

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



CIHEAM IAM Bari



Sustainable Water Integrated Management (SWIM) Support Mechanism



Project funded by the European Union

Water is too Precious to waste 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



# Users' Guide

WUA/Local Office: Working with PDF Forms

Rev. 1.6

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# **1.Introduction**

To collect the information at the local level and perform the monitoring of the Water Users Association (WUA), PDF files consisting of fields that allow for a pre–guided compilation should be compiled by the Local Office.

The compiled Monitoring forms are transmitted to the appropriate Regional Office by email, on a digital support (CD, USB...) or as hard copies, depending on the level of preparedness of the WUA and the availability of soft and hard wares at the Local Office.

The Regional Office is provided with a Monitoring & Evaluation (M&E) system with Data Base (MONEVA System), having the ability to check and incorporate the data/info collected by the local offices (WUAs), to re-organise them into outputs and outcomes and to perform their evaluation with no capability of interference on the results. Two types of outcomes are foreseen for local level:

Outcomes C - Assess the institutional, financial and technical performance of Water Users Associations.

Outcomes D - Assess the impact of WUAs' establishment

The generated evaluation shows the relative level of achievement of each output/outcome by assigning scores to the corresponding variables/indicators according to pre-set scoring criteria, and by comparing the totals 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. The Regional Office is responsible as well to provide the WUAs with the results of the Evaluation as it is generated by MONEVA System.

This guide illustrates the different types of PDF modules and the appropriate way to use them. It describes in details how to fill in the fields and how to transmit the information to the Appropriate Regional Office.

### **1.1 Description of the PDF forms**

Following, the various PDF forms designed to collect information and data and consequently perform the WUAs monitoring, are described.

### WUA/Local office - Detailed info module

This module represents the Identification Card of the WUA. Reference info about the WUA and general data related to the cropping pattern in the irrigated area managed by the WUA are collected.

#### WUA/Local office - Monitoring module 1, frequency: Once at the start

Info and Data to be entered just the first time the M&E system is applied are collected using this 3 pages PDF file.

### WUA/Local office - Monitoring module 2, frequency: 12 months

Info and Data to be monitored and updated yearly are collected using this 13-pages PDF file.

### WUA/Local office - Monitoring module 3, frequency: 36 months

Info and Data to be monitored and updated once each three years are collected using this 13– pages PDF file.

### WUA/Local office - Modification request of monitoring Data

This PDF form allows the WUA to send a request to the Regional Office to rectify any monitoring error.

### WUA/Local office - Comments on evaluation

With this PDF, the WUA can send to the Regional Office any comments/specific requests to explain/justify an achieved score. It applies to an indicator/variable/output/outcome. This is intended to give to the WUAs the right of reply, evaluation being performed by the regional office and communicated to the local office/WUA.

## **1.2 Description of the PDF fields**

The PDF files consist of a group of light blue coloured fields to be filled in. There are essentially 3 different types of fields (Fig. 1):

 Combo box – is a drop–down menu that lists multiple predefined choices: only one can be selected.

**Text field** – are boxes to be filled with free text, consisting of letters and numbers.

 Check box – are small boxes that can be checked to choose an option among two or more (e.g. Yes/No).

The following figure shows some examples of the afore described fields.

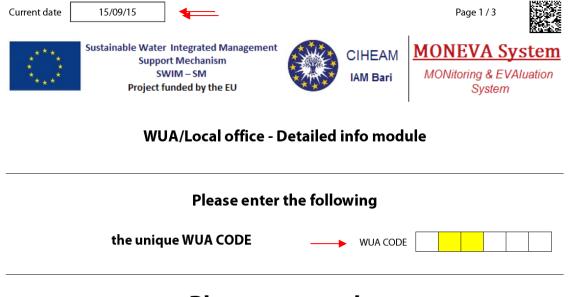
Is the elections of the Administrative Council made	through: <b>Combo box</b> – a drop–down menu that lists multiple predefined choices: only one
secret voting	can be selected
selection	of the W
C02061 23 no. of women	
Number of women participating in the last Genera	
C02062 20 no. of women	consisting of letters and/or numbers.
Number of women members of the Administrative	Council
C02063 3 no. of women	
	<b>Check box</b> – small boxes that can be checked to
Annual auditing report (for the previous year) appr	choose an option among two or more (e.g.
	Yes/No).
C02080 Yes No	
Fig. 1 – Fill-in fields of the PDF form	

# 2.Monitoring

## 2.1 WUA/Local office - Detailed info module

This form is used to collect basic information about the individual WUAs. The current date shows on the upper left corner of Page 1.

The first step consists in filling in the unique WUA Code assigned to you by the Regional Office (Fig. 2). The WUA code is composed of 6 digits where the first one identifies the Country/State/Nation, the 2<sup>nd</sup> and 3<sup>rd</sup> the Regional office and the last three identify the local office or the WUA. The system can handle a maximum of 99 regional offices in a Country/State/Nation and a maximum of 999 local offices/WUAs in one regional office.



# Please answer the following questions

Fig. 2 – Detailed info module showing the Current date and the WUA code

The following fields (Fig. 3) collect reference information about the WUA. By clicking inside, the free text, combo box and date fields are made available to be filled in.

OFFICIAL NAME OF ASSOCIATION	
	OFFICIAL ADDRESS INFORMATION
сптү	
STREET	
CIVIC NUMBER	ZIPCODE
President name	
Contact e mail	Contact phone
Year in which the ha agreement was sign	
Date of the creation of the WUA	Iun mar mer gio ven sab dom         Iun mar mer gio van sab dom         Iun mar mer gio van sab dom         Iun mar mer gio van sab dom           27         28         29         30         31         1         2
If the irrigable area o larger irrigation syste the name of the larg	em r 17 18 19 20 21 22 23

Fig. 3 – Detailed info module: Reference information about the WUA

On Page 2, information regarding the main irrigated crops in the area managed by the WUA are collected. Three main categories of crops are considered: Field crops; Vegetables; Fruits and trees.

Field crops are divided into Cereals, Forages and legumes; Vegetables are divided into Seasonal and Off-season, in order to account for the economic importance of Off-season vegetables cultivated in some areas. The WUA/local office is asked to enter in % the total irrigated area per type of crop for these two categories (Main field crops and Main vegetables) as shown in figure 4.

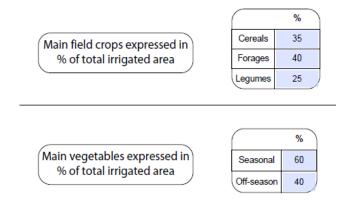


Fig. 4 – Detailed info module: Main field crops and vegetables expressed as percentage of the total irrigated area managed by the WUA

The fields of the third category i.e. Fruits and trees are differently filled in; fruits and trees types are encoded through numbers. The WUA has to identify from the correspondence table the appropriate code of a specific irrigated fruit and tree, to select the identified code from the drop-down list, and then to assign the correct percentage as shown in figure 5. Please note that summing the percentages of one category, a total greater than 100% irrigated area can be obtained due to intensification.

Main fruits and trees	Fruits and Trees CODES	Fruits and Trees types
expressed in % of total	1	ALMONDS
irrigated area	2	APPLES
Ingated area	3	APRICOTS
	4	AVOCADO
	5	BANANA
	6	CHERRIES
(Fruits and Trees CODE %	7	CITRUS
3 20	8	CONIFER TREES
7 10	9	DATE PALMS
	10	DECIDUOUS TREES
	11	GRAPES
	12	OLIVES
	13	PEACHES
	14	PEARS
	15	PISTACHIOS

*Fig.* 5 – *Detailed info module: Characteristics of the fields representing the irrigated fruits and trees in the area managed by the WUA* 

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WALNUTS

# 2.2 WUA/Local office - Monitoring module 1, frequency: Once at the start

With this module, the information is entered only once i.e. the first time the M&E is applied. The info/data entered, correspond to the state of the art/the cumulative data up to a Reference Year (Ry) defined at National level. It will be used as a reference for the subsequent annual and triennial monitoring . This PDF module is customized at National level by inputting the defined Ry as shown in Fig. 6, and then distributed to the Local Offices.

The first field to enter (Fig. 6) is the WUA code assigned to you by the Regional Office.

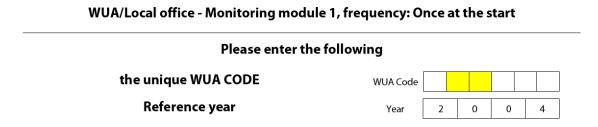


Fig. 6 – Monitoring module once at the start frequency customized at National level showing the built in Reference Year and the field to compile with the WUA code

The WUA code is composed of 6 digits where the first one identifies the Country/State/Nation, the 2<sup>nd</sup> and 3<sup>rd</sup> the Regional office and the last three identify the local office or the WUA. The system can handle a maximum of 99 regional offices in a Country/State/Nation and a maximum of 999 local offices/WUAs in one regional office.

The subsequent fields are of text type and they mainly monitor the irrigable area, the estimated water requirements, and the employment, if any, generated by the PIM/IMT program (example is shown in Fig. 7).

## Please answer the following questions

 Irrigable area: This is the maximum area that can be irrigated within the WUA irrigation scheme if there no limitation of water supply.

 Note: It is calculated by summing the net irrigable area of all farms inside the WUA command area. This is a characteristic of the irrigation system and does not change with time unless there is an important rehabilitation or improvement of the irrigation system.

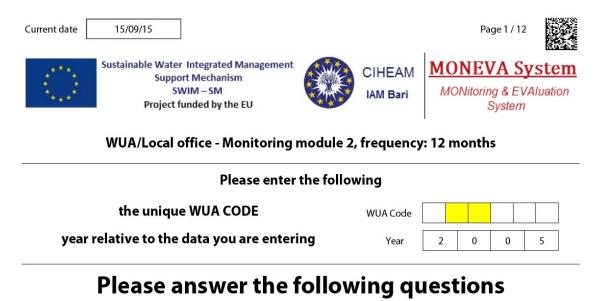
 C03024
 35
 Ha

Fig. 7 – Monitoring module once at the start frequency: Example of text fields to be filled in

9

### 2.3 WUA/Local office - Monitoring module 2, frequency: 12 months

With this module, Info and Data to be monitored and updated yearly are collected . The first two fields to be entered (Fig. 8) are the WUA unique code (assigned to you by the Regional Office) and the year for which Monitoring is performed. The WUA code is composed of 6 digits where the first one identifies the Country/State/Nation, the 2<sup>nd</sup> and 3<sup>rd</sup> the Regional office and the last three identify the local office or the WUA. The system can handle a maximum of 99 regional offices in a Country/State/Nation and a maximum of 999 local offices/WUAs in one regional office. If the Ry defined at National level is 2004, then this module shall be compiled yearly starting 2005.



*Fig.* 8 – Monitoring module 12 months frequency showing the fields to compile with the monitoring year and the WUA code

Most of the subsequent fields are free text fields; few are combo box and date fields that can be activated by clicking in, and filled in by selecting the appropriate answer/info from a drop down list; others are simple check boxes (Fig. 9).

Is the election_ of the Administrative Council made th	rough
C02050 secret voting selection	Combo box – a drop–down menu that lists multiple predefined choices. Only one of the choices can be selected.
Number of women participating in the last General Ac C02062 20 no of women Number of women members of the Administrative Co	<b>Text field</b> – boxes to be filled with free text, consisting of letters and numbers.
C02063 3 no. of women	
Annual auditing report (for the previous year) approv	<b>Check box</b> – little boxes that can be checked to choose an option among two or more (e.g. Yes/No).

*Fig.* 9 – *Monitoring module 12 months frequency: Examples showing the types of fields used to collect information and data* 

## 2.4 WUA/Local office - Monitoring module 3, frequency: 36 months

Info and Data to be monitored and updated once each three years are collected with this module. The first two fields to be entered (Fig. 10) are the WUA unique code (assigned to you by the Regional Office ) and the year for which Monitoring update is performed. The WUA code is composed of 6 digits where the first one identifies the Country/State/Nation, the 2<sup>nd</sup> and 3<sup>rd</sup> the Regional office and the last three identify the local office or the WUA. The system can handle a maximum of 99 regional offices in a Country/State/Nation and a maximum of 999 local offices/WUAs in one regional office. If the Ry defined at National level is 2004, then this module shall be compiled once each three years starting 2005 (i.e. for 2005, 2008, 2011 etc).

#### WUA/Local office - Monitoring module 3, frequency: 36 months

Please enter the following								
the unique WUA CODE	WUA Code	1	2	3	4	5	6	
year relative to the data you are entering	Year	2		0	0		5	

*Fig.* 10 – *Monitoring module 36 months frequency showing the fields to compile with the monitoring year and the WUA code* 

The subsequent fields are mainly free text fields, and check boxes (Fig. 11).

WUA organizes training sessions for farmers: this is often the WUA responsibility

%

Yes No

Degree of satisfaction of the farmers with respect to the WUA performance represents the percentage of farmers who are satisfied. It will be necessary to carry out a survey among the famers. To make statistically significant will be expensive. Hence it is suggested to ask at random some 20- 30 farmers trough a questionnaire to be filled

C07070 87

*Fig.* 11 – *Monitoring module 36 months frequency: Examples showing the types of fields used to collect information and data* 

## 2.5 Sending and exporting collected data

It is extremely important to note that the PDF forms, once completed, cannot be saved if you are only provided with the free Adobe Reader software. This is clearly shown in the message constantly present in the purple band on the top of the open PDF window (Fig. 12).



Fig. 12 – Saving data into PDF forms: Alarming message

As the message states, the data typed into the form cannot be saved consequently, if you close the PDF file before sending or exporting it, data will be lost.

When all data have been entered into the form, you can choose how to forward it to the Regional Office. However, one condition has to be fulfilled first:

All mandatory fields contained in red boxes (i.e. WUA unique code and dates) should be filled in. If any mandatory data is missing, a warning message will appear (Fig. 13).

The non-mandatory fields are the ones in light blue boxes.

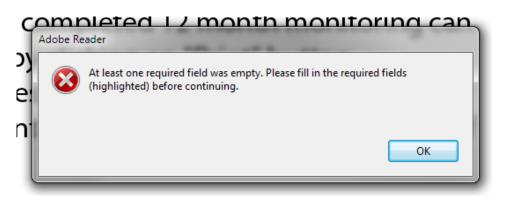


Fig. 13 – Sending form denial warning message.

When this condition is fulfilled, please t follow the options/instructions reported at the end of each PDF form, and listed and detailed hereafter, to send your compiled form to the Relative Regional Office:

**Option 1** - Once you click on "E-mail" button a window will appear; it allows for sending an email pre-populated with the data file (not the PDF itself) to the Regional Office.

**i)** Choosing the option "Default email application", a draft email will be generated using the default email application (e.g. Outlook, Thunderbird, Windows Live Mail) as shown in Figures 14 and 15.

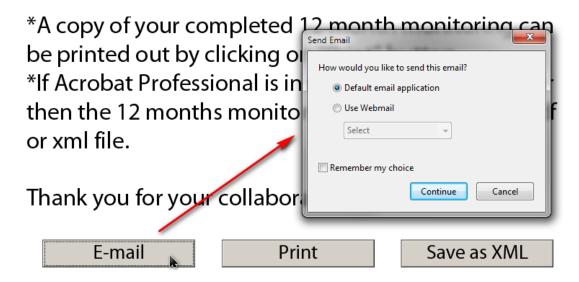


Fig. 14 – Sending the form through the Default email application

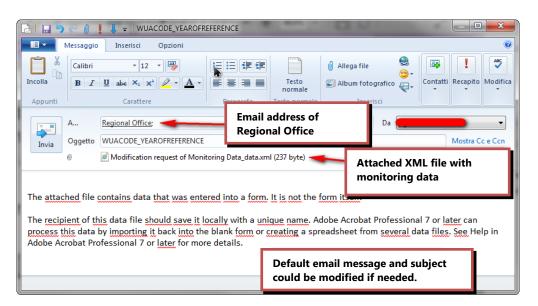


Fig. 15 – A draft email is generated to send the data file to the Regional office

The email message and the subject are generated by default and can be modified if needed. The recipient of the email is the Regional Office, so make sure to cancel the fictitious address that populates by default the recipient box and edit the right address of the Regional Office you are affiliated to. Moreover, please note that the attached file is an XML that contains the data filled in the form, not the PDF file itself.

When received, the Regional Office will save the Local XML with a unique name. Adobe Acrobat Professional 7 or later versions can process this XML file data by importing it back into the blank form or creating a spread sheet from several other data files.

**ii)** You can also send the data using a webmail account (e.g. Gmail, Yahoo) choosing the appropriate option from the window that opens after clicking on "E-mail" button of the PDF form (Fig. 16).

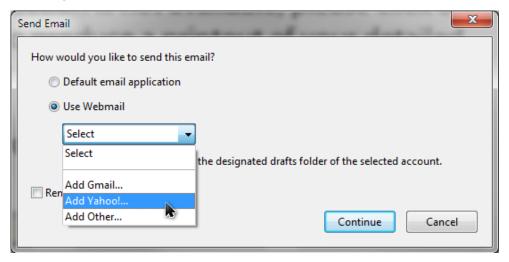


Fig. 16 – Choosing the webmail option to send the data file

The webmail account credentials should be entered every time a file is sent.

A draft email will be generated when opening the internet browser, after which the user can edit the message and add other recipients if required.

**Option 2** - A copy of the form can be printed out by clicking on "Print" button; if no other option is available, the form can be delivered to the Regional Office which will be responsible for the transcription of data onto the M&E system.

**Option 3** - If Acrobat Professional is installed on your computer, click on the button "Save as XML" to save the PDF form as a PDF or XML file. If no internet connection is available these files can be delivered to the Regional Office which will be responsible for copying the data onto the M&E system.

The regional office is provided with a Monitoring and Evaluation (M&E) system with database, which allows for the receipt and incorporation of the data/info collected by the local offices (WUAs), and for the consequent evaluation of the WUA with no interference on the result. The regional office is responsible for sending back, to the WUAs, their own evaluation performed through the M&E System.

### 2.6 WUA/Local office - Modification request of monitoring Data

It may happen that a local office/WUA identifies a monitoring error after having sent the monitoring modules to the Regional Office.

This PDF form allows the WUA to send a request to the Regional office to rectify any monitoring error.

The first mandatory information to be entered is the WUA identification code composed of 6 digits where the first one identifies the Country/State/Nation, the 2<sup>nd</sup> and 3<sup>rd</sup> the Regional office and the last three identify the local office or the WUA. A form where the following information is required (Fig. 17), is filled in for each single variable/indicator, the WUA needs to update/correct:

Code of the indicator or variable object of request – It represents the alphanumeric code of the variable/indicator the WUA needs to rectify. The code shows next to each monitoring field.

- Relative year of the object of request the year for which the variable/indicator above identified needs to be updated.
- Proposed corrected value the corrected value of the indicator/variable.
   Comments useful comments to explain and motivate the request

CODE OF THE INDICATOR OR VARIABLE OBJECT OF REQUEST	C04031
RELATIVE YEAR OF THE OBJECT OF REQUEST	2011
PROPOSED CORRECTED VALUE	12
COMMENTS	A calculation error was committed while applying the equation to calculate the flow. method explicitated in the form.

*Fig.* 17 – Modification request of Monitoring Data: Information to be provided for each variable/indicator object of request

Finally, you have to follow the options/instructions reported at the end of the PDF form file to send your compiled form to the Relative Regional Office (see 2.5).

# **3.WUA/Local office - Comments on evaluation**

Figure 18 shows an example of the evaluation sheet, local offices/WUAs receive by e mail or regular mail from the Regional Offices.

MONITORING						EVALUATION	EVALUATION				
Output Indicator	Evaluat 2	tion criteria (in 1	points) O	Value entered	Sub Total	Indicator	Output Total/MNP	Outcome Total/MNF			
01 - WUA formall	y established										
C01010	01 - WUA has clear functioning rules         C01010       Y       N       Y       2         The indicator checks the existence or not of the Statutes of the WUA which are an indispensable legal instrument for the management of the dimensional) - Statutes of the WUA are available.       WUA. Its absence is a strong shortcoming					2/4 = 50%	2/4 = 50%				
C01011 (Adimensional) -	Y Transter agreer	ment has been	N signed.	N	0	This indicator checks if the transfer agreement has been signed between the WUA and the irrigation agency. The absence of the transfer agreement is understood as the WUA being in an intermediate state where part of the management activities are carried out together					

*Fig.* 18 – *Evaluation sheet of Outcome C1 performed at Regional level and transmitted to the WUA* 

The example refers to Outcome C.1 (WUA formally established) composed by a single output C.1.1 (WUA has clear functioning rules) which is evaluated through two logical indicators:

C01010: "Statutes of the WUA are available" scored "2", the given answer being "YES" and

C01011: "Transfer agreement has been signed" scored "0" the given answer being "NO".

As a result, the Output yielded 2 points over the Maximum Number of Points to reach (4 in this case). The same score applies to the Outcome formed by a single Output, putting the level of achievement at 50%, which means that the progress is medium and considerable improvements are needed for the formal establishment of the WUA.

With the PDF entitled "Comments on Evaluation", the WUA can send to the Regional Office comments/specific requests to explain/justify a specific achieved score of an indicator/variable/output/outcome. This is intended to give to the WUAs the right of reply as evaluation is performed by the regional office and communicated to the local office/WUA.

The first two fields to be entered (Fig. 19) are the WUA code and the evaluation year you are commenting. The WUA code is composed of 6 digits where the first one identifies the Country/State/Nation, the 2<sup>nd</sup> and 3<sup>rd</sup> the Regional office and the last three identify the local office or the WUA.

#### **Comments on evaluation**

Please enter the following							
the unique WUA CODE	WUA COD E	1 2	3	4	5	6	
Please fill in the follov	ving inforn	nati	or	ו			

EVALUATION YEAR

Fig. 19 –Comments on Evaluation: fields to compile with the WUA code and the evaluation year

2

0 1 3

The fields to fill in refer to the specific indicator/variable, output or outcome you need to comment (Fig. 20) and are described below:

- Code Each indicator/variable/output/outcome is affected with a code (reported in the monitoring modules as well as in the evaluation sheet). Please report the code of the indicator/variable/output/outcome you need to comment in the appropriate field.
- Achieved score is the score attributed to the indicator/variable/output/outcome you are commenting as reported in the evaluation sheet (a result of the monitoring).
- ✓ Available MNP (Maximum Number of Points) the Maximum score that can ever be attributed to an indicator/variable/output/outcome (reported in the evaluation sheet)

CODE OF THE INDICATOR OR VARIABLE OBJECT OF REQUEST	ACHIEVED SCORE	AVAILABLE MNP
COMMENTS		
CODE OF THE <u>OUTPUT</u> OBJECT OF REQUEST	ACHIEVED SCORE	AVAILABLE
COMMENTS		
CODE OF THE OUTCOME OBJECT	ACHIEVED SCORE	AVAILABLE MNP
COMMENTS		

Fig. 20 – Comments on evaluation

Finally, you have to follow the options/instructions reported at the end of the PDF form file to send your compiled form to the Relative Regional Office (see 2.5).

# **4. Customization of PDF forms**

**Note**: this chapter is intended only for National Authorities, that have to use Acrobat Professional to properly customize the PDF forms and save them as new files to be distributed to the local levels.

<u>The National Authorities are provided with a Monitoring & Evaluation (M&E) system with</u> <u>Data Base (MONEVA System); Under the Function "Monitoring" of MONEVA system a</u> <u>section called "Monitoring of WUAs/Local Offices" where an original copy of all the</u> <u>above listed and details PDF forms is saved.</u>

All the PDF form files can be customized by the National Authority, if needed (Fig. 21). At the end of each file you can find a field named "Insert customization password". Once this field is filled in with the appropriate password, available at the National Level, all fields will be made available. Checking any field will disable it in the PDF module as shown in Figure 22.

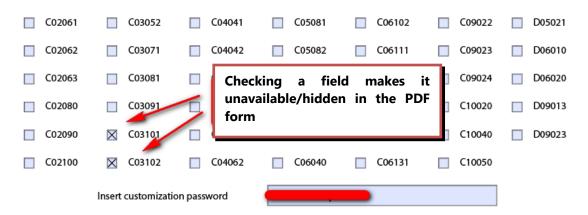


Fig. 21 – Customization of PDF files. Checking (making unavailable) fields C03101 and C03102

Current date 07/10/14	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. 22 – Fields C03101 and C030102 are hidden in the PDF form after customization

Once the password is typed in the appropriate field, click outside the password box. Few seconds are needed before all the field codes appear as shown in Figure 18. Each code represents a field/variable/indicator (see Fig. 9). Checking a field code hides the monitoring variable/indicator from the original PDF form.

Once the customization is completed, the form can be filled as usual, but keep in mind that the PDF file cannot be saved as a new file if only Acrobat Reader free software is available on your computer. If instead, Acrobat Professional is available, a modified and customized copy of the PDF file can be saved. This is useful if users are asked to fill a sub-domain of the fields of the standard form.

Note: The customization of PDF module Local office – Monitoring module once at the start frequency (section 2.2) is mandatory and does not require any password. It shall take place when PIM/IMT dates are defined (see M&E Users' Guide - Database for National/Central Office), by inputting the Reference Year, saving the customized form and then distributing it to the Local Offices.