appropriate Regional Office (by e-mail or using any digital support) the "Comments on Evaluation " module (as XML files) compiled by the WUAs in reply to the evaluation generated using the M&E system installed at Regional level.

The following has to be performed by each Regional Office for all the affiliated Local Offices taking one at once:

Make sure that only the XML files of Local Office/WUA number 1 are saved into the following path: C:\MEVS\Retrieve Local Monitoring Data and then click on "View WUA comments on Local Evaluation report" button (Fig. 33) to open a new window which allows to select the XML file to import. Select the appropriate XML corresponding to the section you are updating.

When the file is selected, a new window will open to view the comments on evaluation (Fig. 38).

When this procedure is completed, the original file is automatically moved from the path to avoid any future overwriting and archived into C:\MEVS\ORIGINAL DATA STORE.

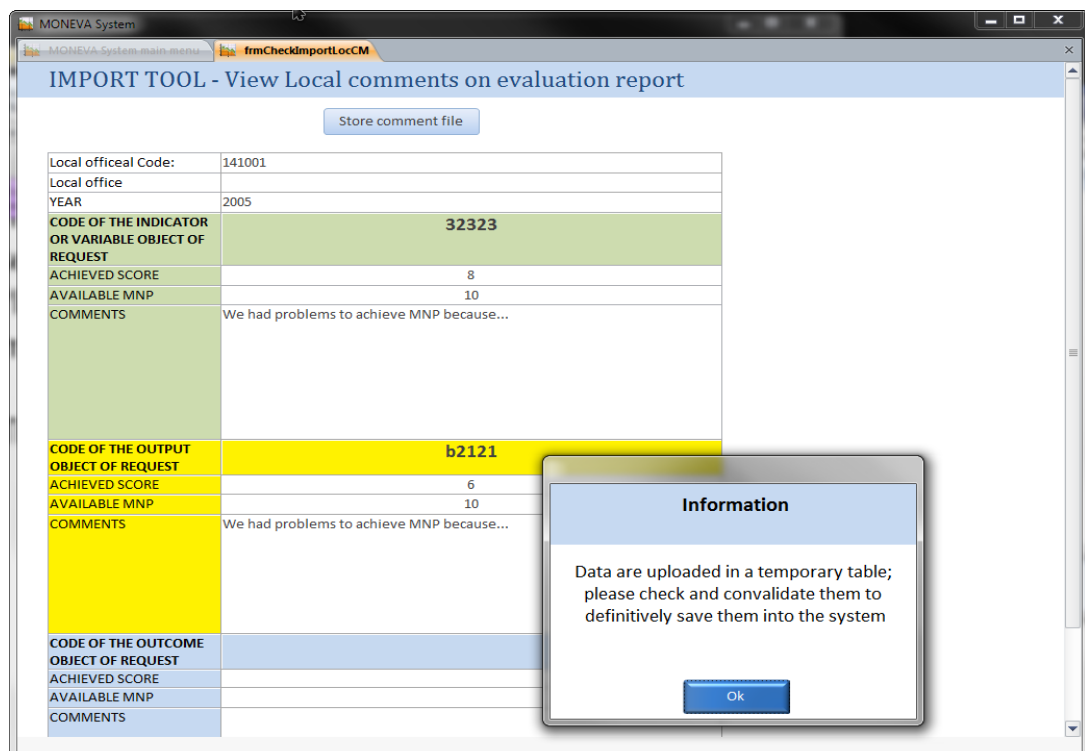


Fig. 38 - Viewing the comments of the WUAs on the evaluation report

9.1.5 Send Regional and Aggregated Local monitoring data to National Office

Clicking on the button "Regional monitoring data" activates the procedure to send the monitoring data to the National/Central Office.

Clicking on the button "Aggregated Local monitoring data" activates the procedure to send the aggregated local monitoring data to the National/Central Office.

The first step to compute in both cases is to select your Regional Office code from the combo box of the opened window and then to click on "Prepare monitoring data for sending" button (Fig. 39).

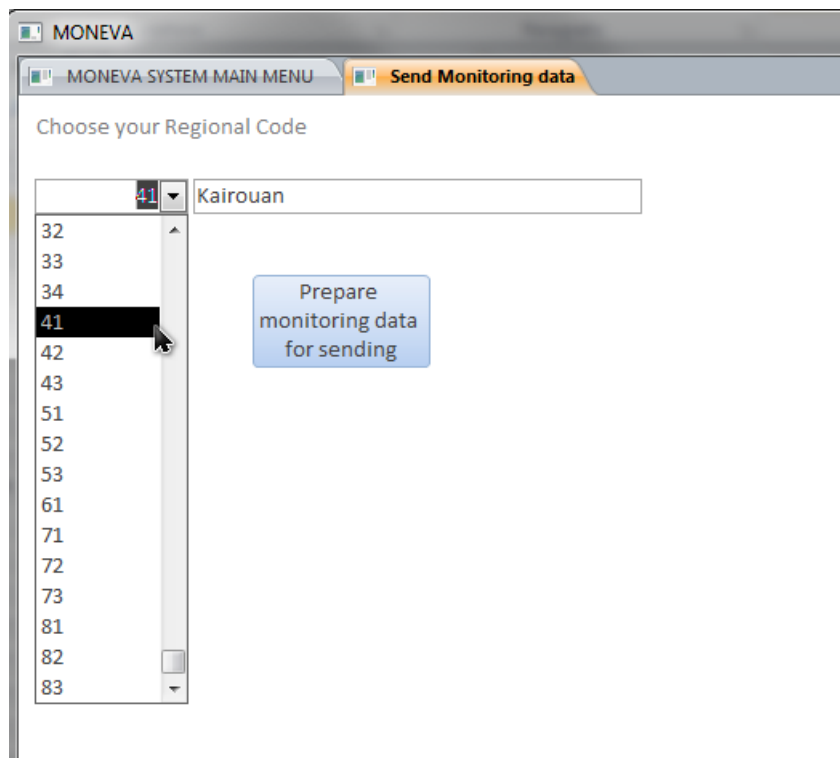


Fig. 39 - Preparing Regional data to be sent to National Office

A warning message will inform you about the correct export of the data saved into the folder C:\MEVS\Send to National in which you can find the following Xml files that incorporate the Regional Monitoring data with different frequencies of update (Fig. 40):

1. The Regional 12 months step monitoring: Code Region_Monitoring_012.xml
2. The Regional 36 months step monitoring: Code Region_Monitoring_036.xml
3. The Regional once at the start monitoring: Code Region_Monitoring_888.xml

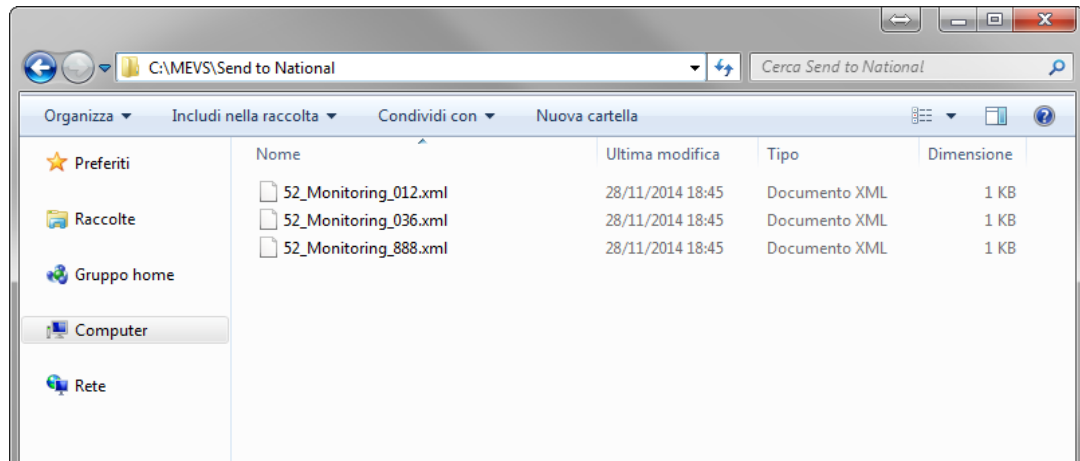


Fig. 40 - The XML files of the Regional Monitoring data with different frequencies to be sent to the Central Office

And the following XML files that incorporate the Local aggregated monitoring data (Fig. 41):

1. The aggregated local logical indicators with update frequency 12 months:
AGGR_LOG_Code Region_Monitoring_012.xml
2. The aggregated local logical indicators with update frequency 36 months:
AGGR_LOG_Code Region_Monitoring_036.xml
3. The aggregated local numerical indicators with update frequency 12 months:
AGGR_NUM_Code Region_Monitoring_012.xml
4. The aggregated local numerical indicators with update frequency 36 months:
AGGR_NUM_Code Region_Monitoring_036.xml
5. The aggregated local numerical indicators with update frequency Once at the start: AGGR_NUM_Code Region_Monitoring_888.xml

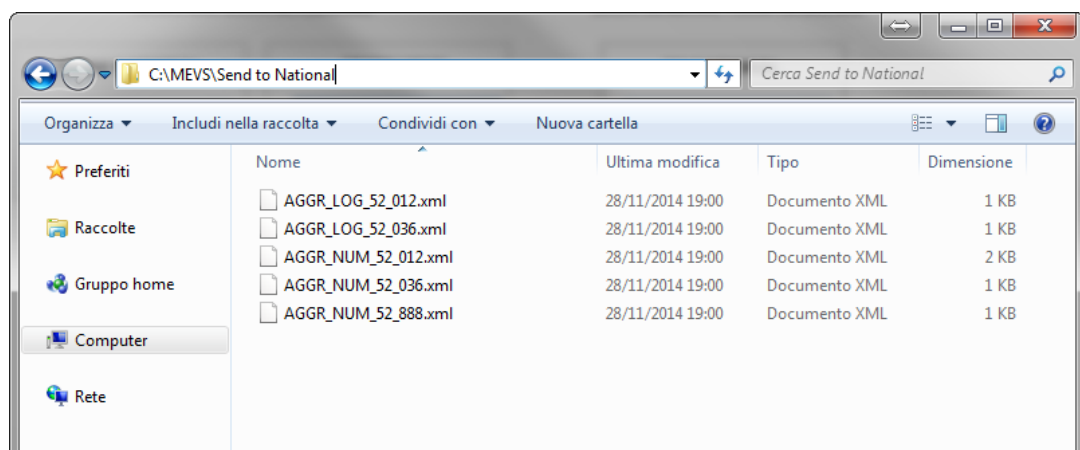


Fig. 41 – The XML files of the Local aggregated monitoring data to be sent by each Region to the Central Office

These files can be sent to the National Office attached to an e-mail or copied on a digital support such as USB drive or CD/DVD.

9.2 Section 'PDF doc archive'

As pre-announced in the introduction, simple PDF modules consisting of fields that allow for a pre-guided compilation are used to perform monitoring at local level by the WUAs. Different types of PDF modules are prepared as listed hereafter:

- 1 - Local office – Detailed info module
- 2 - Local office – Monitoring module, once at the start frequency
- 3 - Local office – Monitoring module, 12 months frequency
- 4 - Local office – Monitoring module, 36 months frequency
- 5 - Modification request of Monitoring Data
- 6 - Comments on Evaluation

All the PDF forms are available under "PDF doc archive" section of the MONEVA System (Fig. 42). To open a specific form, double click the corresponding icon.



Fig. 42 - Section "PDF Doc archive"

Any PDF form can be customized, if needed, by a National Administrator (Fig. 43). Actually, at the end of each module a field named "Insert customization password" is available. Once this field is filled in with the appropriate password, (available at the National Level), all fields are made customizable. Checking any field will disable it in the PDF module (Fig. 44). This Feature allows for a flexible, adaptable system to the specific conditions of a Country. It is actually the analogue of the section "Applicable Indicator" of the database.

However, the customization of PDF module Local office – Monitoring module once at the start frequency is mandatory and does not require any password. It shall take place when PIM/IMT dates are defined, by inputting Ry, saving the customized form and distributing it to the Local Offices.

The customized PDF file can be saved only if Acrobat Professional is available on your computer.

It is the duty of the National/Central Level to re-distribute to the Regional Offices any customised PDF module. The Regional Office on its turn, has the duty to provide the Local offices with the customised modules. This procedure allows to perform a coherent and standardised M&E starting from the local and going up to the National level.

For detailed information about the Local M&E, please refer to "Local Office: Working with PDF Forms" Users' guide.

<input type="checkbox"/> C02061	<input type="checkbox"/> C03052	<input type="checkbox"/> C04041	<input type="checkbox"/> C05081	<input type="checkbox"/> C06102	<input type="checkbox"/> C09022	<input type="checkbox"/> D05021
<input type="checkbox"/> C02062	<input type="checkbox"/> C03071	<input type="checkbox"/> C04042	<input type="checkbox"/> C05082	<input type="checkbox"/> C06111	<input type="checkbox"/> C09023	<input type="checkbox"/> D06010
<input type="checkbox"/> C02063	<input type="checkbox"/> C03081	<input type="checkbox"/>			<input type="checkbox"/> C09024	<input type="checkbox"/> D06020
<input type="checkbox"/> C02080	<input type="checkbox"/> C03091	<input type="checkbox"/>			<input type="checkbox"/> C10020	<input type="checkbox"/> D09013
<input type="checkbox"/> C02090	<input checked="" type="checkbox"/> C03101	<input type="checkbox"/>			<input type="checkbox"/> C10040	<input type="checkbox"/> D09023
<input type="checkbox"/> C02100	<input checked="" type="checkbox"/> C03102	<input type="checkbox"/> C04062	<input type="checkbox"/> C06040	<input type="checkbox"/> C06131	<input type="checkbox"/> C10050	

Insert customization password

Fig. 43 – Customization of PDF files. Checking (making unavailable) fields C03101 and C03102

Current date Page 4 / 13

Irrigable area that is served with open canals

C03091 Ha

Example of two hidden fields.

Irrigable area under sprinkler irrigation

C03103 Ha

Fig. 44 – Fields C03101 and C030102 are hidden in the PDF form after customization

9.3 Section 'Migration and data export tool'

This section allows the Administrators, both at National and Regional level to import and export all the data and settings of MONEVA System. This function is intended for backup and security (export) as well as for migration purposes, allowing to shift to the use of a new release of the software preserving the data and settings of the system (Fig. 45).



Fig. 45 - Migration data tool

The export and import procedures refer to all the files contained in the system folder C:\MEVS\MIGRATION that is created during the installation procedure.

When clicking on 'Migrate data OUT' button, the export procedure will start, creating a series of Excel files in the above mentioned folder (Fig. 46).

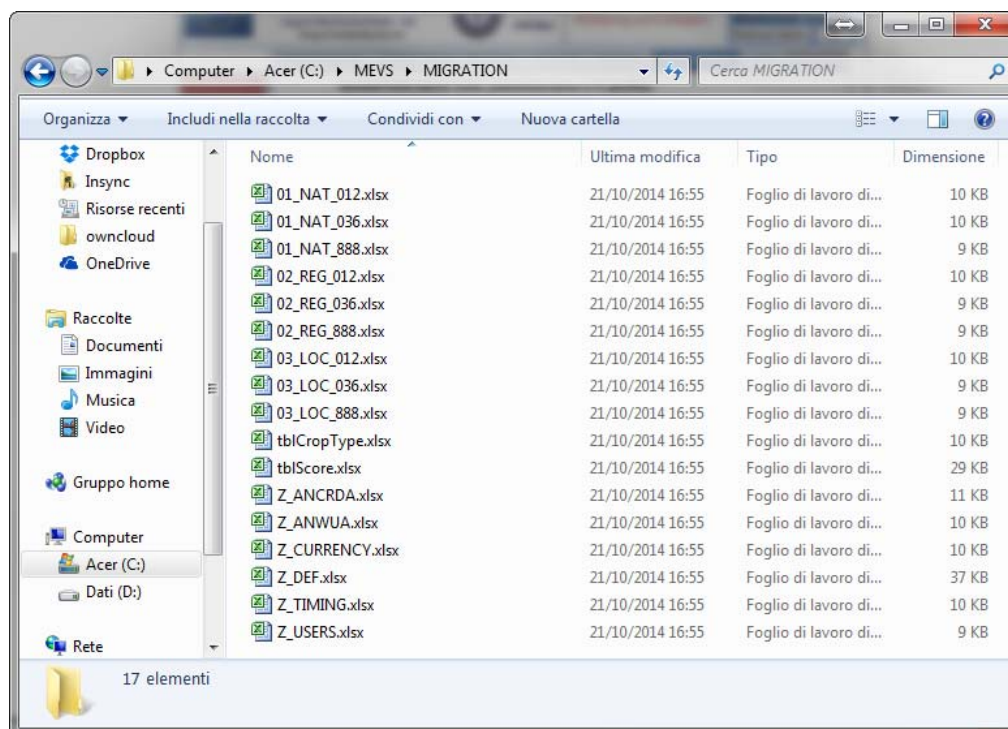


Fig. 46 - Exported data and settings files

When the export procedure is completed, make sure to compress and save the files in a safe directory, to avoid accidental overwriting, and to preserve a backup of your data and settings.

To import existing data and settings, the first step to accomplish is to save all the files into path C:\MEVS\MIGRATION and to subsequently click on 'Migrate data IN' button. A warning message will display reminding you that the import process will overwrite all data and settings currently present in the system.

The import procedure could be used by National Authorities or other subjects to evaluate different periods of M&E or even different databases related to several Countries. This is an important feature that allows for benchmarking, even though it is not a main objective of the current project.

9.4 Section 'Structure'

This section allows to navigate the entire structure of the M&E System and to verify the different relationships among Outcomes/Outputs/Indicators.

Outcome	Output	CODE	Indicator or Variable definition
A monitoring and evaluation system is established	M&E system is defined	B08010	
		B08020N	
		B08020R	
		B08031	Number of Training Days on M&E for leaders and staff
		B08032	
		B08040N	
		B08040R	
A reliable and efficient irrigation system is established	Crop water requirements are reasonably satisfied		
			Intensive use of land
			Irrigation system operates close to the maximum capacity
			Irrigation system operates efficiently
			Water allocations by Irrigation Agency are reliable
Accounting management capacity of WUAs developed and operative			
Financially sustainable WUA			
Governance bodies of the WUA functioning adequately			
Government effectively regulating Federations of WUAs and implementing them according to plan			
Improved control of all technical and financial activities			
Improved environmental conditions			
Improved level and efficiency of water delivery and more effective maintenance			
Improved level of overall efficiency			
Improved soil conditions for crop production			
Increase of farmers income			
Increased jobs opportunities			
Increased opportunities for improving the performance of the WUA			
Irrigation water is provided timely and equitably			
Operation and maintenance costs are reduced			
Reduced cost of operation and maintenance and greater availability of water in the irrigation systems transfer			
Reduced Financial Burden on the Government			
Reliable and satisfactory performance of the Irrigation network			
Satisfactory management of the WUA			
The government is effectively regulating WUAs establishment and functioning and the implementation of the PIM/IMT program			
The implementation of the PIM/IMT program is supported politically			
The irrigation agency is functioning effectively according to a new institutional framework and has an impact on the WUA			
The level of service provision is improved			
The PIM/IMT program has been institutionalized for the planning and implementation phases			
The PIM/IMT program is supported with a national PIM/IMT Plan which is operational			
Water Availability is improved			
Water users are informed and sensitized to the PIM/IMT program			
WUA formally established			
WUAs are established according to plan			
WUAs are financially autonomous for the O&M.			
WUAs leaders and staff know their responsibilities and have the necessary skills to carry out their work			
WUAs receive guidance and support from the irrigation agency Support Units			

Fig. 48 - Details of specific Outcomes/Outputs structure