User's Manual for CBMS StatSimPro 5.0

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User's Manual for CBMS StatSimPro version 5.0

I. Introduction

This manual contains guidelines and instructions on the use of the CBMS Statistics Simulator (StatSimPro version 5.0.) designed and customized for the LGU partners of the CBMS Network.

The StatSim is a MySQL application developed to simulate simple computations and tabulations usually done using statistical software or other tabulation applications and also to export indicators for use in dissemination such as tables and maps. Although this has the mentioned capability, this is not intended to replace the use of more sophisticated statistical software like SAS, Stata or SPSS.

A. System Configuration

It is recommended that the following system configuration should be met for better and faster processing:

- ➢ Intel Core processor or higher
- ➢ 1GB of RAM
- ➢ SVGA monitor
- ➢ Mouse
- ➢ 1GB of free hard drive space
- ➢ Microsoft Windows XP, 32-bit Vista, 32-bit and 64-bit Windows 7
- ➢ Microsoft Office 2003

B. Installation

The step-by-step installation procedure below will update the existing CBMS encoding system in the computer. The installation is quick and simple.

Steps in installing the software:

1. Insert the installation CD provided by the CBMS Team in the computer's CD-ROM drive
2. The setup menu will automatically popup. If it does not, open windows explorer and double click the CD drive where the CD is located and run "**manage.exe**".
3. The StatSim Pro 5.0 setup will prepare the Installation Wizard.
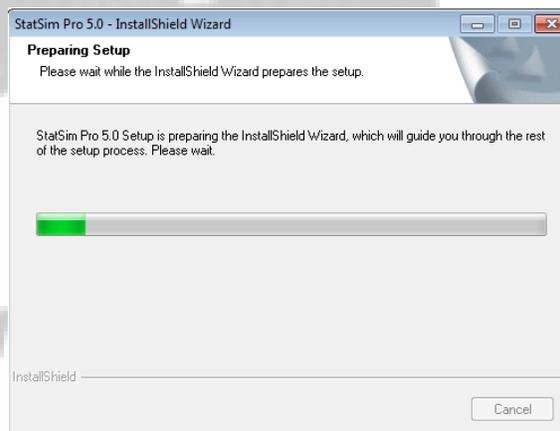
4. The Installation Wizard will start. Click **"Next"** to proceed with the installation.
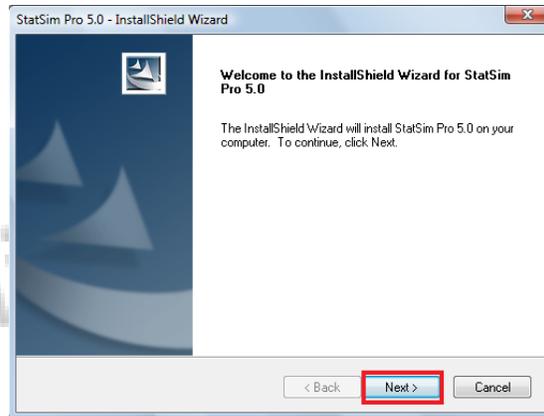
5. The setup will require the user to accept the agreement upon using the software. After agreeing on the terms, click **"Next"**.

6. A pop-up screen will appear asking for Customer Information. Enter the name of the user as well as the company/office name. Click **"Next"**.
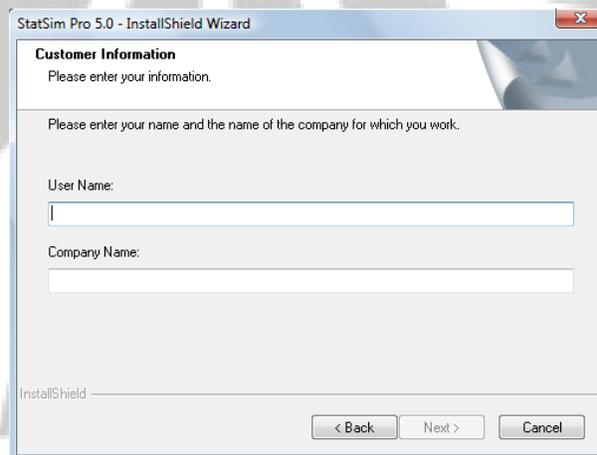
7. The user will be prompted to select a set-up type. Select Complete and Click **"Next"**.
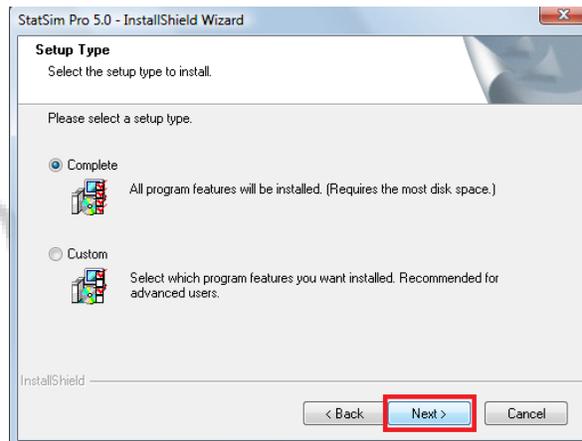
8. Click Install to begin the Installation.
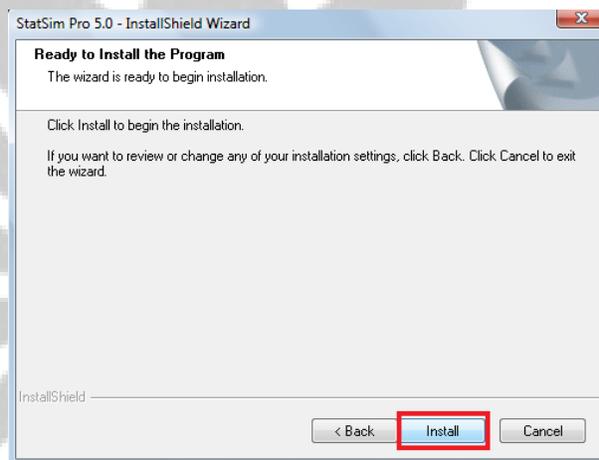
9. A pop-up screen will appear informing that the InstallShield Wizard has successfully installed CBMS StatSimPro 5.0. Click "**Finish**".
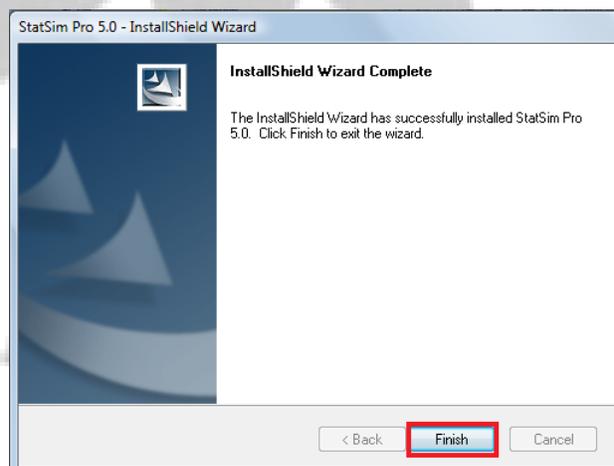
II. General instructions

- Set-up and maintain a computer that will serve as your data repository. This computer should store all encoded text files and NRDB files.
- Before using the StatSim for processing and consolidating your data, check first for the accuracy and consistency of your text files.
- If needed, perform concatenation procedure (refer to Section III of the User's Manual for the Computerized Data Encoding System) to merge encoded household data from same barangays. This is crucial prior to the simulation process.
- Check the matching of households in the encoded data and digitized spot map using the Household Identification Number. **Complete matching of households for both datasets must be attained before processing to avoid repeating the steps.**
- The application will guide the user through the process through clicks and dialogs.
- Create a copy of the CBMSdatabase folder in a remote area which will serve as back-up.

III. Preparing Encoded Data for StatSim Processing

A. CBMS Database Structure

By now, the encoders and processors are most likely familiar with the file structure of the CBMS Database. However, it must still be noted that the general file/folder structure of the CBMS Database is:

C:\CBMSDatabase\\<Region>\\<Province>\\<Municipality>\\<Barangay>

The folder structure was designed so that the encoded data are stored by barangay. Thus, each barangay folders contains the text (ASCII) file where the household data are stored. Recall that the folder names make use of the Philippine Standard Geographic Codes (PSGC). For instance, if the encoded data of interest is Brgy. Pila, San Pascual, Batangas, the target file will be:

C:\CBMSDatabase\04\10\26\019\041026019.hpq

The file path above refers to the folder containing the encoded data (**041026019.hpq**) of Barangay Pila (019), San Pascual (26) in Batangas (10) in Region IVA (04). The folder structure is the same in all computers used for encoding.

IV. Generating Indicators through the CBMS StatSim Pro

A. Opening the StatSim

1. Starting the StatSim application

a. Click on the shortcut icon from the desktop

b. Click on the shortcut icon in the Start Menu
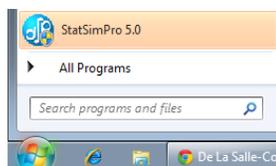
c. Click **Start**, click on **All Programs**, select **CBMS Database** and click on **StatSimPro 5.0**

2. Initializing the StatSim database

a. The Login window will appear. For the username, default is "**admin**". There is no password required. Change the database name according to the name of the province and municipality/city. Example: bulacan_hagonoy. Click the button **OK**.
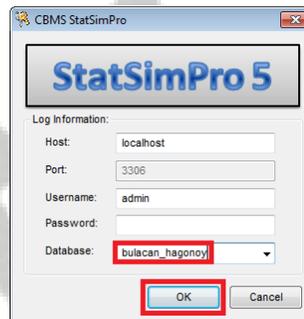
b. Another window will appear saying that the database still does not exist. Click **Yes** to create and initialize the database. Note: The next time the user will open StatSimPro 5.0, the database is already in the pulldown list.
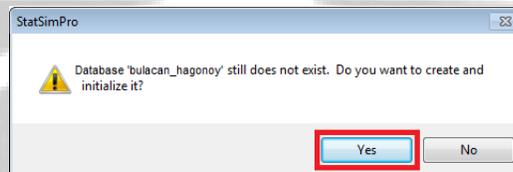
c. The StatsimPro is a menu and dialog driven application. Thus, the user only has to click and select from among the options to proceed and generate the desired outputs. Statsim is also a customized application for a specific CBMS questionnaire version and local government unit (LGU) using the said questionnaire version, thus all information contained in questionnaire can be derived and processed for the LGU. Each questionnaire is differentiated by the HPQ version number.

Note that this 1st version of StatSimPro 5.0 released October 2011 is specifically for the latest CBMS HPQ version 01201101.

d. Configuring the database means specifying the level to be municipal, provincial or regional database. For this example, create a municipal database.
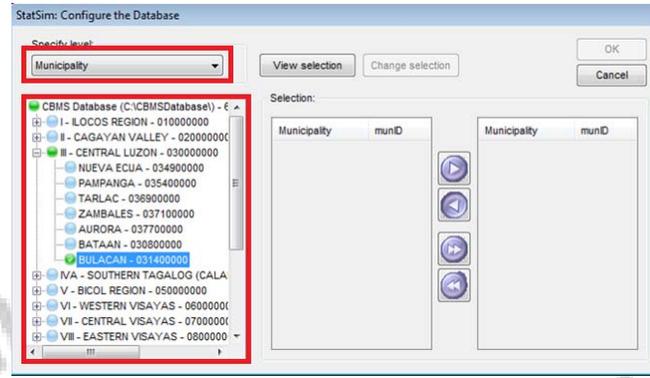
e. Click the button **View selection.** From the listed municipalities, double click on the name of the municipality and Click **OK.** For this example, StatSim database for the municipality of Hagonoy in Bulacan will be created.
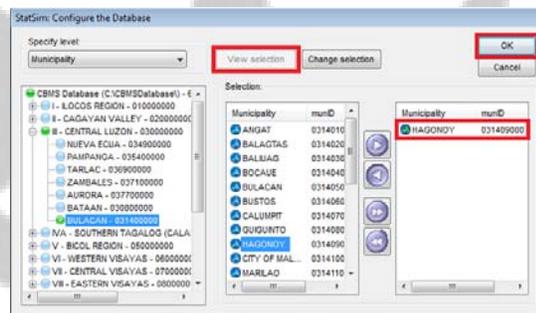
The StatSimPro 5.0 interface will now open.
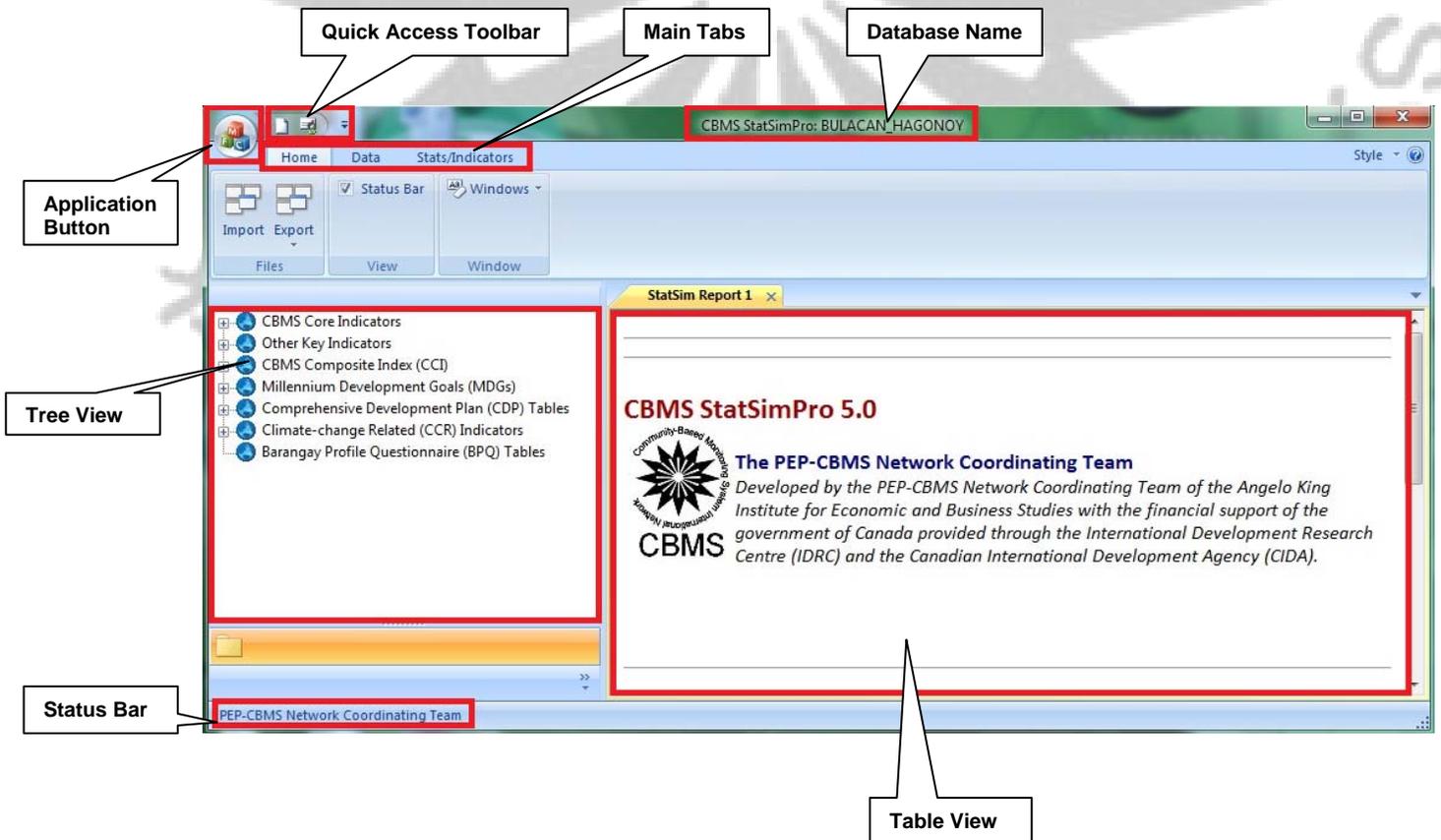
Note: When you are opening a configured database, you will not need to do the procedures discussed in (b) to (e).

1. Application Button – shows a menu of file-related commands such as New, Print and etc.

2. Quick Access Toolbar – a customizable toolbar that displays the frequently used commands.

3. Main Tabs- display the main features and functions of the system. There are 3 main tabs:

    a. Home – under this tab, the user can import and export data, show or hide the status bar, and manage the report windows.

    b. Data – this tab is divided into 2 groups related to data management. Under this tab, the user can manage the created database, reprocess or update the imported data, match data with digitized households in NRDB, and edit thresholds to be used in processing.

    c. Stats/Indicators – enables the user to directly access the HPQ or BPQ crosstabs of CSPro, NRDB, Encoding system and StatSim 4.0. Users can also create or customize reports other than the automatically generated reports using the execute SQL feature.

4. Database Name – displays name of the database being accessed.

5. Tree View – shows the hierarchical view of the available reports generated by the system. There are 3 categories of automatically generated reports in the tree view namely CBMS Core Indicators, LGU Specific Indicators and CBMS composite Index. Each category can be expanded to reveal the sub-items.

6. Status Bar – found at the bottom of the user interface. It shows the progress of the importing and processing of data.

7. Table View – displays the reports selected in the tree view.

B. Importing CBMS Data

This section will guide you through the process of importing your encoded data file into the StatSimPro. In the importing process, the StatSimPro transforms the encoded data into a database ready for further processing and tabulation.

1. To import an encoded barangay data, go to Home in the main tab, then select Import.

The user has 2 ways of importing the encoded data: one is the option to select the text file through the **Auto selection of levels** and the other is by the **Specify path** option.
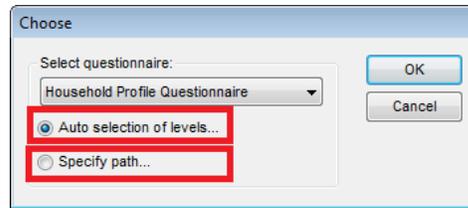
a. Auto Selection of levels

The geopolitical levels are pre-specified following the Philippine Standard Geographic Code (PSGC) folder structure. In the example below, the selection starts from the region, next is the province, followed by the list of municipalities (viewed in the first box) and all barangays under each municipality. The list of barangays can be seen at the second box in the window. Selecting the barangays is easy as selection buttons are present between the second and third box. The third box contains barangays which have been selected from the second box.

First box:
PSGC folder structure

Second box:
List of barangays under each municipality

1st button: **Select** a single barangay
2nd button: **Deselect** a single barangay
3rd button: **Select** multiple barangays
4th button: **Deselect** multiple barangays

Third box:
List of selected barangays from the second box
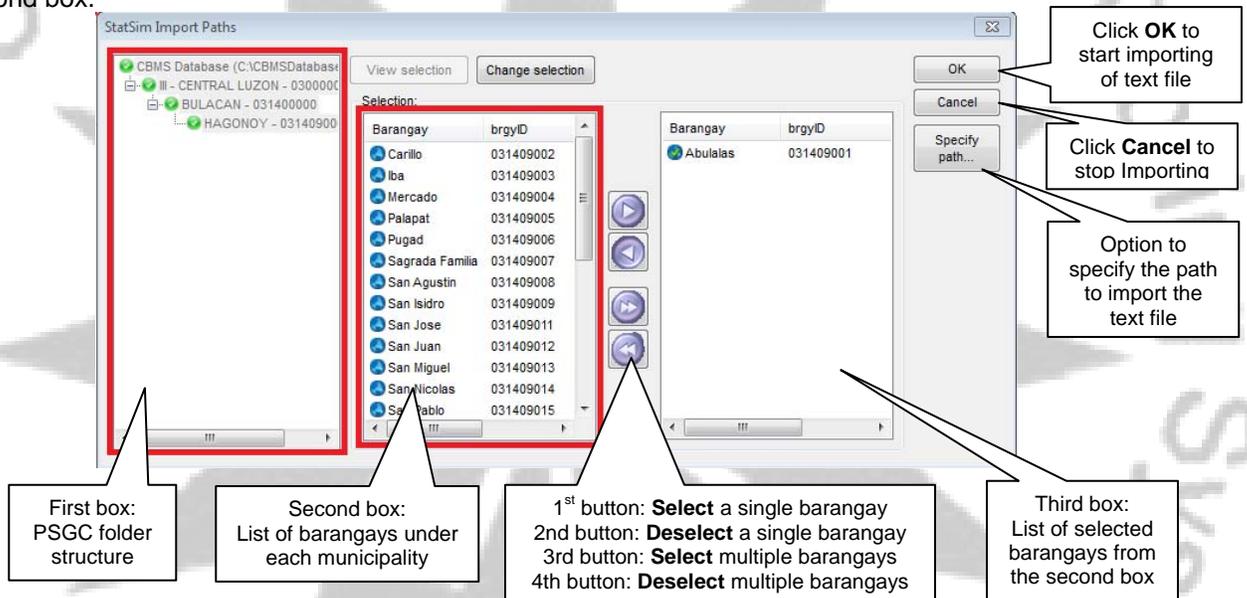
b. Specify path

The specify path options allow the user to manually select the encoded data similar to opening files using windows explorer.

1. In the window, click the button Add to open the browser.

2. From the browser, select the text file. Usually, as instructed during the training, all the text files follow the PSGC folder structure. For example, in selecting the text file of Brgy. Abulalas, Hagonoy, Bulacan select the text file 031409001.hpq from the folder C:\CBMSDatabase\03\14\09\001.

Click **OK** to start importing of text file

Click **Cancel** to stop Importing

Option to Auto-select the text file

The user can add multiple text files by going to desired paths.

Click **Add**.. to add a text file by browsing the folders

Click **Remove** to remove an added text

Click **Clear** to remove all added text files
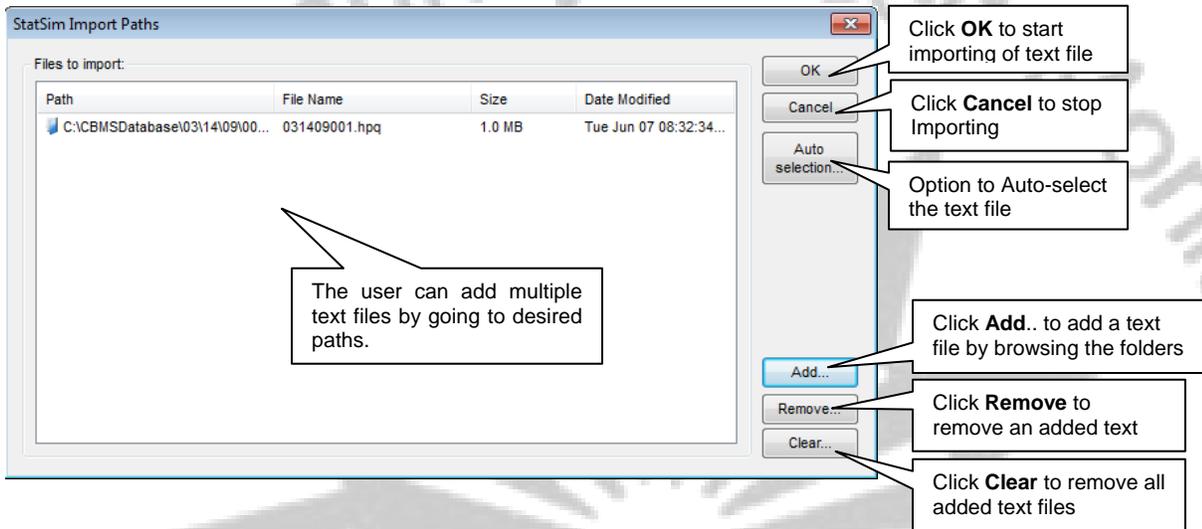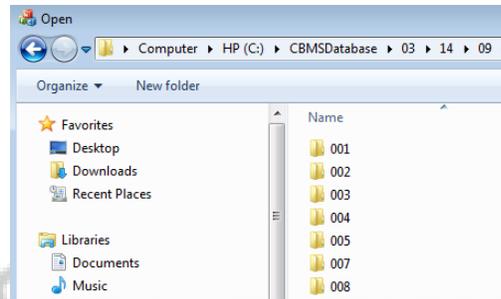
3. After selecting the text file/files from the auto selection of levels or through specifying the paths, click **OK** to start.

4. After the selected files have been imported, a window will appear to ask if the user wants to import another set of data. Click Yes button to add again using the same process or No if user is already done importing desired text files.
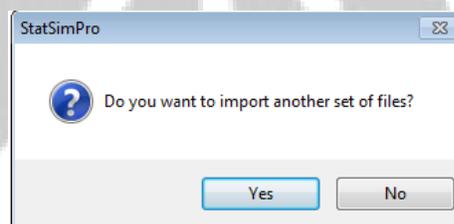
5. Another window will appear, click **Yes** to start the processing.
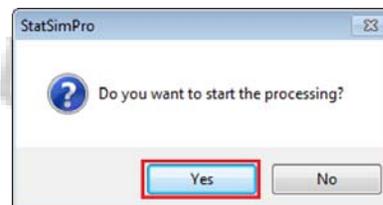
6. A window will appear to ask if the user wants to edit the Purok names. Recall that in the CSPro-based encoding system, all puroks are encoded as codes to reduce mismatches in names.

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This step is very crucial because the labels/names of the puroks in this section must match their names in the NRDB file since matching of these files is both case- and space-sensitive.

7. Click **Yes** to edit the Purok names.
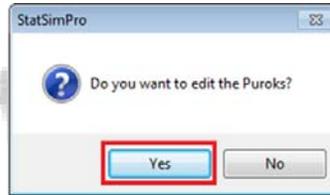
8. Double-click on the PurokName or click Edit to change the names. After editing all the names, click **OK**.
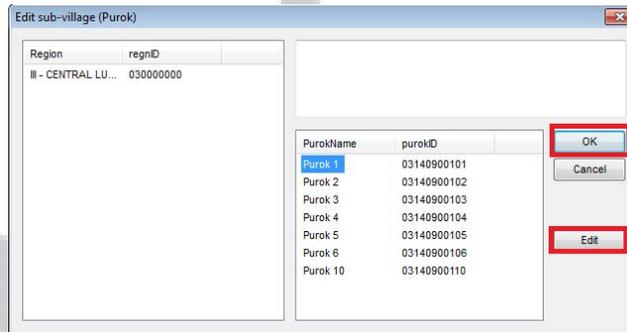
9. The user will now be prompted to select at what level the data will be processed. User can select from the label in the first box and click the button to specify the desired geopolitical levels.

First Box: All levels are seen here. Highlight the desired level to process data

1st button: **Select** a single level
2nd button: **Deselect** a single level
3rd button: **Select** multiple levels
4th button: **Deselect** multiple levels

Second Box: All selected levels are seen here.
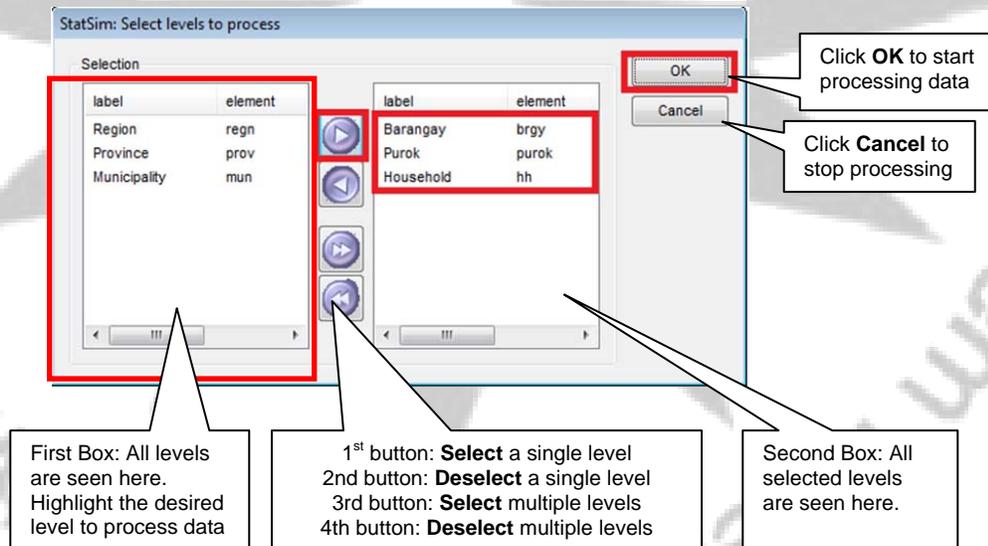
C. Processing CBMS Data

1. 13+1 Core Indicators

The user will be asked if he/she wants to process the CBMS core indicators. Click **Yes** to proceed.
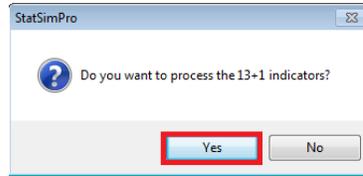
While StatSim is processing, you will see the status of the processing activity at the lower left of the page. Please note that the length of time required in processing the data depends on the size of the file, number of text files that the user is processing and the number of selected levels (region, province, municipality, barangay, purok and households). When done, the user will be prompted that processing has been completed. Also, the status bar will now indicate "**ready**" or "**done**".
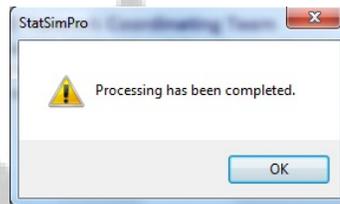
2. Millennium Development Goals Indicators

Localized MDG indicators can also be processed in the StatsimPro 5.0. To generate the table containing MDG indicators, go to **Data** and click **Process/Update**. Select **Process Millennium Development Goals.**

Then, select the levels to process and click OK.
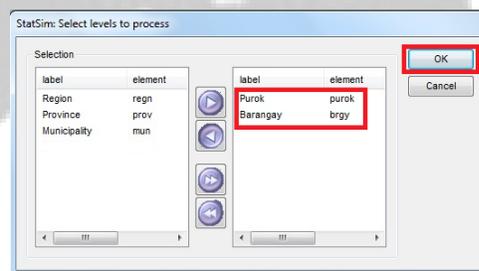
3. Other Key Indicators

StatSim Pro 5.0 can also process and generate results on other key indicators that are related to programs, community participation, migration, Senior Citizens, PWDs, Solo parents and others. To process these indicators, go to **Data** and click **Process/Update**. Select **Process Other Key Indicators.**
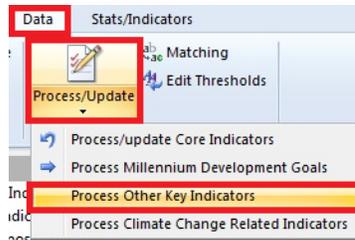
Then, select the levels to process and click OK.
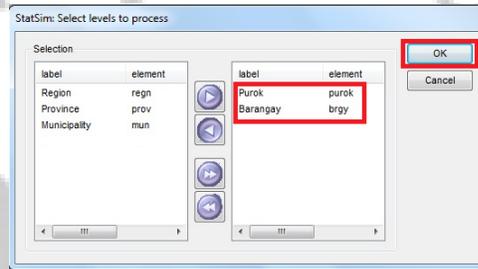
4. Climate Change-Related Indicators

The updated CBMS questionnaire includes climate change-related questions. All these data can also be processed using StatSim Pro 5.0. To process, go to **Data** and click **Process/Update**. Select **Process Climate Change-Related Indicators.**
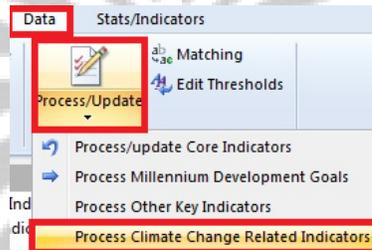
Then, select the levels to process and click OK.
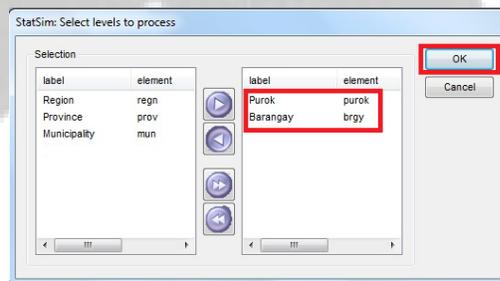
D. Displaying the CBMS Data

1. Core Indicators

To view the data, the StatSim contains the tree view of the report tables in the left side of the interface. To display the CBMS Core Indicators, click on the **CBMS Core Indicators** in the report view. Choose the level of the data you wish to view. If you choose to display the CBMS Core Indicators at the barangay level, then you will be able to view an output similar to the one displayed below:

If you choose to display the CBMS Core Indicators at the household level, below is the sample output:

Users can simultaneously display reports by clicking on the specific sector and indicator then chose the level of data to view. Every time the user selects a report, a new window will open and display the selected report. For example, to view the prevalence of malnutrition at the purok level, below is the output report that shows data for all puroks of Brgy. Abulalas.

Table 1. malnourished children by sex, by purok

| purok | number of children 0-5 years old | | | malnourished children 0-5 years old* | | | | | |
| | | | | Magnitude* | | | Proportion** | | |
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Abulalas	65	34	31	1	1	0	1.54	2.94	0.00
Purok 01	39	22	17	0	0	0	0.00	0.00	0.00
Purok 02	0	0	0	0	0	0	0.00	0.00	0.00
Purok 03	9	5	4	0	0	0	0.00	0.00	0.00
Purok 04	0	0	0	0	0	0	0.00	0.00	0.00
Purok 05	13	5	8	1	1	0	7.69	20.00	0.00
Purok 06	4	2	2	0	0	0	0.00	0.00	0.00
Purok 10	0	0	0	0	0	0	0.00	0.00	0.00

*Malnourished children 0-5 years old or children who are moderately or severely underweight
**Number of malnourished children 0-5 years old over number of children 0-5 years old
Source: CBMS 2010 - 2011
Source: CBMS 2010 - 2011

2. Users can also view the following reports automatically computed by StatSim Pro:

a. Other Key Indicators

Automatically-generated reports are now available for selected key indicators found in the HPQ.
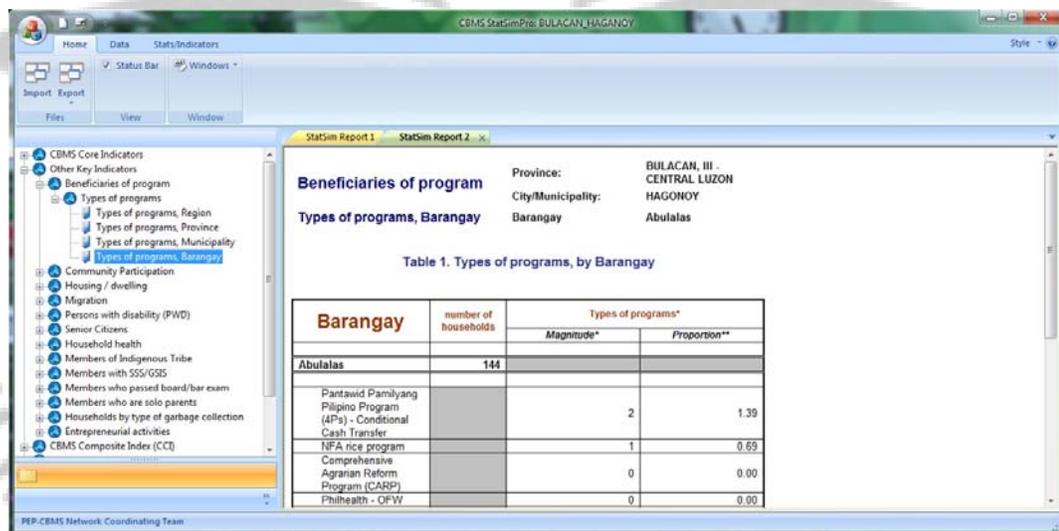
b. CBMS Composite Index

There are 14 basic needs (14 CMS core indicators) that each household should meet. The CBMS Composite Index (CCI) is the sum of all unmet needs of the households. For example, HH#1 have (1) income below poverty threshold; (2) have children who are malnourished; and (3) have children who are not attending elementary school. Thus, the CCI of HH#1 is 3. Below is a sample output. Note that the list is sorted according to the lowest to the highest CBMS Composite Index. This index is useful in targeting beneficiaries of programs. In terms of the 14 multi-dimensional indicators of poverty, the higher the number of CCI, the poorer the household is.

At the purok and higher geopolitical levels, the CCI is the ***average household scores*** at that level. In the example below, the average unmet needs of the households in Brgy. Abulalas is 1. This number is useful in targeting barangays with the highest average unmet needs.

Among puroks, Purok 04 has the highest average unmet needs.

c. Millennium Development Goals

d. Comprehensive Development Plan

e. Climate Change Related Indicators

E. Customizing Tables

Aside from the automatically generated data, users can also create their own tables using all variables found the HPQ. Kindly refer to Manual on Executing SQL statements to generate CBMS data using Statsim.

F. Matching Households in the Encoded Data and Digitized Barangay Spot Maps

Before exporting the processed dataset into the NRDB Pro, you should ensure that the households in your encoded data (i.e., text file) match with the households in your digitized barangay spot maps. To do this, do the following:

1. Click on **Data**, select **Matching**.
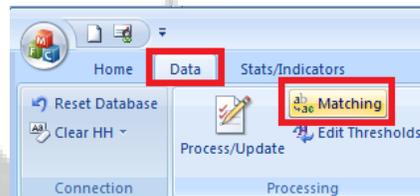
2. You will be prompted to open your NRDB file (i.e., file with .mdb file extension). To do this, go to your **CBMSDatabase** folder, locate the file and click **Open**.
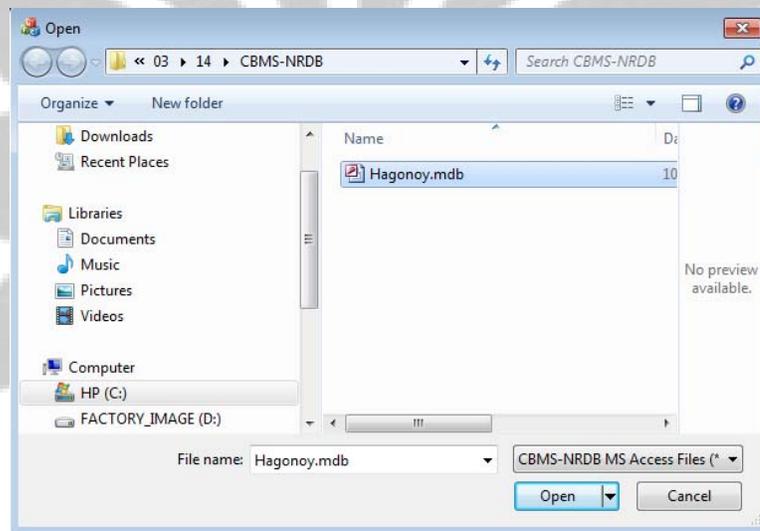
3. A report similar to the one displayed below will be shown in excel. Under the last column with the following heading: **~match,** will appear any of the following codes: 1, -1, or 0. Note that **Code 1** denotes that the household ID is found in your encoded file but not in the digitized spot map. **Code -1** on the other hand, denotes that the household ID is found in the digitized spot map but not found in the encoded file. **Code 0** meanwhile denotes that the household ID match on both files, that is, the household ID can be found in both the encoded file as well as in the digitized spot map.

Also, a summary report shown as below will be displayed in StatSimPro.
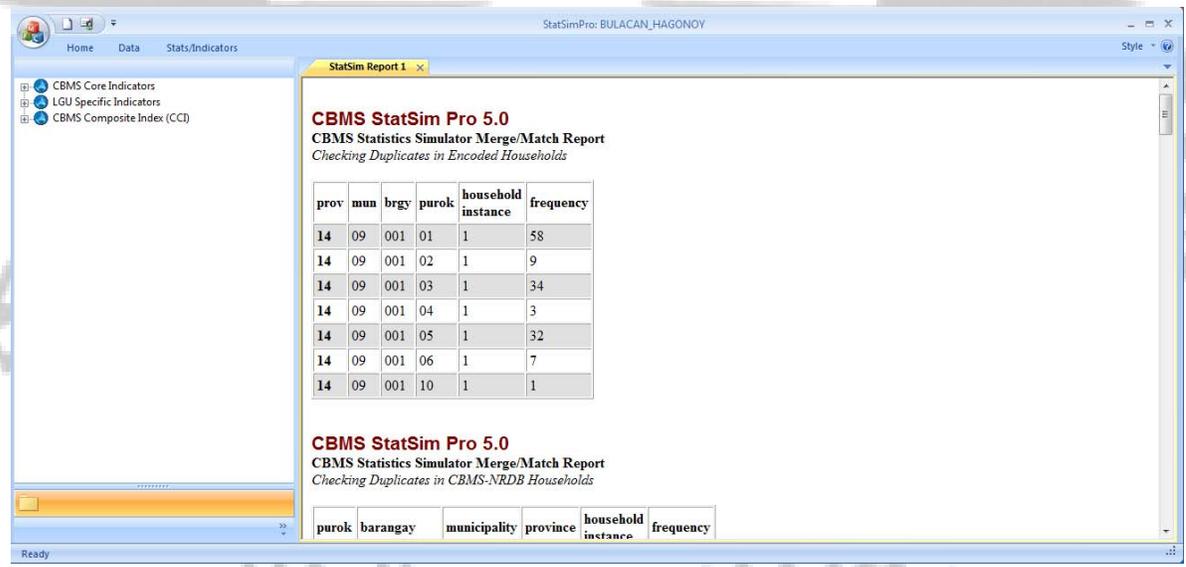
CBMS StatSim Pro 5.0
CBMS Statistics Simulator Merge/Match Report
Checking Duplicates in Encoded Households

prov	mun	brgy	purok	household instance	frequency
14	09	001	01	1	58
14	09	001	02	1	9
14	09	001	03	1	34
14	09	001	04	1	3
14	09	001	05	1	32
14	09	001	06	1	7
14	09	001	10	1	1

CBMS StatSim Pro 5.0
CBMS Statistics Simulator Merge/Match Report
Checking Duplicates in CBMS-NRDB Households

purok	barangay	municipality	province	household instance	frequency

G. Instructions on Exporting Processed CBMS Data

a. Core Dataset from CBMS StatSimPro to CBMS-NRDB

After processing the CBMS Core Indicators using the Statistics Simulator (StatSim) and ensuring that the household IDs in the encoded file and digitized spot map match, the processed dataset can now be exported into the NRDB Pro in order to map the CBMS indicators.

1. From the **Home** menu, select **EXPORT.**

   a. To export Core indicators, Select **Core Indicators to NRDB.**

Select the following levels to process (whichever is applicable): Municipality, Barangay, Purok and Household.
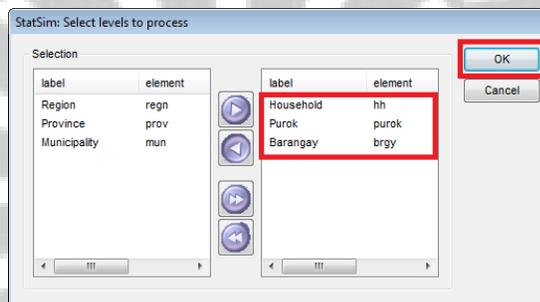
Click **OK**. The following message box will appear:
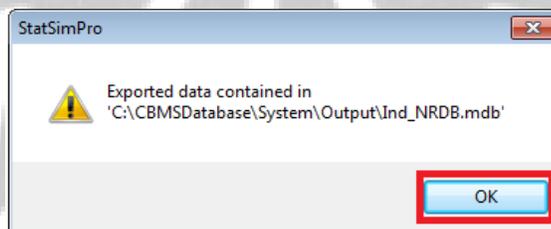
You are now ready to map CBMS Core Indicators using the CBMS-NRDB. Refer to "User's Manual for building the CBMS Database and Poverty Mapping" for the steps.

b. To export CCI, select **CBMS Composite Indicators.**
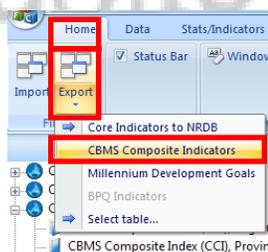
Click **OK**. The following message box will appear:
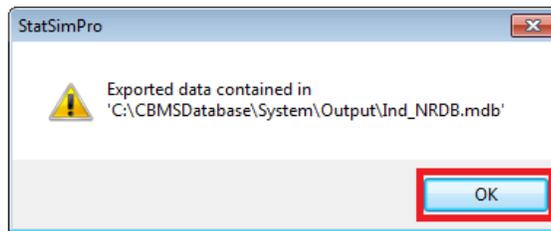
Note that all outputs will go to the file Ind_NRDB.mdb in the same path C:\CBMSDatabase\System\Output

c.   To export MDG data, select **Millennium Development Goals.**
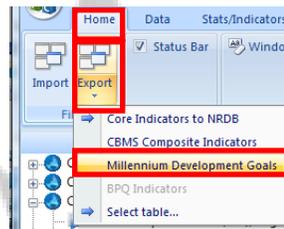
Click **OK**. The following message box will appear:
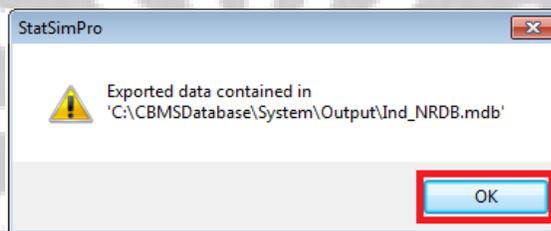
Note that all outputs will go to the file Ind_NRDB.mdb in the same path C:\CBMSDatabase\System\Output

d.   Other Processed tables

Other processed tables can also be exported and opened in MS Excel. From the **Home** menu, select **EXPORT** then select the name of the desired table. The table will automatically open in Excel.

Notes:

1.   *Variables short names are important because the system uses this to make tables. It is important to familiarize oneself with the variable names in the data dictionary.*

2.   *You cannot tabulate alphanumeric columns. This means you could not tabulate texts such as occupation, programs, perception, etc.*

Some commonly-used abbreviations/acronyms (please see data dictionary and list of variable names)**:**
1. regn—Region code
2. prov—Province code
3. mun—Municipality code
4. brgy—Barangay code
5. purok—Purok code
6. hcn—household control number/ID
7. Prop—proportion
8. SWS—Safe water supply
9. STF—Sanitary toilet facility
10. Death04—Child death (0-4)
11. DeathPreg—Death due to pregnancy related causes
12. Maln05—Malnutrition
13. Squat—Squatters
14. MSH—Makeshift housing
15. Povp—Poverty
16. Subp—Subsistent poverty
17. Fshort—Food shortage
18. Unempl15ab—Unemployment (15 years old and above)
19. Elem612—Elementary participation (6-12)
20. Elem611—Elementary participation (6-11)
21. HS1316—High school participation (13-16)
22. HS1215—High school participation (12-15)
21. Sch616—School participation (6-16)
21. Sch615—School participation (6-15)