

# Carbon Benefits Project: Modelling System

## *Simple Assessment Short Exercises*

### **Exercise Two Estimating the GHG impact of an avoided deforestation/reforestation project using the Simple Assessment**

Goal: To determine if project interventions (land management activities) provide a carbon/GHG benefit relative to the baseline scenario ('business as usual'). E.g., do the land management interventions lead to an increase in carbon stocks in soils and biomass and/or a reduction in GHG emissions?

#### *Background information*

For this example exercise, we will focus on Western Kenya. Our hypothetical example is a project which aims to protect existing forest and restore a deforested area in the Kakamega Forest through avoided deforestation and reforestation (see the power point presentation for details).

As the project manager you are producing a report at the end of the project period (10 years). In this instance we are conducting the analysis at the end of the project period, however it may also be done at the beginning of a project, as a projection of what might happen over the project period.

#### *TIPS*

1. Click on the help icon in the top right hand corner  for further help
2. Double click in the white boxes in the tables to activate the dropdown menus
3. Give the system time to work, if you think it is not doing anything check the connection status at the top of the page.
4. Make sure you click on the save buttons after entering data for each land use category.
5. If you need to remind yourself of how much land is in each land use category go to 'Project Description>Step 3> Describe project land use
6. In the Simple and Detailed Assessments, data for the initial land use, baseline and project scenarios may be entered in any order. For example, you don't need to enter all of the initial land use data before going to the baseline or project scenarios. Similarly, you might complete Stage 1 within a land use category and come back to enter Stage 2 at another time.

### Project Description

For this exercise polygons where project land management activities are taking place have already been defined for you in a GIS file. You can upload the polygons and from files provided. To upload the files take these steps:

- 1) **Uploading project activity area polygons:** Click on the “Start Here – Project Description” link on the toolbar and select the option “Upload your own GIS Files” as seen below:

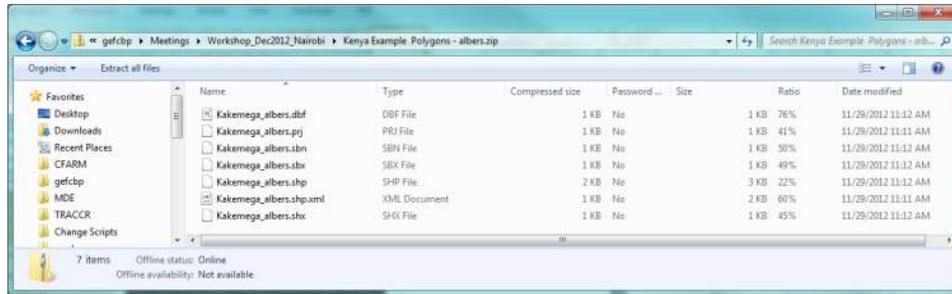
You should then see a page that looks like this:

The screenshot shows a web interface for uploading GIS files. At the top, there is a navigation bar with links: "Start Here", "Project Description", "Guidance", "Analysis Tools", and "Reports". A "Provide Feedback" button is also present. The main content area is split into two panels. The left panel is titled "Upload a ZIP file containing the Shapefile that defines the Project Activity Areas of your project." It includes a "Note" section with the following conditions: contain points or polygons; include the shape (.shp), attribute (.dbf), and projection (.prj) files; and have a geographic coordinate system or one of the supported projections. Below the note are form fields for "File (required):" (with a "Select a file" button), "Name Field:", "Group Name field:", and "Area Field (required for point files):". There is also a checkbox for "overwrite existing areas" and "Upload" and "Reset" buttons. A "\*Required Fields" note is at the bottom. The right panel shows a Google Maps interface with a dark blue background, navigation controls, and map data attribution. At the bottom right of the map area are "Back" and "Next" buttons.

Locate the file named “Kenya Example Polygons – Albers.zip” from the USB stick provided. It will be in the folder called ‘UNCCD Exercises > GIS files’. **You need to locate the ZIP file using the ‘File (required):’ box**

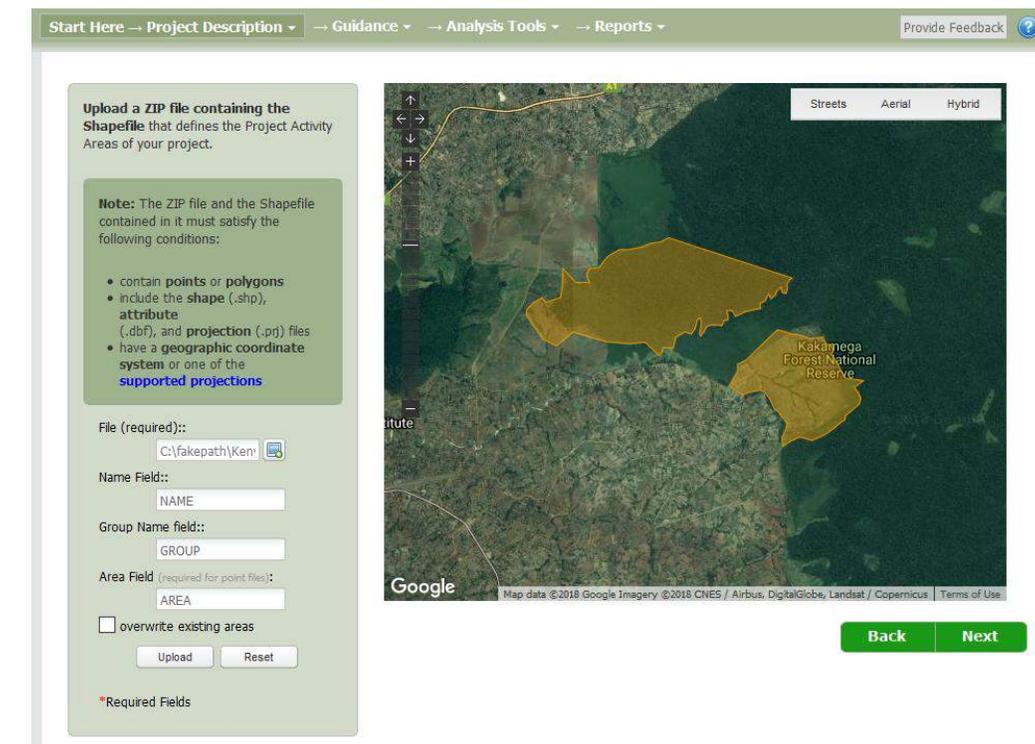
 Kenya Example Polygons - albers

This is a zip file containing the following GIS files produced from ESRI ARCMAP:



You will need to fill in the name of the DBF file fields (GIS 'attributes') for the columns containing the polygon name, group identification, and area. The name refers to the Intervention Area Name, the group refers to the intervention area group name, and the area refers to the land area the point represents. In this example, the name field is 'NAME', the group field is 'GROUP', and the area field is 'AREA' in your own projects they could be different if you use this method to upload files.

Enter the field names and click on the 'Upload' button. You should then see a page that looks like this:



Your project activity areas are now ready for you to continue with the exercise. Please keep in mind that this project is speculative and hypothetical, for demonstration purposes, and is designed to feature land use and management that is both relatively common in the region but also helps instruct the user on aspects of data entry for the CBP Modelling toolkit.

The large upper polygon, named "Avoided Deforestation," is an area of relatively continuous forest, however under this scenario cropland agriculture is encroaching on the forest. Without project intervention, some of this forest would likely be converted into annual cropland.

The smaller polygon, named “Reforestation,” is an area that has been largely deforested and is in degraded condition. Under the project, parts of this polygon will be reforested.

The area (number of hectares) for each land use category (forestland, grassland, annual cropland, etc.) for each Project Activity Area need to be entered under Step 3 in the Project Description, for the initial, baseline and project scenarios.

At this point you should click on the “Start Here -> Project Description” link on the toolbar and select “Describe Project Land Use” under step 3. You may examine the underlying spatial data under step 2 if you wish before proceeding with these steps. You should see a page that looks like this:

Set the ‘Length of report period’ to 10 years.

1. In Step 2, select the Project Activity Area “Avoided Deforestation.”
2. In Step 3, enter the land areas in the table as described for this project and click ‘Save’:  
 In this project activity area, 550 ha were in forest at the beginning of the project (Initial Land Use). In the baseline scenario, at the end of the report period (10 years) we estimate 250 ha would have been converted to annual cropland while 300 ha would remain in forest. In the project scenario, none of the forest land is converted to annual cropland so all 550 ha remain as forestland at the end of the 10 year period.

**2** Select Project Activity Area/Group

Avoided Deforestation Area 1 [587 ha] [Show Project Activity Areas](#)  
(opens in new window)

**3** Enter land use area in ha

Land Use Category	Initial Land Use (ha)	Baseline Scenario (ha)	Project Scenario (ha)
Forestland	550	300	550
Grassland	0	0	0
Settlements	0	0	0
Wetlands	0	0	0
Annual Cropland	0	250	0
Perennial Cropland	0	0	0
Agroforestry	0	0	0
Livestock	0	0	0
<b>Total Area (ha)*</b>	<b>550</b>	<b>550</b>	<b>550</b>

\* The total area includes all of the area in all of the first seven land use categories, but does not include the number of livestock.

[Save](#) [Back](#) [Next](#)

- Go back to Step 2, and select the Project Activity Area “Reforestation.”
- In Step 3, enter the land areas in the table as described for this project and click ‘Save’:  
In this area, 270 ha were in grassland at the beginning of the project. In the baseline scenario, we estimate 270 ha would have remained in grassland at the end of 10 years, while in the project scenario all 270 ha is converted to forestland by the end of 10 years.

**2** Select Project Activity Area/Group

Reforestation Area 1 [289 ha] [Show Project Activity Areas](#)  
(opens in new window)

**3** Enter land use area in ha

Land Use Category	Initial Land Use (ha)	Baseline Scenario (ha)	Project Scenario (ha)
Forestland	0	0	270
Grassland	270	270	0
Settlements	0	0	0
Wetlands	0	0	0
Annual Cropland	0	0	0
Perennial Cropland	0	0	0
Agroforestry	0	0	0
Livestock	0	0	0
<b>Total Area (ha)*</b>	<b>270</b>	<b>270</b>	<b>270</b>

\* The total area includes all of the area in all of the first seven land use categories, but does not include the number of livestock.

[Save](#) [Back](#) [Next](#)

- You have now entered land areas for all Project Activity Areas and Groups, so you may continue to the Simple Assessment.

## INITIAL LANDUSE

Analysis Tools > Simple Assessment > [Initial Land Use](#)

Hover over 'Analysis Tools' in the top menu and click on 'Simple Assessment' then click on



From the menu of land use categories on the left hand side choose:  
Forestland

1. Select *Forest Types and Tree Age Ranges*
2. In step 1, select Project Activity Group "Avoided Deforestation"
3. In step 2, select Forest Type "Tropical mountain systems natural vegetation" and add to the table below.
4. In step 3, select Tree Age Range "> 20 years" and type in the Area associated with this Forest Type and Tree Age Range (in this case 550 ha). Click *Save* and then *Next* to go to the *Natural Losses and Wood Removal* page.

Start Here → Project Description → Guidance → Analysis Tools → Reports Provide Feedback

1 Initial Land Use x 2 Baseline Scenario x 3 Project Scenario x

### Forestland Stage 1 of 2: Forest Types and Tree Age Ranges

Forestland ✓

- Forest Types and Tree Age Ranges ✓
  - Natural Losses and Wood Removal ✓
- Grassland X
- Settlements ✓
- Wetlands ✓
- Annual Crops ✓
- Perennial Crops ✓
- Agroforestry ✓
- Livestock ✓

1 Select Project Activity Area/Group

Avoided Deforestation Area 1 [587 ha] ✓ [Show Project Activity Areas](#) (opens in new window)

2 Select a Forest Type and Tree Age Range

Forest Type: Tropical mountain systems natu

Add to table below

3 Enter area for each record

Forest Type	Tree Age Range*	Area (ha)*
Tropical mountain systems natural vegetation	> 20 years	550

550

Total Area Allocated (ha): 550/550

Save Back Next

5. In step 1, select “Avoided Deforestation”
6. In step 2, enter percent per year of aboveground biomass affected by natural losses (0 for each category)
7. In step 3, enter volumes of wood removed by timber harvest (1000 m<sup>3</sup>/yr) and fuelwood gathering (1000 m<sup>3</sup>/yr).
8. In step 4, enter deforestation rate for Area Cleared without Burning (25 ha/yr) and Area Cleared with Burning (0 ha/yr).
9. Click *Save* and then *Finished*.

Start Here → Project Description → Guidance → Analysis Tools → Reports Provide Feedback

1 Initial Land Use x 2 Baseline Scenario x 3 Project Scenario x

### Forestland Stage 2 of 2: Natural Losses and Wood Removal

Forestland ✓

- Forest Types and Tree Age Ranges ✓
- ▶ Natural Losses and Wood Removal ✓

Grassland x

- Settlements ✓
- Wetlands ✓
- Annual Crops ✓
- Perennial Crops ✓
- Agroforestry ✓
- Livestock ✓

**1** Select Project Activity Area/Group

Avoided Deforestation Area 1 [587 ha] ✓ [Show Project Activity Areas](#)  
(opens in new window)

**2** Enter percent of aboveground biomass affected by natural losses each year

Forest Type	Tree Age Range*	Area (ha)*	Fires (%/yr)	Wind (%/yr)	Pest/Disease (%/yr)	Other Losses (%/yr)
Tropical mountain systems natural vegetation	> 20 years	550	0	0	0	0

**3** Enter volume of wood removed by timber harvest, fuel wood gathering, pruning or any other manmade process.

Forest Type	Tree Age Range*	Area (ha)*	Timber Harvest (m <sup>3</sup> /yr)	Fuelwood Gathering (m <sup>3</sup> /yr)
Tropical mountain systems natural vegetation	> 20 years	550	1000	1000

**4** Enter annual reforestation/afforestation/planting rate and deforestation/tree removal rate, if applicable.

Forest Type	Tree Age Range*	Area (ha)*	Area Cleared without Burning (ha/yr)	Area Cleared with Burning (ha/yr)	Reforestation / Afforestation Area (ha/yr)
Tropical mountain systems natural vegetation	> 20 years	550	25.00	0.00	0.00

Grassland – Select grassland from the menu on the left hand side

1. Select *Grassland Systems*
2. In Step 1, select Project Activity Area “Reforestation”
3. In Step 2, select “Rangeland” and *Add to table below*
4. In Step 3, describe the grassland system as follows
  - a. Condition: Moderately Degraded Grassland
  - b. Improvements: Unimproved
  - c. Amount of N Fertilizer: 0
  - d. % of nitrogen in fertilizer: 0
  - e. Burn Frequency: never burned
  - f. Area (ha): 270
5. Click *Save* and then *Next*. As no silvipasture systems were selected in this Project Activity Area, you do not need to complete the sections on Silvipasture.

Start Here → Project Description → Guidance → Analysis Tools → Reports → Provide Feedback

1 Initial Land Use ✓ 2 Baseline Scenario ✗ 3 Project Scenario ✗

### Grassland Stage 1 of 3: Grassland Systems

Forestland ✓  
Grassland ✓  
 ▶ Grassland Systems ✓  
 Silvipasture Tree Types / Age Ranges ✓  
 Silvipasture Natural Losses and Wood Removal ✓  
 Settlements ✓  
 Wetlands ✓  
 Annual Crops ✓  
 Perennial Crops ✓  
 Agroforestry ✓  
 Livestock ✓

1 Select Project Activity Area/Group  
 Reforestation Area 1 [289 ha] ✓ [Show Project Activity Areas](#)  
 (opens in new window)

2 Select a Grassland System  
 Rangeland Add to table below  
 Definitions:  
 Continuous Pasture  
 Silvipasture  
 Rangeland  
 Continuous Hay Land

3 Describe Grassland System

Delete

Grassland System*	Condition*	Improvements*	Amount of N Fertilizer (kg/ha)*	% of nitrogen (N) in fertilizer*	Burn Frequency*	Area (ha)*
Rangeland	Moderately Degraded Grassland	Unimproved	0	0	never burned	270

Total Area Allocated (ha): 270/270

Save Back Next

Congratulations you have now described the initial land use in all of the areas where the project is working!

## **BASELINE SCENARIO**

Click on



*Analysis Tools > Simple Assessment > [Baseline Scenario](#)*

### Forestland

1. Select *Forest Types and Tree Age Ranges*
2. In Step 1, select the Project Activity area “Avoided Deforestation”
3. In Step 2, select the Forest Type and Tree Age Range “Tropical Mountain Systems Natural Vegetation” and *Add to table below*
4. In Step 3, select the Tree Age Range (> 20 years) and enter the Area (ha) (300)
5. Click *Save* and then *Next* to go to *Natural Losses and Wood Removal*
6. In Step 1, select “Avoided Deforestation”
7. In Step 2, enter percent per year of aboveground biomass affected by natural losses (0 for each category)
8. In Step 3, enter volumes of wood removed by timber harvest (1100 m<sup>3</sup>/yr) and fuelwood gathering (1100 m<sup>3</sup>/yr)
9. In Step 4, enter deforestation rate for Area Cleared without Burning (25 ha/yr) and Area Cleared with Burning (0 ha/yr)
10. Click *Save* and then *Finished*

Start Here → Project Description → Guidance → Analysis Tools → Reports Provide Feedback ?

1 Initial Land Use ✓ 2 **Baseline Scenario** x 3 Project Scenario x

### Forestland Stage 1 of 2: Forest Types and Tree Age Ranges

Forestland ✓

- ▶ Forest Types and Tree Age Ranges ✓
  - Natural Losses and Wood Removal ✓
- Grassland x
- Settlements ✓
- Wetlands ✓
- Annual Crops x
- Perennial Crops ✓
- Agroforestry ✓
- Livestock ✓

**1** Select Project Activity Area/Group

[Show Project Activity Areas](#)  
(opens in new window)

**2** Select a Forest Type and Tree Age Range

Forest Type

**3** Enter area for each record

Delete		
Forest Type	Tree Age Range*	Area (ha)*
Tropical mountain systems natural vegetation	> 20 years	300
		<b>300</b>

Total Area Allocated (ha): 300/300

Start Here → Project Description → Guidance → Analysis Tools → Reports → Provide Feedback

1 Initial Land Use ✓ 2 Baseline Scenario X 3 Project Scenario X

### Forestland Stage 2 of 2: Natural Losses and Wood Removal

**Forestland ✓**

- Forest Types and Tree Age Ranges ✓
- ▶ Natural Losses and Wood Removal ✓

**1** Select Project Activity Area/Group

Avoided Deforestation Area 1 [587 ha] ✓ [Show Project Activity Area \(opens in new window\)](#)

**2** Enter percent of aboveground biomass affected by natural losses each year

Forest Type	Tree Age Range	Area (ha) <sup>a</sup>	Fires (%/yr)	Wind (%/yr)	Pest/Disease (%/yr)	Other Losses (%/yr)
Tropical mountain systems natural vegetation	> 20 years	300	0	0	0	0

**3** Enter volume of wood removed by timber harvest, fuel wood gathering, pruning or any other manmade process.

Forest Type	Tree Age Range	Area (ha) <sup>a</sup>	Timber Harvest (m <sup>3</sup> /yr)	Fuelwood Gathering (m <sup>3</sup> /yr)
Tropical mountain systems natural vegetation	> 20 years	300	1100	1100

**4** Enter annual deforestation rate if applicable.

Forest Type	Tree Age Range	Area (ha) <sup>a</sup>	Area Cleared without Burning (ha/yr)	Area Cleared with Burning (ha/yr)	Reforestation / Afforestation Area (ha/yr)
Tropical mountain systems natural vegetation	> 20 years	300	25	0	0

## Grassland

1. Select *Grassland Systems*
2. In Step 1, select Project Activity Area "Reforestation"
3. In Step 2, select "Rangeland" and *add to table below*
4. In Step 3, describe the grassland system as follows
  - a. Condition: Moderately Degraded Grassland
  - b. Improvements: Unimproved
  - c. Amount of N Fertilizer: 0
  - d. % of nitrogen in fertilizer: 0
  - e. Burn Frequency: never burned
  - f. Area (ha): 270

Click *Save* and then *Next*. Because no silvopasture systems were selected in this Project Activity Area, the sections on Silvopasture do not need to be entered.

**Grassland Stage 1 of 3: Grassland Systems**

1 Initial Land Use ✓ 2 **Baseline Scenario** ✗ 3 Project Scenario ✗

**1 Select Project Activity Area/Group**

Reforestation Area 1 [289 ha] ✓ [Show Project Activity Areas](#)  
(opens in new window)

**2 Select a Grassland System**

Rangeland Add to table below

Definitions:  
Continuous Pasture  
Silvopasture  
Rangeland  
Continuous Hay Land

**3 Describe Grassland System**

Grassland System*	Condition*	Improvements*	Amount of N Fertilizer (kg/ha)*	% of nitrogen (N) in fertilizer*	Burn Frequency*	Area (ha)*
Rangeland	Moderately Degraded Grassland	Unimproved	0	0	never burned	270
						0

Total Area Allocated (ha): 270/270

Save Back Next

## Annual Crops

1. In Step 1 select Project Activity Area “Avoided Deforestation”
2. In Step 2, select the annual cropping system “Maize/sorghum/millet intercropped with legume” and then *Add to table below*
3. In Step 3, describe the selected annual cropping system as follows:
  - a. Improved: Check
  - b. Tillage System: Full
  - c. Amount of N Fertilizer (kg/ha): 5
  - d. % of nitrogen in fertilizer: 46
  - e. Residue management: Collected
  - f. Area (ha): 250
4. Click *Save* and then *Finished*

Start Here → Project Description → Guidance → Analysis Tools → Reports Provide Feedback

1 Initial Land Use ✓ 2 **Baseline Scenario** ✓ 3 Project Scenario x

### Annual Crops Stage 1 of 1: Cropping Systems

Forestland ✓ +

Grassland ✓ +

Settlements ✓ +

Wetlands ✓ +

AnnualCrops ✓ -

▶ Cropping Systems ✓

Perennial Crops ✓ +

Agroforestry ✓ +

Livestock ✓ +

**1** Select Project Activity Area/Group

Avoided Deforestation Area 1 [587 ha] ✓ [Show Project Activity Areas](#)  
(opens in new window)

**2** Select an Annual Cropping System

Annual Cropping System  
Maize/sorghum/millet intercropped with legume

Add to table below

**3** Describe Selected Annual Cropping Systems

Delete						
Annual Crop Name	Improved?	Tillage System*	Amount of N Fertilizer (kg/ha)*	% of nitrogen (N) in fertilizer*	Residue Management*	Area (ha)*
Maize/sorghum/millet intercropped with legume	<input checked="" type="checkbox"/>	Full	5	45	Collected	250
<b>250</b>						

Total Area Allocated (ha): 250/250

Save **Finished**

Congratulations you have now described the Baseline Scenario in all of the areas where the project is working!

## PROJECT SCENARIO

Click on



*Analysis Tools > Simple Assessment > [Project Scenario](#)*

### Forestland

1. Select *Forest Types and Tree Age Ranges*
2. In step 1, select *Project Activity Group* "Avoided Deforestation"
3. In step 2, select *Forest Type* "Tropical Mountain Systems Natural Vegetation" and add to table below.  
In step 3, select *Tree Age Range* "> 20 years" and type in the Area associated with this Forest Type and Tree Age Range (550 ha).
4. Click *Save* and then *Next* to go to *Natural Losses and Wood Removal*.
5. In step 1, select *Project Activity Group* "Avoided Deforestation" if not already selected
6. In step 2, enter percent per year of aboveground biomass affected by natural losses (0 for each category)
7. In step 3, enter volumes of wood removed by timber harvest (1000 m<sup>3</sup>/yr) and fuelwood gathering (1000 m<sup>3</sup>/yr).
8. In step 4, enter deforestation rate for Area Cleared without Burning (0 ha/yr) and Area Cleared with Burning (0 ha/yr).
9. Click *Save* and then *Finished*.
10. Go back to *Forest Types and Tree Age Ranges* and in step 1, select *Project Activity Group* "Reforestation"
11. In step 2, select each of the following Forest Types and *Add to table below*: Pinus patula (Tropical Mountain System Plantation - Pinus spp.), Cupressus lusitanica (Tropical Mountain System Plantation Other), Eucalyptus species (Tropical Mountain System Eucalyptus spp.)
12. In step 3, select *Tree Age Range* "< 20 years" for all 3 forest types and assign areas for each forest type: Tropical Mountain System Plantation - Pinus spp. (100 ha), Tropical Mountain System Plantation Other - (100 ha), Tropical Mountain System Eucalyptus spp. (70ha).
13. Click *Save* (if you get a pop up saying 'Run Calculations' hit 'No' then 'OK') and then *Next* to go to *Natural Losses and Wood Removal*. Select the "Reforestation" group.
14. In step 2, enter percent per year of aboveground biomass affected by natural losses (0 for each category)
15. In step 3, enter volumes of wood removed for all forest types by timber harvest (0 for all types) and fuelwood gathering (0 for all types).
16. In step 4, enter deforestation rate for Area Cleared without Burning (0 ha/yr) and Area Cleared with Burning (0 ha/yr) and the reforestation rate (10 ha/yr for Pinus spp., 10 ha/yr for Other and 7 ha/yr for Eucalyptus spp.).
17. Click *Save* and then *Finished*.

Start Here → Project Description → Guidance → Analysis Tools → Reports Provide Feedback

1 Initial Land Use ✓ 2 Baseline Scenario ✓ 3 Project Scenario ✗

### Forestland Stage 1 of 2: Forest Types and Tree Age Ranges

**Forestland ✗**

- ▶ **Forest Types and Tree Age Ranges ✗**
  - Natural Losses and Wood Removal ✓
- Grassland ✓
- Settlements ✓
- Wetlands ✓
- Annual Crops ✓
- Perennial Crops ✓
- Agroforestry ✓
- Livestock ✓

**1** Select Project Activity Area/Group

[Show Project Activity Areas](#)  
(opens in new window)

**2** Select a Forest Type and Tree Age Range

Forest Type

**3** Enter area for each record

Forest Type	Tree Age Range*	Area (ha)*
Tropical mountain systems natural vegetation	> 20 years	550
		<b>550</b>

Total Area Allocated (ha): 550/550

- 1 Initial Land Use ✓ 2 Baseline Scenario ✓ 3 Project Scenario ✗

### Forestland Stage 2 of 2: Natural Losses and Wood Removal

**Forestland ✗**

- Forest Types and Tree Age Ranges ✗
- ▶ **Natural Losses and Wood Removal ✓**
- Grassland ✓
- Settlements ✓
- Wetlands ✓
- Annual Crops ✓
- Perennial Crops ✓
- Agroforestry ✓
- Livestock ✓

**1** Select Project Activity Area/Group

Avoided Deforestation Area 1 [587 ha] ✓

[Show Project Activity Areas](#)  
(opens in new window)

**2** Enter percent of aboveground biomass affected by natural losses each year

Forest Type	Tree Age Range*	Area (ha)*	Fires (%/yr)	Wind (%/yr)	Pest/Disease (%/yr)	Other Losses (%/yr)
Tropical mountain systems natural vegetation	> 20 years	550	0	0	0	0

**3** Enter volume of wood removed by timber harvest, fuel wood gathering, pruning or any other manmade process.

Forest Type	Tree Age Range	Area (ha)*	Timber Harvest (m <sup>3</sup> /yr)	Fuelwood Gathering (m <sup>3</sup> /yr)
Tropical mountain systems natural vegetation	> 20 years	550	1000	1000

**4** Enter annual deforestation rate if applicable.

Forest Type	Tree Age Range	Area (ha)*	Area Cleared without Burning (ha/yr)	Area Cleared with Burning (ha/yr)	Reforestation / Afforestation Area (ha/yr)
Tropical mountain systems natural vegetation	> 20 years	550	0	0	0

Save **Back** **Finished**

Start Here → Project Description → Guidance → Analysis Tools → Reports Provide Feedback ?

1 Initial Land Use ✓ 2 Baseline Scenario ✓ 3 Project Scenario ✓

### Forestland Stage 1 of 2: Forest Types and Tree Age Ranges

Forestland ✓

- ▶ Forest Types and Tree Age Ranges ✓
  - Natural Losses and Wood Removal ✓
- Grassland ✓
- Settlements ✓
- Wetlands ✓
- Annual Crops ✓
- Perennial Crops ✓
- Agroforestry ✓
- Livestock ✓

1 Select Project Activity Area/Group

Reforestation Area 1 [289 ha] ✓ [Show Project Activity Areas](#)  
( opens in new window )

2 Select a Forest Type and Tree Age Range

Forest Type  
Subtropical mountain systems n

Add to table below

3 Enter area for each record

Forest Type	Tree Age Range*	Area (ha)*
Tropical mountain systems plantation - Pinus spp.	<= 20 years	100
Tropical mountain systems plantation - other	<= 20 years	100
Tropical mountain systems plantation - Eucalyptus spp.	<= 20 years	70
		<b>270</b>

Total Area Allocated (ha): 270/270

Save Back Next

- 1 Initial Land Use ✓ 2 Baseline Scenario ✓ 3 Project Scenario ✓

### Forestland Stage 2 of 2: Natural Losses and Wood Removal

- Forestland ✓
- Forest Types and Tree Age Ranges ✓
- ▶ Natural Losses and Wood Removal ✓
- Grassland ✓
- Settlements ✓
- Wetlands ✓
- Annual Crops ✓
- Perennial Crops ✓
- Agroforestry ✓
- Livestock ✓

**1** Select Project Activity Area/Group

Avoided Deforestation Area 1 [587 ha] ✓

[Show Project Activity Areas](#)  
( opens in new window )

**2** Enter percent of aboveground biomass affected by natural losses each year

Forest Type	Tree Age Range*	Area (ha)*	Fires (%/yr)	Wind (%/yr)	Pest/Disease (%/yr)	Other Losses (%/yr)
Tropical mountain systems natural vegetation	> 20 years	550	0	0	0	0

**3** Enter volume of wood removed by timber harvest, fuel wood gathering, pruning or any other manmade process.

Forest Type	Tree Age Range	Area (ha)*	Timber Harvest (m <sup>3</sup> /yr)	Fuelwood Gathering (m <sup>3</sup> /yr)
Tropical mountain systems plantation - Pinus spp.	<= 20 years	100	0	0
Tropical mountain systems plantation - other	<= 20 years	100	0	0
Tropical mountain systems plantation - Eucalyptus spp.	<= 20 years	70	0	0

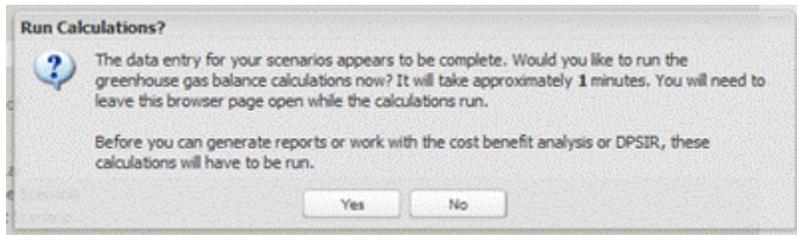
**4** Enter annual deforestation rate if applicable.

Forest Type	Tree Age Range	Area (ha)*	Area Cleared without Burning (ha/yr)	Area Cleared with Burning (ha/yr)	Reforestation / Afforestation Area (ha/yr)
Tropical mountain systems plantation - Pinus spp.	<= 20 years	100	0	0	10
Tropical mountain systems plantation - other	<= 20 years	100	0	0	10
Tropical mountain systems plantation - Eucalyptus spp.	<= 20 years	70	0	0	7

Save **Back** **Finished**

## Review Report Document

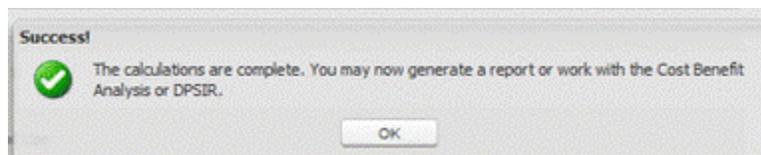
At this point you have completed your data entry for this example. You should see a popup window that looks like this:



If you don't, then got to 'Reports' from the top menu, choose 'create report' and the pop up box should appear. Click 'yes' to run the calculations.

Running the calculations for your project can take from as little as a minute to up to several minutes, depending on the size and complexity of your project. Increasing land use complexity and large intervention areas (over 100,000 ha) may lead to calculation run times longer than 10 minutes. If several users are running calculations at the same time then this can lead to longer run times as well.

Click on the "Yes" button to run the calculations. In approximately 1 minute you should see a window that looks like this:



Click on the "OK" Button and you may now generate a report. Click on the "Reports" link on the toolbar. You should see a page that looks like this:



To generate a Summary Report, click on “Create Summary Report for Review” button.

To generate a Detailed Report showing results of individual equations, in step box 2 select one of the Assessment Steps (Initial Land Use, Baseline Scenario, Project Scenario) and click on the “Create Detailed Report”.

This example scenario is now complete.