



CISIS DATABASE



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

**USER MANUAL**  
**for Head Office**

By Greg Regan

**CISIS DATABASE**  
**BME MODULE (Head Office)**  
**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.

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.

**Gregory D Regan**

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

### 3. Overview of the module

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

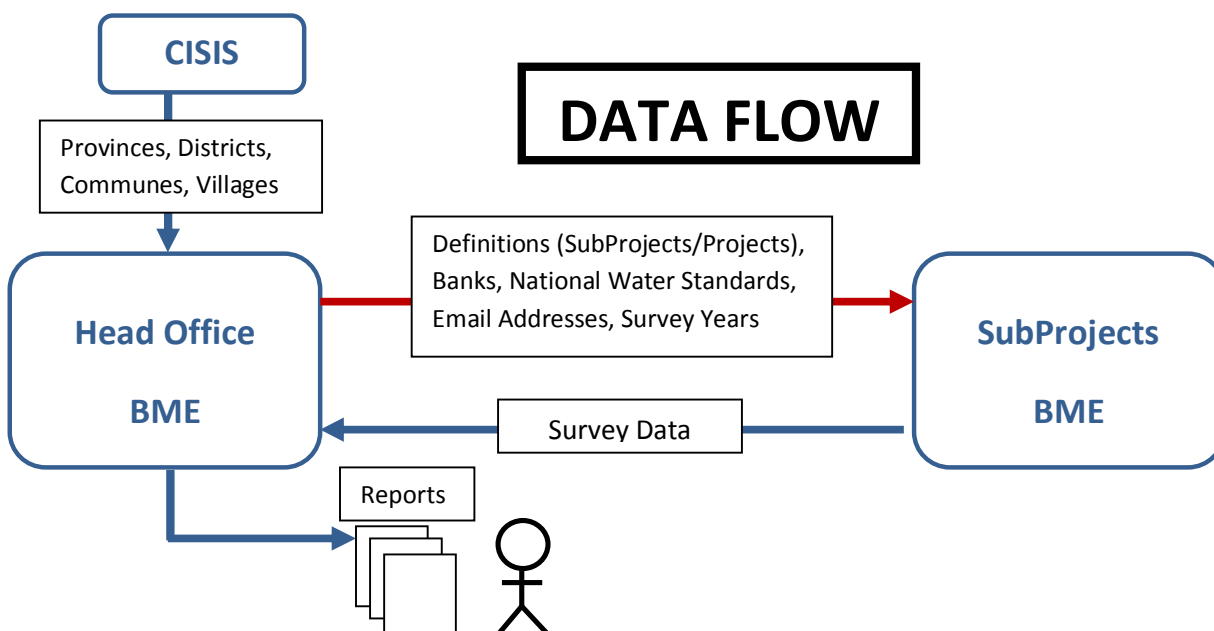
A SubProject survey consists of 2 parts...

- (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



Gregory D Regan

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

### 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.

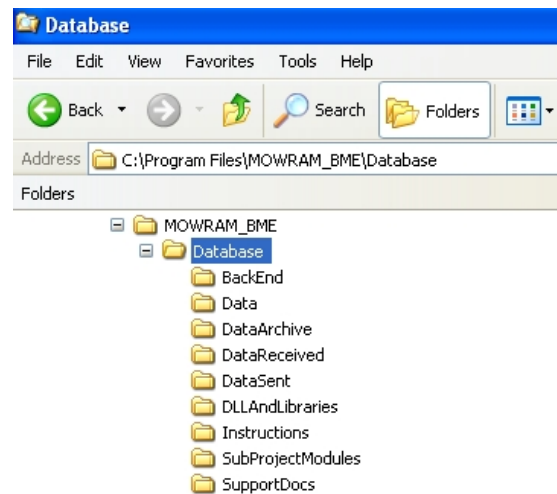
## 4. Installing the software

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.

**Gregory D Regan**

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

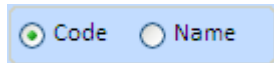
## 5. Common Controls / Navigation

### 5.1. Translation



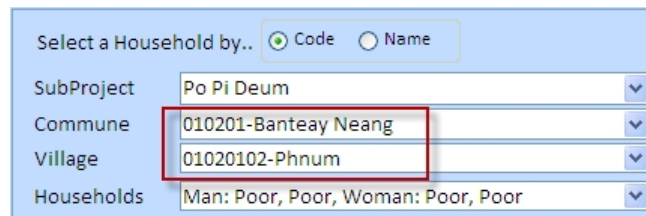
You can change the screen text between Khmer and English by selecting the above control.

### 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'. Below are 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). Below are 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.

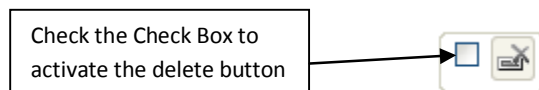
### 5.3. Exit

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...

**Add / Edit Sub Projects Form**  
This form contains the following subforms:

- Communes
- Villages

CISIS by MOWRAM: Edit SubProjects

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

**Add / Edit Sub Projects**

Name:   SubProj

1 of 11

Communes included in this Sub Project :

▶ 010303-Ponley	▼
010801-Phkoam	▼
*	

1 of 2

Villages included in this Sub Project

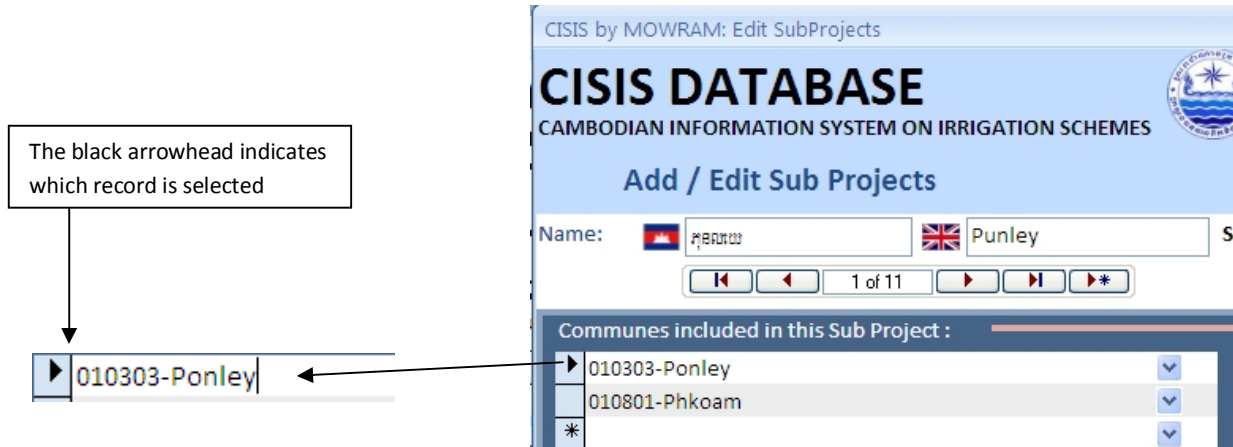
▶ 01030301-Ta Vong	▼
01030302-Ponley	▼
*	

Gregory D Regan

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

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

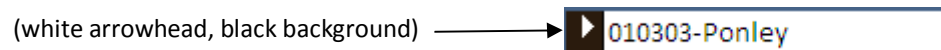
Name:   S

1 of 11

Communes included in this Sub Project :

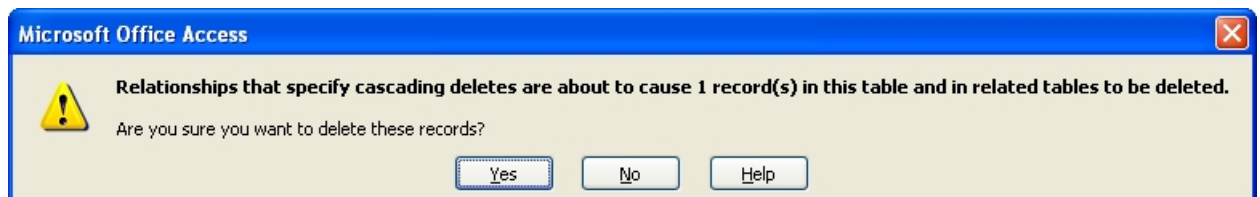
▶ 010303-Ponley	▼
010801-Phkoam	▼
*	▼

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.

Gregory D Regan

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

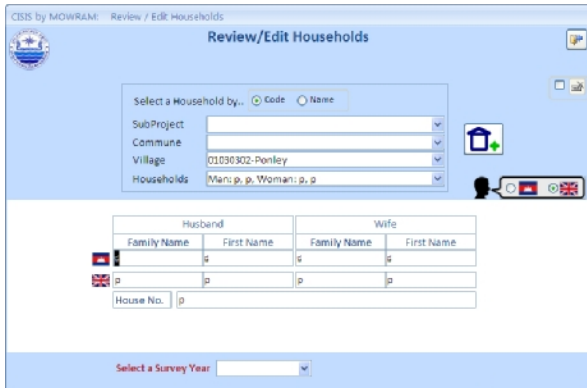


## 5.5. Adding New Records

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	

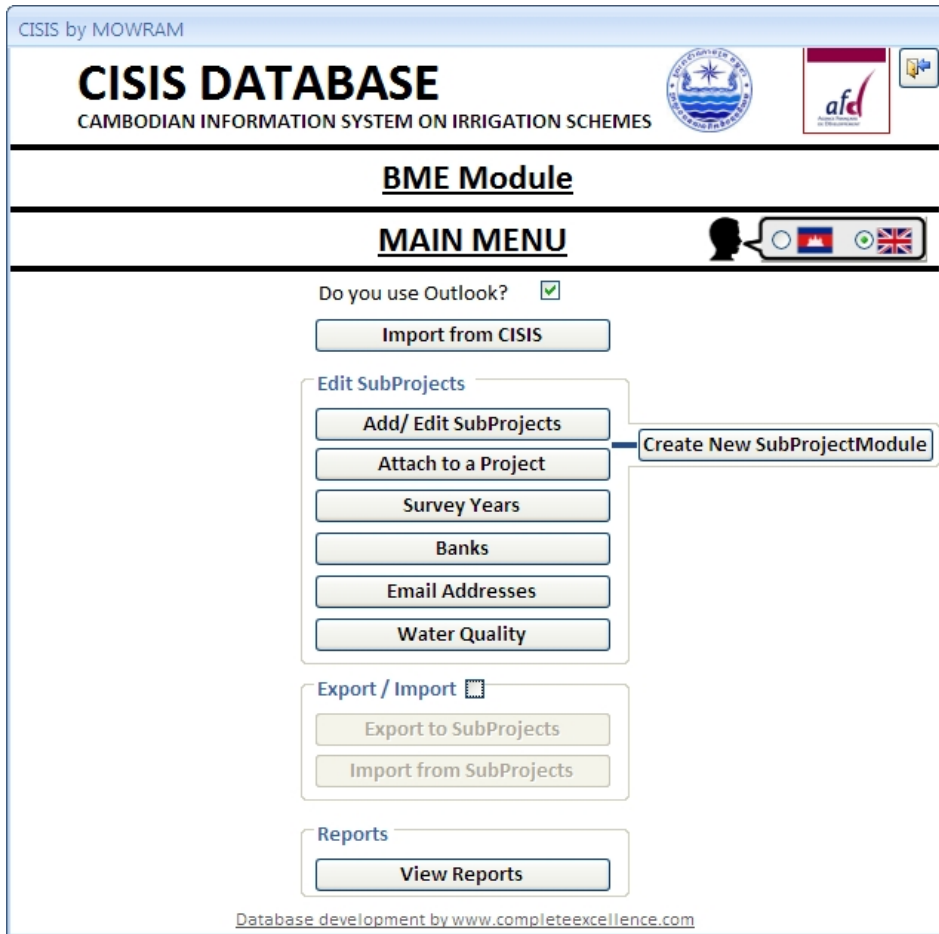
### 5.6. Saving convention

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

Gregory D Regan

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

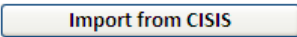
## 6. SUBPROJECT PROCESSES



The Head Office Main Menu pictured above shows Head Office processes in their logical sequence

### 6.1. Import from CISIS

The CISIS administrators must produce a Data Export zip file. This should be saved to the desktop of Head Office BME Administrator's PC.

Press the  button to process this file. This will update the BME module with additions or deletions to Provinces, Districts, Communes and Villages.

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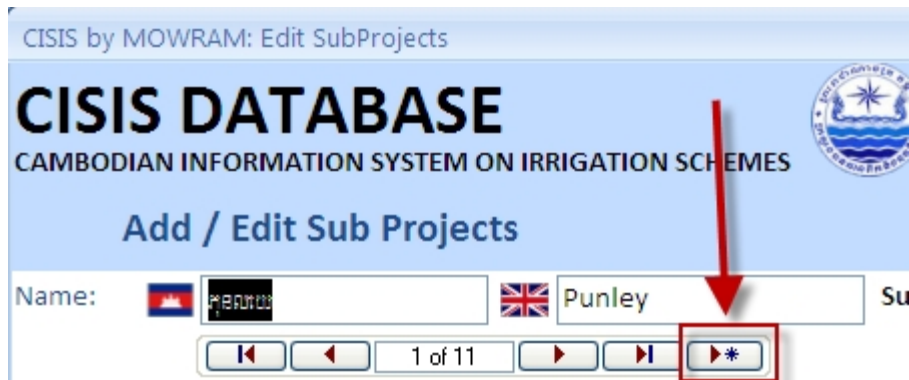
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## 6.2. Add/Edit SubProjects

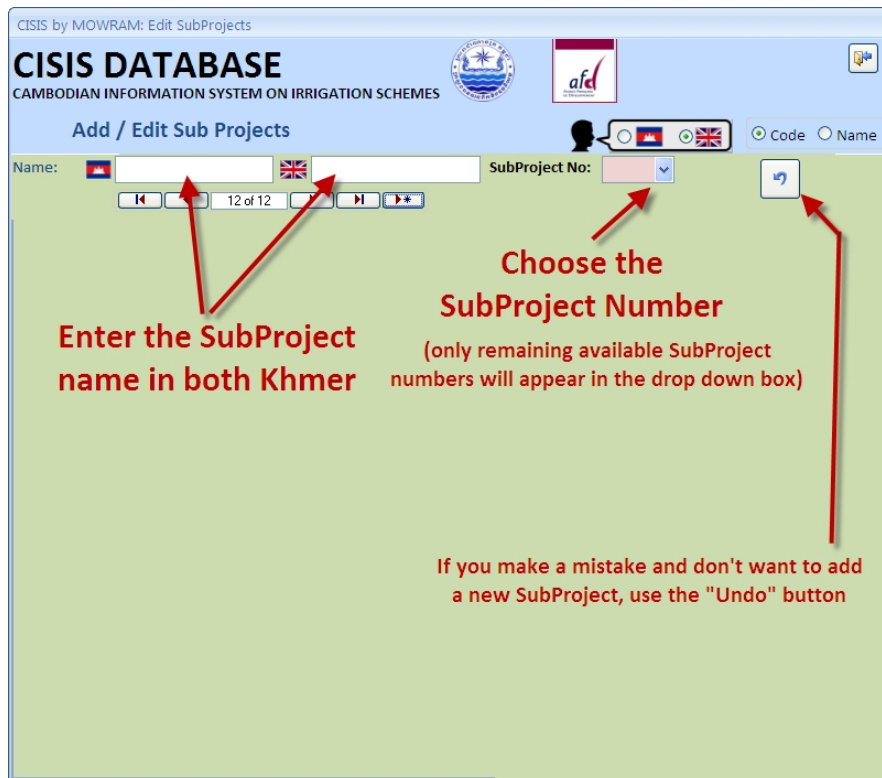
This is where SubProjects are defined in terms of the Communes and Villages they cover. A given Commune or Village can only belong to one SubProject and this rule is enforced by the BME Module

Press 

To add a New Sub Project...



You will see...



**Enter the SubProject name in both Khmer**

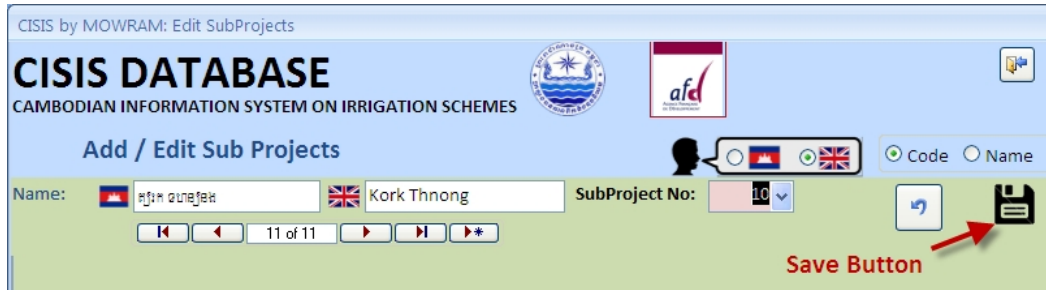
**Choose the SubProject Number**  
(only remaining available SubProject numbers will appear in the drop down box)

If you make a mistake and don't want to add a new SubProject, use the "Undo" button

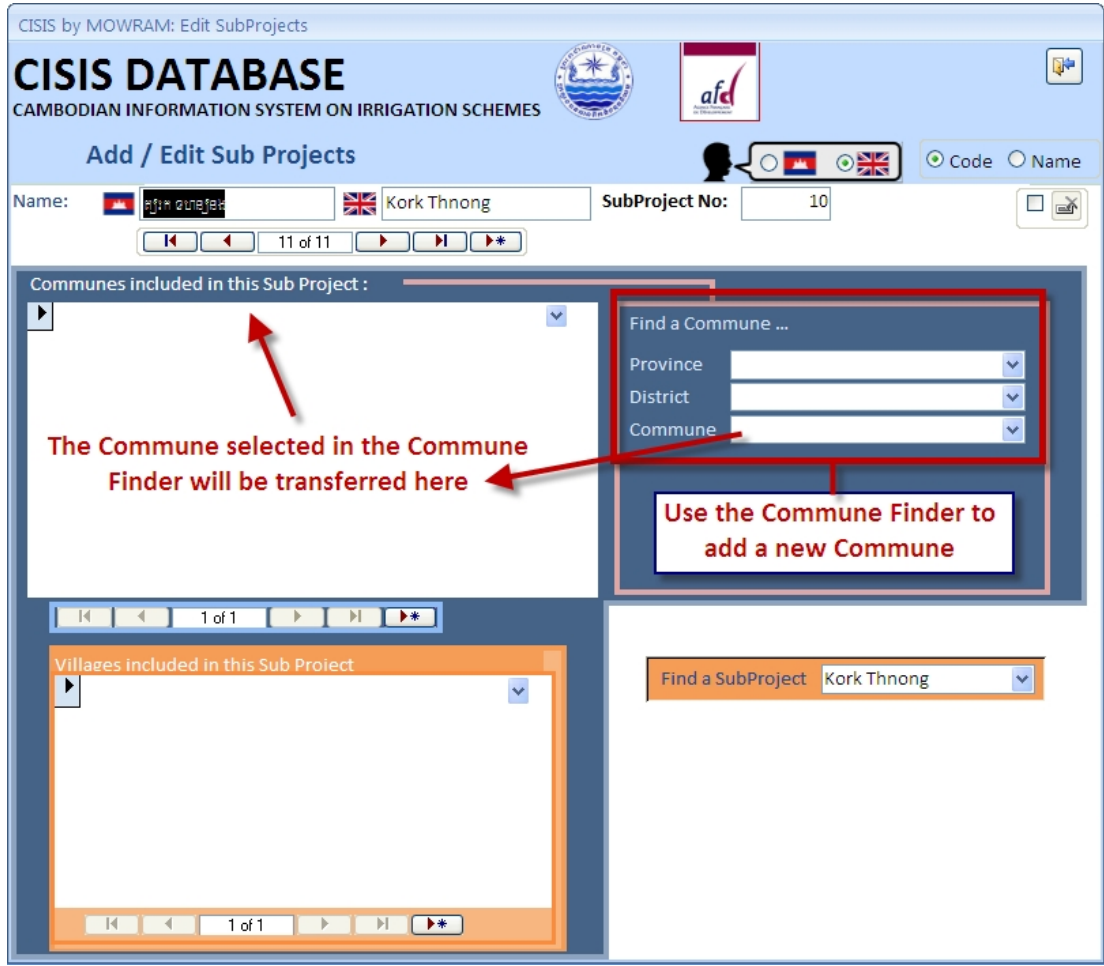
Once you have entered the required information above, you will see the "Save" button...

Gregory D Regan

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



Once saved you will see the screen below and you can now add the Communes and Villages...



CISIS by MOWRAM: Edit SubProjects

# CISIS DATABASE

CAMBODIAN INFORMATION SYSTEM ON IRRIGATION SCHEMES

**Add / Edit Sub Projects**

Name:   SubProject No:

11 of 11

Communes included in this Sub Project :

Find a Commune ...

Province: 17. Siem Reap

District: 1701 - Angkor Chum

Commune: 170101-Char Chhuk

Replace with 170101-Char Chhuk

Villages included in this Sub Project

1 of 1

Find a SubProject:

CISIS by MOWRAM: Edit SubProjects

# CISIS DATABASE

CAMBODIAN INFORMATION SYSTEM ON IRRIGATION SCHEMES

**Add / Edit Sub Projects**

Name:   SubProject No:

11 of 11

Communes included in this Sub Project :

170101-Char Chhuk

**Now add Villages to the Commune**

Find a Commune ...

Province: 17. Siem Reap

District: 1701 - Angkor Chum

Commune: 170101-Char Chhuk

Replace 170101-Char Chhuk with 170101-Char Chhuk

Villages included in this Sub Project

17010101-Prasat

17010102-Yeang

17010103-ənuK

17010104-Prey Lvey

17010105-Prey Cheng

17010106-Kbal Cham

17010107-Kouk Lvea

17010108-Char Roka

17010109-Thnal

17010110-Chhuk

17010111-Kouk Kbat

17010112-Ta Tov

Find a SubProject:

**only villages belonging to the selected Commune above will appear here**

Gregory D Regan


Email: [greg.trader@yahoo.com.au](mailto:greg.trader@yahoo.com.au)

Mobile: +855 (0) 25 99 95

CISIS by MOWRAM: Edit SubProjects

# CISIS DATABASE

CAMBODIAN INFORMATION SYSTEM ON IRRIGATION SCHEMES



**Add / Edit Sub Projects**

Code  Name

Name:   SubProject No:

11 of 11

Communes included in this Sub Project :

▶ 170101-Char Chhuk	▼
*	▼

1 of 1

Villages included in this Sub Project

▶ 17010104-Prey Lvey	▼
▶ 17010105-Prey Cheng	▼
▶ 17010119-Kouk Thnong	▼
▶ 17010120-Ka Trakiet	▼
*	▼

3 of 4

Find a Commune ...

Province: 17. Siem Reap

District: 1701 - Angkor Chum

Commune: 170101-Char Chhuk

Replace: 170101-Char Chhuk  
with: 170101-Char Chhuk

Yes No

Find a SubProject: Kork Thnong

Above, you can use this controls to display Provinces, Districts, Communes and Villages in Khmer or English and by code or by name

Code  Name

Gregory D Regan

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

For example...

The screenshot shows the 'CISIS DATABASE' interface for editing subprojects. At the top, it says 'CISIS by MOWRAM: Edit SubProjects'. The main header includes the 'CISIS DATABASE' logo and 'CAMBODIAN INFORMATION SYSTEM ON IRRIGATION SCHEMES'. Below this is the 'Add / Edit Sub Projects' section, which includes a language selector (Cambodian and English), a search mode (Code or Name), and a search bar. The search bar contains the name 'ក្រក ថ្លង់' (Kork Thnong) and the subproject number '10'. Below the search bar are navigation buttons and a list of 'Communes included in this Sub Project'. The list shows 'Char Chhuk-170101' as the selected commune. To the right of the commune list is a 'Find a Commune ...' dialog box with dropdown menus for Province (Siem Reap. 17), District (Angkor Chum - 1701), and Commune. Below the commune list is a 'Villages included in this Sub Project' list, showing 'Prey Lvey-17010104', 'Prey Cheng-17010105', 'Kouk Thnong-17010119', and 'Ka Trakiet-17010120'. To the right of the village list is a 'Find a SubProject' dropdown menu with 'Kork Thnong' selected. Red arrows point from the text 'Provinces, Districts, Communes and Villages appear by Name first' to the commune and village lists. A black arrow points from the 'Find a SubProject' dropdown to the text 'You can find an existing SubProject by using the SubProject Finder'.

You can find an existing SubProject by using the SubProject Finder

A close-up of the 'Find a SubProject' dropdown menu. The search bar contains 'Kork Thnong'. The dropdown list shows several options: 'Anlong Svay', 'Canal No. 1', 'Chork', 'Don Aov', and 'Kork Thnong'. 'Kork Thnong' is highlighted in black.

Alternatively, use the navigation buttons...

A close-up of the navigation buttons in the interface. The search bar contains 'ក្រក ថ្លង់' (Kork Thnong) and 'Kork Thnong'. Below the search bar are navigation buttons: a home button, a left arrow, '11 of 11', a right arrow, a double right arrow, and a search button.

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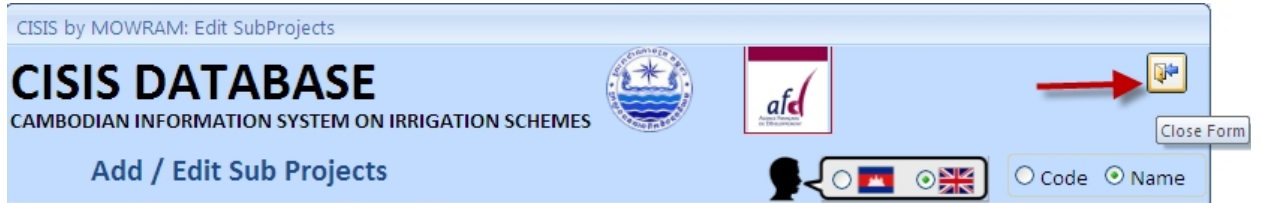
Email: [greg.trader@yahoo.com.au](mailto:greg.trader@yahoo.com.au) Mobile: +855 (0) 25 99 95



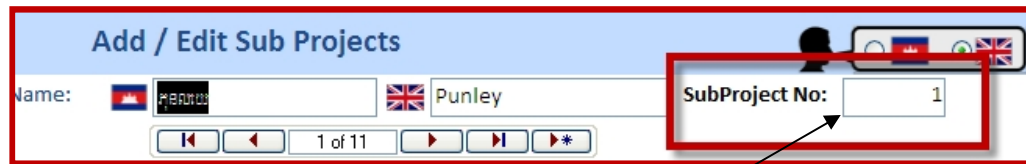
The above screen shows a completed SubProject. To add more, use the “New” button...



When all SubProjects have been added, exit this screen...



You should note above that the numbering of the SubProjects should match your official list e.g. ...



SubProjectAndVillages.xlsx - Microsoft Excel

No	Subproject	Province	District	Commune	Village
1	Punley	BMC	Phnom Srok Svay Chek	Punley Phkoam	Punley and Ta Vong Svay Sor, Thmar Kaul and Ou
2	Po Pi Deum	BMC	Mongkol Borey	Rohat Teuk Bat Trang Banteay Neang Ruessey Kroak	Po Pi Deum Khtum Reay Keut, Anlong Thngan Keut, Bang Bat Keut, Bat Trang, Bat Trang Thom Keut and Bat Trang Toch Phnom, Kork Phnov, Trang and Pongro Neang Ket and Chamka Tadoak
3	Tram Mneash	PUR	Kraker	Thnout Chum	Dangteuk Leach, Chambok Thom, Tbeng Chrum, Tram, Beung Veal, Kandal, Chhteual and Sen Pen
4	Anlong Svay	PUR	Bakan	Rum Lech O Ta Paong	Roung Takok, Kaun Thnoat, Phnou, Pra Sat, Koh Kchiey and Rum Lech Cham Kar O, Robos Raing
5	Krouch Saeuch	PUR	Bakan	Khnar Totoeung Trapeang Chomg	Khnar Totoeung, Krouch Saeuch and Phtas Sla Kab Kralanh, Bakan, Ou Rumchek, Svay Toal and Stung Kambot
6	Kuch Noup	PUR	Kraker	Kbal Trach Kakaoh	Doung, Phsar, Samrong, Sre Russey and Krolanh Chork Thum, Chork Toch, Kakaoh, and Srae Ou

Gregory D Regan

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

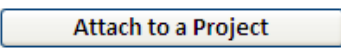
### 6.3. Attach to a Project

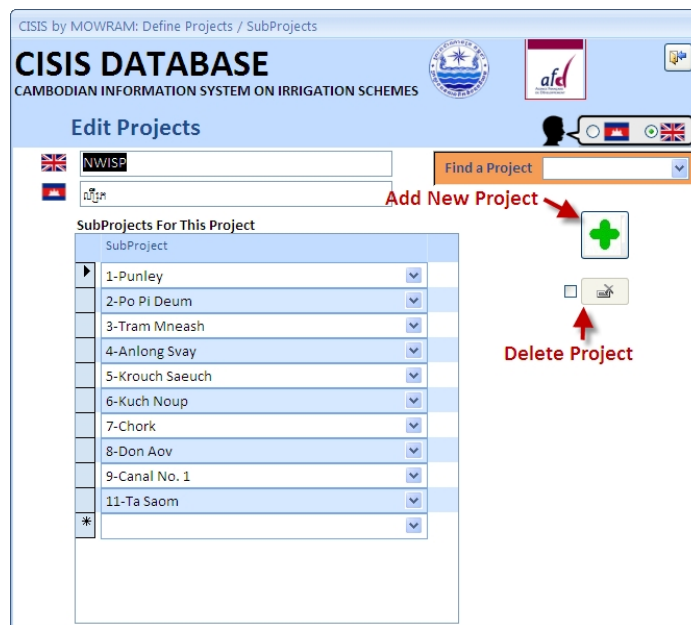
Once SubProjects are attached we need to attach them to a Project. A “Project” is really just a group of SubProjects. By creating a Project, we can report on several SubProjects (later you will see how to do this). Normally a Project will group SubProjects that the Ministry feels are logically linked. For example, the first Project is NWISP and its SubProjects are situated in the North West area of Cambodia.

Once a Project is created and SubProjects linked to it, we can run a single report to show all SubProjects for a given project. For example....

Key Indicators: Summary report form for NWISP (Year: BaseLine)										
INDICATOR		Punley	Po Pi Deum	Tram Mneash	Anlong Svay	Krouch Saeuch	Kuch Noup	Chork	Dd	Ac
<b>Irrigation system</b>										
	Year:	2009	2009	2009	2009	n/a	n/a	n/a	n/a	n/a
4	No. of farming households in benefit area (No.)	15	3	13	18					
5	Average land area per household in benefit area (ha)	0.93	2	0.15	0.67					
6	Overall Average productivity – DS rice (t/ha)	7	3	1	5					
7	Overall Average productivity – WS rice (t/ha)	7	3	1	5					
8	Overall Average productivity – DS other main crop (t/ha)	7	3	1	5					
9	Overall Average productivity – WS other main crop (t/ha)	7	3	1	5					
10	Total WS irrigable area (ha)	14	6	2	12					
11	WS rice planted in benefit area (ha)	7	3	1	6					
12	Other WS crops in benefit area (ha)	7	3	1	6					

To create a Project and attach SubProjects.....

Press  on the Main Menu...



Gregory D Regan

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

A SubProject can only be added to one Project. The user cannot mistakenly add a given SubProject to two Projects as once a SubProject is attached to a Project, it becomes unavailable for selection in the SubProject Drop Down box. For example...

Here you can see the NWISP Project has ten SubProjects attached to it...

CISIS by MOWRAM: Define Projects / SubProjects

# CISIS DATABASE

CAMBODIAN INFORMATION SYSTEM ON IRRIGATION SCHEMES

## Edit Projects

Project Name:

Find a Project:

### SubProjects For This Project

SubProject
1-Punley
2-Po Pi Deum
3-Tram Mneash
4-Anlong Svay
5-Krouch Saeuch
6-Kuch Noup
7-Chork
8-Don Aov
9-Canal No. 1
11-Ta Saom

SubProject No. 10 is not attached to this Project so it is available for selection by other SubProjects

SubProject no. 10 still has not been selected. Let's create a new Project...

Click the "New Project" button  ...

CISIS by MOWRAM: Define Projects / SubProjects

# CISIS DATABASE

CAMBODIAN INFORMATION SYSTEM ON IRRIGATION SCHEMES

## Edit Projects

Project Name:

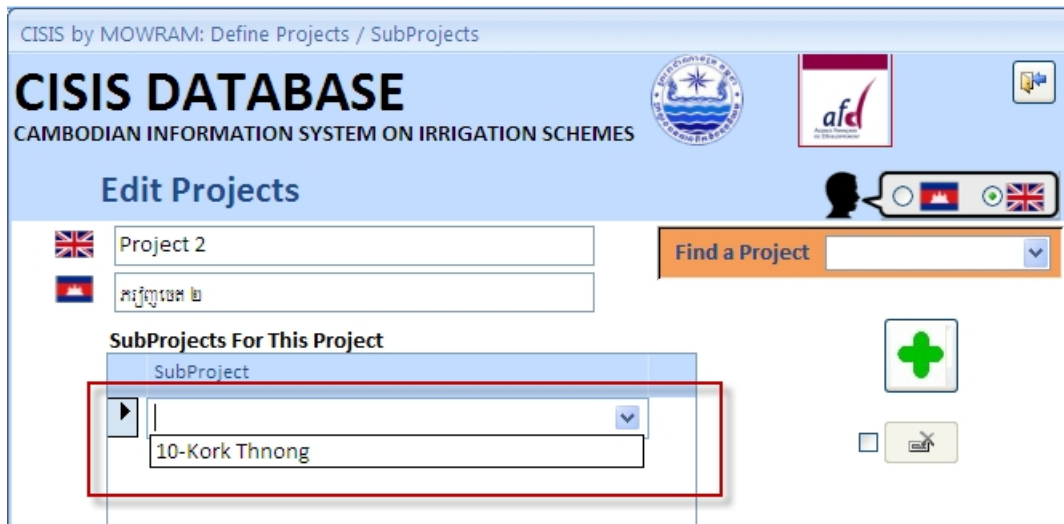
Find a Project:

Enter the Project Name in both English & Khmer and Click Save

Save Button

Gregory D Regan

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



In the new "Project 2" created above, we can only select SubProject no. 10 because the others are already attached to the NWISP Project.

The following controls act the same as explained for SubProjects...

Delete Button...



Save button...



Find...



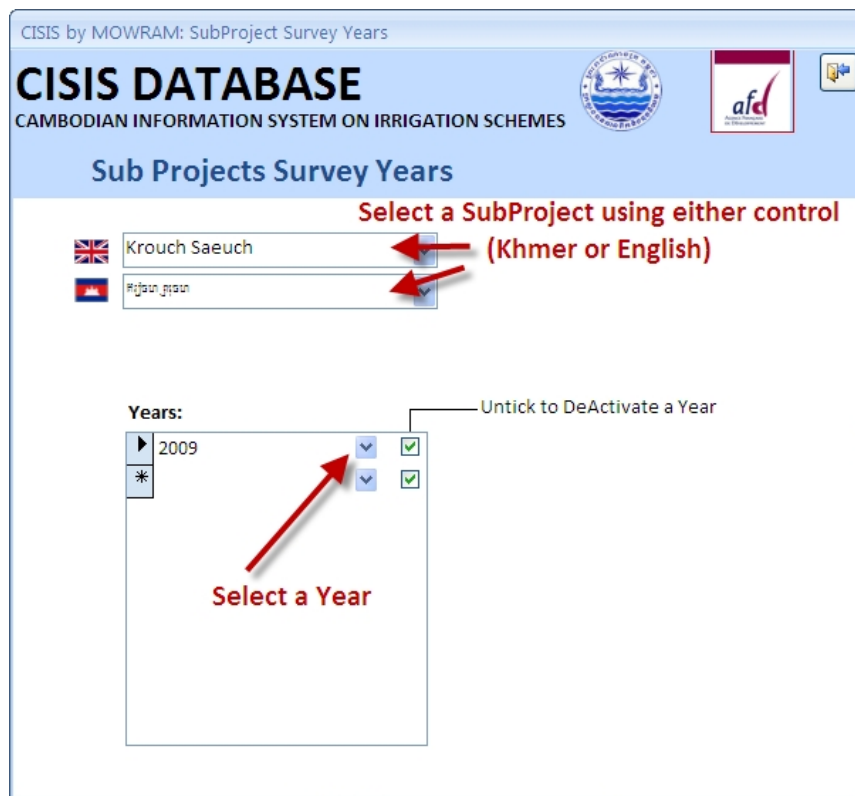
Gregory D Regan

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

## 6.4. Survey Years

Head Office must assign a survey year to each SubProject

Press  ...



Above, you can see “Untick to DeActivate a Year”. Once a survey year is finished and the SubProject office has confirmed that all data entry is completed, Head Office should deactivate the survey year and perform a Data Export to the SubProjects. The SubProject will no longer be able to access data for the deactivated survey year in their module. This prevents historical data being accidentally changed.

At any given time, Head Office should only allow one survey year to be activated. This will prevent SubProjects entering survey data in the wrong survey year.

*DeActivating a year will not delete any survey data entered for that year.*

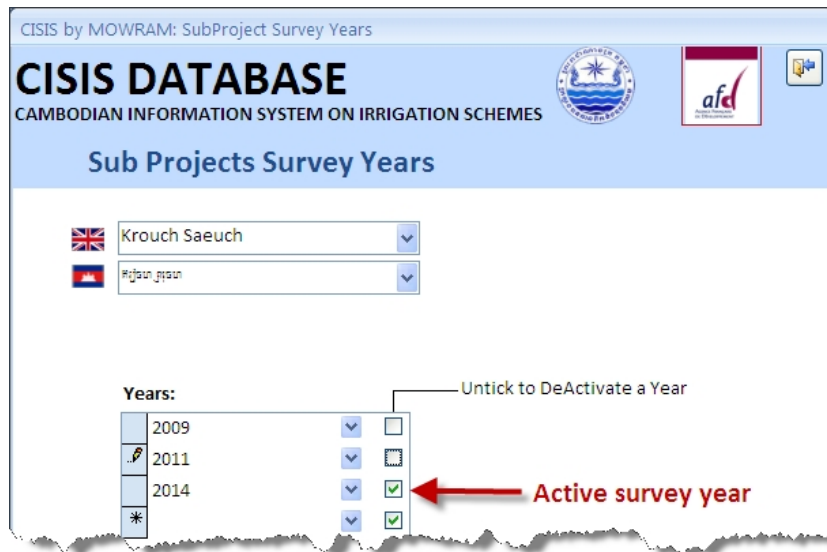
**WARNING: Deleting a survey year deletes survey data entered for that year.**

Deleting a year is not the same as deactivating it. Survey years should only be deleted if it was created by mistake. E.g. you entered 2 survey years instead of just one. If you need to delete a survey year, select it and press the “Delete” key on your keyboard.

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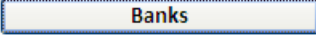
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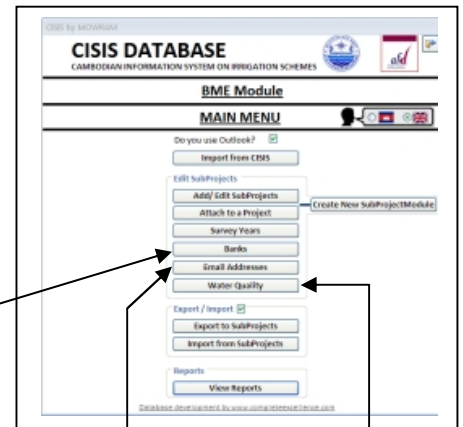
Here is an example of several survey years being created for a SubProject but only one of them is active...



Above, 2009 and 2011 would have been completed. Year 2014 is the survey year currently in progress.

### 6.5. Banks


Press  to edit banks.



Head Office maintains banks to ensure consistency of data. This avoids entering the same bank spelled differently. E.g SubProject 1 enters "ACLEDA" while SubProject 2 enters "A.C.L.E.D.A".

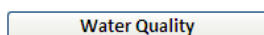
### 6.6. Email Addresses

Email addresses are also maintained by Head Office. SubProjects must request updates by Head Office.

Press  to edit email addresses.

### 6.7. Water Quality

Recommended minimum national water standards are entered by Head Office

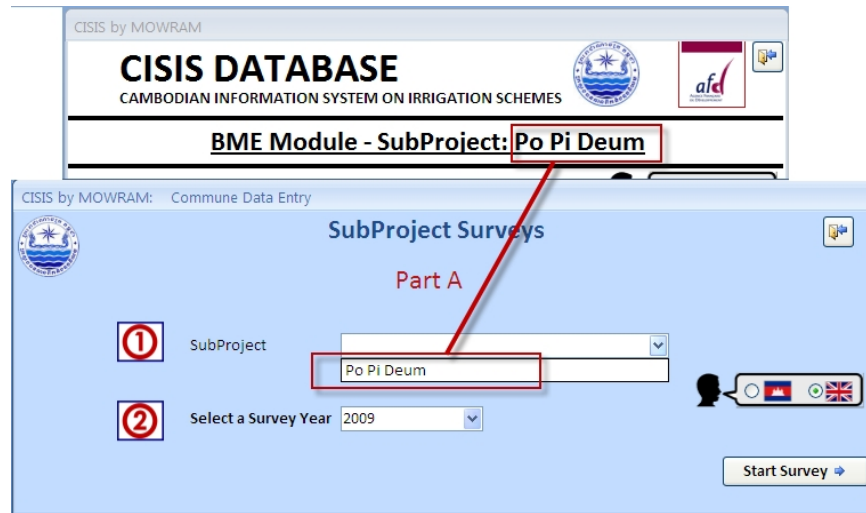


**Gregory D Regan**

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

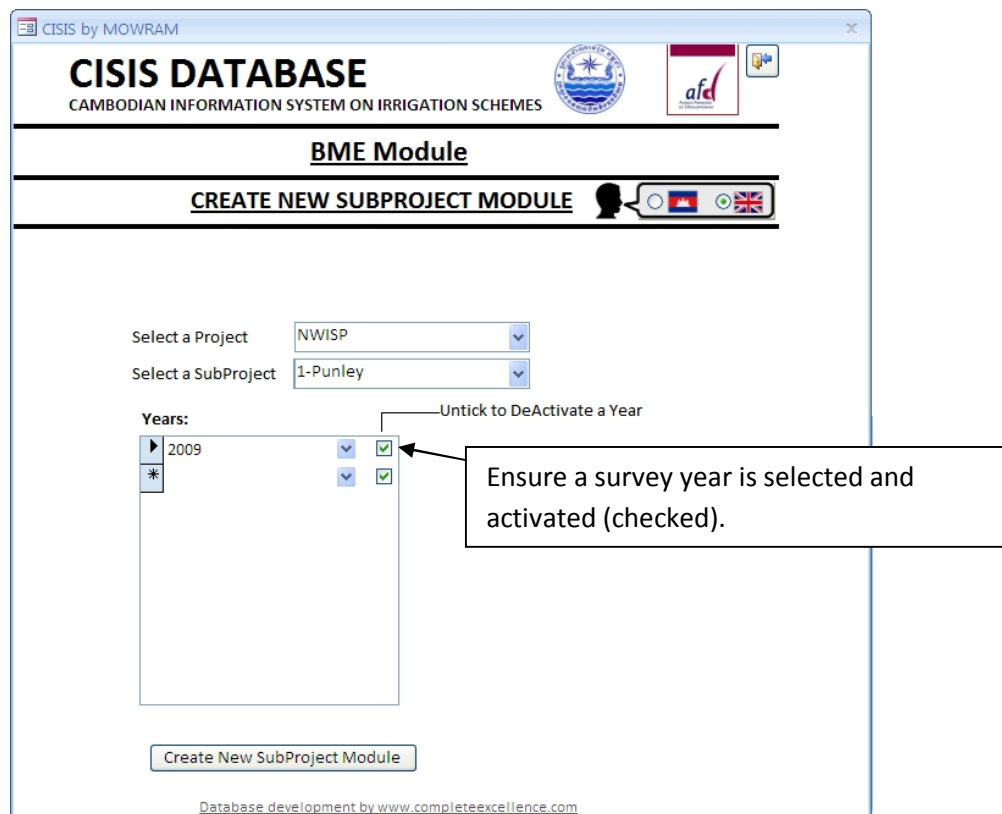
## 6.8. Create New SubProject Module

The SubProject module used by the Commune offices is customized so that each Commune office can only see their own SubProject in screen selections.



In the above example, the software customized for the Po Pi Deum SubProject will only show the Po Pi Deum SubProject. This prevents data entry to the wrong SubProject (particularly important for Part A).

Customizing a SubProject module is automated. Press [Create New SubProjectModule](#) ...



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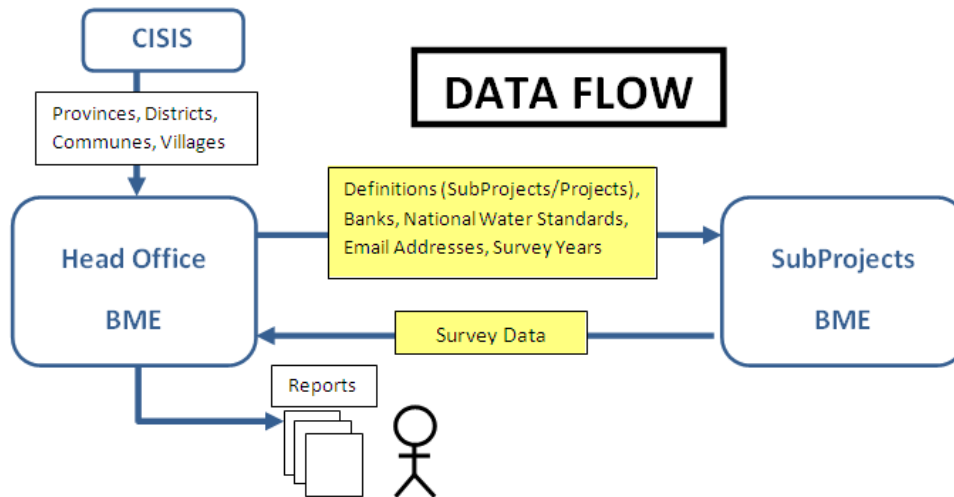
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After selected a Project, SubProject and survey year (if one is not already selected), click the “Create New SubProject Module” button and the new empty SubProject module will be saved to the user’s desktop as a zip file. Send this to the Commune Office responsible for the SubProject.

The Commune Office must unzip the file to the C: drive and software will be located correctly (as explained in *Section 4 “Installing the Software”* above).

### 6.9. Export / Import (Overview)

Data exchange is required between the Head Office module and the SubProject modules. This is shown in the Data Flow diagram below...



The data flows between Head Office and the SubProjects are highlighted in yellow.

Both Export and Import of data can be done using MS Outlook (assuming the user’s MS Outlook is functional). To use MS Outlook for export/import, check the “Do you use Outlook?” box...

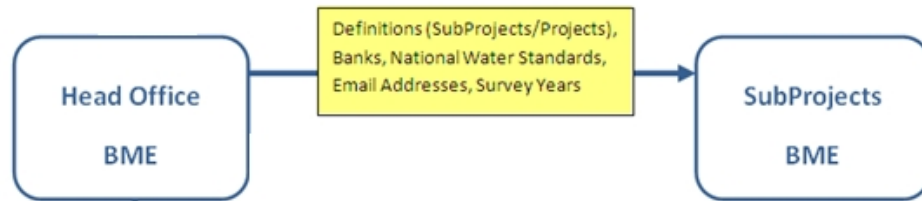


If you choose not to use Outlook the software uses the PC desktop as the place where import/export data is placed.

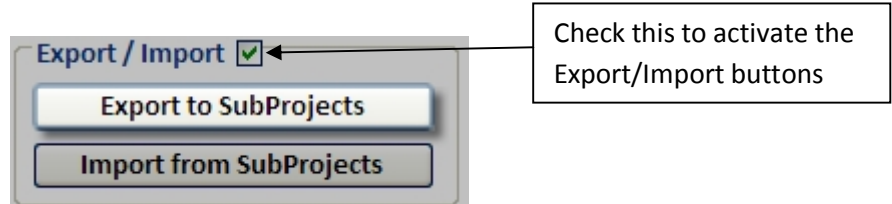
Also, note that Data Export files attached to the emails (both incoming and outgoing) will be removed to prevent your Outlook from becoming bloated. The email itself won’t be deleted so you can check the history of exports and imports. So if you want to resend and Export Data file to the SubProjects, you need to use the module and not resend it directly from Outlook.



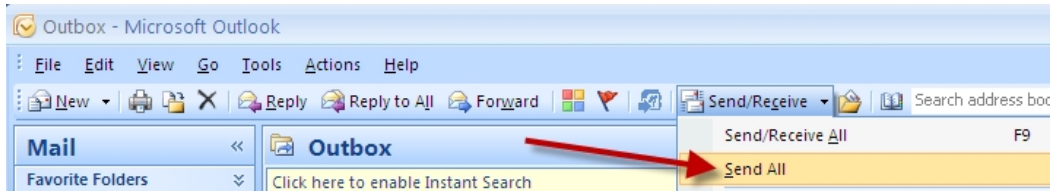
## 6.10. Exporting To SubProjects



To export data to the SubProjects, use the “Export to SubProjects” button.

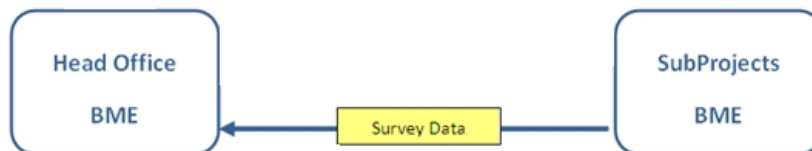
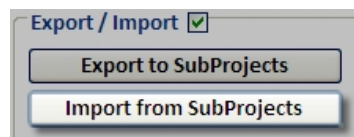


If you are using Outlook, the Head Office Export data file will be automatically emailed to the SubProjects based on the email addresses you have entered for them (see Section 6.6 above). Make sure the internet is activated or the email will not be sent. To make sure the email is sent, press the “Send All” button on your Outlook...



If you are not using Outlook, the Head Office Export data file will be saved to the Desktop. You need to email this to the SubProjects.

## 6.11. Importing from SubProjects



The Commune offices will submit survey data to Head Office from time-to-time as required. This is done by emailing a zipped data export file to the Head Office. These can be processed automatically with or without Outlook.

If you are using Outlook

Do you use Outlook?

the Head Office module will

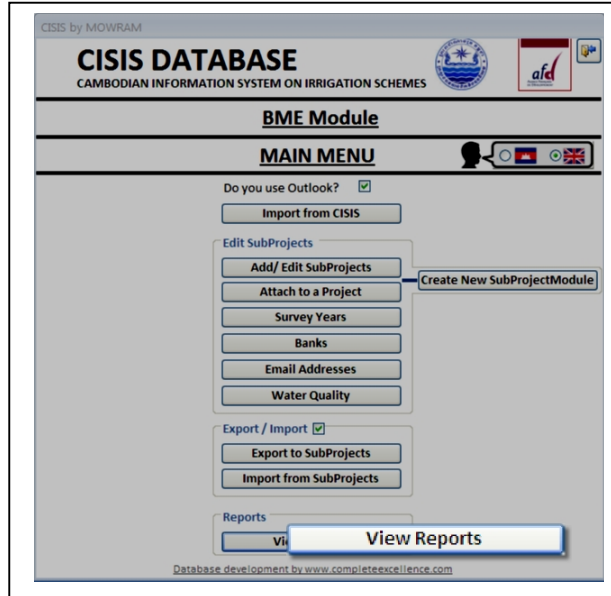
**Gregory D Regan**

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

automatically open Outlook and search the Inbox for the Data Export files emailed by the SubProjects. These will automatically be processed by the module.

If you are not using Outlook, you must save any SubProject Data Export files to the Desktop. The module will find them there and process them automatically. Once processed, they will be removed from the Desktop.

## 6.12. Reporting



There are two reports available

- (1) An MS Word report: this shows a single SubProject and where appropriate, breaks down report statistics by “Wealth Group” e.g. Poor, Average and Better Off.

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

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

Name of Subproject: Punley

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.	15	5	5	5
A2	Average land area per household in benefit area	ha	0.93	1.4	1.4	1.4
A3	Overall Average productivity – DS rice	t/ha	7			

Gregory D Regan

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

- (2) An MS Excel report: this report shows all the SubProjects for the selected Project. Statistics are not broken down by Wealth Group.

Key Indicators: Summary report form for NWISP Year: BaseLine		Punley	Po Pi Deum	Tram Mneash	Anlong Svay	Krouch Saeuch	Kuch Nouy
INDICATOR	Year:	2009	2009	2009	2009	n/a	n/a
57	Average total non-agriculture income for HH last 12 months (USD)	0	0	0	0		
58	% of ISF charged compared to agriculture income (%)	9	0	4	0		
59	Average HH marketable surplus rice (kg)	0	0	0	0		
60	Direct Costs of Production – all crops last 12 months (USD)	301	215	43	172		
61	% of farmer access to formal credit (%)	100	100	100	100		
62	Average interest rate charge by formal credit (%)	25	12	4	14		
63	HH GDP (USD per year)	-301	-215	-43	-172		
64	Poverty incidence (% of HH's)	33	33	8	33		
65	Total labor days input by men for crop production (No.)	4.76	5.33	5.33	3		
66	Total labor days input by women for crop production (No.)	4.76	5.33	5.33	3		
67	Number days hired male labor for crop production (No.)	4.76	5.33	5.33	3		
68	Number days hired female labor for crop production (No.)	4.76	5.33	5.33	3		

The above image shows a report extract for the NWISP Project for the Baseline Year. Note the column to the right shows “n/a” in the year row for the “Krouch Saeuch” SubProject. This is because there is no survey data entered. The report will show a column for all SubProjects in the Project, even if there is no survey data. This is so the user can see which SubProjects still require survey data entry.

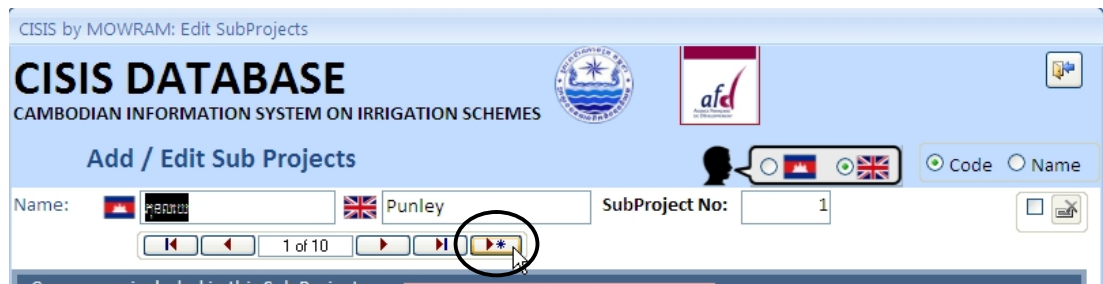
### 6.13. Restoring a Deleted SubProject

Read Section “ 6.9. Restoring a Deleted SubProject” of the SubProject User Manual.

If you accidentally delete a SubProject, it can easily be restored as follows.

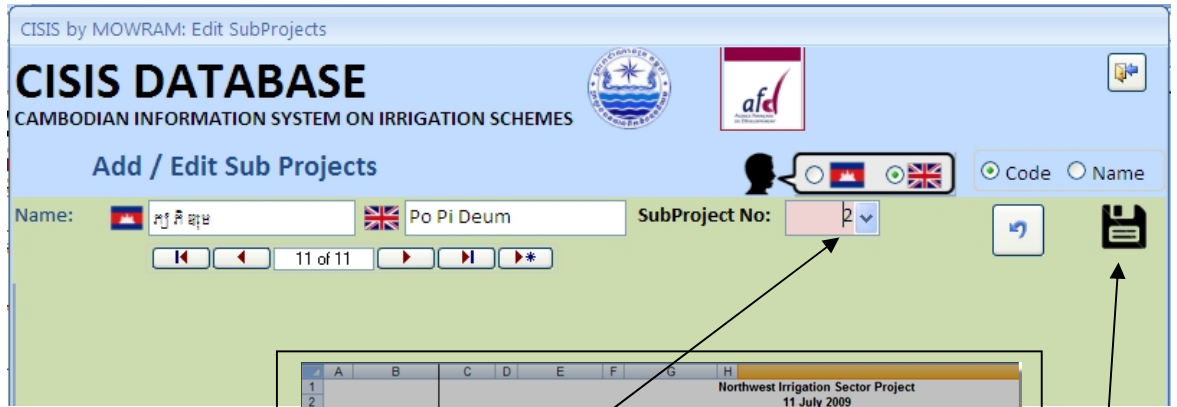


On the next screen, click the “New SubProject” button...



Gregory D Regan

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



Official SubProject List →

No	Subproject	Province	District	Commune	Village
1	Punley	BMC	Phnom Srok Svay Chek	Punley Phkoam	Punley and Ta Vong Svay Sor, Thmar Kaul and Ou
2	Po Pi Deum	BMC	Mongkol Borey	Rohat Teuk Bat Trang Banteay Neang Ruessey Kroak	Po Pi Deum Khtum Reay Keut, Anlong Thngan Keut, Bang Bat Ke Phnom, Kork Phnov, Trang and Pongro Neang Ket and Chamka Tadoak
3	Tram Mneash	PUR	Krakor	Thnot Chum	Dangteuk Leach, Chambok Thom, Tbeng Chrum, Tran Roung Talok, Keun, Phnom Chh, Sat, Ph, K

Make sure the SubProject number matches your official SubProject List

Click the Save button

...and close the form. (You don't need to enter all of the communes and villages for the SubProject).

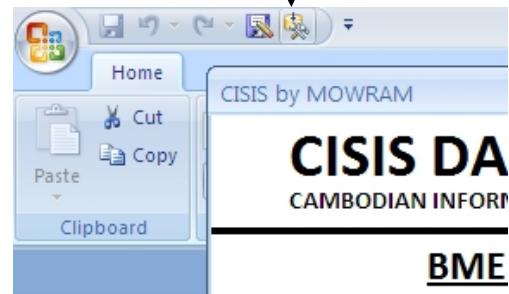
Ask the SubProject to do a Data Export to you and then run the "Import from SubProjects" process.

The SubProject will now be restored with all of its survey data.

### 6.1. Running Compact and Repair Database

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

To do this, click here...



Gregory D Regan

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

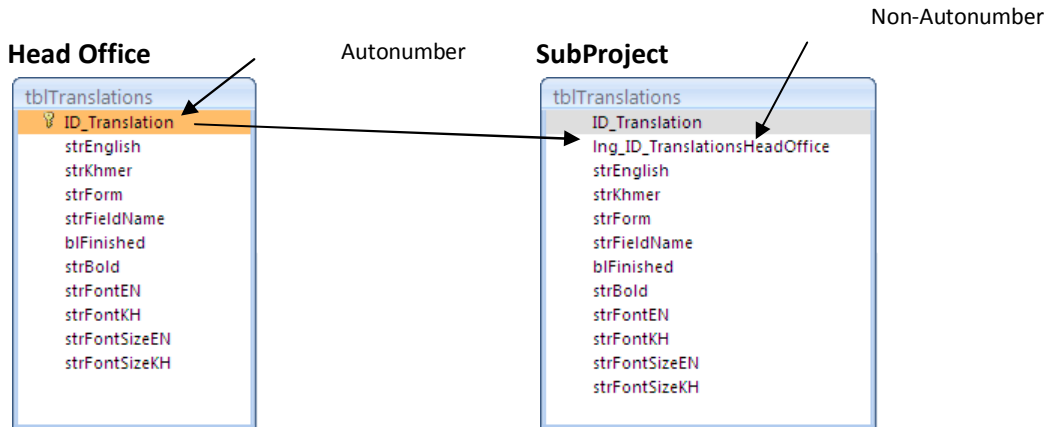
## 7. TECHNICAL NOTES

### 7.1. Head Office Module compared to the SubProject module

Basically, the table/relationship structure of both modules is the same except for a few differences:

#### Translations table (tblTranslations)

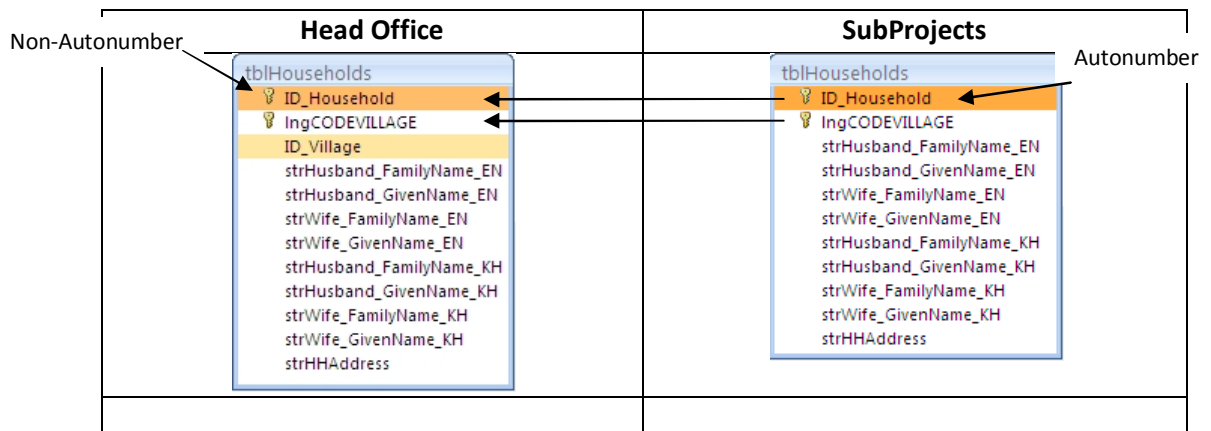
The SubProject version has an extra non-AutoNumber index column so it can import the Head Office Autonumber index. The form labels refer to the Head Office tblTranslations index number. If the SubProject tblTranslations index was also AutoNumber it could increment independently from the Head Office table and the SubProject labels would point to the wrong translation (or none at all).



The same situation exists for the Banks (tblBanks) table

#### Households table (tblHouseholds)

The Head Office households table version of tblHouseholds' index field (ID\_Household) is non-Autonumber so it can accept the SubProjects' Autonumber index. Each SubProject will assign an AutoNumber index to its own Households. So SubProjects 1, 2 and 3 can all have a Household No. 1. Obviously, if the Head Office table accepts three different Households with the same index number, Head Office has no unique index. So the Primary Key in both modules is multi-field: both ID\_Household and IngVillageCode (a unique village code). Households coming from different SubProjects will not have the same village code as a village can only belong to one SubProject.



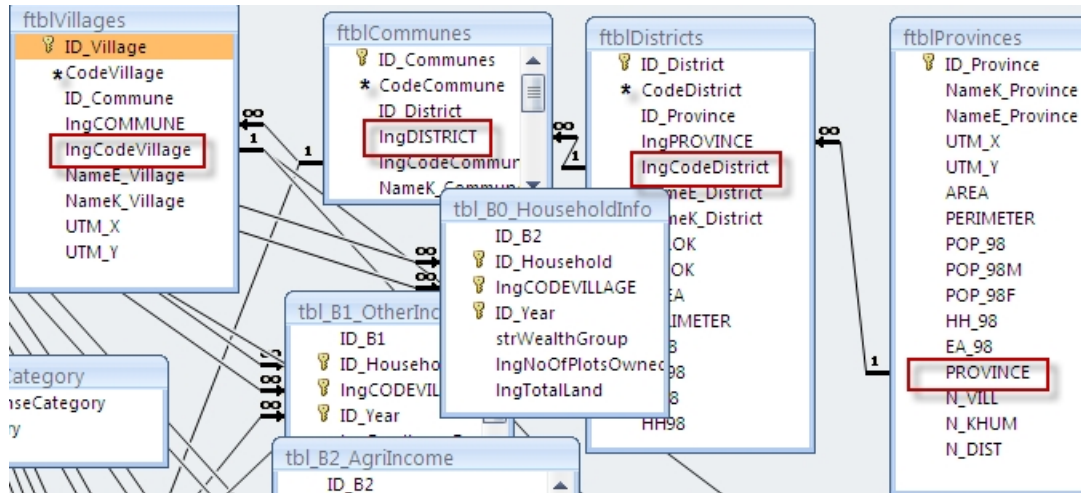
Gregory D Regan

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

## 7.2. Difference to the original CISIS database

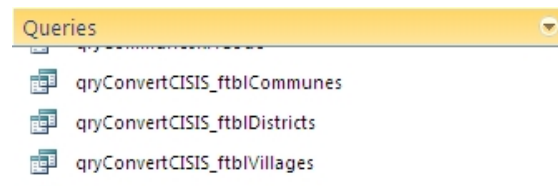
Unlike the original CISIS database, the BME modules (both Head Office and SubProject) use the official government geographical codes in relationships with the tables for Provinces, Districts, Communes and Villages.

The BME modules rely on importing all data from the above mentioned tables so cannot use their own Autonumber index in relationships as Autonumber indices can increment independently. Imagine a Province with an Autonumber index of 1 and an official government Province Code of 01 is accidentally deleted in the CISIS database. The mistake is found and it is restored. Now it may well have an Autonumber index of, say, 25. If the BME modules referred to this index in its relationships, any data depending on the original Autonumber index of 1 would be orphaned. When the Province is restored though, it will be re-entered with the official government Province Code of 01. As long as the BME modules use the government Province Code, accidental deletion and restoration of a Province, District, Commune or Village will not cause a problem (assuming, of course, in the above example, that the deleted Province is in fact restored.)



It is also important to note that the official government codes while appearing as numbers are actually text. For example, a District code may be 0101. Because it has a leading zero, it must be captured as text. However, as I don't like using text in relationships, I have converted these codes to integers e.g. 0101 become 101.

This conversion occurs when the geographical tables are imported from CISIS to the Head Office BME module. This done by the queries shown below...



Gregory D Regan

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

The fields containing the original government code is shown with an asterisk in the above relationship diagram. The fields bordered in red are my conversions for use in relationships. The queries above add the converted field (integer version of the government code) then the record can be added to the BME tables.

### 7.3. Overview: Exporting from Head Office to SubProject

The following tables are exported in this process:

- Provinces (ftblProvinces)
- Districts (ftblDistricts)
- Communes (ftblCommunes)
- Villages (ftblVillages)
- Banks (tblBanks)
- Font (tblFont)
- SubProjects (ftblSubProjects)
- SubProject / Communes (tblSubProjectCommunes): defines which Communes belong to which SubProjects. This is the parent table of the tblSubProjectVillages table
- SubProject / Villages (tblSubProjectVillages): Defines which villages belong to which SubProject (child of the tblSubProjectCommunes table above)
- Project / SubProjects (tblProjectSubProjects): defines which SubProjects are grouped together under which Projects
- SubProject Years (tblSubProjectYears): defines each SubProject's survey years.
- Translations (tblTranslations)
- Email Addresses (tblEmailAddresses)
- Water Quality (tblRecommendedWaterQuality)

In the SubProject module, when importing from Head Office, the last 3 tables above are completely destroyed and completely re-imported each time. These tables have no dependents so no data will be destroyed during this process from Access's cascading deletions (referential integrity)

Programmatically in the SubProject module, the imports are done by:

- Append Queries: to add any new records found
- Delete Queries: to delete any records in the SubProject that were deleted in the Head Office module

An exception is the Villages table. At the time of development, it has 13,866 records and the delete query runs very slowly. So deletions are done programmatically in the cmdImportFromCISIS routine (see programming comment "*Special routine for villages as the delete query takes too long to run*").

**Gregory D Regan**

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

#### 7.4. Overview: Exporting from SubProject to Head Office

The following tables are exported from the SubProject in this process:

- **SubProjects (ftblSubProjects)**
- **SubProject / Communes (tblSubProjectCommunes):**
- **SubProject / Villages (tblSubProjectVillages)**
- **SubProject Years (tblSubProjectYears): defines each SubProject's survey years.**
- Households (tblHouseholds)
- Survey tables A1 to B8
- SubProject Prices (tblPricesBySubProject)
- Email Addresses: only the email address for SubProject concerned is exported

**Explanation:** When the Head Office module performs the routine to import the above tables, it first destroys the SubProject in the ftblSubProjects table. This cascade deletes all dependent data e.g. SubProject/Communes, SubProject/Villages, SubProject Years and all survey data for that SubProject held in tables A1 to B8. This deleted information is completely re-imported. In this way, any corrections by the SubProjects to past data are automatically picked up.

Accidental changing of past data in finished survey years is protected because Head Office can de-activate each Subproject's survey years as they are completed and the SubProject will no longer have editing capability for that survey year (see Section 6.4 above). So the SubProject's ability to correct/edit/enter data, described in the above paragraph, should only be available in the current survey year.

#### 7.5. Data Exchange via MS Outlook

The export/import processes between Head Office and SubProjects can be done via MS Outlook. However, this process has not been tested live with the SubProjects because at the time of development, neither Head Office nor the SubProjects were using MS Outlook.

#### 7.6. Create New SubProject Module

The template database, *C:\Program Files\MOWRAM\_BME\Database\SupportDocs\CISIS\_BME\_SubProjectTemplate.accdb*, contains a complete model of the SubProject software except that it lacks the following queries...

- ftblQrySubProjects
- tblQrySubProjectCommunes\_Custom
- tblQrySubProjectVillages\_Custom

The above are customized according to the selected SubProject and inserted when the SubProject is created. This process means that although each SubProject module contains a full list of all SubProjects, each SubProject can only see its own SubProject in the drop down boxes.

Once the above program routine is finished, a zip file is created programmatically that contains the support documents such as zip DLL's, report templates (MS Word and MS Excel) and an empty backend. This backend is held in the SupportDocs folder, not the BackEnd folder. When

**Gregory D Regan**

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



the SubProject installs and runs the software for the first time, **a check is made to see if a SubProject backend already exists in the BackEnd folder.**

- **If Yes**, it means the computer doing the install already has another SubProject installed so the new empty backend in the SupportDocs folder is not copied to the BackEnd folder. This is because, it is possible that a commune office administers more than one SubProject. There will be a separate accdb file in the Database folder but they will share the same backend database.
- **If No**, the empty backend in the Support Docs folder is copied to the BackEnd folder for use by the front end accdb in the Database folder.

The SubProject will have to run a Data Import from Head Office the first time the software is run as it when first installed, it does not contain the SubProject definition (Communes, Villages) nor up to data translations (used for the bilingual screens).

**Gregory D Regan**

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