



Reports Tutorial

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Introduction

This tutorial will guide you through how to use the charts and reports tools in the CBP system. For definitions of terms, please see the Glossary or Frequently Asked Questions.

We recommend users complete the tutorials for the *Project Description Module, Guidance, Simple Assessment* or *Detailed Assessment* before attempting to generate charts or reports.

This tutorial uses the results of the scenarios entered for the Detailed Assessment Tutorial. The concepts presented apply equally well to results generated from the Simple Assessment.

Navigating to the Reports Page

The Reports Page is accessed from 4th item (moving left to right) on the CBP toolbar. Click on the icon labeled “→ Reports” to reach the page. It should look like that in Figure 4.

Please note that the calculations must have been completed for your project before you can generate reports or charts. If you have not yet run the calculations for your project, and you navigate to the Reports Page, you will see a window prompting you to run your calculations that looks like this:

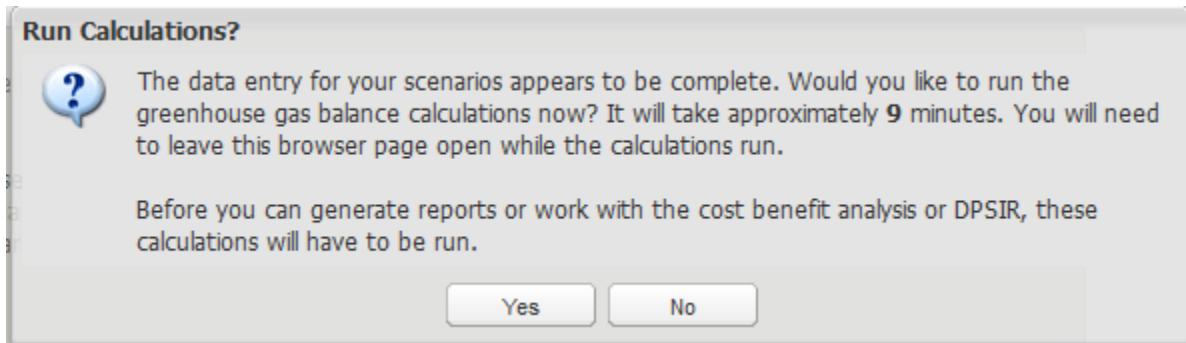


Figure 1. You will be notified if you need to run the calculations for your project. You must have completed the calculations before you can generate reports or charts.

Clicking on “Yes” brings up a window that says “Running greenhouse gas calculations, please wait...” When the calculations are completed, you will see a window that looks like this:

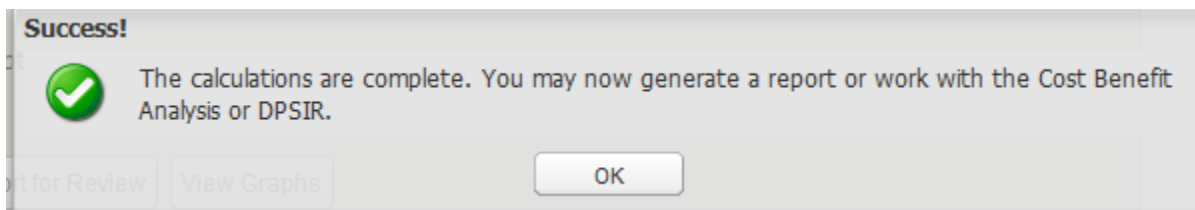


Figure 2. Notification that the calculations are complete.

If you click the “No” option, you will see a window that looks like this:

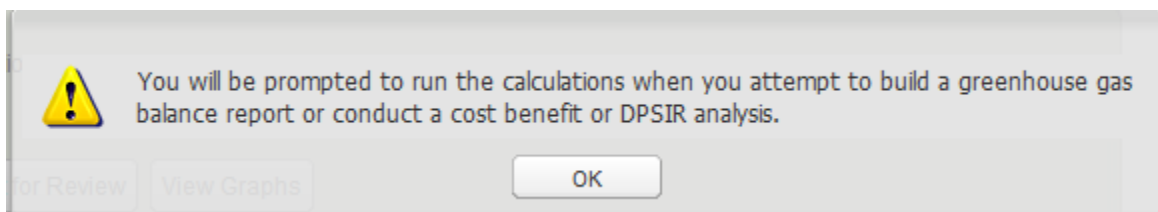


Figure 3. Run Calculations reminder window.

The next time you navigate to the Reports page you will be asked again to run the calculations before you can generate reports and charts.

After the calculations finish, you can use the Reports Page, which looks like this:

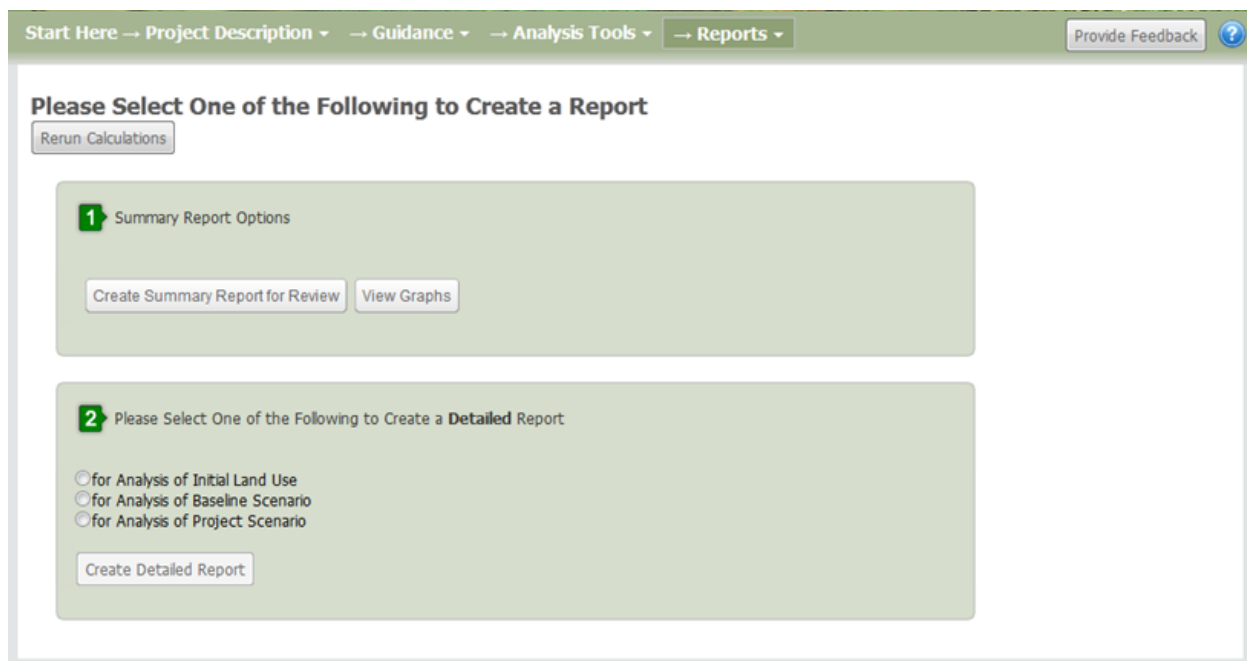


Figure 4. CBP System Reports Page.

From this page you can build a graph/chart (go to [Building Charts](#)), create a summary report (see [Summary Report](#)), or create a detailed report (see [Detailed Report](#)).

Please note that the detailed report may be generated for either a simple or detailed assessment, just as a summary report may be generated for either. NB the term “Detailed Report” does NOT mean the report may be generated only for projects using the Detailed Assessment - a Detailed Report can be generated for either a Simple or a Detailed Assessment.

Rerunning Calculations

You may rerun the calculations at any time. Users should rerun the calculations after making a change in factors on the emissions factors page, or after making any change to the activity data. This includes changing the areas for any land use category in any scenario, modifying how crops are grown, fertilization rates, timber/woody material harvest rates, deforestation rates or tree planting rates.

Building Charts

If you click on the “View Graphs Button, the system builds a chart based on the UNFCCC greenhouse gas source categories. The system will build a chart for you that looks like this:

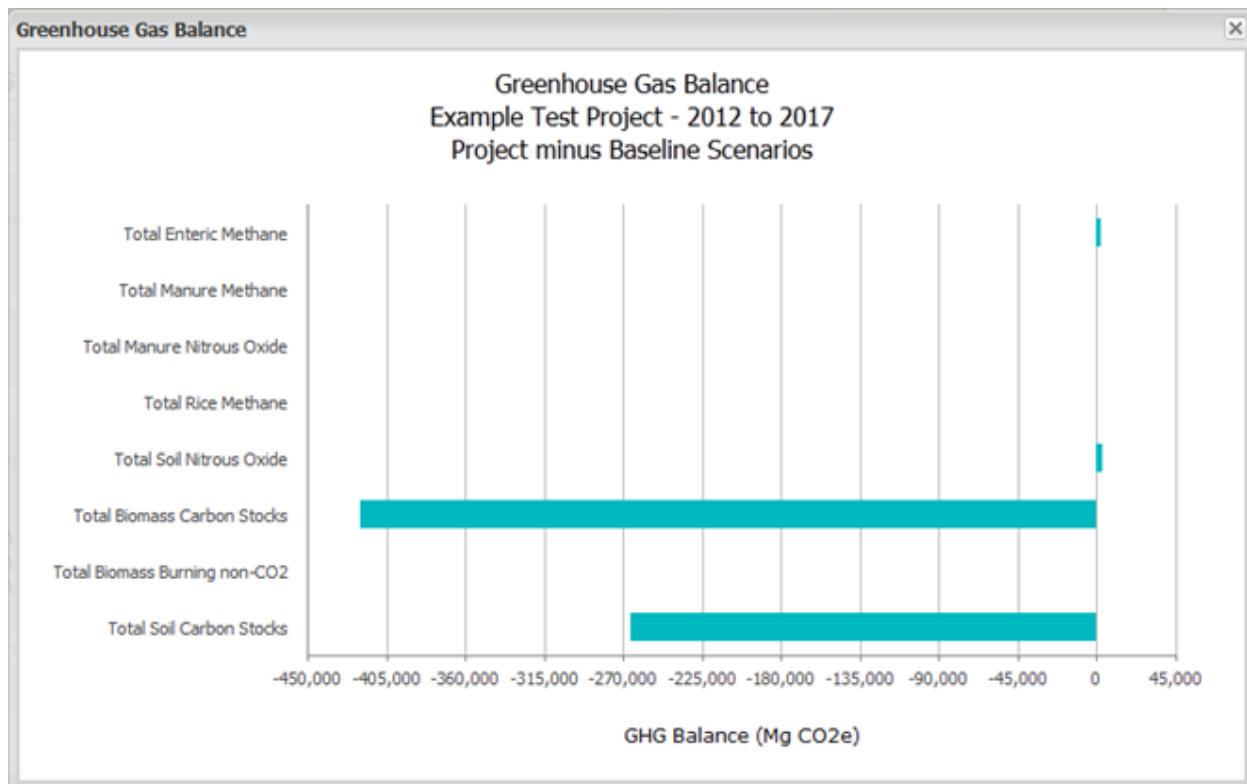


Figure 5. Example of the UNFCCC Chart.

Please note that figures shown as negative values indicate either a net sequestration of carbon or a net emission of greenhouse gas in the project scenario over and above what is happening in the baseline scenario.

Hovering over any of the bars on the chart will show the actual value of the category, as follows:

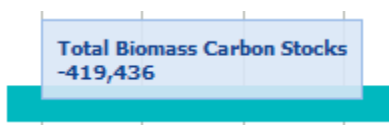


Figure 6. Blowup of the bar chart emissions values.

At the present time the system does not have the capability to download charts as jpeg files, or produce charts in the AFOLU or other formats. We anticipate adding this feature in the near future.

Create a Summary Report

The summary report was designed to aid CBP tool users and the GEF and its implementing agencies (e.g. UNEP, UNDP the World Bank, IFAD etc.) to assess the overall greenhouse gas balance of their projects.

Clicking on the “Create Summary Report for Review” button allows the user to create a summary report. The system first informs the user it could take up to 1 minute to generate the report, though it usually takes far less time to do so. The report is generated as a .pdf file which is then sent to the user’s computer by the browser. The user has the option to save or view the file, depending on the browser.

The report is organized into the following sections:

Section 1: Contains general information about your project, derived from the data entered into the Project Information Module when you first created your project. This information is for user reference and for GEF staff and implementing agency personnel to use to help understand the project administration and management.

Section 2: Shows what information was used to generate the report, including the user name, the report period, the assessment method (Simple or Detailed), and the component route taken. Component A refers to the tools hosted at Colorado State University (The Simple Assessment, The Detailed Assessment and the Dynamic Modeling Option).

Section 3 contains the Greenhouse Gas Benefits Report.

This section begins with a summary of the greenhouse gas balance of the Baseline Scenario, the Project Scenario and the difference between the two (the overall greenhouse gas impact of the project, also termed the ‘Carbon Benefit’). This is broken down into totals for the report period and annual values.

This is followed by summaries for Leakage Assessment, Permanence Indicators, Monitoring Program, Economic Impacts, and Social Impacts. These five sections are currently placeholders for use in the future but are not currently linked to any information entered by the user. If the user has information about methods they have used which is relevant to these categories it could be added using a PDF editor.

UNFCCC Summary Table

Section 3 is followed by Table 3.1, ‘The Simple Summary Report following UNFCCC Common Reporting Guidelines’. Table 3.1 shows the overall greenhouse gas balance for the baseline and project scenarios

Security and Downloading

Reports: The summary report is in .pdf format, and the detailed report is in Microsoft Excel® Worksheet (.xls) format. Depending on your browser you should have the opportunity to either download or view the report directly.

Depending on the settings in your browser or your anti-virus software, you may be warned about viewing .pdf or .xls files downloaded from the web. The CBP system is carefully safeguarded against computer viruses and so you can download and view these files safely.

and net carbon benefits (the difference between the baseline and the project scenario) in the UNFCCC source categories and subcategories. They are expressed as tonnes CO₂e for carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O) and other greenhouse gases (NO_x, CO). The net Carbon Benefits are shown in total tonnes CO₂e, total tonnes CO₂e per hectare and total tonnes CO₂e per hectare per year.

An example of this table showing the results from the Detailed Assessment Tutorial example are given in Figure 7:

Table 3.1 Simple Summary Report following UNFCCC Common Reporting Guidelines.

Greenhouse Gas Source and Sink Categories	Baseline Scenario (2012 - 2022) Emissions and Removals				Project Scenario (2012 - 2022) Emissions and Removals				Carbon Benefits		
	CO ₂	CH ₄	N ₂ O	GHGs	CO ₂	CH ₄	N ₂ O	GHGs	Total tCO ₂ e	tCO ₂ e / ha	tCO ₂ e / ha /yr
	tonnes CO ₂ equivalent				tonnes CO ₂ equivalent						
Agriculture											
A. Enteric Methane		2004				4383			2379	0.28	0.03
B. Manure Management		0	0			0	0		0	0	0
C. Rice Cultivation		0				0			0	0	0
D. Agricultural Soils	0	0	3277		0	0	6527		3250	0.38	0.04
E. Prescribed Burning of Savannas		0	0	0		0	0	0	0	0	0
F. Field Burning of Agricultural Residues		0	0	0		0	0	0	0	0	0
G. Other	0	0	0	0	0	0	0	0	0	0	0
Land Use Change and Forestry											
A. Forest and other Woody Biomass	-159952				-579388				-419436	-49	-4.9
B. Forest and Grassland Conversion	0	0	0	0	0	0	0	0	0	0	0
C. Abandonment of Managed Lands	0				0				0	0	0
D. CO ₂ Emissions and Removals from Soil	75972				-189527				-265500	-31	-3.1
E. Other	0	0	0	0	0	0	0	0	0	0	0
Total	-83980	2004	3277	0	-768915	4383	6527	0	-679306	-80	-8

Figure 7. Example of Summary Report table 3.1, showing the greenhouse gas balance from the Detailed Report Tutorial example.

AFOLU Summary Table

Table 3.2 gives an expanded report which is broken into three sections over three pages. The example below (Figure 8) was generated from the Detailed Assessment Tutorial example:

Table 3.2 Expanded Report showing Carbon Emissions by IPCC AFOLU Source Categories. Projected report period used in calculations is 10 years, from 2012 to 2022.

Source category	Source sub-category	Without Project (Baseline scenario)			With Project (Project scenario)			Incremental difference (Project scenario minus baseline scenario)		
		tCO ₂ e	tCO ₂ e/yr	Uncertainty (%)	tCO ₂ e	tCO ₂ e/yr	Uncertainty (%)	tCO ₂ e	tCO ₂ e/yr	Uncertainty (%)
Total Enteric Methane		2004	200	20	4383	438	11	2379	238	10
Total Manure Methane		0	0	0	0	0	0	0	0	0
Total Manure Nitrous Oxide		0	0	0	0	0	0	0	0	0
Total Rice Methane		0	0	0	0	0	0	0	0	0
Soil Nitrous Oxide	Crop Residue N	0	0	0	0	0	0	0	0	0
	Manure N in Pasture/Range/Paddock	1138	114	110	3752	375	57	2614	261	50
	Manure N Amendments	0	0	0	0	0	0	0	0	0
	Mineralization of Cultivated Organic Soils	0	0	0	0	0	0	0	0	0
	Synthetic N Fertilizer	2139	214	42	2775	277	35	636	64	28
Total Soil Nitrous Oxide		3277	328	39	6527	653	32	3250	325	26

Source category	Source sub-category	Without Project (Baseline scenario)			With Project (Project scenario)			Incremental difference (Project scenario minus baseline scenario)		
		tCO ₂ e	tCO ₂ e/yr	Uncertainty (%)	tCO ₂ e	tCO ₂ e/yr	Uncertainty (%)	tCO ₂ e	tCO ₂ e/yr	Uncertainty (%)
Biomass Carbon Stocks	Forest Land	0	0	0	-133428	-13343	20	-133428	-13343	14
	Grassland/Savanna	-146630	-14663	5.7	25198	2520	7.2	171828	17183	5.6
	Annual Cropland	0	0	0	0	0	0	0	0	0
	Perennial Cropland	-5411	-541	7.8	-476375	-47637	4.9	-470964	-47096	4.3
	Agroforestry	0	0	0	-3944	-394	13	-3944	-394	13
	Settlements	-7911	-791	21	9160	916	13	17072	1707	13
	Deforestation	0	0	0	0	0	0	0	0	0
	Shifting Cultivation	0	0	0	0	0	0	0	0	0
Total Biomass Carbon Stocks		-159952	-15995	5.4	-579388	-57939	5.5	-419436	-41944	4.5
Biomass Burning non-CO ₂	Cropland Residue	0	0	0	0	0	0	0	0	0
	Forest Land	0	0	0	0	0	0	0	0	0
	Grassland/Savanna	0	0	0	0	0	0	0	0	0
	Perennial Crops	0	0	0	0	0	0	0	0	0
	Agroforestry	0	0	0	0	0	0	0	0	0
	Settlements	0	0	0	0	0	0	0	0	0
	Deforestation	0	0	0	0	0	0	0	0	0
	Shifting Cultivation	0	0	0	0	0	0	0	0	0
Total Biomass Burning non-CO₂		0	0	0	0	0	0	0	0	0

Source category	Source sub-category	Without Project (Baseline scenario)			With Project (Project scenario)			Incremental difference (Project scenario minus baseline scenario)		
		tCO ₂ e	tCO ₂ e/yr	Uncertainty (%)	tCO ₂ e	tCO ₂ e/yr	Uncertainty (%)	tCO ₂ e	tCO ₂ e/yr	Uncertainty (%)
		Total	Annual	Uncertainty (%)	Total	Annual	Uncertainty (%)	Total	Annual	Uncertainty (%)
Soil Carbon Stocks	Mineral Soils*	75972	7597	26	-189527	-18953	22	-265500	-26550	20
	Organic Soils	0	0	0	0	0	0	0	0	0
Total Soil Carbon Stocks		75972	7597	26	-189527	-18953	23	-265500	-26550	21
Total Greenhouse Gas Emissions		-78699	-7870	25	-758005	-75800	22	-679306	-67931	20

Figure 8. The three sections of Table 3.2 Expanded Summary table, in the IPCC Agriculture, Forestry and Other Land Uses (AFOLU) format, generated from the Detailed Assessment Tutorial example.

IN the same way as Table 3.1, table 3.2 gives the greenhouse gas flux for the baseline and project scenarios and the difference between the two. The greenhouse gas balance is shown in more detail by land use categories (where those data can be generated), and includes a measure of the uncertainty (also called a confidence interval) associated with the calculations. A major difference between Tables 3.1 and 3.2 is that Table 3.2 shows the totals of carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) expressed as carbon dioxide equivalents. The greenhouse gas flux on a yearly basis is also shown.

Creating a Detailed Report

The detailed report is designed to aid CBP tool users, the GEF and its implementing agencies (UNEP, UNDP, The World Bank, IFAD etc.) in examining the equations used in the greenhouse gas flux calculations for any given project.

Users may generate a Detailed Report for each of the Assessment Steps of the project (Initial Land Use, Baseline Scenario, Project Scenario). To generate a detailed report, the user must first select one of these assessment steps and then click on the button labeled “Create Detailed Report”. The system first informs the user it could take up to 1 minute to generate the report. Click on the “OK” button to generate the report. User then has the option of viewing the file or saving it to their computer.

Whether the user opens the file immediately, or saves it to their computer and opens it later, the user may see the following dialog box:

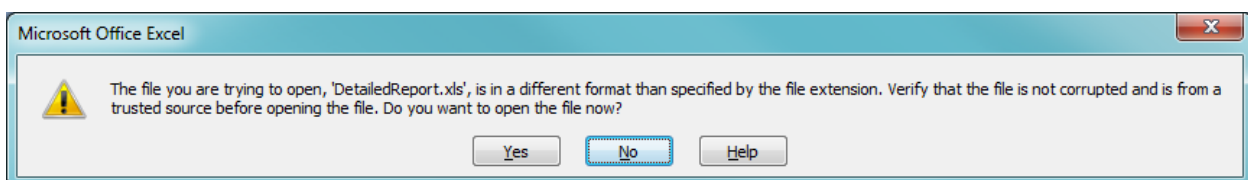


Figure 9. File alert users may see in Microsoft Excel[®].

This is because the file generated by the CBP tool has to be translated into Excel® format. The CBP system is carefully safeguarded against computer viruses and corruption, so it is safe to open the file. Click on the “Yes” button to view the detailed report. Your report should look something like Figure 10.

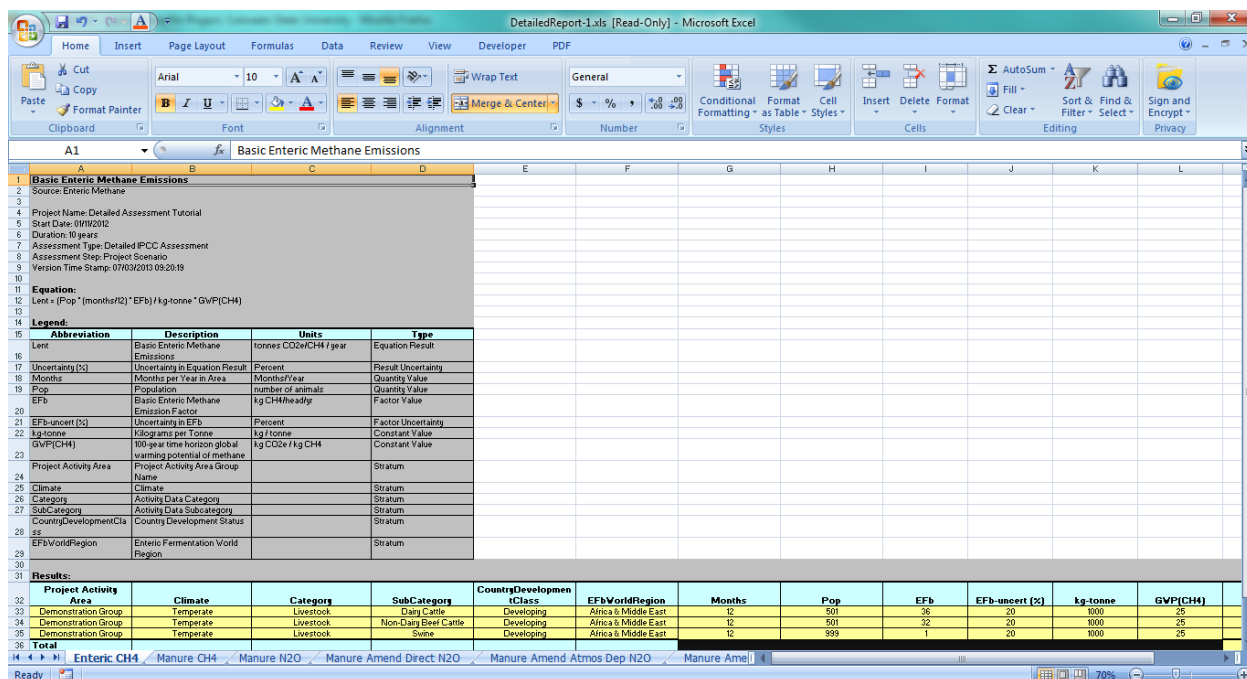


Figure 10. The Detailed Report.

The Detailed Report consists of a comprehensive set of 66 worksheets within an Excel workbook, with each worksheet corresponding to a separate greenhouse gas flux equation. In the image shown in Figure 10 above, each worksheet and corresponding equation are represented by a different tab in the bottom of the frame. Please note that not every workbook will necessarily have data as there may be no activity data in this particular category and therefore no will have been carried out. For example, if your project had no livestock present in the Initial Land Use phase, and you generated a detailed report for that period, then no calculations of Enteric Methane Emissions from livestock would be possible.

Each worksheet consists of three sections:

Header: The top 13 lines contain header information describing the project as shown below and in Figure 11.

- Calculation Name
- Source and sub-source category
- start date of the project
- report period
- type of Assessment (Simple or Detailed)
- Assessment Step (Initial Land Use, Baseline Scenario, or Project Scenario)

- Date and time the report was generated
- The greenhouse gas flux equation

1	Basic Enteric Methane Emissions
2	Source: Enteric Methane
3	
4	Project Name: Detailed Assessment Tutorial
5	Start Date: 01/11/2012
6	Duration: 10 years
7	Assessment Type: Detailed IPCC Assessment
8	Assessment Step: Project Scenario
9	Version Time Stamp: 07/03/2013 09:20:19
10	
11	Equation:
12	$Lent = (Pop * (months/12) * EFb) / kg\text{-tonne} * GWP(CH4)$
13	

Figure 11. Detailed Report Header from the enteric methane calculation worksheet of the Detailed Assessment Tutorial example, Project Scenario.

Legend: The next set of lines informs the user of the different factors, activity data and constants used in the equation. If you consider the enteric methane equation shown on line 12 of Figure 11, one sees a series of abbreviations (“Lent”, “Pop”, “EFb”, etc.) and symbols used in the equation. Each abbreviated item is defined in the legend with a description, a definition of units and a type definition. The type definitions are as follows:

- Equation Result: The total calculated value for this equation.
- Result Uncertainty: The total uncertainty for the equation result.
- Quantity Value: This is part of the activity data the user entered for their project. For the enteric methane calculation, “Pop” (livestock count or population) and “Months” (months present in the project area) are data the user entered in the livestock land use pages.
- Factor Value: These are the equation factors assembled by the scientific committees working in the Intergovernmental Panel on Climate Change (IPCC) . If the user was utilizing the Detailed Assessment they have the opportunity to change these factors based on measurements from their project or from the region. Otherwise the values used in the equation are the default values assembled by the IPCC scientists.
- Factor Uncertainty: This is the uncertainty (also called a confidence interval) for an associated Factor Value.
- Constant Value: These are equation constants that cannot be changed. They generally are physical constants (e.g. the molecular weight ration of nitrogen in nitrous oxide), a conversion factor (e.g. the conversion from kilograms to megagrams) or are internationally-agreed upon values such as the global warming potential of nitrous oxide or other greenhouse gases.
- Stratum: These are the categories of activity data information entered by the user for their project, or information derived from the polygons or points drawn on their project map. These include climate region, soil class, country, tree/forest type, livestock category, crop type, etc.

14	Legend:			
15	Abbreviation	Description	Units	Type
16	Lent	Basic Enteric Methane Emissions	tonnes CO2e/CH4 / year	Equation Result
17	Uncertainty (%)	Uncertainty in Equation Result	Percent	Result Uncertainty
18	Months	Months per Year in Area	Months/Year	Quantity Value
19	Pop	Population	number of animals	Quantity Value
20	EFb	Basic Enteric Methane Emission Factor	kg CH4/head/yr	Factor Value
21	EFb-uncert (%)	Uncertainty in EFb	Percent	Factor Uncertainty
22	kg-tonne	Kilograms per Tonne	kg / tonne	Constant Value
23	GWP(CH4)	100-year time horizon global warming potential of methane	kg CO2e / kg CH4	Constant Value
24	Project Activity Area	Project Activity Area Group Name		Stratum
25	Climate	Climate		Stratum
26	Category	Activity Data Category		Stratum
27	SubCategory	Activity Data Subcategory		Stratum
28	CountryDevelopmentClasses	Country Development Status		Stratum
	EFbWorldRegion	Enteric Fermentation World		Stratum

Figure 12. Detailed Report Legend from the enteric methane calculation worksheet of the Detailed Assessment Tutorial example, Project Scenario.

Equation Results: Users can find the equation results at the bottom of the page. The section looks like that in Figure 13. Each of the equation elements described in the Legend are shown in the equation results, with the corresponding activity data, factor data, uncertainties, constants and calculated results. The user has the opportunity to proof the calculations and examine how the activity data and factors are used to estimate greenhouse gas flux from their project.

30	Results:													
31														
32	Project Activity Area	Climate	Category	SubCategory	CountryDevelopment Class	EFbWorldRegion	Months	Pop	EFb	EFb-uncert (%)	kg-tonne	GWP(CH4)	Result	Uncertainty (%)
33	Demonstration Group	Temperate	Livestock	Dairy Cattle	Developing	Africa & Middle East	12	501	36	20	1000	25	451	20
34	Demonstration Group	Temperate	Livestock	Non-Dairy Beef Cattle	Developing	Africa & Middle East	12	501	12	20	1000	25	451	20
35	Demonstration Group	Temperate	Livestock	Pigs	Developing	Africa & Middle East	12	999	12	20	1000	25	25	20
36	Total												877	14
37	*GWP are 100-year time horizon based on estimates from the IPCC 4th Assessment Report													

Figure 13. Detailed Report Equation Results from the enteric methane calculation worksheet of the Detailed Assessment Tutorial example, Project Scenario.