

Separate Volume
2-9 NFMS User Manual

 Laos - National Forest Management System

Laos NFMS User Manual

Laos NFMS Version 1.0 User's Manual

Laos NFMS Version 1.0 User manual

(Laos_NFMS Version 1.0)

Sept 2017

| | | |
|-----------|--|-----------|
| 1. | Overview | 1 |
| 1.1 | Function of NFMS..... | 1 |
| 1.2 | Operating Environment..... | 2 |
| 2. | Launch / Quit..... | 3 |
| 2.1 | Launch NFMS..... | 3 |
| 2.2 | Quit NFMS | 5 |
| 3. | Screen Layout and Map Operation | 6 |
| 3.1 | Screen Layout..... | 6 |
| 3.2 | Map Operation | 7 |
| 3.2.1 | Map Operation Menu..... | 7 |
| 3.2.2 | Basic Function Menu | 10 |
| 3.2.3 | Map pane | 15 |
| 4. | Analysis function | 16 |
| 4.1 | Screen Layout of Analysis Function | 16 |
| 4.2 | Activity Data..... | 17 |
| 4.2.1 | Analyze Forest Area | 17 |
| 4.2.2 | Analyze Forest Area Change | 21 |
| 4.3 | Emission Factor | 24 |
| 4.3.1 | Analyze Average Carbon Stock..... | 24 |
| 4.4 | Carbon, CO2..... | 26 |
| 4.4.1 | Amount of Carbon/CO2..... | 26 |
| 4.4.2 | Carbon Stock Change | 29 |

1. Overview

Laos National Forest Management System (NFMS) is geographic information system which helps to manage REDD+ related data and support “Measurement” of REDD+ MRV by it's analysis function.

1.1 Function of NFMS

◆ Map Operation function

- Display background map (e.g. satellite imagery)
- Display thematic map (e.g. forest type map)
- Zoom-in, zoom-out and move map
- Switch layer
- Measure length and area of map
- Print map

◆ Analysis Function

- Calculate forest area and forest area change
- Display emission factor (forest inventory result)
- Calculate carbon stock and carbon stock change

1.2 Operating Environment

Internet browser is required to use NFMS. Below is the list of internet browser which NFMS is compatible with.

◆ **Internet Browser**

- **Microsoft Windows:InternetExplorer11.0, EDGE, Chrome**

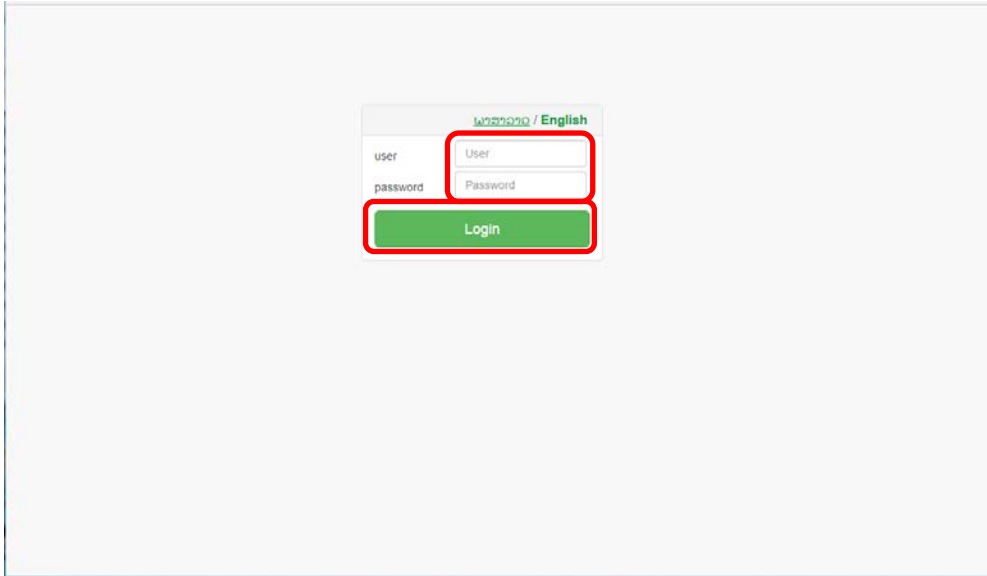
◆ **System Requirements**

- **CPU: Intel Core-i3 or more**
- **Memory: 2GB or more**
- **Display: Resolution 1024 * 768(TrueColor) or more**

2. Launch / Quit

2.1 Launch NFMS

1. Enter [user] and [password] at [Login] screen and click [Login] button.

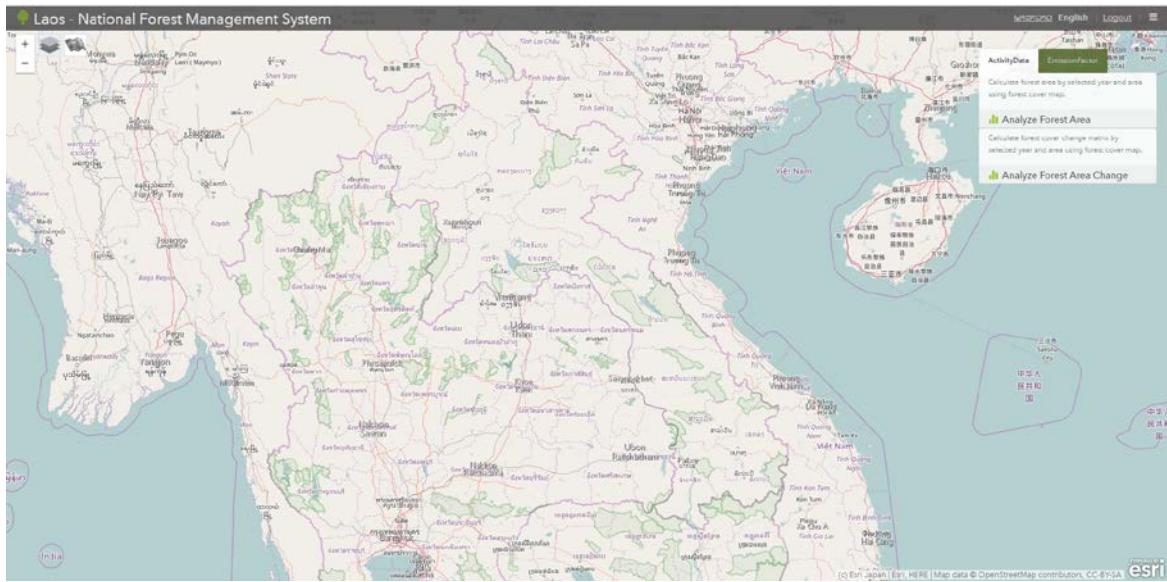


-> If user and password is valid, login will succeed.

Select Language

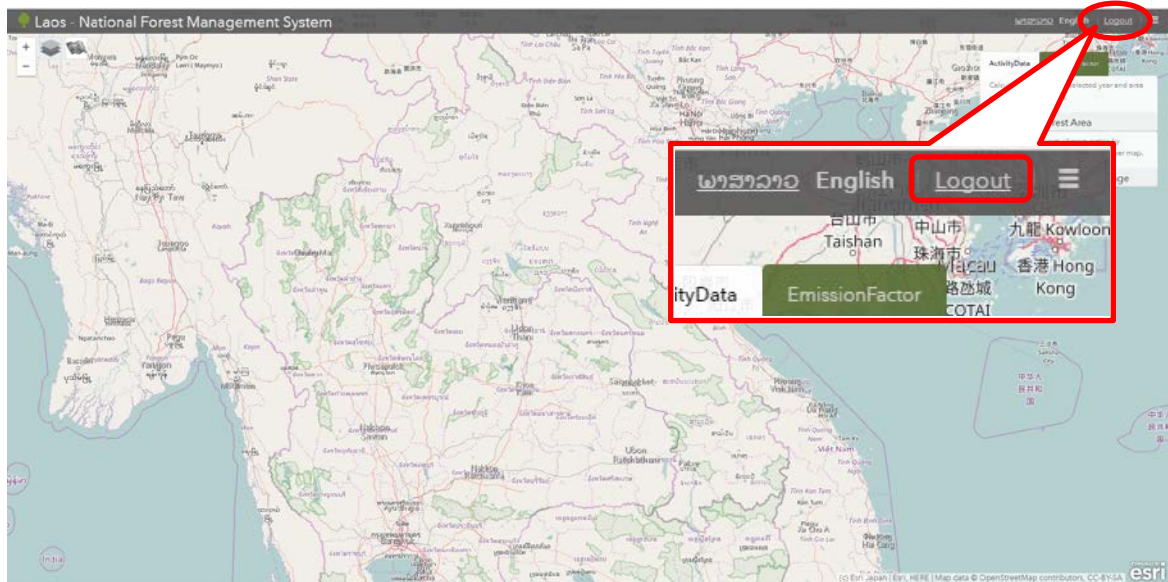
By clicking lanugage button ([ລາວລາວ / English](#)) at login screen, user can change the display language between Lao and English..

2. Map screen will be displayed.



2.2 Quit NFMS

1. Click [Logout]



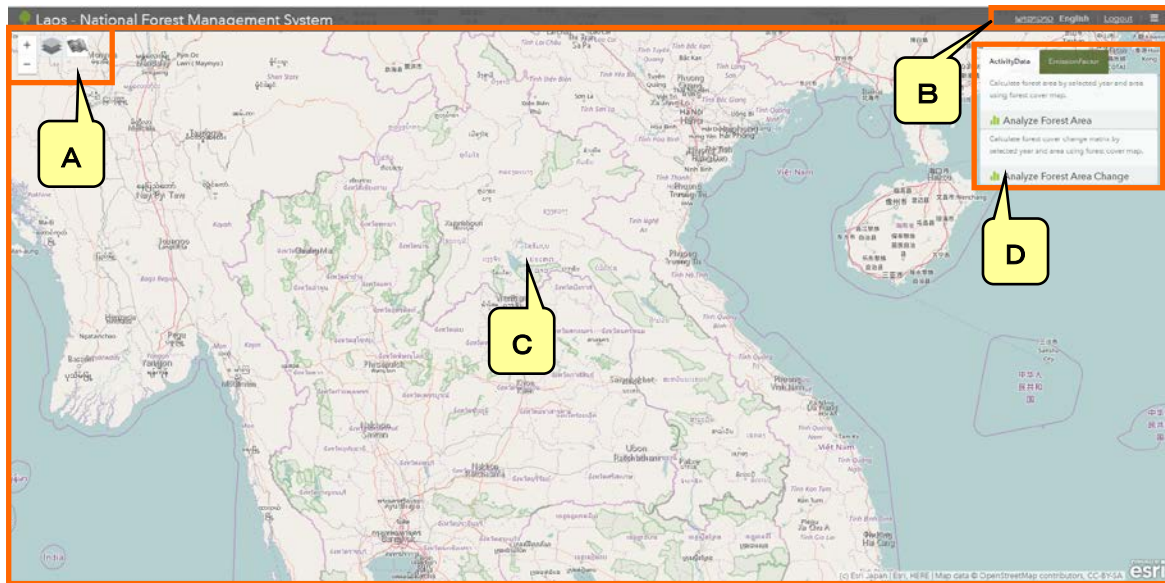
⇒【Logout confirmation dialog】 will appear

Click [OK] button

3. Screen Layout and Map Operation

3.1 Screen Layout

Below figure shows screen layout of Laos NFMS



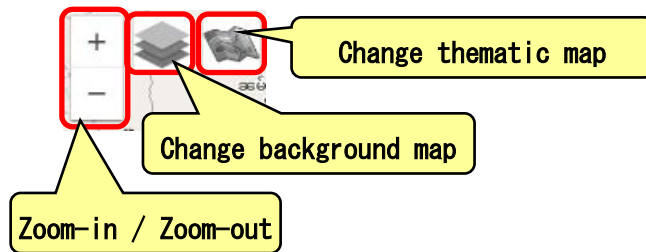
- **A Map operation menu**
 - Change background map, thematic map
 - Zoom-in / Zoom-out
- **B Basic function menu**
 - Change display language
 - Measure function
 - Print function
- **C Map pane**
 - Display map
- **D Analysis dialog**
 - Analysis of activity data, emission factor and carbon stock.

3.2 Map Operation

3.2.1 Map Operation Menu

Below function can be used in map operation menu.

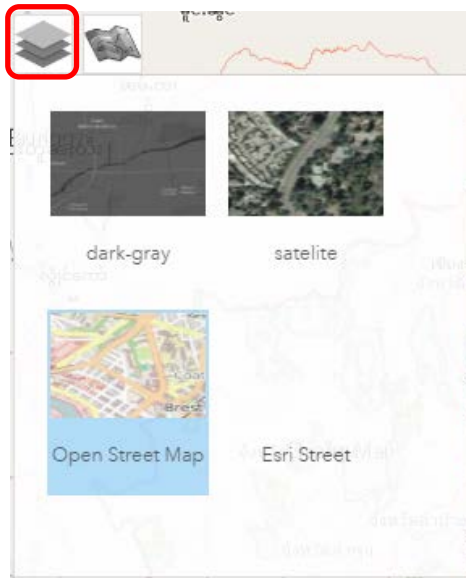
【Zoom-in / Zoom-out】, 【Change Background map】, 【Change thematic map】




 You also can zoom-in and zoom-out using mouse wheel.

◆ **[Change Background Map]**

User can switch background map.




1. **Click [Change Background Map] button**

Click  button to display change background map.

2. **Select background map to display**

Background map installed in NFMS will be displayed. Click background map to display.

3. **Closing background map change menu**

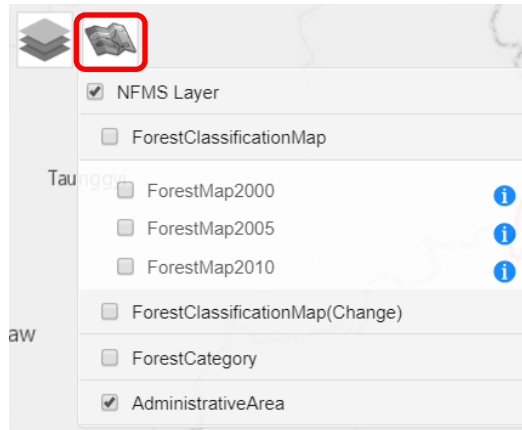
Click  button to close background map change menu

 **Current background map**

Current background map will be displayed with blue frame.

◆ **[Change Thematic Map]**

User can switch thematic map.




1. **Click [Change Thematic Map] button**

Click  button to display thematic map layer tree.

2. **Change thematic map**

User can change which thematic map to display by checking checkbox on layer tree.

3. **Close thematic map layer tree**

Click  button to close thematic map layer tree.

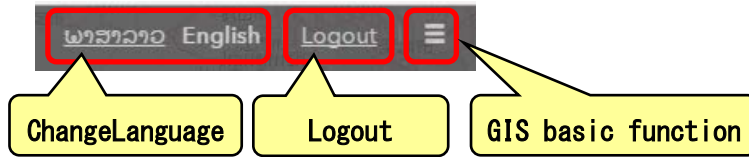
Thematic map layer tree

Initially, layer tree is closed. By clicking category name, user can display/undisplay category or layer under the category. By clicking category checkbox, you may display/undisplay all the layer under the category.

3.2.2 Basic Function Menu

Below function can be used by using basic function menu.

【Display language change】、【Logout】、【GIS basic function】



◆ 【Change language】

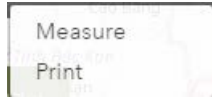
Display language can be changed using this function.
Selectable language : English and Lao

◆ 【Logout】

User can quit the system by clicking [Logout.]

◆ **【GIS basic function】**

User can use measure and print function.



✓ **【Measure function】**

By using measure function, user can measure length and area.



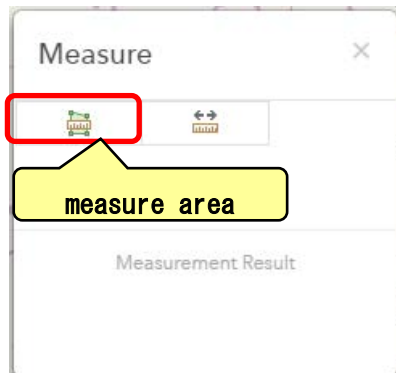
➤ **【Measuring area】**

By drawing polygon, user can measure area.

1. **Click [Measure]**

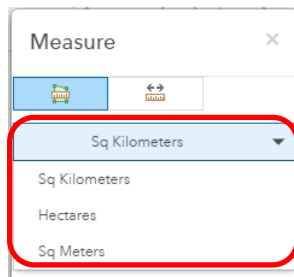
2. **Select [Measure area] from [Measure] dialog**

Select measure area () from [Measure] dialog.



3. **Select measure unit**

Select measure unit



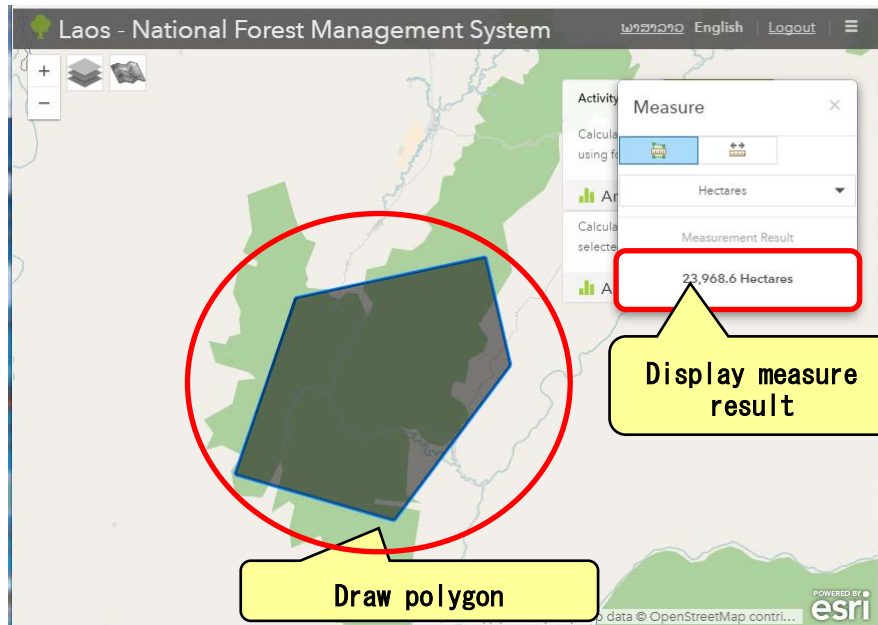
| | |
|--------------|----------------|
| Unit of area | Sq. Kilometers |
| measure | Hectares |

| | |
|--|------------|
| | Sq. Meters |
|--|------------|

4. Draw polygon and check measure result

Draw polygon (Double-click to finish drawing)。

Measure result will be displayed in **【Measure】** dialog.



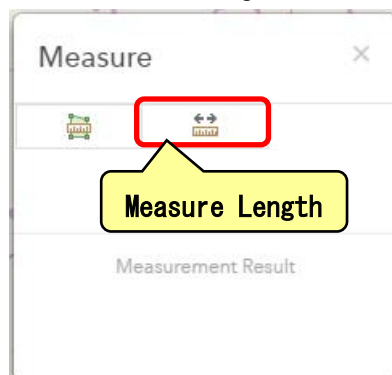
➤ **【Measure length】**

User can measure length by drawing line.

1. Click **【Measure】**

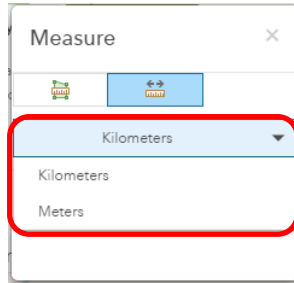
2. Select **【Measure Length】** from **【Measure】** dialog

Select measure length () from **【Measure】** dialog



3. Select measure unit

Select measure unit

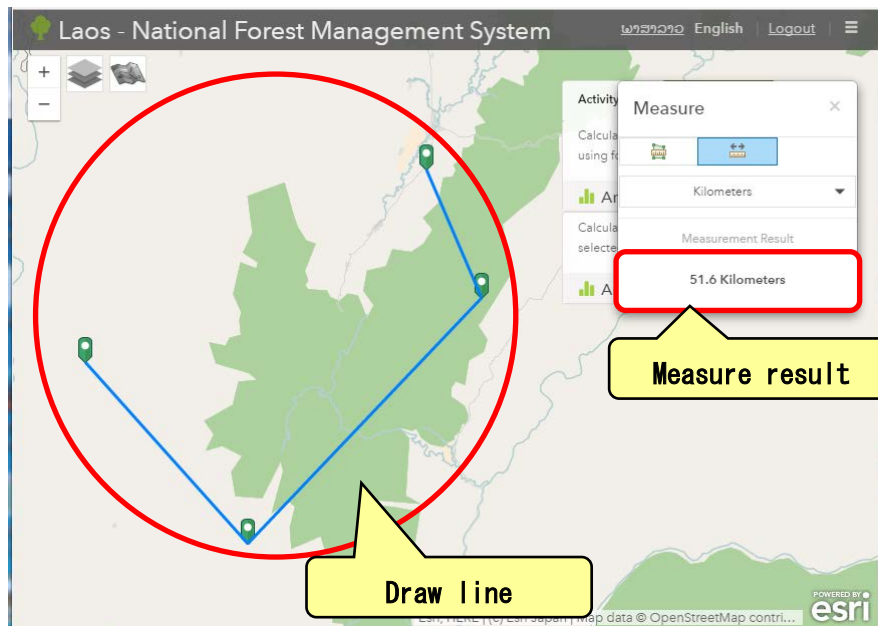


| | |
|----------------|------------|
| Length measure | Kilometers |
| unit | Meters |

4. Draw line on map and check measure result

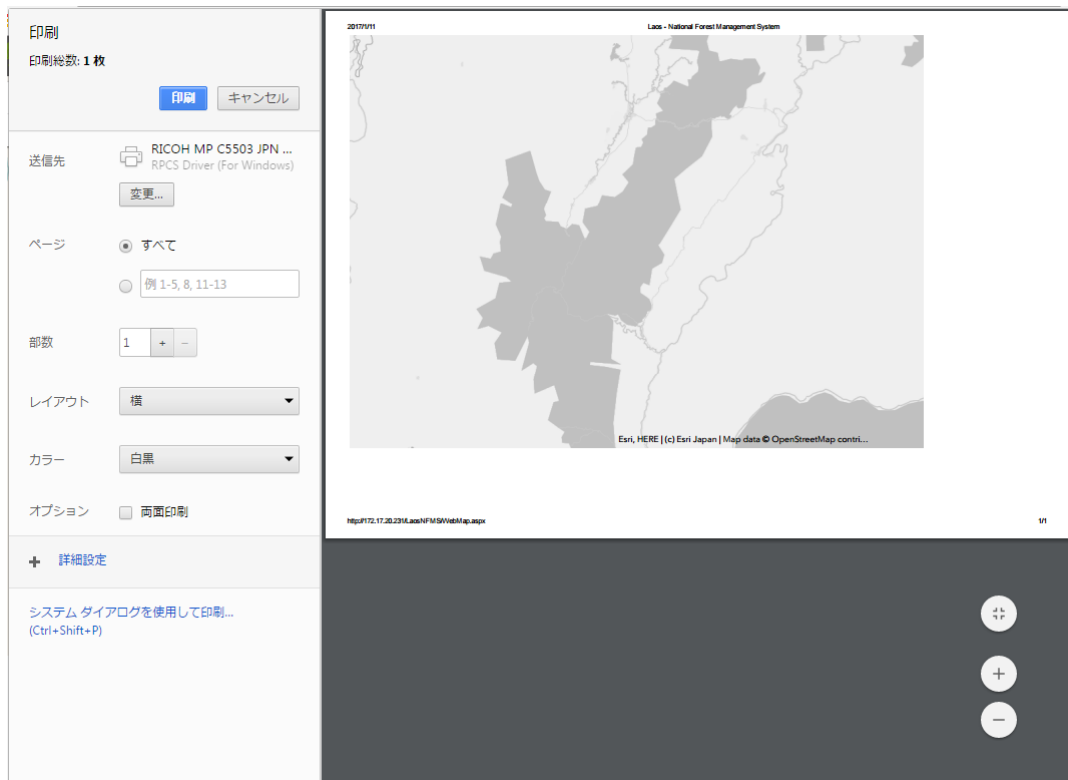
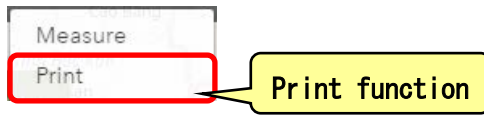
Draw line (Double click to finish drawing)

Measure result will be displayed in 【Measure】 dialog



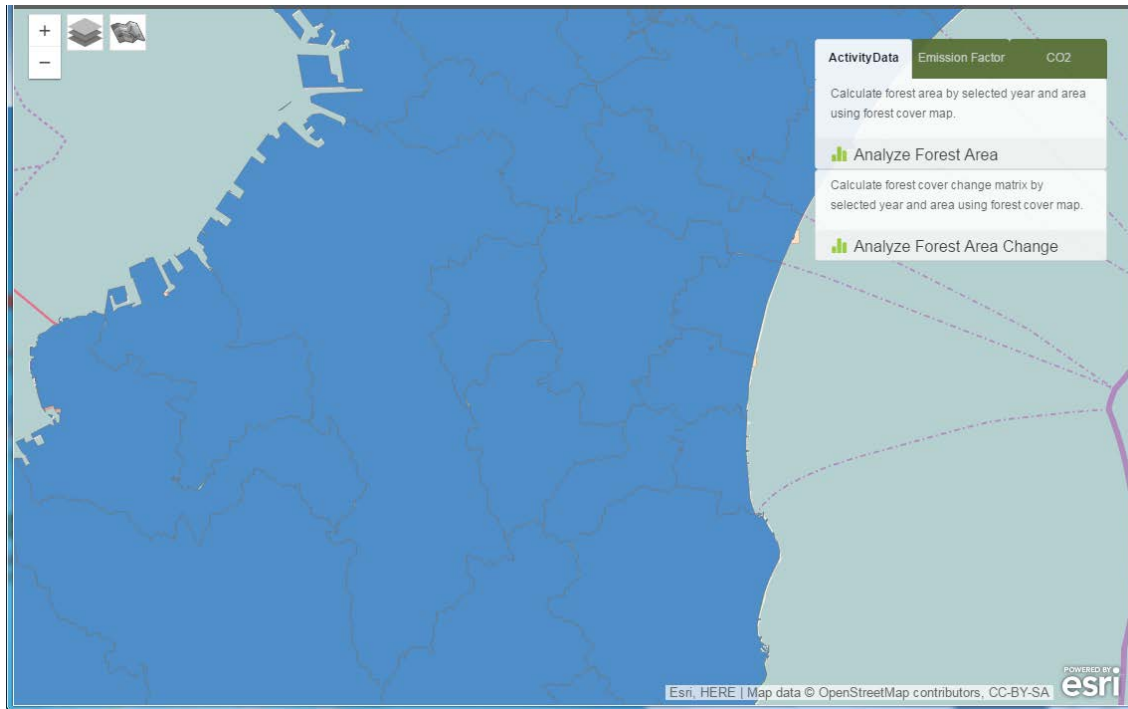
✓ **【Print function】**

Select [Print] to print map.



3.2.3 Map pane

User can display background map and thematic map on map pane.



◆ 【Display attribute】

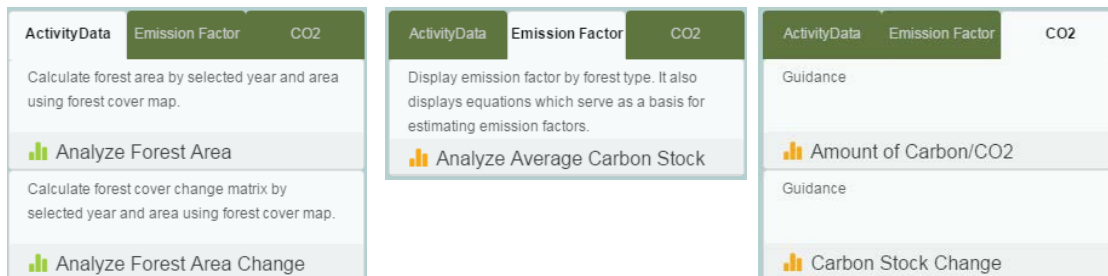
User can display feature attribute by clicking feature



4. Analysis function

4.1 Screen Layout of Analysis Function

Below figure shows screen layout of analysis function.



| No | Tab | Function Name |
|----|-----------------|------------------------------|
| 1 | Activity Data | Analyze Forest Area |
| 2 | | Analyze Forest Area Change |
| 3 | Emission Factor | Analyze Average Carbon Stock |
| 4 | CO2 | Amount of Carbon/CO2 |
| 5 | | Carbon Stock Change |

4.2 Activity Data

4.2.1 Analyze Forest Area

User can analyze forest area using below analysis condition.

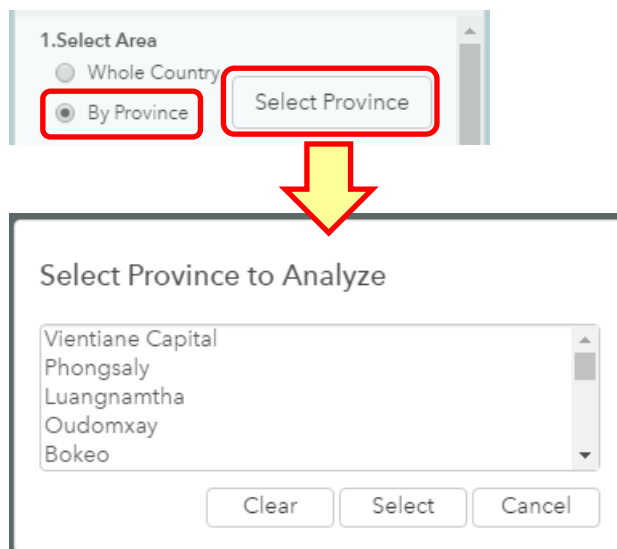
| No. | Analysis Condition | Note |
|-----|--|---|
| 1 | Select Area | User can select "whole country" or selected province. |
| 2 | Narrow down analysis area by forest category | User can analyze forest area by forest category |
| 3 | Select map year | User can select year of forest type map |
| 4 | Select unit to aggregate data | User can select unit to aggregate data. |

1. 【Select area】

User can select area to analyze.

- Whole Country
- By Province

When selecting [By Province], click [Select Province]



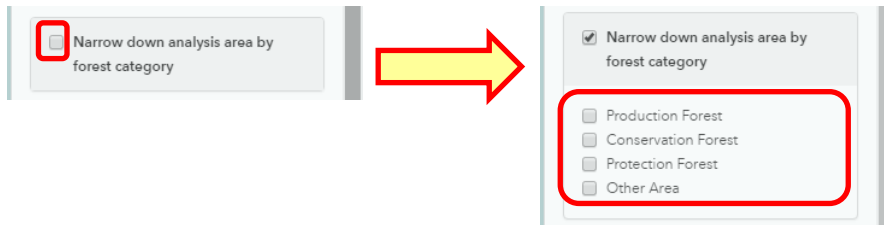
Select province to analyze. Multiple province can be selected.

Selecting multiple province

User can select multiple province by「Shift + Click」 and 「Ctrl + Click」

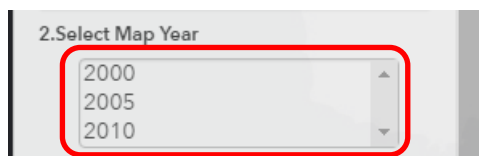
2. **【Narrow down analysis area by forest category】**

User can narrow down analysis area by forest category.



3. **【Select Map Year】**

User can select map year to analyze.

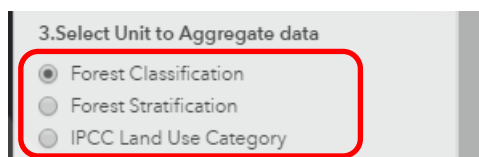


 Selecting multiple map year

User can select multiple map year by "Shift + Click" and "Ctrl + Click"

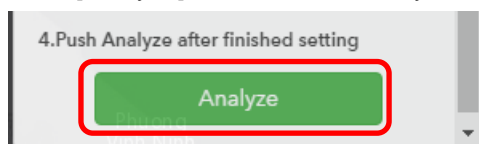
4. **【Select Unit to Aggregate data】**

Select unit to aggregate data.



5. **【Analyze】**

Click [Analyze] button to start analysis.



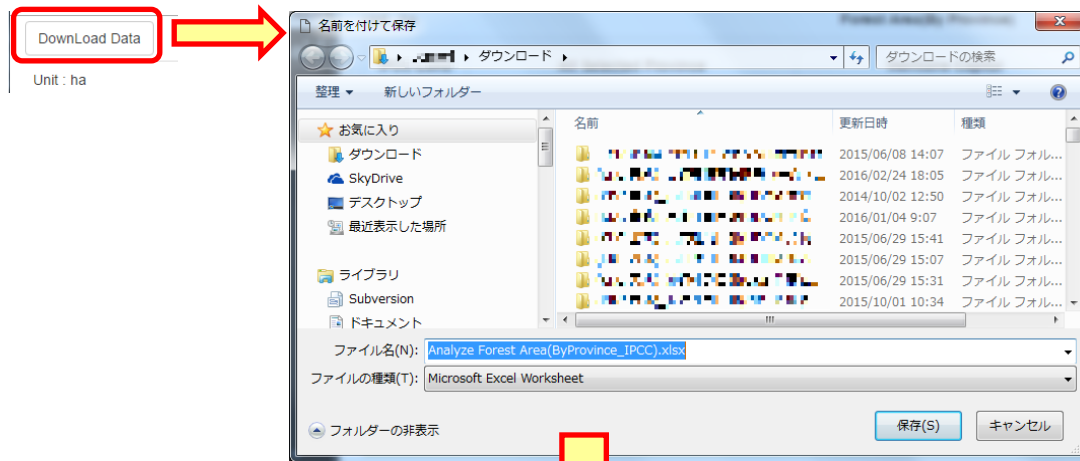
6. 【Analysis Result】

Analysis result will be displayed.

| DownLoad Data | | | | | | | | | | | | |
|--------------------------|-----------------------|-----------|-------------------|-----------|-------------------|----------|-------------------|----------|-------------------|----------|-------------------|----------|
| Unit : ha | | | | | | | | | | | | |
| Forest Area(By Province) | | | | | | | | | | | | |
| IPCC Land Use Category | All Selected Province | | | | Vientiane Capital | | | | Phongsaly | | | |
| | Production Forest | | Protection Forest | | Production Forest | | Protection Forest | | Production Forest | | Protection Forest | |
| | 2000 | 2005 | 2000 | 2005 | 2000 | 2005 | 2000 | 2005 | 2000 | 2005 | 2000 | 2005 |
| Forest Land | 4,525.92 | 5,003.38 | 4,916.70 | 5,076.30 | 2,785.03 | 2,971.03 | 2,177.97 | 2,611.36 | 1,740.89 | 2,032.35 | 2,738.73 | 2,464.94 |
| Grassland | 1,414.94 | 1,825.36 | 1,307.60 | 1,079.38 | 567.28 | 955.35 | 661.78 | 557.57 | 847.66 | 870.00 | 645.82 | 521.81 |
| Cropland | 2,767.40 | 1,992.23 | 2,529.08 | 2,307.40 | 1,142.41 | 1,021.77 | 1,554.14 | 1,009.35 | 1,625.00 | 970.46 | 974.93 | 1,298.05 |
| Settlements | 632.57 | 339.15 | 639.25 | 588.51 | 452.65 | 195.36 | 173.12 | 493.94 | 179.92 | 143.78 | 466.13 | 94.58 |
| Other Land | 1,319.41 | 1,531.64 | 1,626.12 | 1,165.77 | 887.39 | 885.85 | 796.40 | 235.13 | 432.02 | 645.79 | 829.72 | 930.64 |
| Wetlands | 1,165.44 | 1,271.38 | 957.39 | 943.68 | 376.16 | 477.07 | 471.29 | 486.44 | 789.28 | 794.31 | 486.10 | 457.23 |
| Other | 1,566.22 | 1,227.07 | 1,276.19 | 1,048.60 | 969.80 | 571.19 | 569.98 | 431.10 | 596.42 | 655.88 | 706.21 | 617.50 |
| Sum | 13,391.91 | 13,190.21 | 13,252.32 | 12,209.64 | 7,180.72 | 7,077.62 | 6,404.69 | 5,824.90 | 6,211.19 | 6,112.59 | 6,847.64 | 6,384.75 |

7. 【Download analysis result】

Click [Download Data] to download analysis result.



| | | Forest Area(By Province) | | | | | | | | | | | |
|------------------------|--|--------------------------|-----------|-------------------|-----------|-------------------|----------|-------------------|----------|-------------------|----------|-------------------|----------|
| Unit : ha | | All Selected Province | | | | Vientiane Capital | | | | Phongsaly | | | |
| IPCC Land Use Category | | Production Forest | | Protection Forest | | Production Forest | | Protection Forest | | Production Forest | | Protection Forest | |
| | | 2000 | 2005 | 2000 | 2005 | 2000 | 2005 | 2000 | 2005 | 2000 | 2005 | 2000 | 2005 |
| Forest Land | | 4,525.92 | 5,003.38 | 4,916.70 | 5,076.30 | 2,785.03 | 2,971.03 | 2,177.97 | 2,611.36 | 1,740.89 | 2,032.35 | 2,738.73 | 2,464.94 |
| Grassland | | 1,414.94 | 1,825.36 | 1,307.60 | 1,079.38 | 567.28 | 955.35 | 661.78 | 557.57 | 847.66 | 870.00 | 645.82 | 521.81 |
| Cropland | | 2,767.40 | 1,992.23 | 2,529.08 | 2,307.40 | 1,142.41 | 1,021.77 | 1,554.14 | 1,009.35 | 1,625.00 | 970.46 | 974.93 | 1,298.05 |
| Settlements | | 632.57 | 339.15 | 639.25 | 588.51 | 452.65 | 195.36 | 173.12 | 493.94 | 179.92 | 143.78 | 466.13 | 94.58 |
| Other Land | | 1,319.41 | 1,531.64 | 1,626.12 | 1,165.77 | 887.39 | 885.85 | 796.40 | 235.13 | 432.02 | 645.79 | 829.72 | 930.64 |
| Wetlands | | 1,165.44 | 1,271.38 | 957.39 | 943.68 | 376.16 | 477.07 | 471.29 | 486.44 | 789.28 | 794.31 | 486.10 | 457.23 |
| Other | | 1,566.22 | 1,227.07 | 1,276.19 | 1,048.60 | 969.80 | 571.19 | 569.98 | 431.10 | 596.42 | 655.88 | 706.21 | 617.50 |
| Sum | | 13,391.91 | 13,190.21 | 13,252.32 | 12,209.64 | 7,180.72 | 7,077.62 | 6,404.69 | 5,824.90 | 6,211.19 | 6,112.59 | 6,847.64 | 6,384.75 |

4.2.2 Analyze Forest Area Change

User can analyze forest area change using below analysis condition.

| No. | Analysis Condition | Note |
|-----|--|---|
| 1 | Select Area | User can select “whole country” or selected province. |
| 2 | Narrow down analysis area by forest category | User can analyze forest area by forest category. |
| 3 | Select map year | User can select year of forest type map. |
| 4 | Select unit to aggregate data | User can select unit to aggregate data. |

1. **【Select area】**

User can select area to analyze.

For detail, please refer to “4.2.1 Analyze Forest Area”.

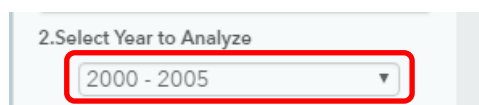
2. **【Narrow down analysis area by forest category】**

User can narrow down analysis area by forest category.

For detail, please refer to “4.2.1 Analyze Forest Area”.

3. **【Select Map Year】**

User can select map year to analyze.



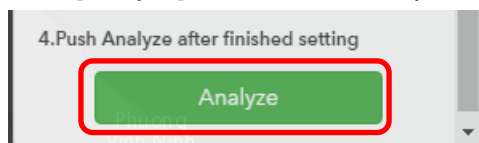
4. **【Select Unit to Aggregate data】**

Select unit to aggregate data.

For detail, please refer to “4.2.1 Analyze Forest Area”.

5. **【Analyze】**

Click [Analyze] button to start analysis.



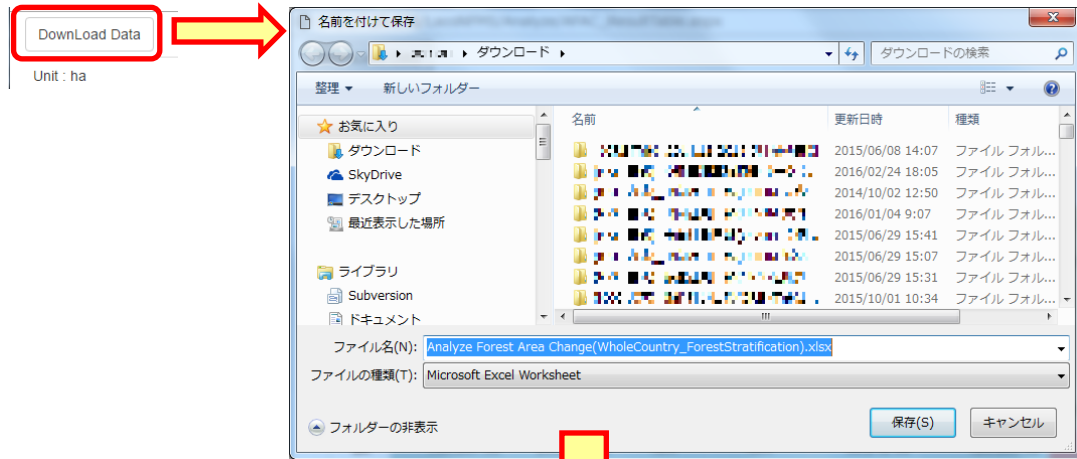
6. [Analysis Result]

Analysis result will be displayed.

| Download Data | | Forest Area Change(Whole Country) | | | | | | | | | | | | | | | | | | | |
|---------------|----------------|-----------------------------------|------------|--------------|----------------|------------------|----------------|--------------|---------------|--------------|------------------|----------------|------------------|---------------|--------------|---------------|--------------|---------------|----------------|---------------|--|
| LINE# | | Forest Type(HEct) | | | | | | | | | | | | | | | | | | | |
| | ET/ND | ED | CF | MCR | P | BURV | SA | SR | G | DW | UC | SP | GA | AP | U | BR | O | W | CL | SH | |
| ET/ND | 59,994,624.21 | 8,507,216.02 | N/A | 400,073.30 | 16,399,796.18 | 74,131,036.96 | 89,759.00 | 1,074,281.06 | 1,368,912.21 | N/A | 940,520,387.34 | 16,304,036.57 | 332,213,762.46 | 6,944,936.91 | 209,139.26 | 94,799.50 | 977,665.49 | 3,205,472.02 | 378,761,499.61 | 45,091,122.91 | |
| ED | 30,527,122.66 | N/A | N/A | N/A | N/A | 14,514,629.56 | 127,297.00 | N/A | 3,541,402.02 | 54,825.00 | 5,591,942.63 | 33,624,823.17 | 42,562,969.72 | 72,487.00 | 174,775.08 | N/A | 179,968.08 | 712,487.00 | 142,056.00 | 16,612.00 | |
| CF | N/A | N/A | N/A | N/A | N/A | 62,232.29 | N/A | N/A | N/A | N/A | 2,071,991.45 | 17,112.00 | 21,166.46 | N/A | N/A | N/A | N/A | 8,226,231.01 | 23,411.57 | 11,300.00 | |
| MCR | 150,791.04 | N/A | N/A | N/A | N/A | 1,300,239.00 | N/A | N/A | 272,424.00 | N/A | 3,023,591.45 | 507,000.01 | 196,024.14 | N/A | N/A | N/A | 05,692.00 | N/A | 776,625.11 | 92,862.00 | |
| P | 43,200.00 | N/A | N/A | N/A | N/A | 187,133.74 | N/A | N/A | N/A | N/A | 114,364.40 | N/A | 21,859.46 | N/A | N/A | N/A | N/A | N/A | 209,009.39 | 534,190.00 | |
| BURV | 21,569,716.96 | 7,893,305.42 | 351,753.03 | 2,591,178.08 | 26,534,693.88 | 45,462,359.59 | 172,739.70 | 613,081.67 | 41,494,894.43 | 879,713.03 | 1,816,138,976.11 | 195,891,027.84 | 1,794,309,967.45 | 21,236,274.94 | 1,912,159.79 | 413,942.32 | 3,324,259.75 | 10,540,676.09 | 404,957,214.00 | 10,119,809.18 | |
| SA | 146,267.59 | 299,762.59 | N/A | N/A | 30,212.52 | 126,000.02 | N/A | N/A | N/A | N/A | 2,000,024.67 | 8,360,254.11 | 2,526,180.08 | 261,762.00 | N/A | N/A | 25,637.59 | 15,697.00 | N/A | 14,600.00 | |
| SR | 3,169,257.51 | N/A | N/A | N/A | N/A | 911,875.00 | N/A | N/A | N/A | N/A | 1,369,587.35 | N/A | 11,655.79 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| G | 19,494,422.59 | N/A | N/A | N/A | 167,407.80 | 1,377,095.43 | 111,043,888.96 | N/A | N/A | 118,402.00 | 3,145,595.56 | 11,730,897.80 | 12,361,805.02 | 641,825.00 | 590,062.88 | N/A | 110,075.00 | 1,294,824.71 | 6,479,024.11 | 779,456.24 | |
| DW | 411,200.41 | N/A | N/A | N/A | N/A | 11,756,672.00 | N/A | N/A | 51,862.00 | N/A | 1,707,840.00 | 2,864,040.70 | 752,070.00 | 197,100.00 | N/A | N/A | N/A | 172,138.00 | 417,627.30 | N/A | |
| UC | 10,145,460.70 | 38,763.47 | 631,147.70 | 42,804.00 | (7,761,886.42) | 1,853,773,530.41 | (5,535,143.27) | 3,721,246.32 | 1,645,596.13 | 6,033,199.74 | N/A | 16,869,646.91 | 68,314.36 | 59,294.48 | 1,716,689.54 | 72,251.88 | 248,437.13 | 2,239,769.34 | 16,729,595.51 | 1,757,660.78 | |
| SP | N/A | 8,159,244.89 | N/A | N/A | N/A | 36,987,532.23 | 41,187.00 | N/A | 3,793,417.49 | 610,262.00 | 26,962,024.78 | N/A | 25,520,902.66 | 101,094.91 | 2,481,590.76 | 11,000.00 | 21,896.32 | 4,789,039.21 | 22,369,515.23 | 331,417.00 | |
| GA | 45,199.19 | 204,262.00 | N/A | N/A | 1,026,471.69 | 125,040,002.36 | 64,475.00 | N/A | 4,130,132.34 | N/A | 107,798.40 | N/A | N/A | N/A | 7,900,269.24 | 131,369.49 | N/A | 316,210.00 | 94,200.00 | 120,621.84 | |
| AP | N/A | 66,662.50 | N/A | N/A | N/A | 15,912,668.26 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 957,173.77 | N/A | N/A | N/A | N/A | N/A | 98,375.00 | |
| U | 92,463.48 | N/A | N/A | N/A | 9,600.00 | 1,951,165.94 | N/A | N/A | N/A | N/A | 279,449.00 | 6,317.73 | 154,621.88 | N/A | N/A | N/A | N/A | 45,735.00 | 27,053.40 | N/A | |
| BR | 25,400.00 | N/A | N/A | N/A | N/A | 239,421.31 | N/A | N/A | N/A | 00,750.00 | N/A | 609,000.70 | 41,000.00 | N/A | N/A | N/A | N/A | 200,065.71 | N/A | N/A | |
| O | 130,010.00 | N/A | N/A | N/A | N/A | 2,490,056.90 | N/A | N/A | N/A | N/A | 51,300.00 | 284,327.86 | 11,709.00 | 163,038.44 | N/A | N/A | N/A | 59,762.00 | 131,500.00 | N/A | |
| W | 346,644.22 | N/A | N/A | N/A | N/A | 2,296,516.40 | N/A | N/A | 1,807,623.90 | 2,114.16 | 1,167,771.14 | 2,117,802.10 | 796,346.26 | N/A | N/A | 11,917,996.17 | 80,122.24 | N/A | 8,125,125.17 | 74,818.00 | |
| CL | 241,000,214.47 | 14,709,251.90 | N/A | N/A | 303,969.67 | 457,087,950.21 | 130,320.00 | N/A | 4,301,430.00 | 369,937.00 | 11,143,126.40 | 27,262,090.74 | 10,800,100.00 | 537,553.07 | N/A | 16,610.00 | 04,937.00 | 2,098,872.16 | N/A | 300,916.00 | |
| SH | 13,994,402.37 | 10,361,015.80 | N/A | N/A | N/A | 21,431,391.33 | 201,620.00 | N/A | 848,816.38 | 12,407.00 | 1,639,345.99 | 16,479,713.61 | 730,643.27 | 29,725.00 | 26,862.00 | N/A | 17,400.00 | 82,200.00 | 55,743.45 | N/A | |

7. [Download analysis result]

Click [Download Data] to download analysis result.



| | EF | DD | CF | MCB | P | B RV | SA | SR | G | SW | LC | RP | OA | AP | U | BR |
|------|----------------|----------------|------------|--------------|---------------|------------------|--------------|--------------|---------------|--------------|------------------|----------------|------------------|---------------|--------------|----------|
| EF | 964842.21 | 805716.02 | N/A | 606473.36 | 10,195,796.18 | 74,131,008.86 | 83,750.00 | 1,674,391.00 | 3,389,912.21 | N/A | 649,528,867.94 | 15,504,190.33 | 252,213,762.48 | 6,844,696.91 | 258,139.26 | 84.7 |
| DD | 30327,22.08 | N/A | N/A | N/A | N/A | 14,514,629.38 | 127,957.09 | N/A | 3,341,462.02 | 34,623.00 | 9,591,842.63 | 33,824,833.17 | 42,506,968.72 | 72,487.30 | 174,775.00 | N/A |
| CF | N/A | N/A | N/A | N/A | N/A | 9,222.29 | N/A | N/A | N/A | N/A | 5,071,881.45 | 1,112.50 | 2,119,466.46 | N/A | N/A | N/A |
| MCB | 180,716.94 | N/A | N/A | N/A | N/A | 1,365,258.88 | N/A | N/A | 272,424.96 | N/A | 3,029,591.48 | 567,609.91 | 3,065,514.14 | N/A | N/A | N/A |
| P | 45,206.00 | N/A | N/A | N/A | N/A | 167,133.74 | N/A | N/A | N/A | N/A | 114,364.46 | N/A | 21,819.46 | N/A | N/A | N/A |
| B RV | 21,338,713.99 | 2,833,385.42 | 331,733.03 | 2,591,178.88 | 26,314,611.88 | 45,452,339.59 | 172,708.70 | 63,380.67 | 41,494,694.43 | 5,791,130.00 | 1,818,138,078.11 | 195,981,027.84 | 1,794,308,987.45 | 21,239,214.54 | 1,812,158.78 | 4,038 |
| SA | 140,271.50 | 299,362.50 | N/A | N/A | 36,212.50 | 11,069.62 | N/A | N/A | N/A | N/A | 2,800,024.67 | 8,366,234.11 | 2,626,166.90 | 255,762.50 | N/A | N/A |
| SR | 3,169,373.51 | N/A | N/A | N/A | N/A | 111,875.60 | N/A | N/A | N/A | N/A | 1,369,977.73 | N/A | 1,845.79 | N/A | N/A | N/A |
| G | 19,456,422.59 | N/A | N/A | 167,487.90 | 1,377,093.43 | 111,043,688.95 | N/A | N/A | N/A | 118,462.50 | 5,145,595.56 | 11,730,897.60 | 12,965,633.52 | 641,825.80 | 5,999,032.88 | N/A |
| SW | 411,286.41 | N/A | N/A | N/A | N/A | 11,758,972.00 | N/A | N/A | N/A | 51,862.50 | 1,797,840.63 | 2,984,040.76 | 75,073.53 | 197,100.80 | N/A | N/A |
| LC | 161,454,683.76 | 88,383.47 | 611,147.70 | 47,884.91 | 1,781,688.42 | 1,831,773,730.41 | 1,511,143.27 | 1,771,348.32 | 1,645,986.11 | 1,833,366.78 | 7,866,668.91 | 483,514.88 | 82,564.48 | 1,718,619.44 | 70.3 | |
| RP | N/A | 81,982,448.88 | N/A | N/A | N/A | 39,567,022.23 | 41,187.50 | N/A | 3,783,417.49 | 810,662.56 | 36,965,504.78 | N/A | 25,528,962.46 | 103,064.41 | 2,485,199.76 | 180.2 |
| OA | 9,188.19 | 298,262.50 | N/A | N/A | 1,826,471.89 | 125,045,082.90 | 84,475.00 | N/A | 4,130,323.24 | N/A | 167,706.40 | 30,447,909.40 | N/A | 7,903,279.04 | 531,308.48 | N/A |
| AP | N/A | 68,682.50 | N/A | N/A | N/A | 35,510,688.26 | N/A | N/A | N/A | N/A | N/A | N/A | 857,173.77 | N/A | N/A | N/A |
| U | 92,481.48 | N/A | N/A | 8,680.00 | N/A | 1,965,115.84 | N/A | N/A | N/A | N/A | 279,449.00 | 6,317.73 | 18,621.89 | N/A | N/A | N/A |
| BR | 23,496.00 | N/A | N/A | N/A | N/A | 228,421.81 | N/A | N/A | 567,590.00 | N/A | N/A | 568,686.79 | 41,890.86 | N/A | N/A | N/A |
| O | 13,917.50 | N/A | N/A | N/A | N/A | 2,400,056.80 | N/A | N/A | N/A | 51,300.00 | 284,327.98 | 11,700.00 | 158,856.44 | N/A | N/A | N/A |
| W | 346,644.27 | N/A | N/A | N/A | N/A | 3,299,519.40 | N/A | N/A | 1,874,873.00 | 2,114.18 | 11,807,773.14 | 2,117,923.13 | 796,146.26 | N/A | N/A | 11,117.9 |
| CL | 2,416,924.67 | 147,902,211.92 | N/A | N/A | 391,918.87 | 457,887,790.21 | 113,232.00 | N/A | 4,911,490.33 | 369,837.50 | 113,413,288.83 | 27,842,985.74 | 10,868,190.66 | 373,533.17 | N/A | 10.9 |
| SH | 13,894,463.37 | 10,382,615.80 | N/A | N/A | N/A | 21,431,381.33 | 291,625.00 | N/A | 8,948,118.38 | 12,487.50 | 1,631,385.98 | 18,875,713.81 | 735,660.27 | 28,725.80 | 38,862.50 | N/A |

4.3 Emission Factor

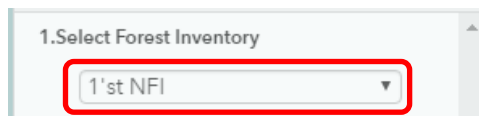
4.3.1 Analyze Average Carbon Stock

User can analyze average carbon stock using below analysis condition.

| No. | Analysis Condition | Note |
|-----|-------------------------------|--|
| 1 | Select forest inventory | User can select which forest inventory to display. |
| 2 | Select unit to aggregate data | User can select unit to aggregate data. |

1. **【Select forest inventory】**

User can select forest inventory to display.



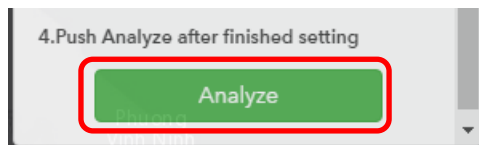
2. **【Narrow down analysis area by forest category】**

User can narrow down analysis area by forest category.

For detail, please refer to “4.2.1 Analyze Forest Area”.

3. **【Analyze】**

Click [Analyze] button to start analysis.



4. **【Analysis Result】**

Analysis result will be displayed.

Download Data

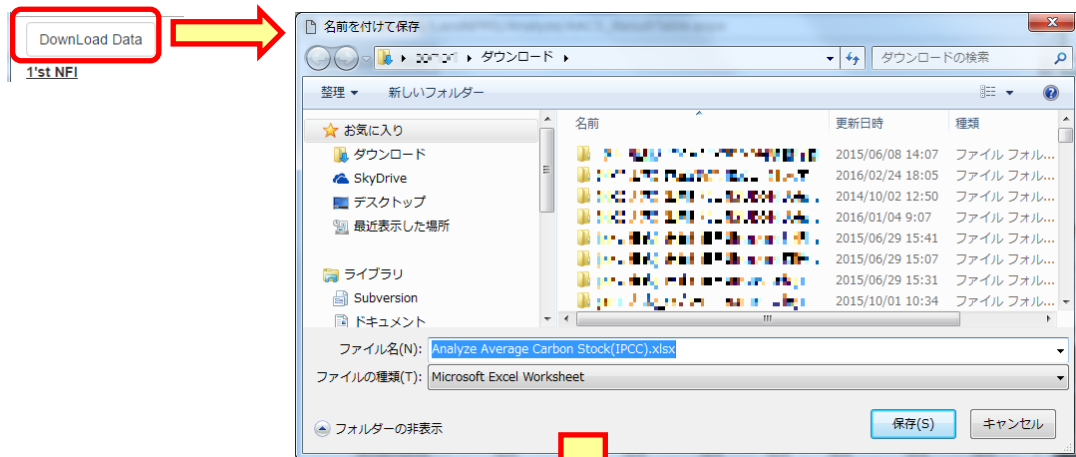
1'st NFI
This data is the result of the 1'st NFI.

Average Carbon Stock

| IPCC Land Use Category | Carbon Pool | All Carbon Pool | | | AGB (Above Ground Biomass) | | | BGB (Below Ground Biomass) | | | Dead Wood | | | Litter | | | Soil | | |
|------------------------|-------------|------------------|-------|---------|----------------------------|-------|---------|----------------------------|-------|---------|------------------|-------|---------|------------------|-------|---------|------------------|-------|---------|
| | | tBiomass (dm)/ha | tC/ha | tCO2/ha | tBiomass (dm)/ha | tC/ha | tCO2/ha | tBiomass (dm)/ha | tC/ha | tCO2/ha | tBiomass (dm)/ha | tC/ha | tCO2/ha | tBiomass (dm)/ha | tC/ha | tCO2/ha | tBiomass (dm)/ha | tC/ha | tCO2/ha |
| Forest Land | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Grassland | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Cropland | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Settlements | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Other Land | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Wetlands | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Other | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

5. 【Download analysis result】

Click [Download Data] to download analysis result.



Analyze Average Carbon Stock (Excel)

| Carbon Pool | | All Carbon Pool | | | AGB (Above Ground Biomass) | | | BGB (Below Ground Biomass) | | | Dead Wood | | | Litter | | |
|------------------------|--|------------------|-------|---------|----------------------------|-------|---------|----------------------------|-------|---------|------------------|-------|---------|------------------|-------|---------|
| | | tBiomass (dm)/ha | tC/ha | tCO2/ha | tBiomass (dm)/ha | tC/ha | tCO2/ha | tBiomass (dm)/ha | tC/ha | tCO2/ha | tBiomass (dm)/ha | tC/ha | tCO2/ha | tBiomass (dm)/ha | tC/ha | tCO2/ha |
| IPCC Land Use Category | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Forest Land | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Grassland | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Cropland | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Settlements | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Other Land | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Wetlands | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Other | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

4.4 Carbon, CO₂

4.4.1 Amount of Carbon/CO₂

User can analyze forest amount of carbon/co₂ using below analysis condition.

| No. | Analysis Condition | Note |
|-----|--|--|
| 1 | Select Area | User can select “whole country” or selected province. |
| 2 | Narrow down analysis area by forest category | User can analyze forest area by forest category. |
| 3 | Select map year | User can select year of forest type map. |
| 4 | Select emission factor | User can select which forest inventory result to use for analysis. |
| 5 | Select unit to aggregate data | User can select unit to aggregate data. |

1. **【Select area】**

User can select area to analyze.

For detail, please refer to “4.2.1 Analyze Forest Area”.

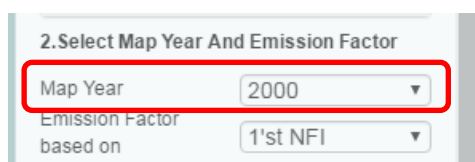
2. **【Narrow down analysis area by forest category】**

User can narrow down analysis area by forest category.

For detail, please refer to “4.2.1 Analyze Forest Area”.

3. **【Select Map Year】**

User can select map year to analyze.



2. Select Map Year And Emission Factor

Map Year

Emission Factor based on

4. **【Select emission factor】**

User can select which forest inventory result to use for analysis.

5. **【Select Unit to Aggregate data】**

Select unit to aggregate data.

For detail, please refer to “4.2.1 Analyze Forest Area”.

6. **【Analyze】**

Click [Analyze] button to start analysis.

7. **【Analysis Result】**

Analysis result will be displayed.

Download Data

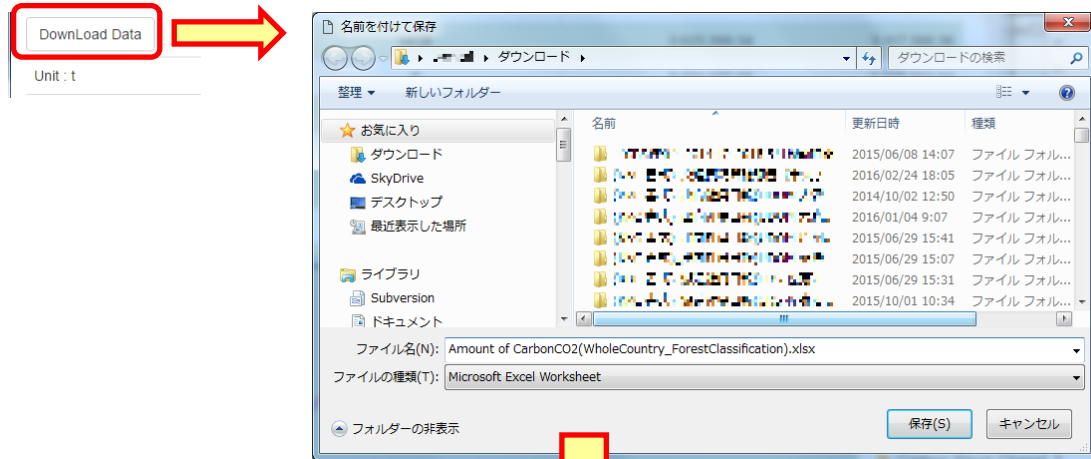
Unit : t

Amount of Carbon/CO2(Whole Country)

| Forest Classification | Carbon | CO2 |
|-----------------------|---------------|---------------|
| EF | 3,455,800.90 | 3,208,667.98 |
| MD | 3,290,026.80 | 3,756,469.88 |
| DD | 2,874,925.86 | 3,730,329.56 |
| CF | 3,300,014.37 | 3,873,077.00 |
| MCB | 3,625,399.34 | 3,117,588.36 |
| P | 3,331,975.60 | 3,525,553.94 |
| B | 3,666,265.85 | 3,708,354.80 |
| RV | 3,211,021.32 | 3,389,752.99 |
| SA | 3,486,691.46 | 3,452,011.18 |
| SR | 3,471,755.27 | 3,520,433.97 |
| G | 2,983,819.60 | 2,939,757.49 |
| SW | 3,336,405.07 | 3,313,215.43 |
| UC | 3,493,406.61 | 3,174,060.25 |
| RP | 3,328,439.96 | 3,604,228.48 |
| OA | 3,508,807.62 | 3,516,698.65 |
| AP | 3,252,179.53 | 3,317,797.07 |
| U | 3,267,046.23 | 3,422,104.20 |
| BR | 3,248,382.96 | 3,885,695.53 |
| O | 3,799,216.78 | 3,731,098.30 |
| W | 3,199,306.09 | 3,764,916.02 |
| CL | 3,075,712.71 | 3,341,473.25 |
| SH | 3,210,117.05 | 3,554,914.81 |
| Sum | 73,416,716.28 | 76,648,199.12 |

8. 【Download analysis result】

Click [Download Data] to download analysis result.



| Amount of Carbon/CO2(Whole Country) | | | |
|-------------------------------------|---------------|---------------|--|
| Forest Classification | Carbon | CO2 | |
| EF | 3,455,800.90 | 3,208,667.98 | |
| MD | 3,290,026.80 | 3,756,469.88 | |
| DD | 2,874,925.86 | 3,730,329.56 | |
| CF | 3,300,014.37 | 3,873,077.00 | |
| MCB | 3,625,399.34 | 3,117,588.36 | |
| P | 3,331,975.60 | 3,525,553.94 | |
| B | 3,666,265.85 | 3,708,354.80 | |
| RV | 3,211,021.32 | 3,389,752.99 | |
| SA | 3,486,691.46 | 3,452,011.18 | |
| SR | 3,471,755.27 | 3,520,433.97 | |
| G | 2,983,819.50 | 2,939,757.49 | |
| SW | 3,336,405.07 | 3,313,215.43 | |
| UC | 3,493,406.61 | 3,174,060.25 | |
| RP | 3,328,439.36 | 3,604,228.48 | |
| OA | 3,508,807.62 | 3,516,698.65 | |
| AP | 3,252,179.53 | 3,317,797.07 | |
| U | 3,267,046.23 | 3,422,104.20 | |
| BR | 3,248,382.96 | 3,885,695.53 | |
| O | 3,799,216.78 | 3,731,098.30 | |
| W | 3,199,306.09 | 3,764,916.02 | |
| CL | 3,075,712.71 | 3,341,473.25 | |
| SH | 3,210,117.05 | 3,554,914.81 | |
| Sum | 73,416,716.28 | 76,848,199.12 | |

4.4.2 Carbon Stock Change

User can analyze carbon stock change using below analysis condition.

| No. | Analysis Condition | Note |
|-----|--|--|
| 1 | Select Area | User can select "whole country" or selected province. |
| 2 | Narrow down analysis area by forest category | User can analyze forest area by forest category. |
| 3 | Select map year | User can select year of forest type map. |
| 4 | Select emission factor | User can select which forest inventory result to use for analysis. |
| 5 | Select unit to aggregate data | User can select unit to aggregate data. |

1. **【Select area】**

User can select area to analyze.

For detail, please refer to "4.2.1 Analyze Forest Area".

2. **【Narrow down analysis area by forest category】**

User can narrow down analysis area by forest category.

For detail, please refer to "4.2.1 Analyze Forest Area".

3. **【Select Map Year】**

User can select map year to analyze.

2. Select Map Year And Emission Factor

Map Year: 2000 - 2005

Emission Factor based on

for initial map: 1'st NFI

for final map: 1'st NFI

4. **Select emission factor**

User can select which forest inventory result to use for analysis.

5. **Select Unit to Aggregate data**

Select unit to aggregate data.

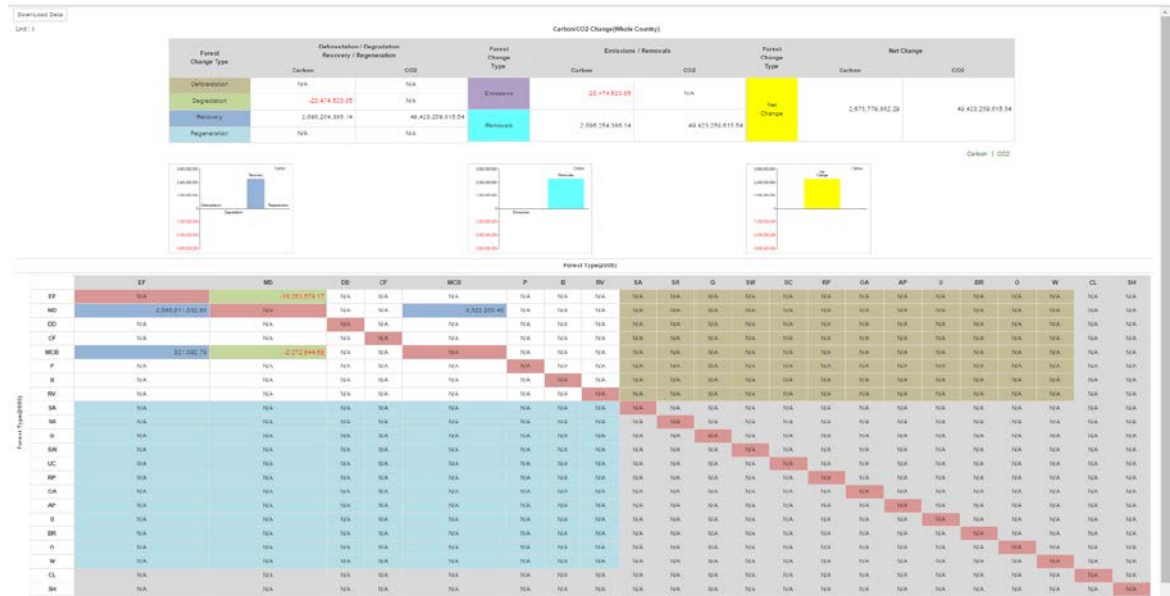
For detail, please refer to “4.2.1 Analyze Forest Area”.

6. **Analyze**

Click [Analyze] button to start analysis.

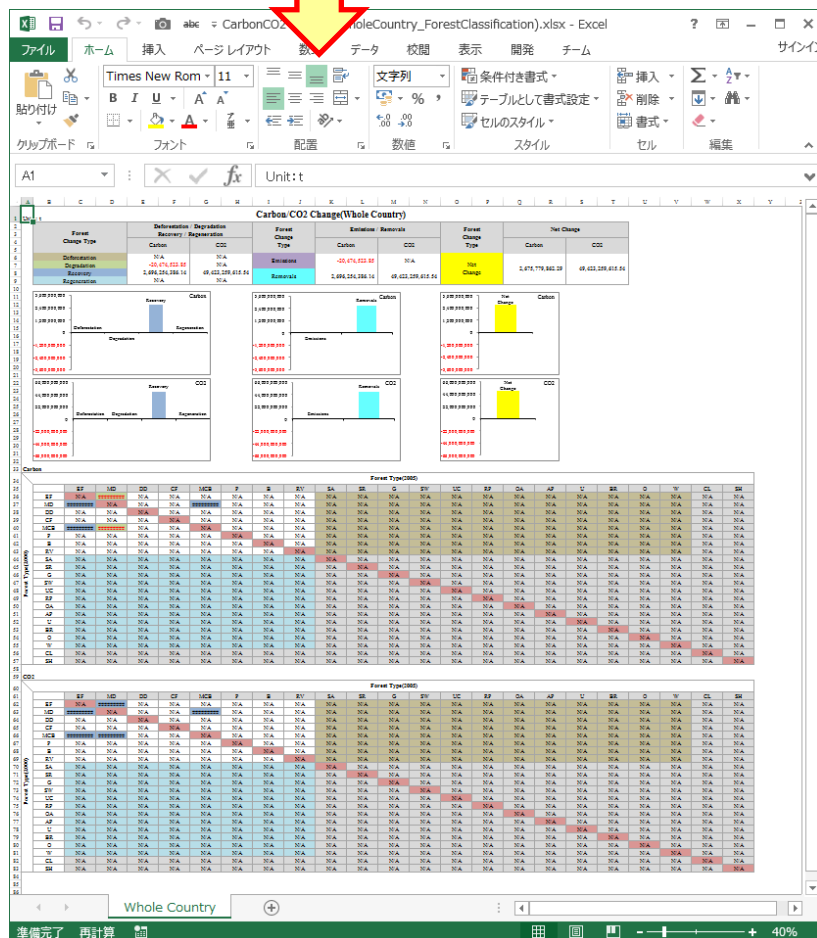
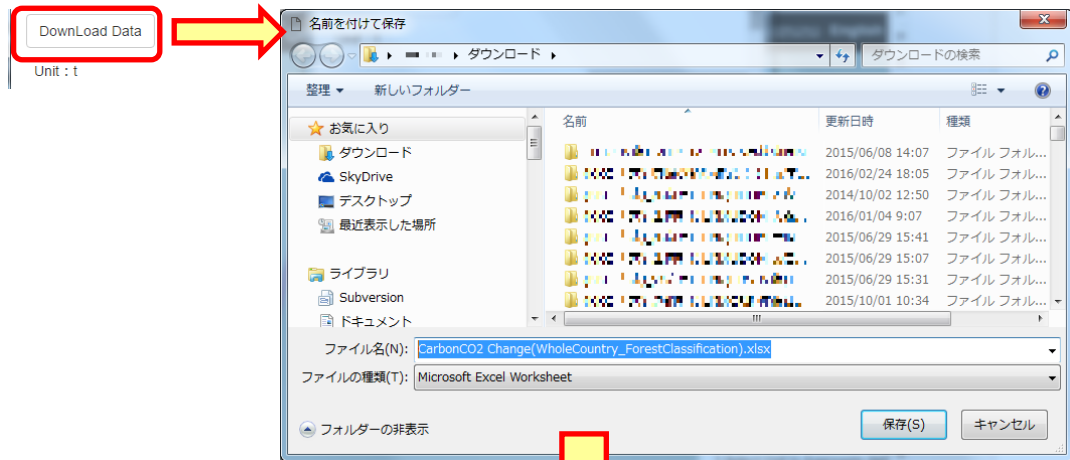
7. **Analysis Result**

Analysis result will be displayed.



8. 【Download analysis result】

Click [Download Data] to download analysis result.



 Laos - National Forest Management System

ຄູ່ມືນຳໃຊ້ລະບົບຄວບຄຸມໜ່ວຍງານຂອງສະບັບລາວ NFMS

ຄູ່ມືນຳໃຊ້ລະບົບຄວບຄຸມໜ່ວຍງານຂອງສະບັບລາວ

NFMSNFMS ສະບັບ 1.0

ຄູ່ມືນຳໃຊ້ NFMS ຂອງສປປລາວ ສະບັບ 1.0

(ສປປລາວ NFMS ສະບັບ 1.0)

ກັນຍາ 2017

| | | |
|-----------|--|-----------|
| 1. | ພາບລວມ..... | 1 |
| 1.1 | ຟັງຊັ້ນຂອງລະບົບ NFMS | 1 |
| 1.2 | ສະພາບແວດລ້ອມໃນການດໍາເນີນງານ..... | 2 |
| 2. | ການເຂົ້າໃຊ້ລະບົບ/ ການອອກຈາກລະບົບ..... | 3 |
| 2.1 | ການເຂົ້າໃຊ້ລະບົບ NFMS..... | 3 |
| 2.2 | ການອອກຈາກລະບົບ NFMS | 5 |
| 3. | ໜ້າຕ່າງ ແລະ ການສະແດງຜົນຂອງແຜນທີ່..... | 6 |
| 3.1 | ໜ້າຕ່າງ..... | 6 |
| 3.2 | ການສະແດງຜົນຂອງແຜນທີ່..... | 8 |
| 3.2.1 | ເມນູ ການສະແດງຜົນຂອງແຜນທີ່..... | 8 |
| 3.2.2 | ເມນູ ຄຳສັ່ງພື້ນຖານ..... | 11 |
| 3.2.3 | ໜ້າຕ່າງຂອງແຜນທີ່..... | 17 |
| 4. | ຟັງຊັ້ນການວິເຄາະ..... | 18 |
| 4.1 | ໜ້າຕ່າງຂອງຟັງຊັ້ນການວິເຄາະ..... | 18 |
| 4.2 | ຂໍ້ມູນກົດຈະກຳ..... | 19 |
| 4.2.1 | ການວິເຄາະພື້ນທີ່ປ່າໄມ້..... | 19 |
| 4.2.2 | ວິເຄາະການປ່ຽນແປງຂອງພື້ນທີ່ປ່າໄມ້..... | 24 |
| 4.3 | ບັດໃຈການປ່ອຍທາດອາຍພິດ..... | 27 |
| 4.3.1 | ວິເຄາະຄ່າສະເລ່ຍຂອງທາດກາກບອນ..... | 27 |
| 4.4 | ທາດກາກບອນ, CO2 | 29 |
| 4.4.1 | ປະລິມານຂອງທາດກາກບອນ/CO2..... | 29 |
| 4.4.2 | ການປ່ຽນແປງຂອງທາດກາກບອນ..... | 34 |

1. ພາບລວມ

ລະບົບຄຸ້ມຄອງປ່າໄມ້ແຫ່ງຊາດຂອງ ສ ບ ປ ລາວ (NFMS) ແມ່ນລະບົບຂໍ້ມູນຂ່າວສານທາງພູມິສາດທີ່ຊ່ວຍຈັດການຂໍ້ມູນທີ່ກ່ຽວຂ້ອງກັບວິກິດການ REDD + ແລະ ສະຫນັບສະຫນູນ "ການວັດແທກ" ຂອງ REDD + MRV, ເຊິ່ງມັນມີຜົນຊັບໃນການວິເຄາະ.

1.1 ຜົນຊັບຂອງລະບົບ NFMS

- ◆ ຜົນຊັບການດຳເນີນງານຂອງແຜນທີ່
 - ສະແດງຜົນປະຫວັດຂອງແຜນທີ່ (e.g. ພາບຖ່າຍດາວທັມ)
 - ສະແດງຜົນແຜນທີ່ພາບພື້ນທີ່ (e.g. ແຜນທີ່ປະເພດປ່າໄມ້)
 - ຊຸມ-ເຂົ້າ, ຊຸມ-ອອກ ແລະ ເລື່ອນແຜນທີ່
 - ປັບປຸງຜົນຊັບ
 - ວັດແທກຄວາມຍາວ ແລະ ພື້ນທີ່ຂອງແຜນທີ່
 - ປຶ້ງແຜນທີ່
- ◆ ຜົນຊັບຂອງການວິເຄາະ
 - ຄິດໄລ່ພື້ນທີ່ປ່າໄມ້ ແລະ ການປັບປຸງຂອງພື້ນທີ່ປ່າໄມ້
 - ສະແດງບັນດາຂໍ້ມູນການປ່ອຍທາດອາຍພິດ(ຜົນຂອງການສຳຫຼວດປ່າໄມ້)
 - ຄິດໄລ່ປະລິມານ ແລະ ການປັບປຸງຂອງທາດກາກບອນ

1.2 ສະພາບແວດລ້ອມໃນການດໍາເນີນງານ

ອິນເຕີເນັດບາວສເຊີ້ ແມ່ນມີຄວາມຈໍາເປັນເພື່ອທີ່ຈະນໍາໃຊ້ລະບົບຕິດຕາມກວດກາບໍາໄມ້ ແຫ່ງຊາດ NFMS. ລາຍລະອຽດຂ້າງລຸ່ມນີ້ແມ່ນ

ສາມາດນໍາໃຊ້ກັບລະບົບ NFMS ໄດ້.

◆ Internet Browser

- Microsoft Windows: Internet Explorer 11.0, EDGE, Chrome

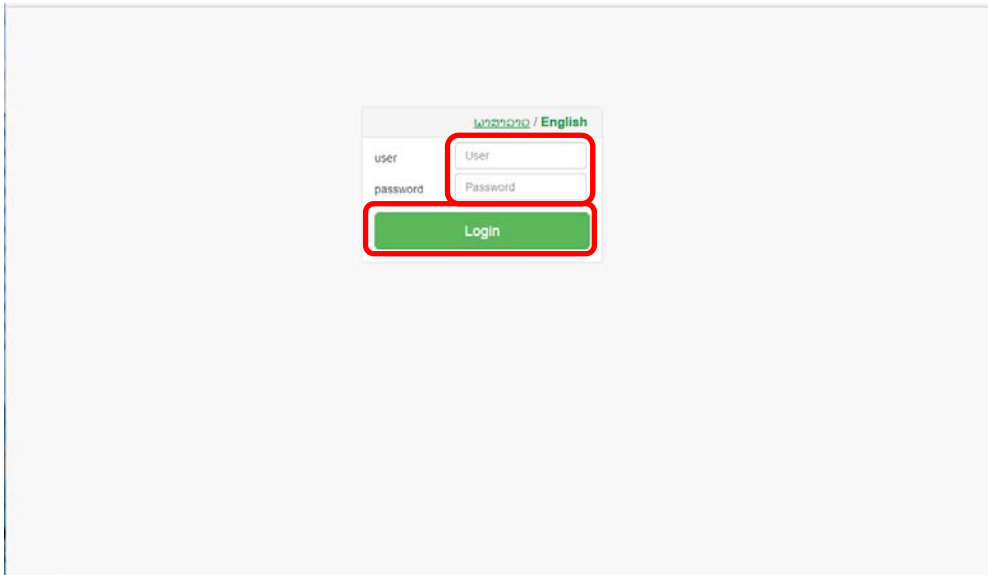
◆ ສະເປັກຂອງເຄື່ອງຄອມພິວເຕີ້ທີ່ສາມາດນໍາໃຊ້ໄດ້ກັບລະບົບ.

- CPU: Intel Core-i3 or more
- Memory: 2GB or more
- Display: Resolution 1024 * 768 (TrueColor) or more

2. ການເຂົ້າໃຊ້ລະບົບ / ການອອກຈາກລະບົບ.

2.1 ການເຂົ້າໃຊ້ລະບົບ NFMS

1. ລົງຊື່ [ຜູ້ໃຊ້] ແລະ [ພາສເວີດ] ໃສ່ບ່ອນ [ເຂົ້າສູ່ລະບົບ] ແລະ ກົດປຸ່ມ [ເຂົ້າສູ່ລະບົບ].

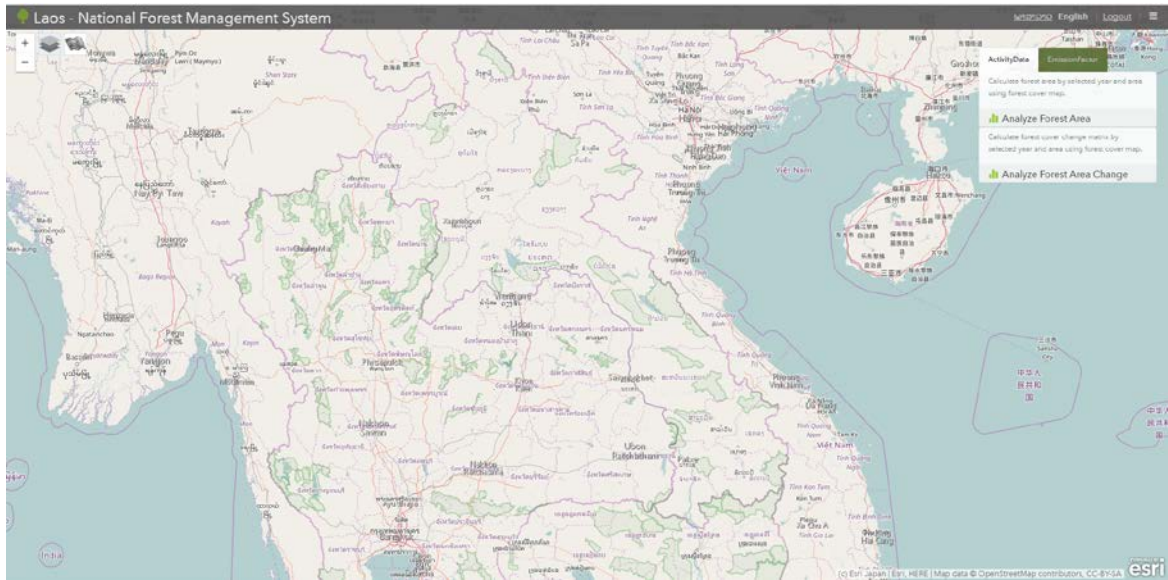


-> ຖ້າຫາກຊື່ຜູ້ໃຊ້ ແລະ ພາສເວີດ ຖືກຕ້ອງ, ການເຂົ້າສູ່ລະບົບຈະສໍາເລັດ.

💡 ເລືອກພາສາ

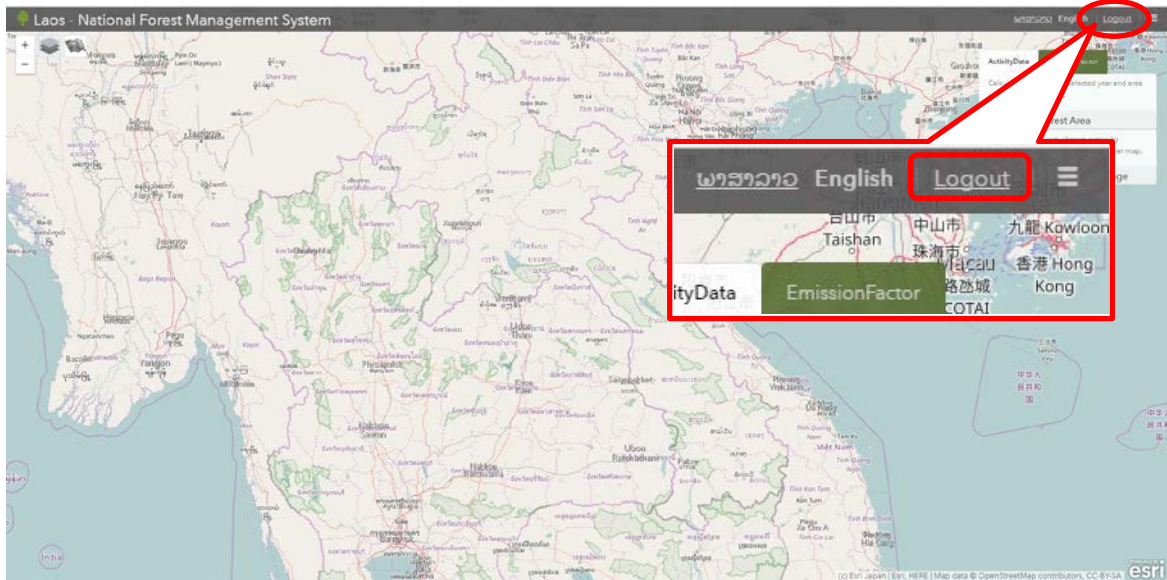
ຜູ້ໃຊ້ສາມາດປ່ຽນພາສາລະຫວ່າງພາສາລາວ ແລະ ພາສາອັງກິດໂດຍການກົດປຸ່ມເລືອກພາສາ ([ພາສລາວ / English](#)) ທີ່ໜ້າຈໍເຂົ້າສູ່ລະບົບ.

2. ໜ້າຈໍແຜນທີ່ ຈະປາກົດຂຶ້ນ.



2.2 ການອອກຈາກລະບົບ NFMS

1. ກົດປຸ່ມ [ອອກຈາກລະບົບ]

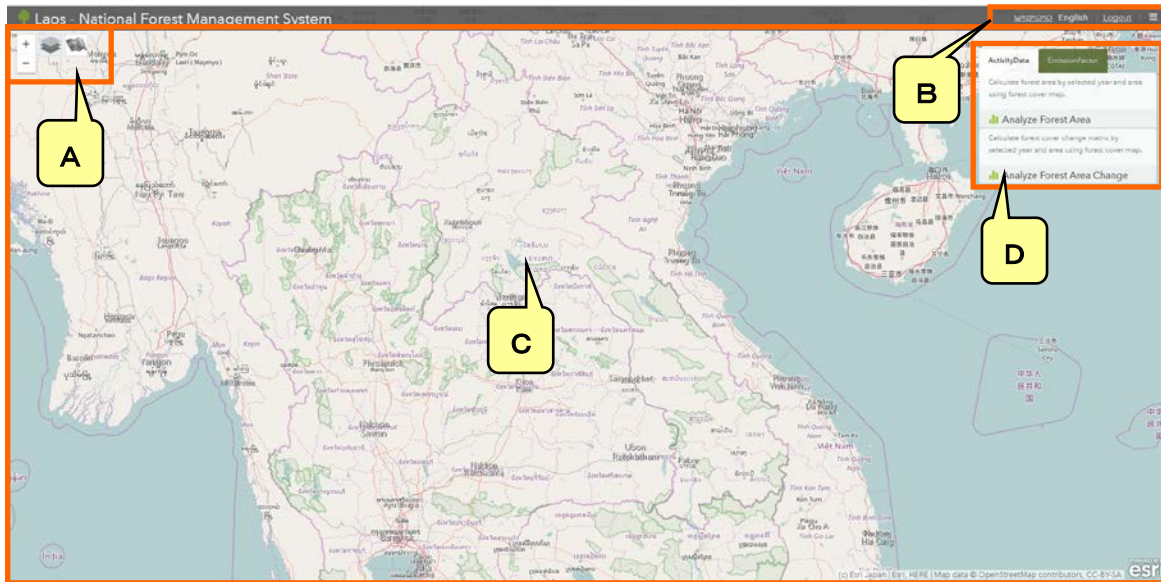


⇒ [ຂໍ້ຄວາມການຢືນຢັນການອອກຈາກລະບົບ] ຈະປາກົດຂຶ້ນ
ກົດປຸ່ມ [ຕົກລົງ]

3. ໜ້າຕ່າງ ແລະ ການສະແດງຜົນຂອງແຜນທີ່

3.1 ໜ້າຕ່າງ

ໜ້າຕ່າງຂ້າງລຸ່ມນີ້ແມ່ນສະແດງໃຫ້ເຫັນເຖິງໜ້າຕາຂອງລະບົບຕິດຕາມກວດກາປ່າໄມ້ແຫ່ງຊາດລາວ NFMS



• A ມາດຕະການສຳລັບການສະແດງຜົນຂອງແຜນທີ່.

ປ່ຽນແຜນທີ່ ພື້ນທີ່, ແຜນທີ່ ສະເພາະ

ຊຸມເຂົ້າ/ຊຸມອອກ

• B ມາດຕະການສຳລັບພື້ນຖານ

ຄຳສັ່ງປ່ຽນພາສາ

ຄຳສັ່ງວັດແທກ

ຄຳສັ່ງປື້ນ

• C ໜ້າຕ່າງແຜນທີ່

ການສະແດງແຜນທີ່

• D ໜວດຄຳສັ່ງໃນການວິເຄາະ

ວິເຄາະຂໍ້ມູນກິດຈະກຳ, ປັດໄຈການປ່ອຍທາດອາຍພິດ ແລະ
ປະລິມານຂອງທາດກາກບອນ.

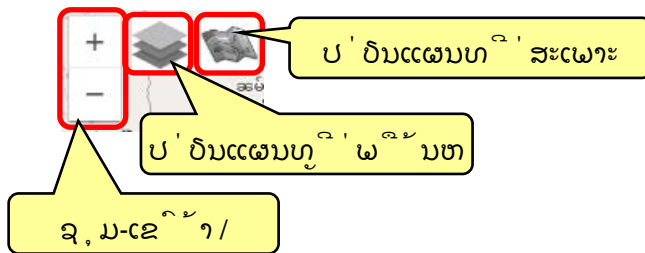
3.2 ການສະແດງຜົນຂອງແຜນທຶນ

3.2.1 ແມ່ນູການສະແດງຜົນຂອງແຜນທຶນ

ຜັງຊັ້ນຂ້າງລຸ່ມນີ້ສາມາດກຳນົດການສະແດງຜົນຂອງແຜນທຶນໄດ້.

[ຊຸມ-ເຂົ້າ/ຊຸມ-ອອກ], [ປ່ຽນແຜນທຶນພື້ນຫຼັງ],

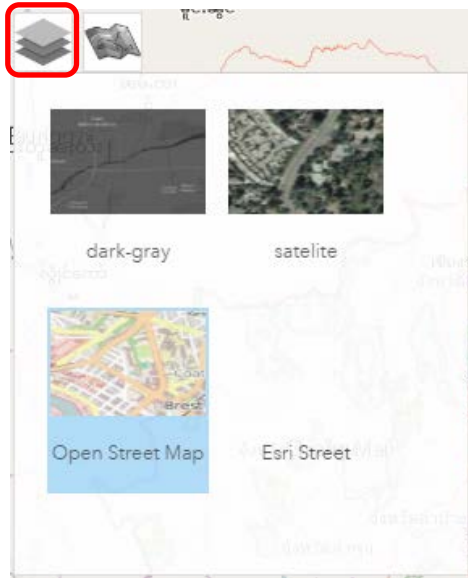
[ປ່ຽນແຜນທຶນສະເພາະ],




💡.ທ່ານສາມາດນຳໃຊ້ລູກລິ້ງຂອງເມື່ອໃນການຊຸມ-ເຂົ້າ/ຊຸມ-ອອກ

◆ [ປ່ຽນແຜນທີ່ພື້ນຫຼັງ]

ທ່ານສາມາດປ່ຽນແຜນທີ່ພື້ນຫຼັງໄດ້




1. ກົດປຸ່ມ [ປ່ຽນແຜນທີ່ພື້ນຖານ]

ກົດປຸ່ມ  ເພື່ອປ່ຽນແຜນທີ່ພື້ນຖານ.

2. ເລືອກແຜນທີ່ພື້ນຖານເພື່ອສະແດງຜົນ.

ແຜນທີ່ພື້ນຖານທີ່ຕິດຕັ້ງໃນລະບົບ NFMS ຈະຖືກສະແດງຜົນ.
ເລືອກແຜນທີ່ພື້ນຖານທີ່ຈະສະແດງ.

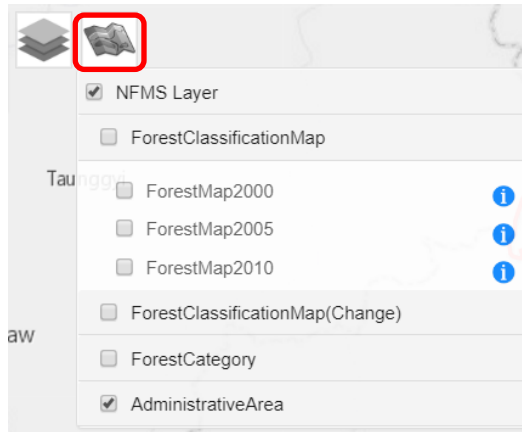
3. ເມນູຄຳສັ່ງປົດການປ່ຽນແຜນທີ່ພື້ນຖານ

4. ກົດປຸ່ມ  ຄຳສັ່ງປົດການປ່ຽນແຜນທີ່ພື້ນຖານ


💡 ແຜນທີ່ພື້ນຖານທີ່ສະແດງ
ແຜນທີ່ພື້ນຖານຈະສະແດງຜົນໃນກອບສີຟ້າ

◆ **[ການປ່ຽນຂໍ້ມູນແຜນທີ່]**

ຜູ້ໃຊ້ສາມາດປ່ຽນຂໍ້ມູນແຜນທີ່ໄດ້




1. ກົດປຸ່ມ [ປ່ຽນຂໍ້ມູນແຜນທີ່]

ກົດປຸ່ມ  ເພື່ອສະແດງໂຄງສ້າງຂໍ້ມູນແຜນທີ່.

2. ປ່ຽນແປງຂໍ້ມູນແຜນທີ່

ຜູ້ໃຊ້ສາມາດປ່ຽນແຜນທີ່ສະເພາະເພື່ອຈະສະແດງຜົນໂດຍການເລືອກຕົກໃສ່ໃນບ່ອນຂອງໂຄງສ້າງຂອງຊັ້ນ.

3. ເມນູຄຳສັ່ງປົດການປ່ຽນຂໍ້ມູນແຜນທີ່

ກົດປຸ່ມ  ຄຳສັ່ງປົດການປ່ຽນຂໍ້ມູນແຜນທີ່.

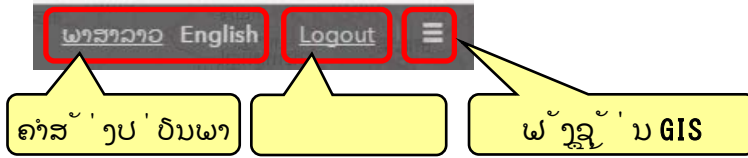
 ໂຄງສ້າງຂອງແຜນທີ່ສະເພາະ

ຜູ້ໃຊ້ສາມາດສະແດງຂໍ້ມູນແຜນທີ່ໂດຍການເລືອກທີ່ຈະສະແດງ/ບໍ່ສະແດງ

3.2.2 ມູນຄ່າສັ່ງພື້ນຖານ

ຄ່າສັ່ງຕໍ່ໄປຂ້າງລຸ່ມນີ້ແມ່ນຄ່າສັ່ງພື້ນຖານ

【ຄ່າສັ່ງປ່ຽນພາສາ】、【ອອກຈາກລະບົບ】、【GIS basic function】



◆ 【ຄ່າສັ່ງປ່ຽນພາສາ】

ຜູ້ໃຊ້ສາມາດປ່ຽນພາສາ

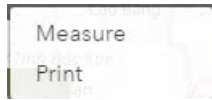
ໂດຍການເລືອກພາສາ : English ຫຼື ພາສາລາວ

◆ 【ອອກຈາກລະບົບ】

ຜູ້ໃຊ້ສາມາດອອກຈາກລະບົບໂດຍຄວິກ [Logout.]

◆ **【ພັງຊັ້ນ GIS ພື້ນຖານ】**

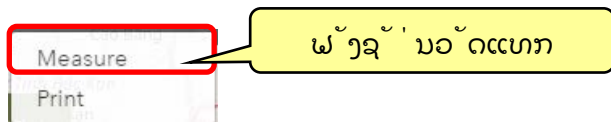
ຜູ້ໃຊ້ສາມາດໃຊ້ຄໍາສັ່ງວັດແທກ ແລະ ປິ້ນ



✓ **【ຄໍາສັ່ງວັດແທກ】**

ໂດຍການນຳໃຊ້ພັງຊັ້ນວັດແທກ, ເຊິ່ງຜູ້ໃຊ້ສາມາດວັດແທກລວງຍາວ ແລະ

ພື້ນທີ່.




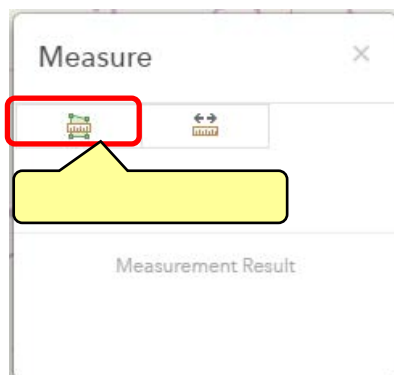
➤ **【ການວັດແທກພື້ນທີ່】**

ຜູ້ໃຊ້ສາມາດວັດແທກພື້ນທີ່ໂດຍການແຕ້ມ polygon

1. ຄວິກ [ວັດແທກ]

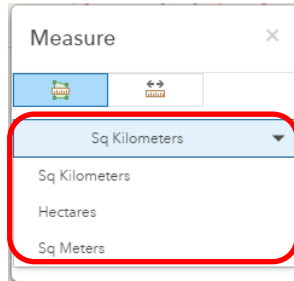
2. ເລືອກ [ພື້ນທີ່ຕ້ອງການວັດແທກ] ຈາກຊ່ອງ [ວັດແທກ]

ເລືອກ () ຈາກຊ່ອງ [ວັດແທກ].



3. ເລືອກຫົວໜ່ວຍ

ເລືອກຫົວໜ່ວຍຕ້ອງການໃຊ້ໃນການວັດແທກ

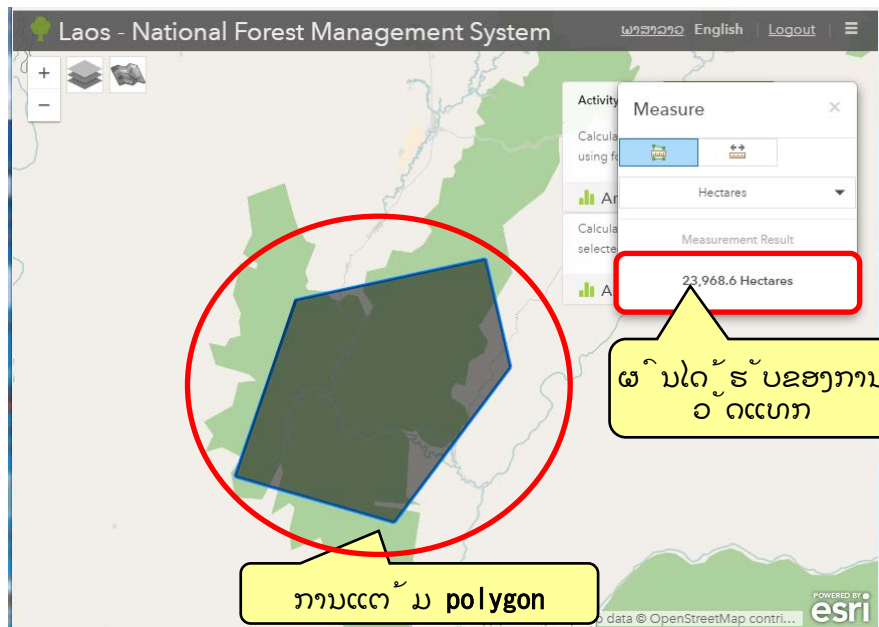


| | |
|----------------------|---------------|
| ຫົວໜ່ວຍວັດແທກພື້ນທີ່ | ຕາລາງກິໂລແມັດ |
| | ເຮັກຕາ |
| | ຕາລາງແມັດ |

4. ການແຕ້ມ polygon ແລະ ກວດສອບຜົນໄດ້ຮັບ

ການແຕ້ມ polygon (ຄລິກ 2 ເທື່ອ ເພື່ອສຳເລັດການແຕ້ມ).

ຜົນໄດ້ຮັບຂອງການວັດແທກມັນຈະສະແດງຜົນຢູ່ໃນຫ້ອງຂອງ [ວັດແທກ].



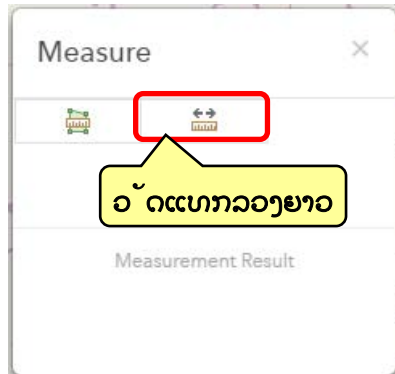
➤ [ວັດແທກລວງຍາວ]

ຜູ້ໃຊ້ສາມາດວັດແທກລວງຍາວໂດຍການແຕ້ມສ່ວນ.

1. ຄວາມ [ວັດແທກ]

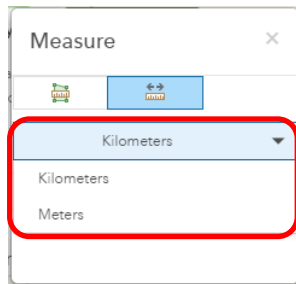
2. ເລືອກ [ວັດແທກລວງຍາວ] ຈາກຊ່ອງ [ວັດແທກ].

ເລືອກ () ຈາກຊ່ອງ [ວັດແທກ]



3. ເລືອກຫົວໜ່ວຍ

ເລືອກຫົວໜ່ວຍຕ້ອງການໃຊ້ໃນການວັດແທກ

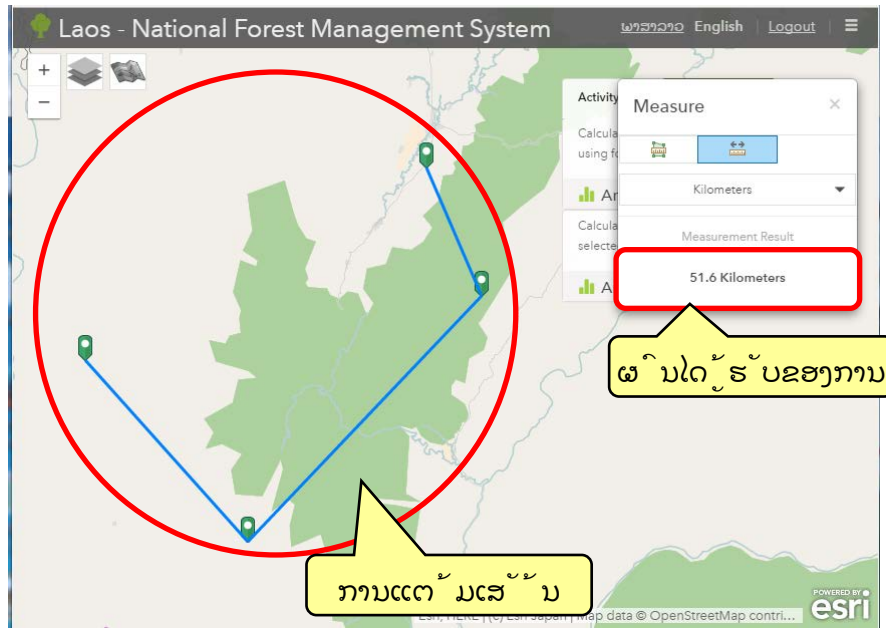


| | |
|---------------------|----------|
| ຫົວໜ່ວຍວັດແທກລວງຍາວ | ກິໂລແມັດ |
| | ແມັດ |

4. ການແຕ້ມສັນຍາ 'ເທິງແຜນທີ່' ແລະ ກວດສອບຜົນໄດ້ຮັບ

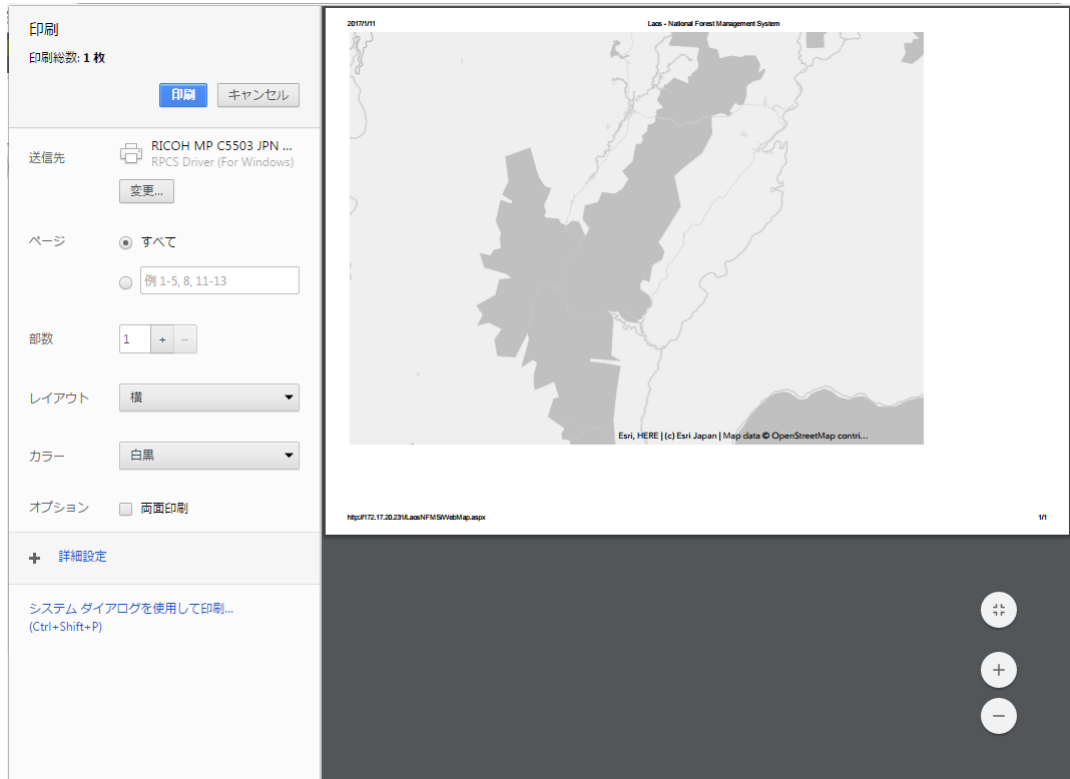
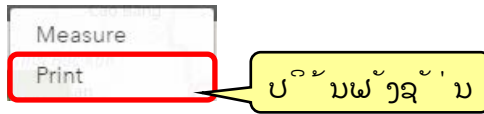
ການແຕ້ມສັນຍາ (ຄວາມ 2 ເທິງ 'ອເພີ' ອສຳເລັດການແຕ້ມ)

ຜົນໄດ້ຮັບຂອງການວັດແທກມັນຈະສະແດງຜົນສັນຍາ 'ໃນຫ້ອງຂອງ [ວັດແທກ]



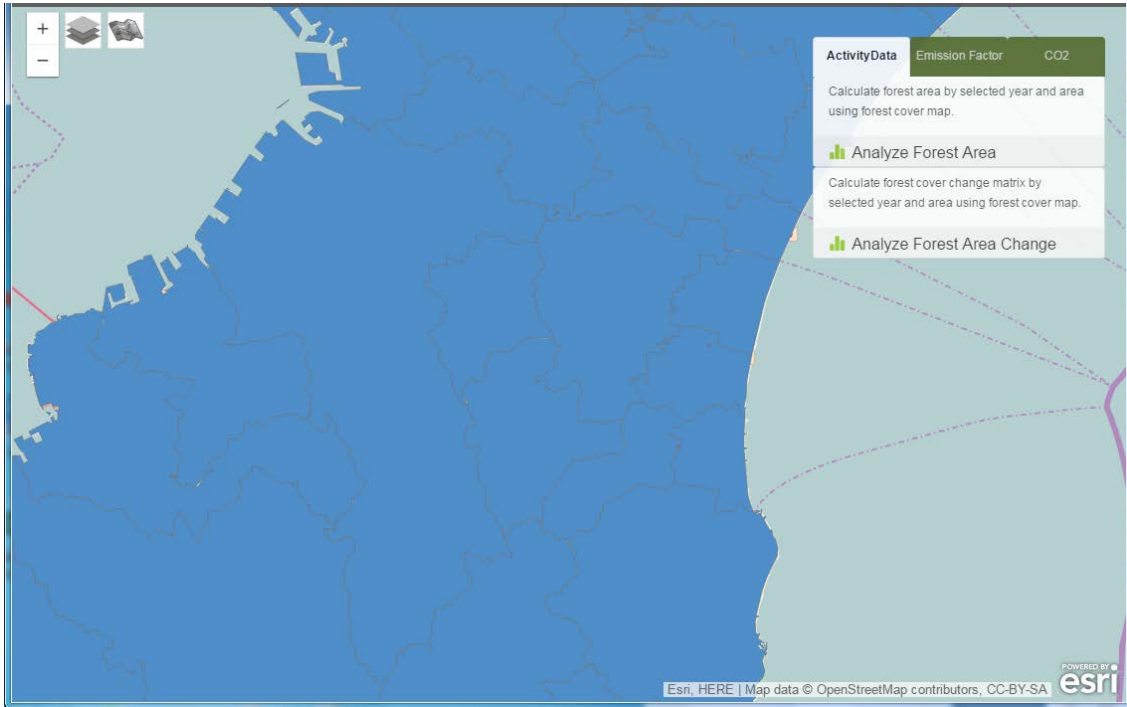
✓ 【ຄຳສັ່ງປິ້ນ】

ເລືອກ[ປິ້ນ]ເພື່ອປິ້ນແຜນທີ່.



3.2.3 ໜ້າຕ່າງຂອງແຜນທີ່

ຜູ້ໃຊ້ສາມາດສະແດງແຜນທີ່ພື້ນຫຼັງ ແລະ ແຜນທີ່ສະເພາະໄດ້ຢູ່ໃນໜ້າຕ່າງຂອງແຜນທີ່.



◆ 【ຕາຕະລາງສະແດງຜົນ】

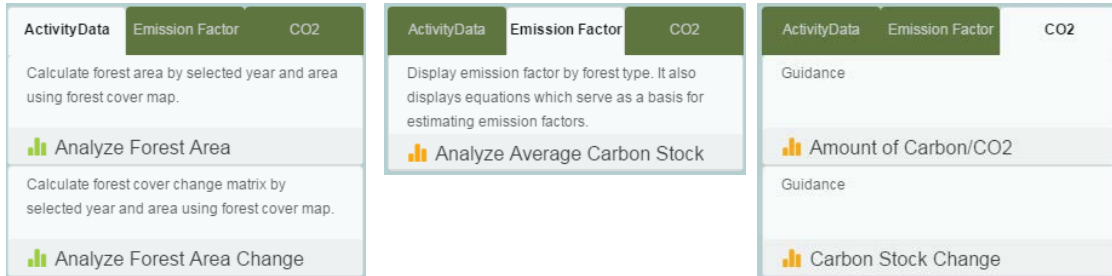
ຜູ້ໃຊ້ສາມາດເບິ່ງຕາຕະລາງສະແດງຜົນໂດຍການຄວິກໃສ່ພາບຂອງແຜນທີ່



4. ພັງຊີ ນການວິເຄາະ

4.1 ໜ້າຕ່າງຂອງພັງຊີ ນການວິເຄາະ

ໜ້າຕ່າງຂ້າງລຸ່ມນີ້ແມ່ນສະແດງໃຫ້ເຫັນເຖິງໜ້າຕາຂອງພັງຊີ ນການວິເຄາະ.



| ລ/ດ | ແທ້ບ | ຊື່ຂອງພັງຊີ ນ |
|-----|-----------------------|----------------------------------|
| 1 | ຂໍ້ມູນກິດຈະກຳ | ການວິເຄາະພື້ນທີ່ປ່າໄມ້ |
| 2 | | ວິເຄາະການປ່ຽນແປງຂອງພື້ນທີ່ປ່າໄມ້ |
| 3 | ບັດໄຈການປ່ອຍທາດອາຍພິດ | ວິເຄາະຄ່າສະເລ່ຍຂອງທາດກາກບອນ |
| 4 | CO2 | ປະລິມານຂອງທາດກາກບອນ/CO2 |
| 5 | | ການປ່ຽນແປງຂອງທາດກາກບອນ |

4.2 ຂໍ້ມູນກົດຈະກຳ

4.2.1 ການວິເຄາະພື້ນທີ່ປ່າໄມ້

ຜູ້ໃຊ້ສາມາດວິເຄາະພື້ນທີ່ປ່າໄມ້ໂດຍປະຕິບັດຕາມເງື່ອນໄຂດັ່ງຂ້າງລຸ່ມນີ້

| ລ/ດ | ເງື່ອນໄຂໃນການວິເຄາະ | ໝາຍເຫດ |
|-----|----------------------------------|--|
| 1 | ເລືອກພື້ນທີ່ | ຜູ້ໃຊ້ສາມາດເລືອກ“ທົ່ວປະເທດ” ຫຼື “ຂອງແຕ່ລະແຂວງ” |
| 2 | ລົງເລືອກວິເຄາະພື້ນທີ່ຕາມປະເພດປ່າ | ຜູ້ໃຊ້ສາມາດວິເຄາະພື້ນທີ່ຕາມປະເພດປ່າ |
| 3 | ເລືອກບົດຂອງແຜນທີ່ | ຜູ້ໃຊ້ສາມາດເລືອກບົດຂອງແຜນທີ່ປະເພດປ່າໄມ້ |
| 4 | ເລືອກປະເພດທີ່ຕ້ອງການສັງລວມ | ຜູ້ໃຊ້ສາມາດເລືອກປະເພດທີ່ຕ້ອງການສັງລວມ |

1. 【ເລືອກພື້ນທີ່】

ຜູ້ໃຊ້ສາມາດເລືອກພື້ນທີ່ຕ້ອງການຈະວິເຄາະ.

- ທົ່ວປະເທດ
- ຂອງແຕ່ລະແຂວງ

ເວລາເລືອກ [ຂອງແຕ່ລະແຂວງ], ຄລິກ [ເລືອກແຂວງ]

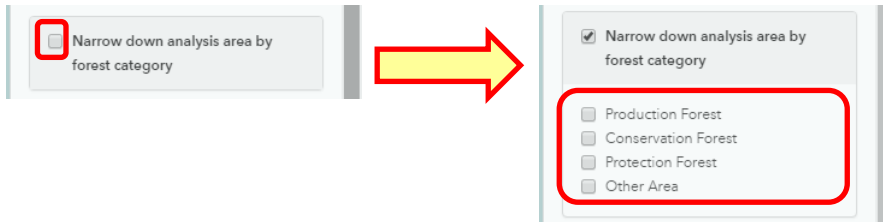
ເລືອກແຂວງທີ່ຕ້ອງການຈະວິເຄາະ,
ສາມາດເລືອກໄດ້ຫຼາຍແຂວງແລະວິເຄາະພ້ອມກັນໄດ້.

💡 ເລືອກຫຼາຍແຂວງພ້ອມກັນ

ວິທີການເລືອກຫຼາຍແຂວງພ້ອມກັນແມ່ນກົດ «Shift + Click» ແລະ «Ctrl + Click»

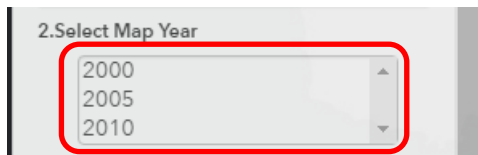
2. **【ລົງເລືອກວິເຄາະພື້ນທີ່ຕາມປະເພດປ່າ】**

ຜູ້ໃຊ້ສາມາດວິເຄາະພື້ນທີ່ຕາມປະເພດປ່າ.



3. **【ເລືອກປີຂອງແຜນທີ່】**

ຜູ້ໃຊ້ສາມາດເລືອກປີຂອງແຜນທີ່ປະເພດປ່າໄມ້ທີ່ຕ້ອງການວິເຄາະໄດ້.

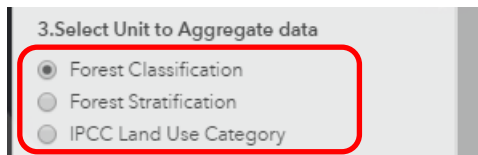


💡 ເລືອກຫຼາຍແຂວງພ້ອມກັນ

ວິທີການເລືອກຫຼາຍແຂວງພ້ອມກັນແມ່ນກົດ «Shift + Click» ແລະ «Ctrl + Click»

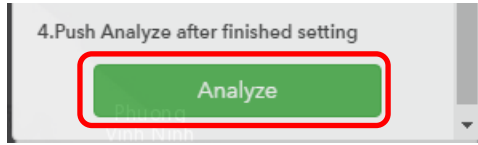
4. **【ເລືອກປະເພດທີ່ຕ້ອງການສັງລວມ】**

ເລືອກປະເພດທີ່ຕ້ອງການສັງລວມ.



5. **【ວິເຄາະ】**

ຄລິກປຸ່ມ [ວິເຄາະ] ເພື່ອດຳເນີນການວິເຄາະ.



6. 【ຜົນຂອງການວິເຄາະ】

ຜົນຂອງການວິເຄາະຈະສະແດງດັ່ງຕາຕະລາງຂ້າງລຸ່ມນີ້:

Download Data

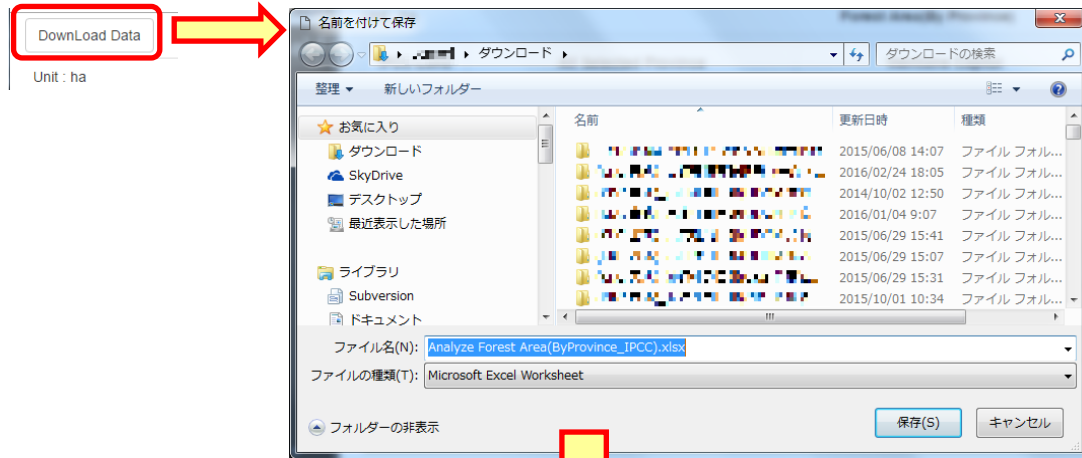
Unit : ha

Forest Area(By Province)

| IPCC Land Use Category | All Selected Province | | | | Vientiane Capital | | | | Phongsaly | | | |
|------------------------|-----------------------|-----------|-------------------|-----------|-------------------|----------|-------------------|----------|-------------------|----------|-------------------|----------|
| | Production Forest | | Protection Forest | | Production Forest | | Protection Forest | | Production Forest | | Protection Forest | |
| | 2000 | 2005 | 2000 | 2005 | 2000 | 2005 | 2000 | 2005 | 2000 | 2005 | 2000 | 2005 |
| Forest Land | 4,525.92 | 5,003.38 | 4,916.70 | 5,076.30 | 2,785.03 | 2,971.03 | 2,177.97 | 2,611.36 | 1,740.89 | 2,032.35 | 2,738.73 | 2,464.94 |
| Grassland | 1,414.94 | 1,825.36 | 1,307.60 | 1,079.38 | 567.28 | 955.35 | 661.78 | 557.57 | 847.66 | 870.00 | 645.82 | 521.81 |
| Cropland | 2,767.40 | 1,992.23 | 2,529.08 | 2,307.40 | 1,142.41 | 1,021.77 | 1,554.14 | 1,009.35 | 1,625.00 | 970.46 | 974.93 | 1,298.05 |
| Settlements | 632.57 | 339.15 | 639.25 | 588.51 | 452.65 | 195.36 | 173.12 | 493.94 | 179.92 | 143.78 | 466.13 | 94.58 |
| Other Land | 1,319.41 | 1,531.64 | 1,626.12 | 1,165.77 | 887.39 | 885.85 | 796.40 | 235.13 | 432.02 | 645.79 | 829.72 | 930.64 |
| Wetlands | 1,165.44 | 1,271.38 | 957.39 | 943.68 | 376.16 | 477.07 | 471.29 | 486.44 | 789.28 | 794.31 | 486.10 | 457.23 |
| Other | 1,566.22 | 1,227.07 | 1,276.19 | 1,048.60 | 969.80 | 571.19 | 569.98 | 431.10 | 596.42 | 655.88 | 706.21 | 617.50 |
| Sum | 13,391.91 | 13,190.21 | 13,252.32 | 12,209.64 | 7,180.72 | 7,077.62 | 6,404.69 | 5,824.90 | 6,211.19 | 6,112.59 | 6,847.64 | 6,384.75 |

7. 【ດາວໂຫຼດຜົນຂອງການວິເຄາະ】

ຄວັກບໍ່ມ [ດາວໂຫຼດຂໍ້ມູນ] ເພື່ອດາວໂຫຼດຜົນຂອງການວິເຄາະ.



| Forest Area(By Province) | | | | | | | | | | | | |
|--------------------------|-----------------------|-----------|-------------------|-----------|-------------------|----------|-------------------|----------|-------------------|----------|-------------------|----------|
| IPCC Land Use Category | All Selected Province | | | | Vientiane Capital | | | | Phongsaly | | | |
| | Production Forest | | Protection Forest | | Production Forest | | Protection Forest | | Production Forest | | Protection Forest | |
| | 2000 | 2005 | 2000 | 2005 | 2000 | 2005 | 2000 | 2005 | 2000 | 2005 | 2000 | 2005 |
| Forest Land | 4,525.92 | 5,003.38 | 4,916.70 | 5,076.30 | 2,785.03 | 2,971.03 | 2,177.97 | 2,611.36 | 1,740.89 | 2,032.35 | 2,738.73 | 2,464.94 |
| Grassland | 1,414.94 | 1,825.36 | 1,307.60 | 1,079.38 | 567.28 | 955.35 | 661.78 | 557.57 | 847.66 | 870.00 | 645.82 | 521.81 |
| Cropland | 2,767.40 | 1,992.23 | 2,529.08 | 2,307.40 | 1,142.41 | 1,021.77 | 1,554.14 | 1,009.35 | 1,625.00 | 970.46 | 974.93 | 1,298.05 |
| Settlements | 632.57 | 339.15 | 639.25 | 588.51 | 452.65 | 195.36 | 173.12 | 493.94 | 179.92 | 143.78 | 466.13 | 94.58 |
| Other Land | 1,319.41 | 1,531.64 | 1,626.12 | 1,165.77 | 887.39 | 885.85 | 796.40 | 235.13 | 432.02 | 645.79 | 829.72 | 930.64 |
| Wetlands | 1,165.44 | 1,271.38 | 957.39 | 943.68 | 376.16 | 477.07 | 471.29 | 486.44 | 789.28 | 794.31 | 486.10 | 457.23 |
| Other | 1,566.22 | 1,227.07 | 1,276.19 | 1,048.60 | 969.80 | 571.19 | 569.98 | 431.10 | 596.42 | 655.88 | 706.21 | 617.50 |
| Sum | 13,391.91 | 13,190.21 | 13,252.32 | 12,209.64 | 7,180.72 | 7,077.62 | 6,404.69 | 5,824.90 | 6,211.19 | 6,112.59 | 6,847.64 | 6,384.75 |

4.2.2 ວິເຄາະການປ່ຽນແປງຂອງພື້ນທີ່ປ່າໄມ້

ຜູ້ໃຊ້ສາມາດວິເຄາະການປ່ຽນແປງຂອງພື້ນທີ່ປ່າໄມ້ໂດຍປະຕິບັດຕາມເງື່ອນໄຂດັ່ງຂ້າງລຸ່ມນີ້.

| ລ/ດ | ເງື່ອນໄຂໃນການວິເຄາະ | ໝາຍເຫດ |
|-----|----------------------------------|---|
| 1 | ເລືອກພື້ນທີ່ | ຜູ້ໃຊ້ສາມາດເລືອກ“ທີ່ປະເທດ” ຫຼື “ຂອງແຕ່ລະແຂວງ” |
| 2 | ລົງເລືອກວິເຄາະພື້ນທີ່ຕາມປະເພດປ່າ | ຜູ້ໃຊ້ສາມາດວິເຄາະພື້ນທີ່ຕາມປະເພດປ່າ |
| 3 | ເລືອກປີຂອງແຜນທີ່ | ຜູ້ໃຊ້ສາມາດເລືອກປີຂອງແຜນທີ່ປະເພດປ່າໄມ້ |
| 4 | ເລືອກປະເພດທີ່ຕ້ອງການສັງລວມ | ຜູ້ໃຊ້ສາມາດເລືອກປະເພດທີ່ຕ້ອງການສັງລວມ |

1. 【ເລືອກພື້ນທີ່】

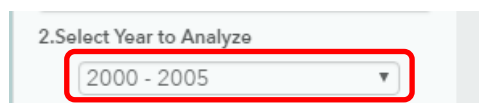
ຜູ້ໃຊ້ສາມາດເລືອກພື້ນທີ່ຕ້ອງການຈະວິເຄາະ.
ສຳລັບລາຍລະອຽດແມ່ນອີງໃສ່ຂໍ້ທີ່ “4.2.1ການວິເຄາະພື້ນທີ່ປ່າໄມ້”.

2. 【ລົງເລືອກວິເຄາະພື້ນທີ່ຕາມປະເພດປ່າ】

ຜູ້ໃຊ້ສາມາດວິເຄາະພື້ນທີ່ຕາມປະເພດປ່າ..
ສຳລັບລາຍລະອຽດແມ່ນອີງໃສ່ຂໍ້ທີ່ “4.2.1ການວິເຄາະພື້ນທີ່ປ່າໄມ້”.

3. 【ເລືອກປີຂອງແຜນທີ່】

ຜູ້ໃຊ້ສາມາດເລືອກປີຂອງແຜນທີ່ປະເພດປ່າໄມ້ທີ່ຕ້ອງການວິເຄາະໄດ້.

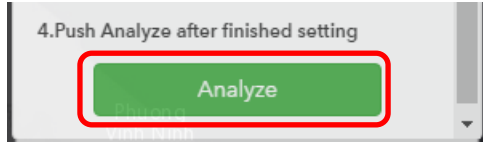


4. 【ເລືອກປະເພດທີ່ຕ້ອງການສັງລວມ】

ເລືອກປະເພດທີ່ຕ້ອງການສັງລວມ
ສຳລັບລາຍລະອຽດແມ່ນຍັງໃສ່ຂໍ້ທີ່ "4.2.1ການວິເຄາະພື້ນທີ່ປ່າໄມ້".

5. [ວິເຄາະ]

ຄວິກບໍ່ມີ [ວິເຄາະ] ເພື່ອດຳເນີນການວິເຄາະ.



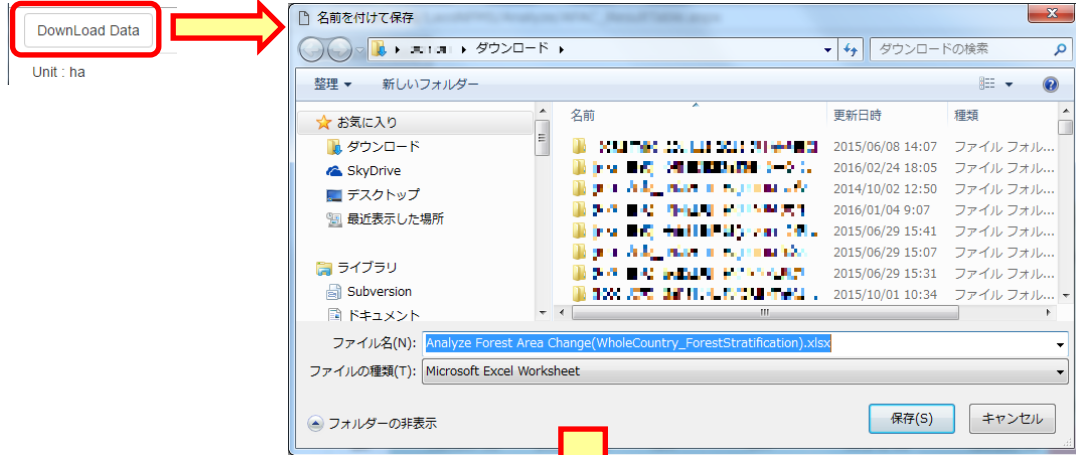
6. [ຜົນຂອງການວິເຄາະ]

ຜົນຂອງການວິເຄາະຈະສະແດງດັ່ງຕາຕະລາງຂ້າງລຸ່ມນີ້:

| Download Data | | Forest Area Change(Whole Country) | | | | | | | | | | | | | | | | | | | |
|---------------|----------------|-----------------------------------|------------|--------------|---------------|------------------|--------------|--------------|---------------|--------------|------------------|----------------|------------------|---------------|--------------|---------------|--------------|---------------|----------------|---------------|--|
| LINE No | | Forest Type(200) | | | | | | | | | | | | | | | | | | | |
| | EFMD | ED | CF | MCE | P | B-RV | SA | SR | G | SW | UC | RP | OA | AP | U | BR | O | W | CL | SH | |
| EFMD | 30,594,624.21 | 9,597,246.02 | N/A | 409,873.36 | 19,399,796.18 | 74,134,008.96 | 89,759.09 | 1,974,891.08 | 3,389,812.21 | N/A | 946,928,887.54 | 16,504,199.32 | 202,211,762.48 | 6,944,896.81 | 209,139.26 | 84,799.55 | 977,869.45 | 3,289,472.92 | 378,761,499.81 | 46,099,122.81 | |
| ED | 30,527,122.88 | N/A | N/A | N/A | N/A | 14,514,829.58 | 127,027.09 | N/A | 3,341,482.02 | 54,625.00 | 5,991,842.83 | 33,424,823.17 | 42,582,989.72 | 72,487.92 | 174,775.08 | N/A | 179,989.08 | 712,487.92 | 142,066.00 | 18,812.30 | |
| CF | N/A | N/A | N/A | N/A | N/A | 82,232.28 | N/A | N/A | N/A | N/A | 5,071,891.45 | 17,912.92 | 21,198.46 | N/A | N/A | N/A | N/A | 8,229,231.01 | 23,491.57 | 16,300.00 | |
| MCE | 190,792.94 | N/A | N/A | N/A | N/A | 1,305,229.00 | N/A | N/A | 272,424.90 | N/A | 3,033,091.40 | 507,000.91 | 196,524.14 | N/A | N/A | N/A | N/A | 65,802.00 | 795,925.11 | 82,862.00 | |
| P | 45,300.00 | N/A | N/A | N/A | N/A | 187,153.74 | N/A | N/A | N/A | N/A | 194,364.40 | N/A | 23,959.46 | N/A | N/A | N/A | N/A | N/A | 209,089.38 | 534,192.00 | |
| B-RV | 21,369,791.96 | 7,833,361.42 | 331,753.03 | 2,591,178.08 | 26,514,691.88 | 46,482,359.99 | 172,798.70 | 613,561.67 | 41,484,694.43 | 879,710.63 | 1,816,138,876.11 | 195,981,027.84 | 1,794,359,987.48 | 21,236,274.84 | 1,912,169.79 | 413,942.32 | 3,324,298.75 | 10,543,878.89 | 404,967,214.00 | 10,115,809.18 | |
| SA | 146,267.00 | 209,762.59 | N/A | N/A | N/A | 30,212.90 | 129,669.02 | N/A | N/A | N/A | 2,805,024.47 | 8,946,264.11 | 2,356,198.08 | 201,762.00 | N/A | N/A | 25,637.89 | 15,697.00 | N/A | 14,000.00 | |
| SR | 3,949,257.51 | N/A | N/A | N/A | N/A | 91,879.00 | N/A | N/A | N/A | 1,909,587.76 | N/A | 15,895.79 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| G | 18,494,422.59 | N/A | N/A | N/A | 167,487.80 | 119,243,888.95 | N/A | N/A | N/A | 118,482.93 | 1,140,595.56 | 11,730,897.80 | 12,360,609.52 | 641,825.00 | 586,082.88 | N/A | 102,079.00 | 1,294,624.71 | 8,478,024.11 | 779,496.24 | |
| SW | 411,200.41 | N/A | N/A | N/A | N/A | 91,705,092.00 | N/A | N/A | 91,892.92 | N/A | 1,797,840.00 | 2,884,046.70 | 712,070.00 | 197,162.00 | N/A | N/A | N/A | 172,198.32 | 617,927.36 | N/A | |
| UC | 10,146,466.70 | 36,783.47 | 891,147.70 | 42,944.80 | 1,791,886.42 | 1,853,773,520.41 | 5,571,143.27 | 3,727,246.32 | 1,846,596.13 | 1,821,169.74 | N/A | 10,888,646.91 | 88,314.38 | 98,254.48 | 1,718,889.54 | 79,251.88 | 248,437.43 | 2,228,768.34 | 18,728,936.51 | 1,797,662.78 | |
| RP | N/A | 8,198,248.89 | N/A | N/A | N/A | 38,987,232.23 | 41,187.00 | N/A | 3,793,417.49 | 810,952.00 | 28,962,924.78 | N/A | 25,529,802.08 | 103,004.81 | 2,465,199.76 | 18,000.00 | 21,886.32 | 4,789,699.21 | 22,989,515.23 | 339,437.90 | |
| OA | 46,199.19 | 298,262.93 | N/A | N/A | 1,026,471.89 | 125,945,092.96 | 84,476.00 | N/A | 4,190,162.34 | N/A | 167,796.42 | 50,447,909.42 | N/A | 9,900,299.04 | 331,369.49 | N/A | 796,219.89 | 94,006.20 | 626,921.84 | 923,937.37 | |
| AP | N/A | 68,662.53 | N/A | N/A | N/A | 18,910,688.26 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 857,173.77 | N/A | N/A | N/A | N/A | 88,375.00 | 23,687.00 | |
| U | 92,461.46 | N/A | N/A | N/A | 9,800.00 | 1,906,193.34 | N/A | N/A | N/A | N/A | 279,449.00 | 8,317.71 | 194,821.88 | N/A | N/A | N/A | N/A | 48,735.03 | 27,933.43 | N/A | |
| BR | 23,400.00 | N/A | N/A | N/A | N/A | 209,421.31 | N/A | N/A | N/A | N/A | 909,096.70 | N/A | 41,000.00 | N/A | N/A | N/A | N/A | 289,985.71 | N/A | N/A | |
| O | 138,012.00 | N/A | N/A | N/A | N/A | 2,400,090.90 | N/A | N/A | N/A | N/A | 51,300.00 | 284,327.88 | 11,700.00 | 158,836.44 | N/A | N/A | N/A | 59,762.00 | 131,500.00 | N/A | |
| W | 346,644.22 | N/A | N/A | N/A | N/A | 2,289,919.82 | N/A | N/A | 1,857,633.00 | 2,194.16 | 1,187,777.14 | 2,117,852.13 | 798,348.28 | N/A | N/A | 11,117,998.17 | 82,122.34 | N/A | 8,328,125.17 | 74,818.80 | |
| CL | 241,099,216.47 | 14,708,221.00 | N/A | N/A | 303,068.67 | 497,047,750.21 | 130,535.00 | N/A | 4,361,400.00 | 269,917.00 | 11,143,106.65 | 27,262,969.74 | 10,861,193.04 | 597,553.97 | N/A | 11,919.00 | 66,937.33 | 2,589,872.16 | N/A | 309,918.93 | |
| SH | 13,894,452.97 | 10,382,215.80 | N/A | N/A | N/A | 21,481,391.33 | 201,625.00 | N/A | 848,818.38 | 12,487.93 | 1,831,585.98 | 16,479,713.81 | 736,643.27 | 29,725.00 | 26,862.58 | N/A | 17,400.00 | 82,300.00 | 55,746.45 | N/A | |

7. 【ດາວໂຫຼດຜົນຂອງການວິເຄາະ】

ຄວາມໝາຍ: ມາດຕະການວິເຄາະຜົນຂອງການວິເຄາະ.



| Forest Type(2005) | EFMD | DD | CF | MCB | P | BKV | SA | SR | G | SW | LC | RP | OA | AP | BR |
|-------------------|---------------|------------|-----|-----------|---------------|---------------|-----------|--------------|--------------|-----------|----------------|---------------|----------------|--------------|------------|
| 2005 | 99684624.21 | 8057616.02 | N/A | 606673.36 | 10,199,796.18 | 74,131,008.86 | 83,750.00 | 1,674,891.09 | 3,389,912.21 | N/A | 649,528,867.94 | 15,504,190.33 | 252,213,762.48 | 6,844,656.91 | 258,139.26 |
| 2010 | 30,327,122.08 | N/A | N/A | N/A | N/A | 14,514,639.38 | 12,720.00 | N/A | 3,341,462.02 | 54,623.00 | 9,591,842.63 | 33,424,823.17 | 42,566,988.72 | 72,487.70 | 174,775.00 |
| 2015 | N/A | N/A | N/A | N/A | N/A | 9,232.29 | N/A | N/A | 278,424.96 | N/A | 5,071,881.45 | 11,122.50 | 271,996.46 | N/A | N/A |
| 2020 | 180,714.94 | N/A | N/A | N/A | N/A | 1,305,236.88 | N/A | N/A | 278,424.96 | N/A | 3,028,091.48 | 507,600.91 | 106,534.14 | N/A | N/A |

4.3 ບັດໄຈການບໍ່ອຍທາດອາຍພືດ

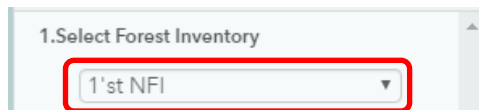
4.3.1 ວິເຄາະຄ່າສະເລ່ຍຂອງທາດກາກບອນ

ຜູ້ໃຊ້ສາມາດວິເຄາະຄ່າສະເລ່ຍຂອງທາດກາກບອນໂດຍປະຕິບັດຕາມເງື່ອນໄຂດັ່ງຂ້າງ ລຸ່ມນີ້.

| ລ.ດ. | ເງື່ອນໄຂໃນການວິເຄາະ | ໝາຍເຫດ |
|------|----------------------------|--|
| 1 | ເລືອກປະເພດການສຳຫຼວດ | ຜູ້ໃຊ້ສາມາດເລືອກປະເພດການສຳຫຼວດທີ່ຕ້ອງການຈະສະແດງຜົນ |
| 2 | ເລືອກປະເພດທີ່ຕ້ອງການສັງລວມ | ຜູ້ໃຊ້ສາມາດເລືອກປະເພດທີ່ຕ້ອງການສັງລວມ |

1. [ເລືອກປະເພດການສຳຫຼວດ]

ຜູ້ໃຊ້ສາມາດເລືອກປະເພດການສຳຫຼວດທີ່ຕ້ອງການຈະສະແດງຜົນ

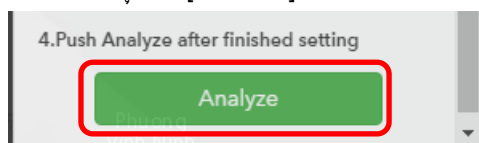


2. [ລົງເລືອກວິເຄາະພື້ນທີ່ຕາມປະເພດປ່າ]

ຜູ້ໃຊ້ສາມາດວິເຄາະພື້ນທີ່ຕາມປະເພດປ່າ..
ສຳລັບລາຍລະອຽດແມ່ນອີງໃສ່ຂໍ້ທີ່ "4.2.1ການວິເຄາະພື້ນທີ່ປ່າໄມ້".

3. [ວິເຄາະ]

ຄລິກປຸ່ມ [ວິເຄາະ] ເພື່ອດຳເນີນການວິເຄາະ.



4. **【ຜົນຂອງການວິເຄາະ】**

ຜົນຂອງການວິເຄາະຈະສະແດງດັ່ງຕາຕະລາງຂ້າງລຸ່ມນີ້:

Download Data

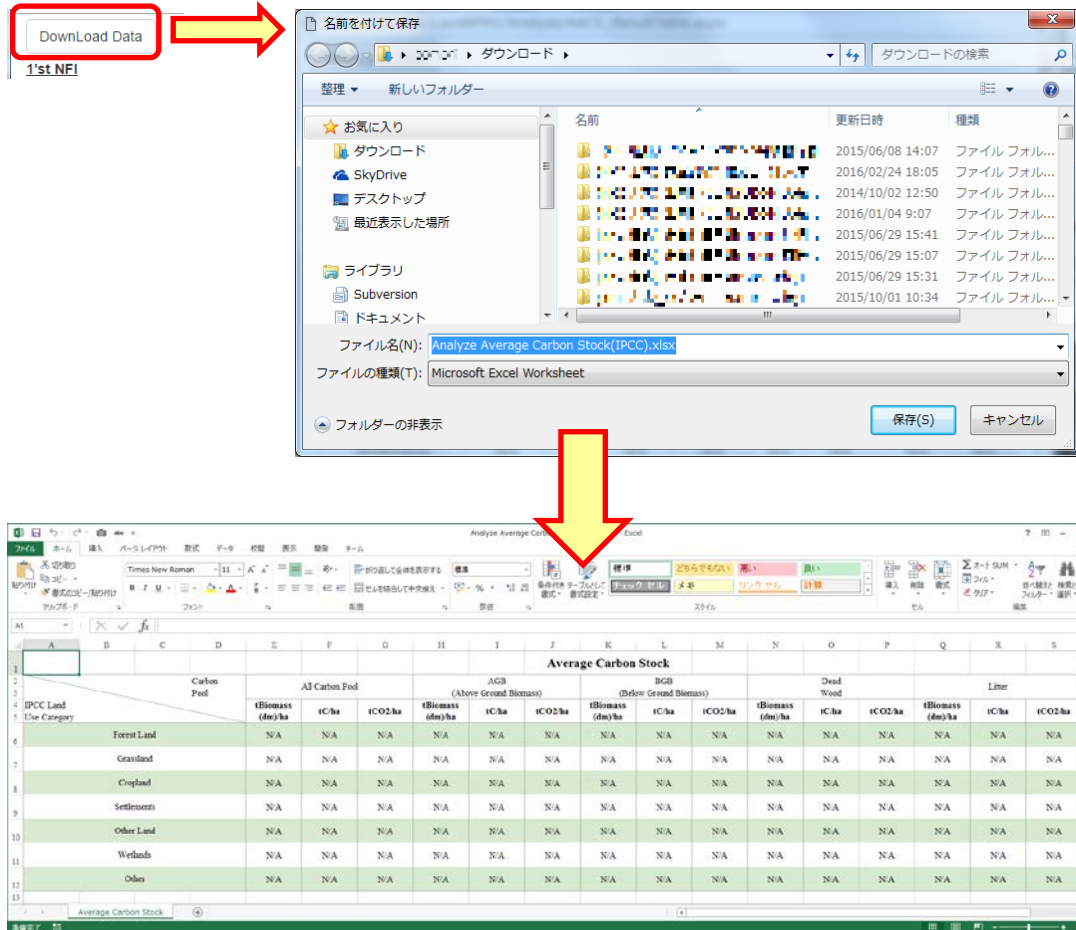
1st NFI
This data is the result of the 1st NFI.

Average Carbon Stock

| IPCC Land Use Category | Carbon Pool | All Carbon Pool | | | AGB (Above Ground Biomass) | | | BGB (Below Ground Biomass) | | | Dead Wood | | | Litter | | | Soil | | |
|------------------------|-------------|------------------|-------|---------|----------------------------|-------|---------|----------------------------|-------|---------|------------------|-------|---------|------------------|-------|---------|------------------|-------|---------|
| | | tBiomass (dm)/ha | tC/ha | tCO2/ha | tBiomass (dm)/ha | tC/ha | tCO2/ha | tBiomass (dm)/ha | tC/ha | tCO2/ha | tBiomass (dm)/ha | tC/ha | tCO2/ha | tBiomass (dm)/ha | tC/ha | tCO2/ha | tBiomass (dm)/ha | tC/ha | tCO2/ha |
| Forest Land | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Grassland | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Cropland | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Settlements | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Other Land | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Wetlands | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Other | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

5. **【ດາວໂຫຼດຜົນຂອງການວິເຄາະ】**

ຄລິກບຸ່ມ [ດາວໂຫຼດຂໍ້ມູນ] ເພື່ອດາວໂຫຼດຜົນຂອງການວິເຄາະ.



4.4 ທາດກາກບອນ, CO2

4.4.1 ປະລິມານຂອງທາດກາກບອນ/CO2

ຜູ້ໃຊ້ສາມາດວິເຄາະປະລິມານຂອງທາດກາກບອນ/CO2

ຂອງບ່າໄດ້ໂດຍປະຕິບັດຕາມເງື່ອນໄຂດັ່ງຂ້າງລຸ່ມນີ້.

| ລ.ດ. | ເງື່ອນໄຂໃນການວິເຄາະ | ໝາຍເຫດ |
|------|----------------------------------|--|
| 1 | ເລືອກພື້ນທີ່ | ຜູ້ໃຊ້ສາມາດເລືອກ“ທົ່ວປະເທດ” ຫຼື “ຂອງແຕ່ລະແຂວງ” |
| 2 | ລົງເລືອກວິເຄາະພື້ນທີ່ຕາມປະເພດບ່າ | ຜູ້ໃຊ້ສາມາດວິເຄາະພື້ນທີ່ຕາມປະເພດບ່າ |

| | | |
|---|----------------------------|--|
| 3 | ເລືອກປັດຂອງແຜນທີ່ | ຜູ້ໃຊ້ສາມາດເລືອກປັດຂອງແຜນທີ່ປະເພດປ່າໄມ້ |
| 4 | ເລືອກປັດໄຈການປ່ອຍທາດອາຍພິດ | ຜູ້ໃຊ້ສາມາດເລືອກປະເພດການສຳຫຼວດທີ່ຕ້ອງການຈະສະແດງຜົນ |
| 5 | ເລືອກປະເພດທີ່ຕ້ອງການສັງລວມ | ຜູ້ໃຊ້ສາມາດເລືອກປະເພດທີ່ຕ້ອງການສັງລວມ |

1. **【ເລືອກພື້ນທີ່】**

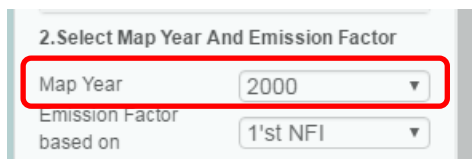
ຜູ້ໃຊ້ສາມາດເລືອກພື້ນທີ່ຕ້ອງການຈະວິເຄາະ.
ສຳລັບລາຍລະອຽດແມ່ນອີງໃສ່ຂໍ້ທີ່ “4.2.1ການວິເຄາະພື້ນທີ່ປ່າໄມ້”.

2. **【ລົງເລິກວິເຄາະພື້ນທີ່ຕາມປະເພດປ່າ】**

ຜູ້ໃຊ້ສາມາດວິເຄາະພື້ນທີ່ຕາມປະເພດປ່າ..
ສຳລັບລາຍລະອຽດແມ່ນອີງໃສ່ຂໍ້ທີ່ “4.2.1ການວິເຄາະພື້ນທີ່ປ່າໄມ້”.

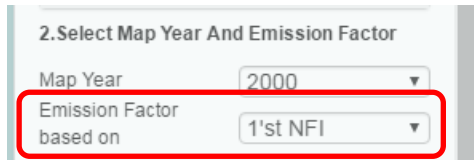
3. **【ເລືອກປັດຂອງແຜນທີ່】**

ຜູ້ໃຊ້ສາມາດເລືອກປັດຂອງແຜນທີ່ປະເພດປ່າໄມ້ທີ່ຕ້ອງການວິເຄາະໄດ້.



4. **【ເລືອກປັດໄຈການປ່ອຍທາດອາຍພິດ】**

ຜູ້ໃຊ້ສາມາດເລືອກປະເພດການສຳຫຼວດທີ່ຕ້ອງການຈະສະແດງຜົນ



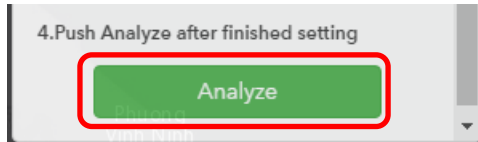
5. **【ເລືອກປະເພດທີ່ຕ້ອງການສັງລວມ】**

ເລືອກປະເພດທີ່ຕ້ອງການສັງລວມ

ສຳລັບລາຍລະອຽດແມ່ນອີງໃສ່ຂໍ້ທີ່ "4.2.1ການວິເຄາະພື້ນທີ່ປ່າໄມ້".

6. **【ວິເຄາະ】**

.ຄລິກປຸ່ມ [ວິເຄາະ] ເພື່ອດຳເນີນການວິເຄາະ.



7. **【ຜົນຂອງການວິເຄາະ】**

ຜົນຂອງການວິເຄາະຈະສະແດງດັ່ງຕາຕະລາງຂ້າງລຸ່ມນີ້:

Download Data

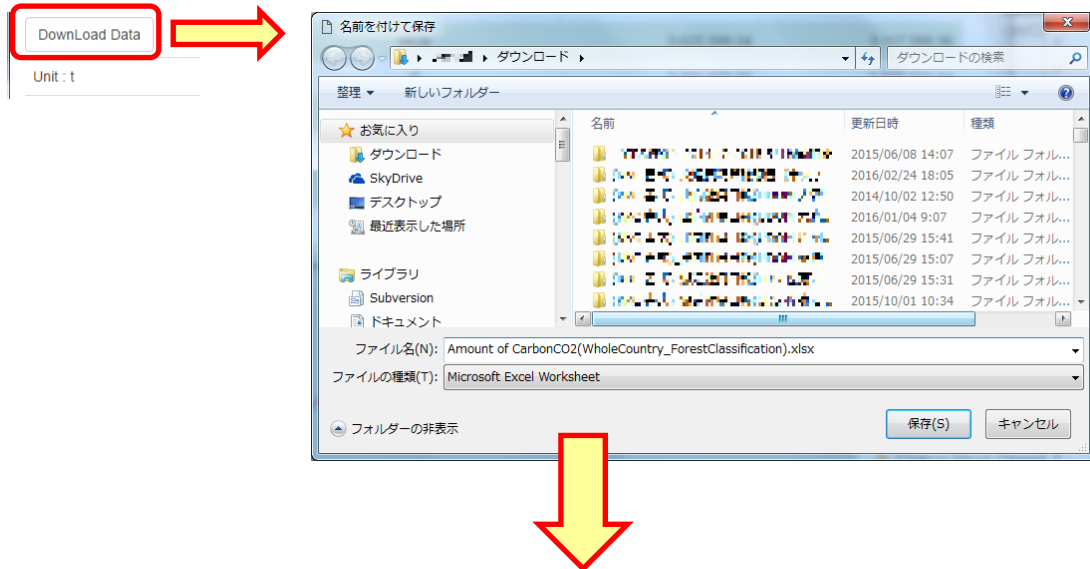
Unit : t

Amount of Carbon/CO2(Whole Country)

| Forest Classification | Carbon | CO2 |
|-----------------------|---------------|---------------|
| EF | 3,455,800.90 | 3,208,667.98 |
| MD | 3,290,026.80 | 3,756,469.88 |
| DD | 2,874,925.86 | 3,730,329.56 |
| CF | 3,300,014.37 | 3,873,077.00 |
| MCB | 3,625,399.34 | 3,117,588.36 |
| P | 3,331,975.60 | 3,525,553.94 |
| B | 3,666,265.85 | 3,708,354.80 |
| RV | 3,211,021.32 | 3,389,752.99 |
| SA | 3,486,691.46 | 3,452,011.18 |
| SR | 3,471,755.27 | 3,520,433.97 |
| G | 2,983,819.50 | 2,939,757.49 |
| SW | 3,336,405.07 | 3,313,215.43 |
| UC | 3,493,406.61 | 3,174,060.25 |
| RP | 3,328,439.96 | 3,604,228.48 |
| OA | 3,508,807.62 | 3,516,698.65 |
| AP | 3,252,179.53 | 3,317,797.07 |
| U | 3,267,046.23 | 3,422,104.20 |
| BR | 3,248,382.96 | 3,885,695.53 |
| O | 3,798,216.78 | 3,731,098.30 |
| W | 3,199,306.09 | 3,764,916.02 |
| CL | 3,075,712.71 | 3,341,473.25 |
| SH | 3,210,117.05 | 3,554,914.81 |
| Sum | 73,416,716.28 | 76,648,199.12 |

8. 【ດາວໂຫຼດຜົນຂອງການວິເຄາະ】

ຄວັກບຸລິມ [ດາວໂຫຼດຂໍ້ມູນ] ເພື່ອດາວໂຫຼດຜົນຂອງການວິເຄາະ.



Amount of CarbonCO2(WholeCountry_ForestClassification).xlsx - Excel

Unit : t

| Amount of Carbon/CO2(Whole Country) | | | | |
|-------------------------------------|---------------|---------------|--|--|
| Forest Classification | Carbon | CO2 | | |
| EF | 3,455,800.90 | 3,208,667.98 | | |
| MD | 3,290,026.80 | 3,756,469.88 | | |
| DD | 2,874,925.86 | 3,730,329.56 | | |
| CF | 3,300,014.37 | 3,873,077.00 | | |
| MCB | 3,625,399.34 | 3,117,588.36 | | |
| P | 3,331,975.60 | 3,525,553.94 | | |
| B | 3,666,265.85 | 3,708,354.80 | | |
| RV | 3,211,021.32 | 3,389,752.99 | | |
| SA | 3,486,691.46 | 3,452,011.18 | | |
| SR | 3,471,755.27 | 3,520,433.97 | | |
| G | 2,983,819.50 | 2,939,757.49 | | |
| SW | 3,336,405.07 | 3,313,215.43 | | |
| UC | 3,493,406.61 | 3,174,060.25 | | |
| RP | 3,328,439.36 | 3,604,228.48 | | |
| OA | 3,508,807.62 | 3,516,698.65 | | |
| AP | 3,252,179.53 | 3,317,797.07 | | |
| U | 3,267,046.23 | 3,422,104.20 | | |
| BR | 3,248,382.96 | 3,885,695.53 | | |
| O | 3,799,216.78 | 3,731,098.30 | | |
| W | 3,199,306.09 | 3,764,916.02 | | |
| CL | 3,075,712.71 | 3,341,473.25 | | |
| SH | 3,210,117.05 | 3,554,914.81 | | |
| Sum | 73,416,716.28 | 76,848,199.12 | | |

Whole Country

準備完了 100%

4.4.2 ການປັບແປງຂອງທາດກາກບອນ.

ຜູ້ໃຊ້ສາມາດວິເຄາະການປັບແປງຂອງທາດກາກບອນໄດ້ໂດຍປະຕິບັດຕາມເງື່ອນໄຂດັ່ງຂ້າງ

ລຸ່ມນີ້:

| ລ.ດ. | ເງື່ອນໄຂໃນການວິເຄາະ | ໝາຍເຫດ |
|------|----------------------------------|--|
| 1 | ເລືອກພື້ນທີ່ | ຜູ້ໃຊ້ສາມາດເລືອກ“ທີ່ວປະເທດ” ຫຼື “ຂອງແຕ່ລະແຂວງ” |
| 2 | ລົງເລືອກວິເຄາະພື້ນທີ່ຕາມປະເພດປ່າ | ຜູ້ໃຊ້ສາມາດວິເຄາະພື້ນທີ່ຕາມປະເພດປ່າ |
| 3 | ເລືອກປີຂອງແຜນທີ່ | ຜູ້ໃຊ້ສາມາດເລືອກປີຂອງແຜນທີ່ປະເພດປ່າໄມ້ |
| 4 | ເລືອກບັດໃຈການປ່ອຍທາດອາຍພິດ | ຜູ້ໃຊ້ສາມາດເລືອກປະເພດການສຳຫຼວດທີ່ຕ້ອງການຈະສະແດງຜົນ |
| 5 | ເລືອກປະເພດທີ່ຕ້ອງການສັງລວມ | ຜູ້ໃຊ້ສາມາດເລືອກປະເພດທີ່ຕ້ອງການສັງລວມ |

1. 【ເລືອກພື້ນທີ່】

ຜູ້ໃຊ້ສາມາດເລືອກພື້ນທີ່ຕ້ອງການຈະວິເຄາະ.

ສຳລັບລາຍລະອຽດແມ່ນອີງໃສ່ຂໍ້ທີ່ “4.2.1ການວິເຄາະພື້ນທີ່ປ່າໄມ້”.

2. 【ລົງເລືອກວິເຄາະພື້ນທີ່ຕາມປະເພດປ່າ】

ຜູ້ໃຊ້ສາມາດວິເຄາະພື້ນທີ່ຕາມປະເພດປ່າ..

ສຳລັບລາຍລະອຽດແມ່ນອີງໃສ່ຂໍ້ທີ່ “4.2.1ການວິເຄາະພື້ນທີ່ປ່າໄມ້”.

3. 【ເລືອກປີຂອງແຜນທີ່】

ຜູ້ໃຊ້ສາມາດເລືອກປີຂອງແຜນທີ່ປະເພດປ່າໄມ້ທີ່ຕ້ອງການວິເຄາະໄດ້.

2. Select Map Year And Emission Factor

Map Year ▼

Emission Factor based on
for initial map ▼

for final map ▼

4. **[ເລືອກບັດໄຈການປ່ອຍທາດອາຍພິດ]**

ຜູ້ໃຊ້ສາມາດເລືອກປະເພດການສຳຫຼວດທີ່ຕ້ອງການຈະສະແດງຜົນ



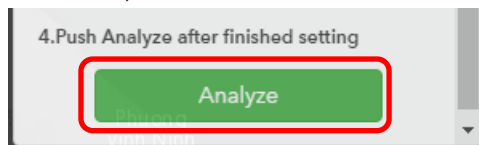
5. **[ເລືອກປະເພດທີ່ຕ້ອງການສັງວມ]**

ເລືອກປະເພດທີ່ຕ້ອງການສັງວມ

ສຳລັບລາຍລະອຽດແມ່ນອີງໃສ່ຂໍ້ທີ່ "4.2.1ການວິເຄາະພື້ນທີ່ປ່າໄມ້".

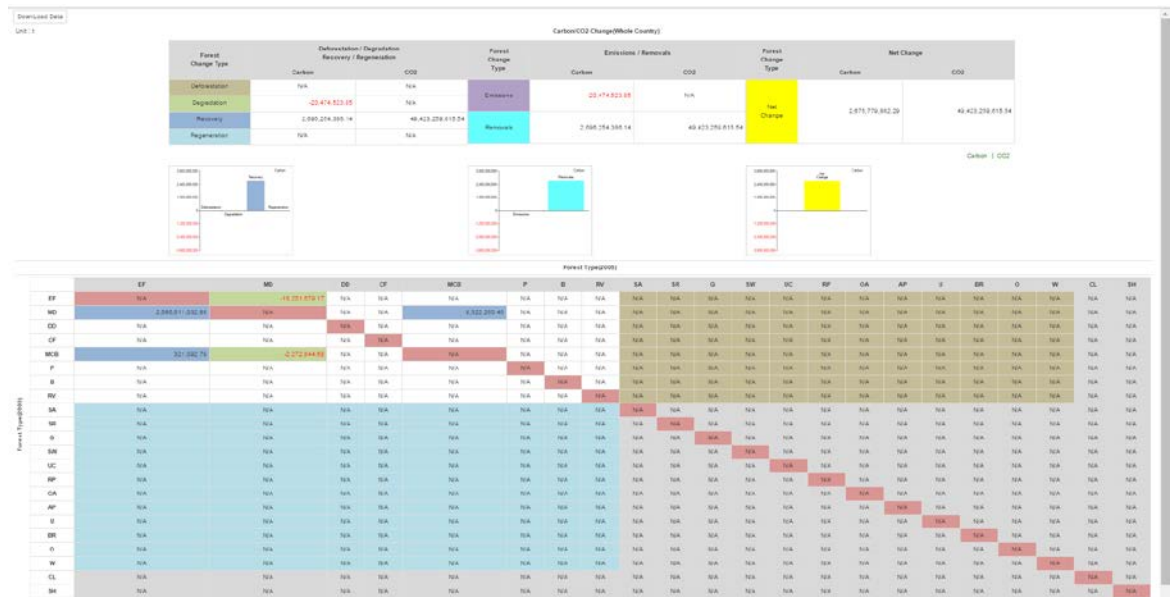
6. **[ວິເຄາະ]**

ຄວນກຳລັງມີ [ວິເຄາະ] ເພື່ອດຳເນີນການວິເຄາະ.



7. **[ຜົນຂອງການວິເຄາະ]**

ຜົນຂອງການວິເຄາະຈະສະແດງດັ່ງຕາຕະລາງຂ້າງລຸ່ມນີ້:



8. 【ດາວໂຫຼດຜົນຂອງການວິເຄາະ】

[ດາວໂຫຼດຜົນຂອງການວິເຄາະ] ເພື່ອດາວໂຫຼດຜົນຂອງການວິເຄາະ.

