



CISIS DATABASE



**BME MODULE**  
**(Benefit Monitoring & Evaluation)**

**USER MANUAL**  
**for Sub Projects**

By Greg Regan

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# CISIS DATABASE BME MODULE DOCUMENTATION

## 1. Terms

- CISIS - Cambodian Information System on Irrigation Schemes
- BME – Benefit Monitoring and Evaluation
- PPMS – An alternative name to BME (Project Performance Monitoring System)
- SubProject – a specific collection of Communes and Villages (and the households of those villages)
- Project – a specific group of SubProjects
- MOWRAM - Ministry of Water Resources and Meteorology
- MS Access – Microsoft Access database software
- NWISP – North West Irrigation (a specific section of MOWRAM)
- Baseline Year – the first survey year for a given SubProject

## 2. History

The original CISIS database was designed to facilitate data collection and reporting on Cambodia's circa 3,000 irrigation schemes. It covers areas such as infrastructure, management, operation, agricultural uses, distribution network and yearly budgeting.

The BME Module was designed as an addition to the existing CISIS database. Its purpose is to assess the correlation between

- (a) improvements in irrigation schemes and
- (b) improvements in the quality of life of the communities served by those irrigation schemes

This author decided to develop the BME module as a separate MS Access database because...

- (a) it was felt that the original database may become stressed once used as multi-user database for which it was designed
- (b) the BME Module was conceived by NWISP, a specific section of MOWRAM. At the time of development, MOWRAM's IT infrastructure was fragmented and it was not clear that NWISP and the existing CISIS administrators could share a common server.

As such, BME was designed as a separate module. However, the BME module feeds off geographical information contained in CISIS such as government defined Provinces, Districts, Communities and Villages. This data is passed from CISIS to BME to ensure that the 2 systems remain aligned and that maintenance of this geographical information is not duplicated. The information is passed via a data package so that the two systems don't require direct communication (e.g. residing on a common server). The two systems can reside in completely separate locations and the data updates (CISIS to BME) can be done by email or flash drive.

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It should be noted that while BME was conceived by NWISP, the module has been designed so that new Projects/SubProjects can be added at any time.

The BME was originally designed as a spreadsheet calculation. It was recognized that this would be difficult to maintain over time .....

- (a) Data entry is decentralized so each MOWRAM Commune Office, responsible for a given SubProject, requires its own spreadsheet. These need to be collated somehow.
- (b) Spreadsheets are easy to corrupt rendering collation difficult
- (c) The spreadsheet format does not match that of the paper surveys which increases the likelihood of errors e.g. data being entered in the wrong field
- (d) Volume of information: the NWISP Project alone includes 11 SubProjects, each of which will survey around 100 households per survey year. Each survey has around 200 fields. A complete evaluation will require two to three survey years. Other Projects are foreseen in future.

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### 3. Overview of the module

A complete description of the BME/PPMS can be found in the Annexes.

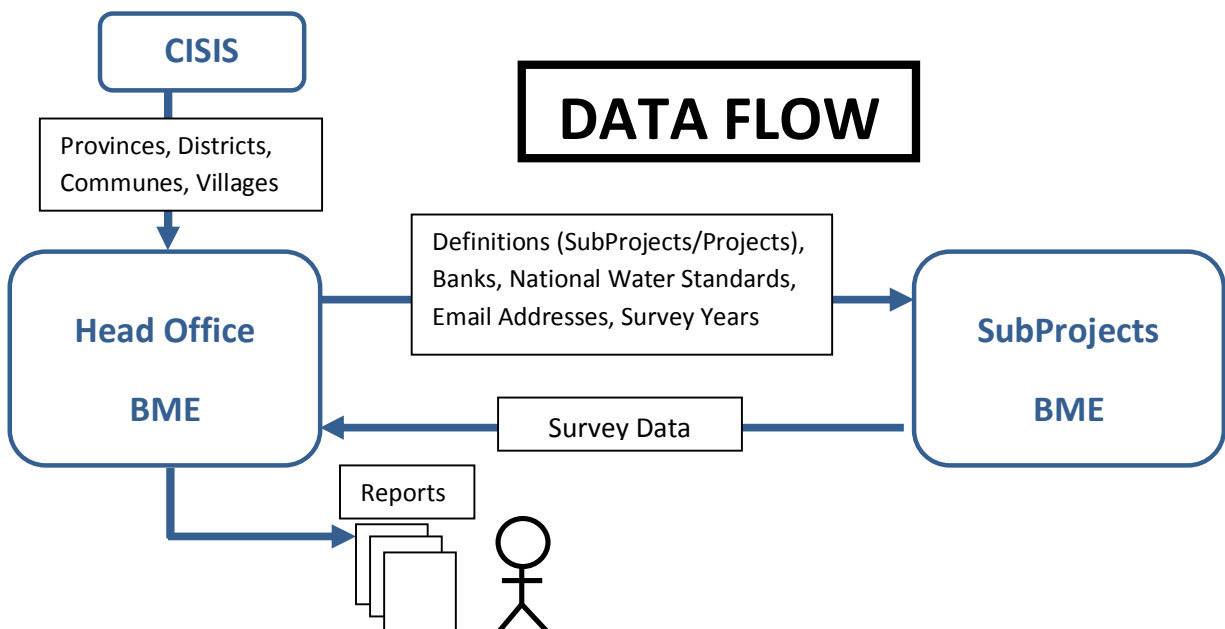
A SubProject survey consists of 2 parts...

- (1) Part A – one survey per SubProject conducted at the Commune level
- (2) Part B – Household Survey. A maximum of 100 households will be surveyed per SubProject which is considered to be statistically relevant.

One aspect of Part A is to roughly determine the percentage of a SubProjects that could be considered “Poor”, “Average” and “Better Off”. The households selected for surveying in Part B should then match that same demographic composition.

#### Head Office is responsible for...

- (i) Updating regularly from CISIS
- (ii) Maintaining
  - a. SubProject definition – only needs to be established once
  - b. Project definition – only needs to be established once
  - c. Bank lists – where SubProject must contact Head Office to add new banks
  - d. Recommended Water Standards
  - e. Email Addresses - can only be updated by Head Office
  - f. SubProjects’ survey years: once a survey year is finished for a SubProject, Head Office can deactivate that year to prevent accidental changes to the survey data. SubProjects can only add data to survey years determined by Head Office. This is set individually for each SubProject.
- (iii) Providing each SubProject with their customized module (automated)
- (iv) Reporting – this is completely automated



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### The SubProjects are responsible for...

- (i) Verifying that the SubProject Definitions are correct
- (ii) Requesting changes to Banks and email addresses
- (iii) Survey coordination
- (iv) Survey data entry

The BME modules have been designed primarily with promoting ease of data entry by the SubProvinces...

- Software screens are bilingual (Khmer/English)
- Data entry screens match the paper format
- Data exchange with Head Office is simple
- Required data fields cannot be omitted
- Data types are controlled e.g. text cannot be entered in a number field
- Calculations that were previously done by the user on the previous survey form are now handled by the module (e.g value of production)

As for Head Office, data collation and reporting are automated.

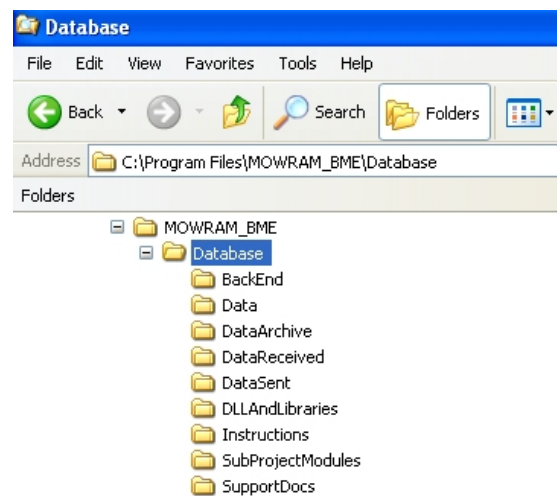
## 4. Installing the software

The software **must** be installed in the location ...

C:\Program Files\MOWRAM\_BME

Overview of the sub folders

- Database: holds the Front End
- BackEnd: holds the BackEnd
- SupportDocs: holds the MS Word and MS Excel reporting templates as well as the empty SubProject software template
- The “Data” sub folders are used for data exchange between Head Office and the SubProjects



It is imperative to respect the above as the software looks for templates and data in the above specific locations. Also, the Front End (user interface) looks for the Back End (data tables) in the location C:\Program Files\MOWRAM\_BME\Database\BackEnd.

For an explanation of splitting a database into a Front and Back end, see my instructional video prepared for the original CISIS database.

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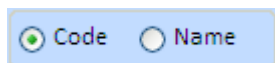
## 5. Common Controls / Navigation

### 5.1. Translation



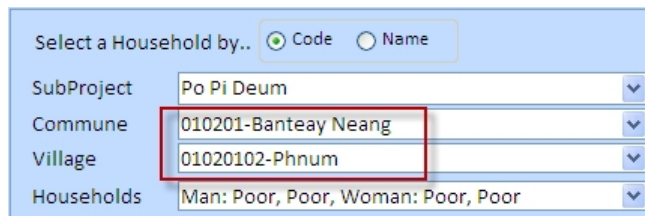
You can change the screen text between Khmer and English by selecting the above control.

### 5.2. Code / Name



The official government naming of Provinces, Districts, Communes and Villages also uses a numbering system. When selecting any of these, you can switch between...

(i) Code view

A screenshot of a form titled 'Select a Household by..' with radio buttons for 'Code' (selected) and 'Name'. The form contains dropdown menus for 'SubProject' (Po Pi Deum), 'Commune' (010201-Banteay Neang), 'Village' (01020102-Phnum), and 'Households' (Man: Poor, Poor, Woman: Poor, Poor). The 'Commune' and 'Village' fields are highlighted with a red box.

(ii) Name view

A screenshot of a form titled 'Select a Household by..' with radio buttons for 'Code' and 'Name' (selected). The form contains dropdown menus for 'SubProject' (Po Pi Deum), 'Commune' (Banteay Neang-010201), 'Village' (Phnum-01020102), and 'Households' (Man: Poor, Poor, Woman: Poor, Poor). The 'Commune' and 'Village' fields are highlighted with a red box.

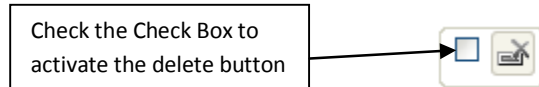
### 5.3. Exit

To exit forms, use the Exit button...



#### 5.4. Deleting records...

On many forms, you will find this control to delete records...



By default, the button is disabled (shown in grey) as shown above. This is a safeguard so that the Delete Button is not accidentally pressed. To activate it, check the check box.

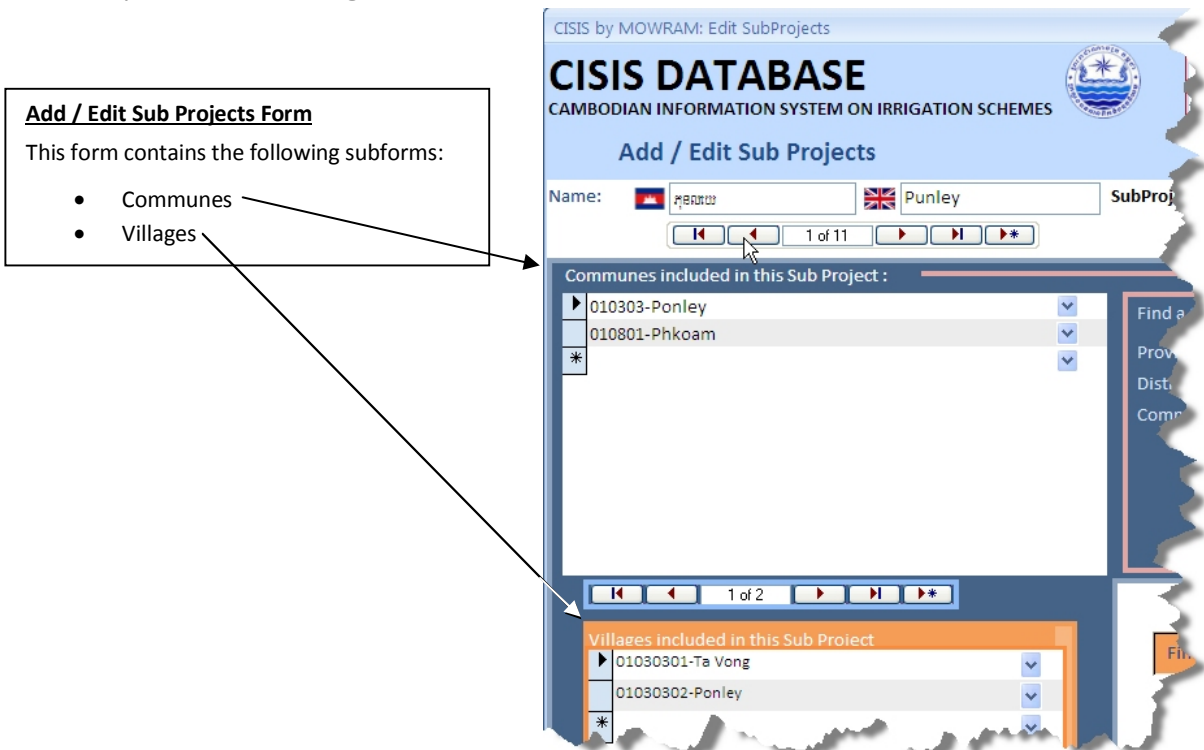
Once activated, the delete button will appear in colour...



Once the delete button is clicked, as a further safeguard against accidental deletion, the user will be warned, normally twice, that the record is about to be deleted.

#### DELETING RECORDS IN SUB FORMS

The process for deleting a record in a subform is different. Look at the form below...

A screenshot of the "Add / Edit Sub Projects Form" in the CISIS DATABASE. The form title is "CISIS by MOWRAM: Edit SubProjects". The main header is "CISIS DATABASE CAMBODIAN INFORMATION SYSTEM ON IRRIGATION SCHEMES". Below the header, there is a section "Add / Edit Sub Projects" with a "Name:" field containing "Punley" and a "SubProj" field. A navigation bar shows "1 of 11" records. Below this is a section "Communes included in this Sub Project:" with a list of communes: "010303-Ponley" and "010801-Phkoam". A second navigation bar shows "1 of 2" records. Below this is a section "Villages included in this Sub Project" with a list of villages: "01030301-Ta Vong" and "01030302-Ponley". A callout box on the left, titled "Add / Edit Sub Projects Form", contains the text "This form contains the following subforms:" followed by a bulleted list: "Communes" and "Villages". Arrows point from "Communes" to the commune list and from "Villages" to the village list in the screenshot.

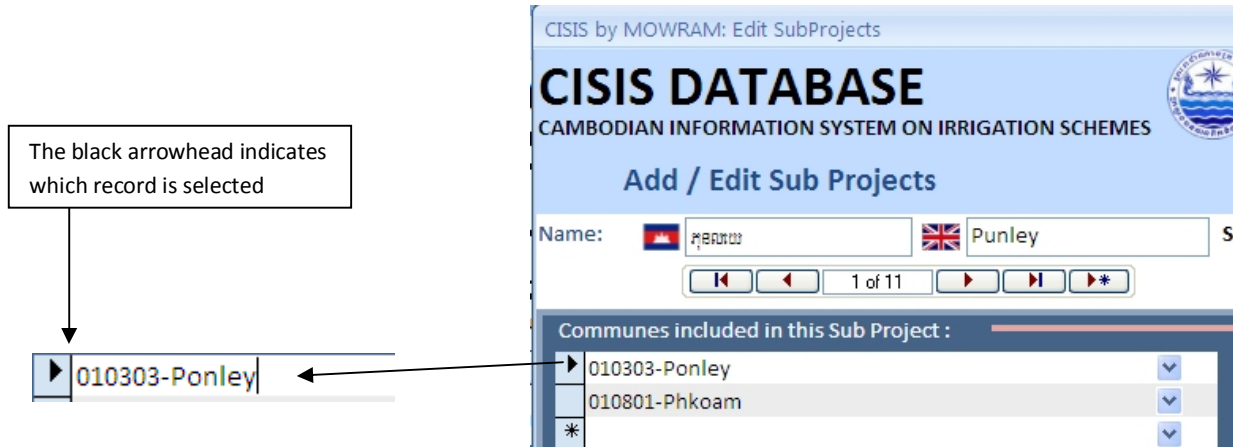
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To delete the “010303-Ponley” commune, first select it...

The black arrowhead indicates which record is selected



CISIS by MOWRAM: Edit SubProjects

# CISIS DATABASE

CAMBODIAN INFORMATION SYSTEM ON IRRIGATION SCHEMES

## Add / Edit Sub Projects

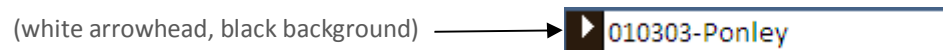
Name:   S

1 of 11

Communes included in this Sub Project :

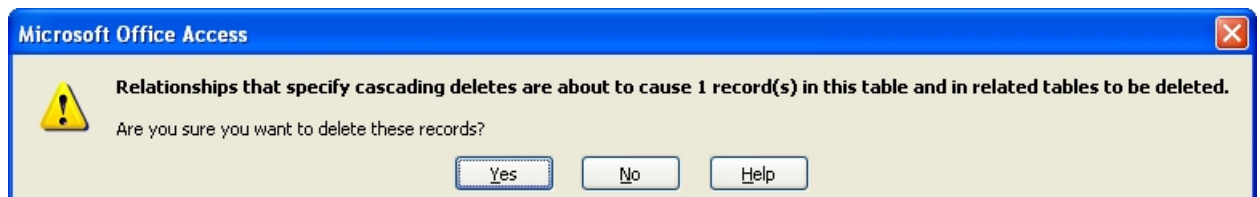
▶ 010303-Ponley	▼
010801-Phkoam	▼
*	▼

Click the black arrowhead. It will change in appearance to look like this...



... then press the **Delete** key on your keyboard.

You will get this warning ...



If you are sure you want to delete the record, click “Yes”.

## ATTENTION!

Be careful deleting records. Deleting a record may delete other information that depends on it. For example, SubProjects require Communes. If you delete a Commune, the SubProject attached to it will also be deleted. The survey data attached to that SubProject will in turn be deleted.

Safeguards have been built into the software to prevent accidental deletion but ultimately, the responsibility belongs to the user.

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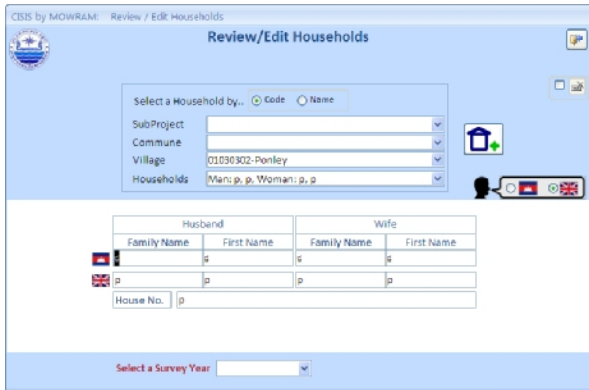
Email: [greg.trader@yahoo.com.au](mailto:greg.trader@yahoo.com.au) Mobile: +855 (0) 25 99 95

## 5.5. Adding New Records


Normally, records are added to forms using an “Add Record” button which may look like one of the following...



When adding records to some forms, the form background colour will change to light green indicating the form is in “New Record” mode....



Normal mode



New Record mode

In “New Record” mode, some forms will have an “Undo” button. Use this if you decide to cancel adding the new record.



When all the necessary data has been completed for the new record, you may see the “Save” button...



Click this to save the new record. The form will return to “Normal” mode (the green background will disappear).

## ADDING RECORDS TO SUBFORMS

Let's return to the example illustrated in 5.4 above.

The Phkoam commune is selected.

To add a new village, just select the next vacant row indicated by \*

Click the drop-down arrow to see records available for selection

Select a new village from the drop-down list

Villages included in this Sub Project	
01080105-Ou	▼
01080108-Svay Sa	▼
01080110-Thma Koul	▼
▶	▼
01080101-Phkoam	
01080102-Yeang Vien	
01080103-Yeang	
01080104-Ampil	
01080105-Ou	

### 5.6. Saving convention

Data changes are saved automatically. Unlike MS Word or MS Excel, there is no "Save" button to click after making data changes.

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## 6. SUBPROJECT PROCESSES

CISIS by MOWRAM

**CISIS DATABASE**  
CAMBODIAN INFORMATION SYSTEM ON IRRIGATION SCHEMES

**BME Module - SubProject: Punley**

**MAIN MENU**

Do you use Outlook?

**Import**   
Import from HeadOffice

**Edit / Review...**

My SubProject  
Yearly Prices  
Households

**Data Entry**

Survey Section A  
Survey Section B

**Reports**

View Reports

**Export**   
Export to HeadOffice

Database development by [www.completeexcellence.com](http://www.completeexcellence.com)

The SubProject Main Menu pictured above shows SubProject processes in their logical sequence

### 6.1. Import from Head Office

From time to time, Head Office will email you with a data update which will be attached to the email as a zip file.

For imports from Head Office (and also exports to Head Office), you have the choice of using MS Outlook or not.

If you normally use MS Outlook for your email, then you can check the “Do you use Outlook?” option...

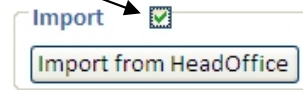
Do you use Outlook?

Selecting the Outlook option completely automates the process. The BME software will automatically open Outlook, search the inbox for Data Export files from Head Office, save and then process them.

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To activate the Import button, click the check box



If you are not using Outlook, you can save the Data Export zip file to your desktop. The BME software will move the zip file to the data subfolder then process it.

Press the [Import from HeadOffice](#) button to run the import process. This will update the SubProject BME module with additions or deletions to Provinces, Districts, Communes and Villages, translations, banks, email addresses and survey years.

## IMPORTANT!

You **must** do an Import from Head Office the very first time you install the software. The software will not work correctly without it.

If you do not receive a Data Export file from Head Office, you must contact them.

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## 6.2. My SubProject (check your SubProject)

Head Office is responsible for setting up the SubProjects, that is, determining which Communes and Villages are included in the SubProject.

However, it is the responsibility of the Commune Office to check that this is correct. To do this, click the **My SubProject** button to see a report showing your SubProject, Communes and Villages...

SubProject	Commune	Village
ក្រុមសាលា	សាលាក្រាំង	រំពេង្រា
		ឧហាម គ្រូល
ក្រុមសាលា	ស្រុកសាលា	ស្រុកសាលា
		ស្រុកសាលា

If the information on the report is not correct, email Head Office with any corrections.

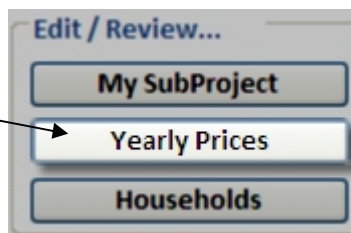
**Note:** to see the report in Khmer, choose the language with the language selector before running the report....



## 6.3. Yearly Prices

Next, you need to add rice and crop prices for the current survey year. This needs to be done for each new survey year added. This is used to calculate the value of production and farmers' income.

To add yearly prices, click



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On the yearly prices screen, follow the steps 1 to 4...

CISIS by MOWRAM: Enter Annual Crop Prices

**CISIS DATABASE Annual Crop Prices (by SubProject)**

Select a SubProject  1

Select a Year  2

Price WS Rice (\$/ton)

Price DS Rice (\$/ton)

Price WS Crop (\$/ton)

Price DS Crop (\$/ton)

Database development by [www.completeexcellence.com](http://www.completeexcellence.com)

#### 6.4. Households

In order to add a household survey, you first need to add a household. Once added, surveys can be added for the current survey year and later survey years. To add a household, press the “Household” button...

Edit / Review...

My SubProject

Yearly Prices

Households

The Households form appears...

First check if the Household has been added. Use the SubProject, Commune, Village and Household drop down lists to search for a household....

CISIS by MOWRAM: Review / Edit Households

**Review/Edit Households**

Select a Household by..  Code  Name

Search

SubProject

Commune

Village

Households

Husband		Wife	
Family Name	First Name	Family Name	First Name
<input type="text" value="p"/>	<input type="text" value="p"/>	<input type="text" value="p"/>	<input type="text" value="p"/>
<input type="text" value="p"/>	<input type="text" value="p"/>	<input type="text" value="p"/>	<input type="text" value="p"/>

House No.

Select a Survey Year

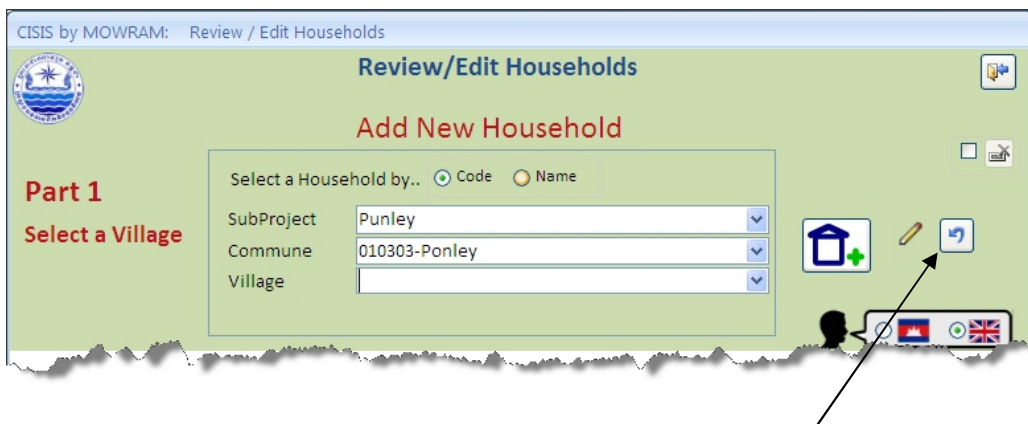
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If it does not exist, click

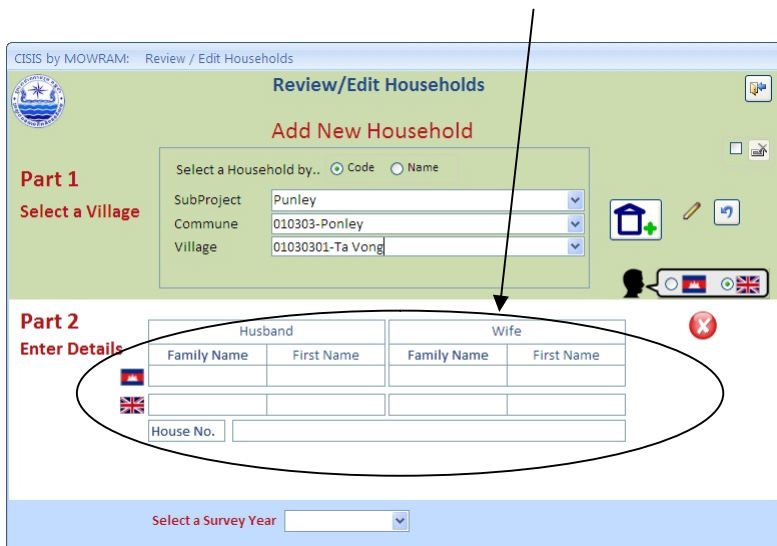


The background colour will change to light green indicating we are in “New Household” mode.

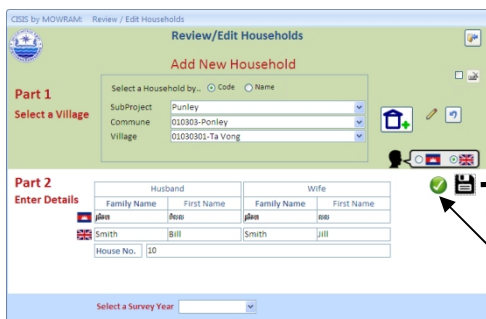


If you did not really want to add a new household, click the the “Undo” button.

To add a new household, select the SubProject, Commune and Village where the household is located. Now you can add the Household details in Part 2 of the form...



Once you have completed all the fields, the “Save” button will appear...



Click to save the household



indicates that all required data has been entered

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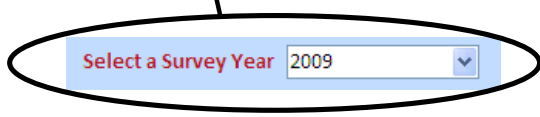
Email: [greg.trader@yahoo.com.au](mailto:greg.trader@yahoo.com.au) Mobile: +855 (0) 25 99 95



Once saved, the form returns to "Normal" mode (blue background)...

Husband		Wife	
Family Name	First Name	Family Name	First Name
Smith	Bill	Smith	Jill

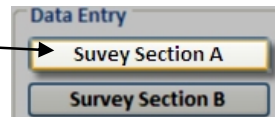
- If you want to start the survey directly, you can select a survey year.
- The "Start Survey" year will appear



### 6.5. Survey Section A

You must complete Survey Section A for each SubProject in every survey year. In Survey Section A, there is only one survey to complete.

To start, click



1 SubProject Punley

2 Select a Survey Year 2009

You must select a SubProject and Survey Year or the "Start Survey" button will not appear

Click to start the survey

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The first screen of Part A appears...

CISIS DATABSE Table A1: Ranking Of Wealth Distribution

SubProject: Punley  
Year: 2009

Village (show village name)	**Poor H/Hs No.	**Average H/Hs No.	**Better off H/Hs No.
01030301-Ta Vong	3	2	2
01030302-Ponley	3	3	3
	0	0	0

Main criteria used by the focal group to guide wealth ranking

	Poor (top 4 criteria)	Average (top 4 criteria)	Better off (top 4 criteria)
1.			
2.			
3.			
4.			

Start Survey Table A2

- Complete all fields.
- To move to the next table, click the button on the bottom right side of the screen

You must complete all tables A1 to A5 in the section

### 6.6. Survey Section B (Household surveys)

Each survey year, each SubProject will have a maximum of 100 household surveys to enter.

To start, click

Data Entry

Survey Section A

Survey Section B

CISIS by MOWRAM: Review / Edit Households

Review/Edit Households

ENTER HOUSEHOLD SURVEY

Select a Household by..  Code  Name

SubProject: Punley

Commune: 010303-Ponley

Village: 01030301-Ta Vong

Households: Man: Smith, Bill, Woman: Smith, Jill

Man: F, F, Woman: F, F

Man: q, q, Woman: q, q

Family Name: Man: Smith, Bill, Woman: Smith, Jill

Family Name	First Name	First Name	First Name
Smith	Bill	Smith	Jill

House No.: 10

Select a Survey Year: 2009

Start Survey

Find a household by selecting the SubProject, Commune and Village it belongs

Select the Household from the "Households" drop down list

Select a survey year, then the "Start Survey" button will appear. Click this to start entering data.

B1: Other Income Sources  
**CISIS DATABASE Table B0: Household Information**

SubProject: Punley  
 Province: Banteay Meanchey  
 District: Banteay Meanchey  
 Commune: Ponley  
 Village: Ta Vong

HOUSEHOLD	
Husband	Wife
Family Name	Family Name
Smith	Smith
House No.	10

Year: 2009

Plots Owned: 0 Total Land in project area (ha): 0

Wealth Group: Poor (selected)

Table B1 →

- Complete all data
- Click the button at bottom right to move to the next table in section
- Continue until you have completed all sections B1 to B8
- **NB: there is no Table B5**

“Wealth Group” on Table B0 is the field that corresponds to the “By Wealth Group” on the MS Word Summary Report.

If you see many “n/a” in one of the Wealth Group columns, it means no household survey data has been entered for that Wealth Group

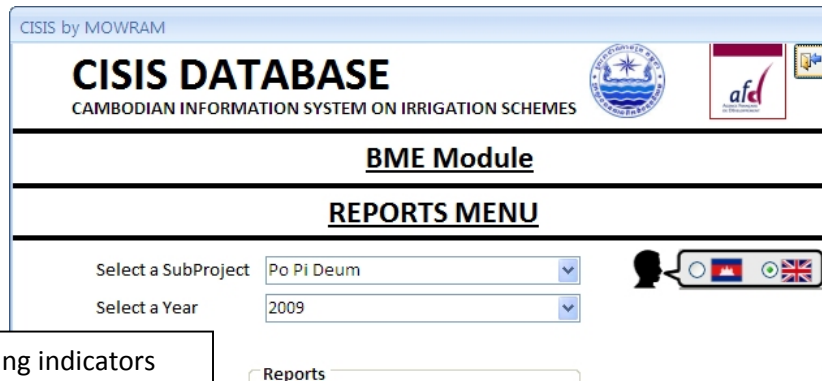
Contract No. NIP-LC\_\_ – Appendix A-A – Baseline Data Survey Questionnaire

Table Ref	Indicators Measured - Baseline Year	Unit	Total	By Wealth Group		
				Poor	Average	Better Off
A4	Does FWUC use an accounting system? (Yes or No)	Y/N	Y			
B8	Percentage of HHs satisfied with FWUC Financial management system	%		0%	100%	n/a
A4	Total O&M cost in last 12 month?	\$	3			

## 6.7. View Report

Once you have finished all data entry for a survey year, you can run two kinds of reports

To go to the Reports screen, click



Shows reporting indicators split by Wealth Group for **one** survey year

Shows one summary column for each completed survey year.  
It does not show a split by Wealth Group

Contract No. NIP-EC\_\_ - Appendix A-A - Baseline Data Survey/Questionnaire

**KEY INDICATORS: Summary Report Form for Overall Scheme**

Name of Subproject: Po Pi Deum [ice.com](http://ice.com)

Year of Survey: 2009

Baseline Year?: 2009

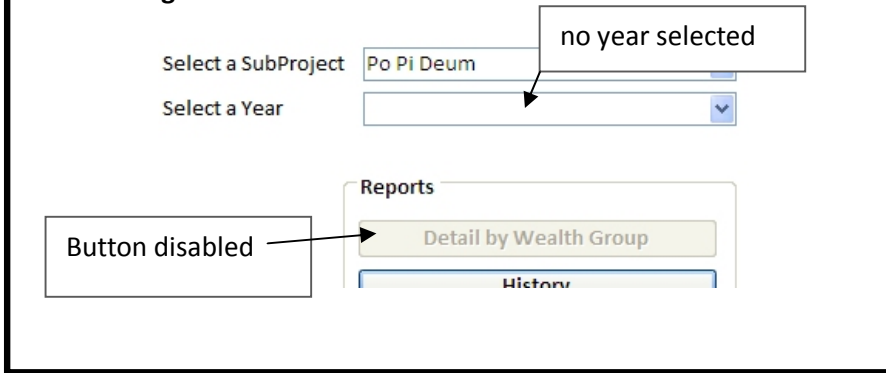
Table Ref	Indicators Measured - Baseline Year	Unit	Total	By Wealth Group		
				Poor	Average	Better Off
	Irrigation system					
A1	No. of farming households in benefit area	No.	3	1	1	n/a
A2	Average land area per household in benefit area	ha	2	3	3	n/a

	A	B	C	D	E	F
1	<b>Key Indicators: SUMMARY REPORT FOR PO PI DEUM</b>					
2	<b>INDICATOR</b>					
3	<b>Irrigation system</b>	<b>Year: 2009 2012 2014</b>				
4	No. of farming households in benefit area (No.)		3	95	300	
5	Average land area per household in benefit area (ha)		2	0.19	0.67	
6	Overall Average productivity – DS rice (t/ha)		3	3	3	
7	Overall Average productivity – WS rice (t/ha)		3	3	3	
8	Overall Average productivity – DS other main crop (t/ha)		3	3	3	
9	Overall Average productivity – WS other main crop (t/ha)		3	3	3	
10	Total WS irrigable area (ha)		6	18	8	
11	WS rice planted in benefit area (ha)		3	9	4	
12	Other WS crops in benefit area (ha)		3	9	4	
13	Scheme WS Cropping intensity (%)		3	3	3	

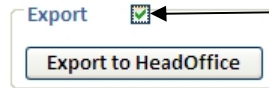
Gregory D Regan

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**NOTE: you must select a year to run the "Detail by Wealth Group" report. If you do not select a year or Sub Project, the button will be disabled e.g.....**



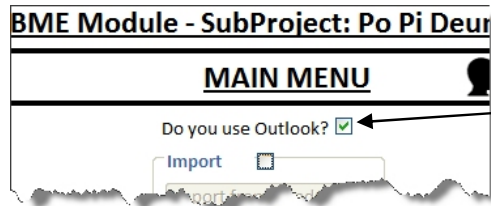
## 6.8. Export to Head Office



Check to activate the "Export to Head Office" button

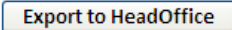
### 6.8.1. Export Using MS Outlook

For this to work, you must have a correctly operating email address working in your MS Outlook.

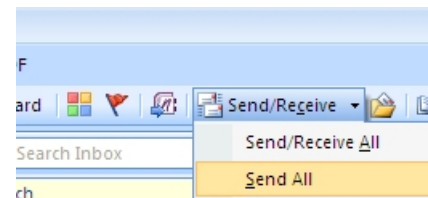


Check here to use this method

Make sure you are connected to the Internet.

Click 

MS Outlook will be opened automatically and an email to Head Office will be created with a DataExport zip file attached. When the process is finished, be sure to click "Send All" in MS Outlook or the email may stay in your Outbox ....

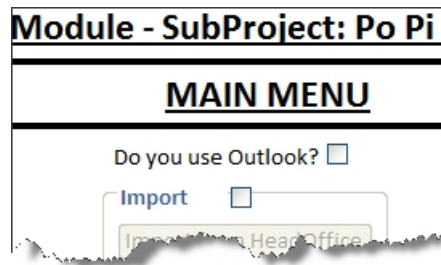


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### 6.8.2. Export not using MS Outlook

If you do not use MS Outlook for your email, do not select "Do you use Outlook?" ...



Click

**Export to HeadOffice**



A DataExport zip file will be saved to your desktop (e.g. CISIS\_BME\_SubProjectExportModule\_002\_Po Pi Deum.zip)

Email this to Head Office.

#### **WARNING!**

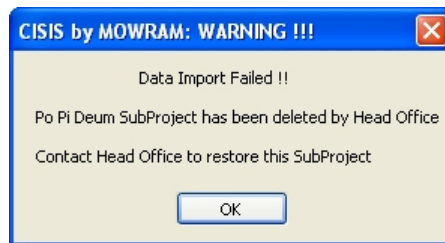
**Do not change the name of any zip files created by the BME software.**

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## 6.9. Restoring a Deleted SubProject

It's possible that Head Office may accidentally delete your SubProject. If this happens, you will see this message the next time you do the Data Import from Head Office (see section 6.1 above)...



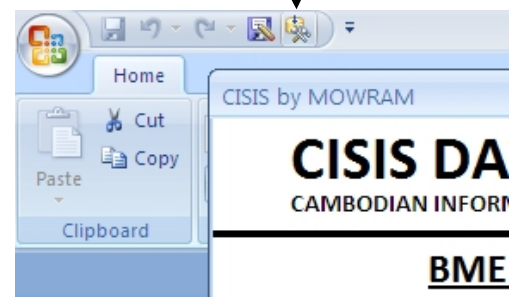
Advise Head Office of this problem. Ask them to refer to Section **“6.13 Restoring a Deleted SubProject”** of the Head Office User Manual. Run the Export to Head Office procedure (see Section 6.8).

When they restore your SubProject in the Head Office module, they must send you a Data Export and you must run the Import process (see Section **“6.1 Import from Head Office”**).

## 6.10. Running Compact and Repair Database

You should compact and repair your database regularly. This keeps the database running efficiently.

To do this, click here...



## 6.11.

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