



USER GUIDE - WEB INTERFACE

« SeqCOI » tool

SEQUESTRATION
DU CARBONE
DANS LES TERRITOIRES
DE L'OCEAN INDIEN



AVEC L'EUROPE,
nos régions
coopèrent



SUMMARY

- What is SeqCOI ?
- Presentation of the web interface and its features
- How to simulate a scenario?
- How to read the results?
- How to interpret the results tables?

In this guide, an underlined text is a link to a sub-part. You can come back to the main menu anytime by clicking on





What is SeqCOI?

- a. Videos to understand what is the SeqCOI tool
- b. Additional resources for further information
- c. The 3 roles of the SeqCOI decision support tool



What is SeqCOI?

- The principle behind this decision support tool (DST) can be discovered **in the presentation video** (1'30s) with English subtitles

<https://www.youtube.com/watch?v=3YjHzSshp0w>

- To learn more, here are **3 videos (in French) on the main topics** :
 - Video #1 : The **role of soils** in the fight against climate change (18'57s)
<https://www.youtube.com/watch?v=0Ctqf5TT5eQ>
 - Video #2 : A **spatialised calculator for GHG balances** of land uses (13'26s)
<https://www.youtube.com/watch?v=B9kkxykxV9I>
 - Video #3 : A **DST** for territorial public policies(16'09s)
<https://www.youtube.com/watch?v=t4tiF9tJXc0>



What is SeqCOI?

- The tool's operation is **illustrated on a poster** presented at the 2025 “Journées d’Etude des Sols (JES)” **(translated in English)**

<https://smartis.re/medias/Poster-presentation-seqcoi-2025-EN.pdf>

- And additional resources can be found in the « Help » menu:
 - This user guide
 - Technical document (in French) detailing the design and operation of the SeqCOI tool.



What is SeqCOI?

- **ENHANCING**
research data



- **CALCULATING GHG**
balances thanks to a
spatialised
calculator



- **MAPPING GHG**
balances on a
Web interface



In order to popularise them in a **Decision Support Tool (DST)**, available online, free of charge, on the SMARTIS.RE platform



Presentation of the web interface and its features

- a. Web interface: what do we see?
- b. Map display window
- c. Scenario definition zone
- d. Results access zone



Web interface: what do we see?

Rodrigues is the territory used as an **illustrative example** in this guide, but the approach is the same for all territories!

Here, **Rodrigues** is the selected territory

Targeted territories

GreenHouse Gases

Maps

Land use change scenarios

Results in 1 click !

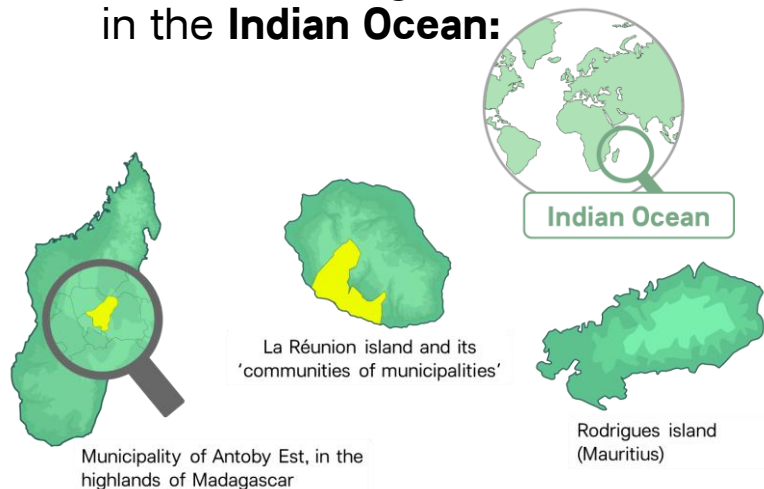
The screenshot shows the SeqCOI web interface. At the top, there's a navigation bar with 'SeqCOI' logo and a dropdown menu showing 'La Réunion', 'Madagascar', 'Rodrigues', and 'Rodrigues' (selected). Below this is a 'GreenHouse Gases' section with tabs for 'Landuse', 'Total', 'CO2 biomass', 'CO2 soil', 'CO2 other', 'N2O', 'CH4', and 'C Soil'. The main area is a map of Rodrigues, color-coded by land use. On the right, there's a sidebar with 'Surface area of selected parcels (Ha)' (0), 'Scenario' (Forest and natural vegetation, Forest - dense, Forest - less dense, Crops and grasslands, Livestock, Coastal wetlands, Buildings), and 'Calculate' and 'Summary table' buttons.



Web interface: what do we see?



- Choose among three territories in the **Indian Ocean**:



- What is SeqCOI?
- User guide
- Technical document

- Click on the “**Connect**” button to identify yourself.
- Log in with your SMARTIS account.
- If you don't have one yet, request one! You can request to create an account directly.
- Your advantages: save your scenarios so you can find them later.

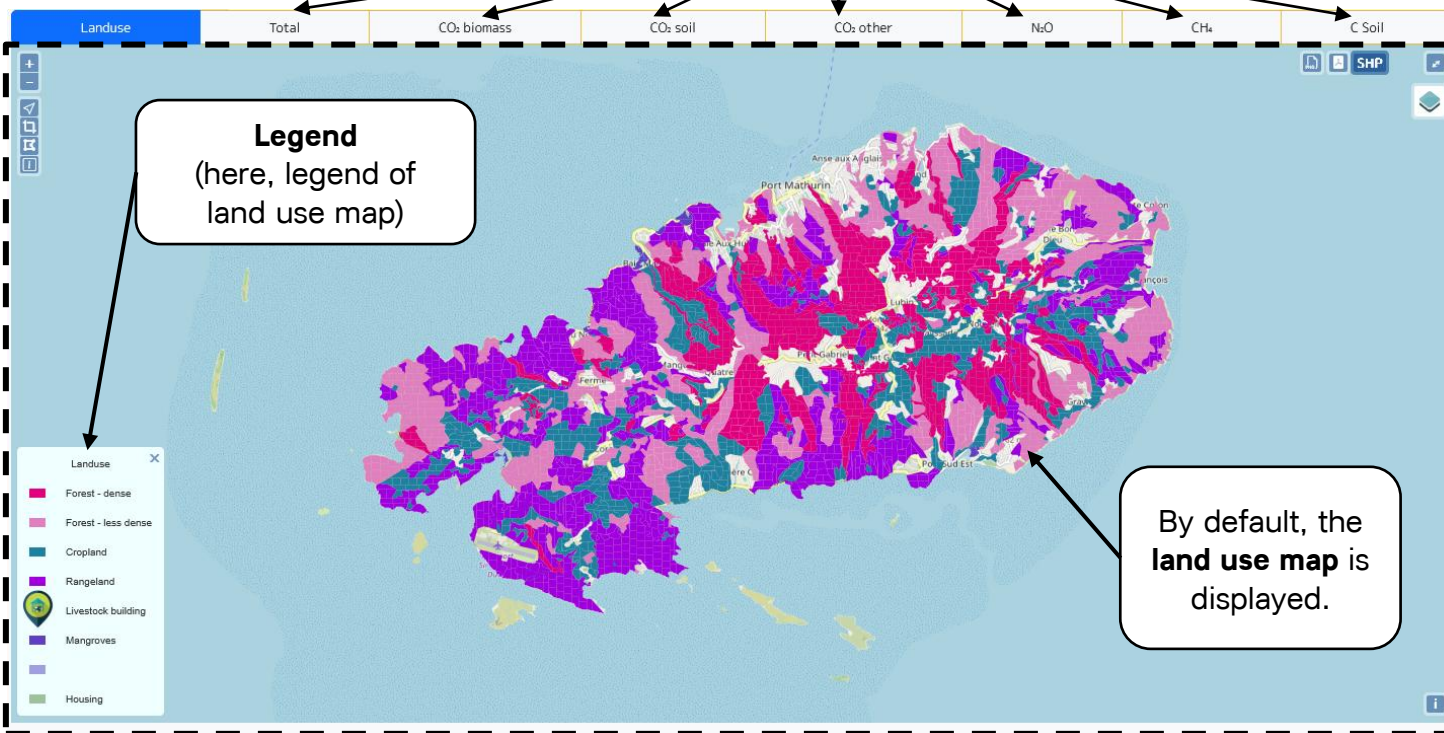


Web interface: what do we see?

Map display window

Choice of variable to display (land use, total GHG emissions and emissions by gas) and soil carbon stocks (Csol)

Maps are displayed in the web-mapping window



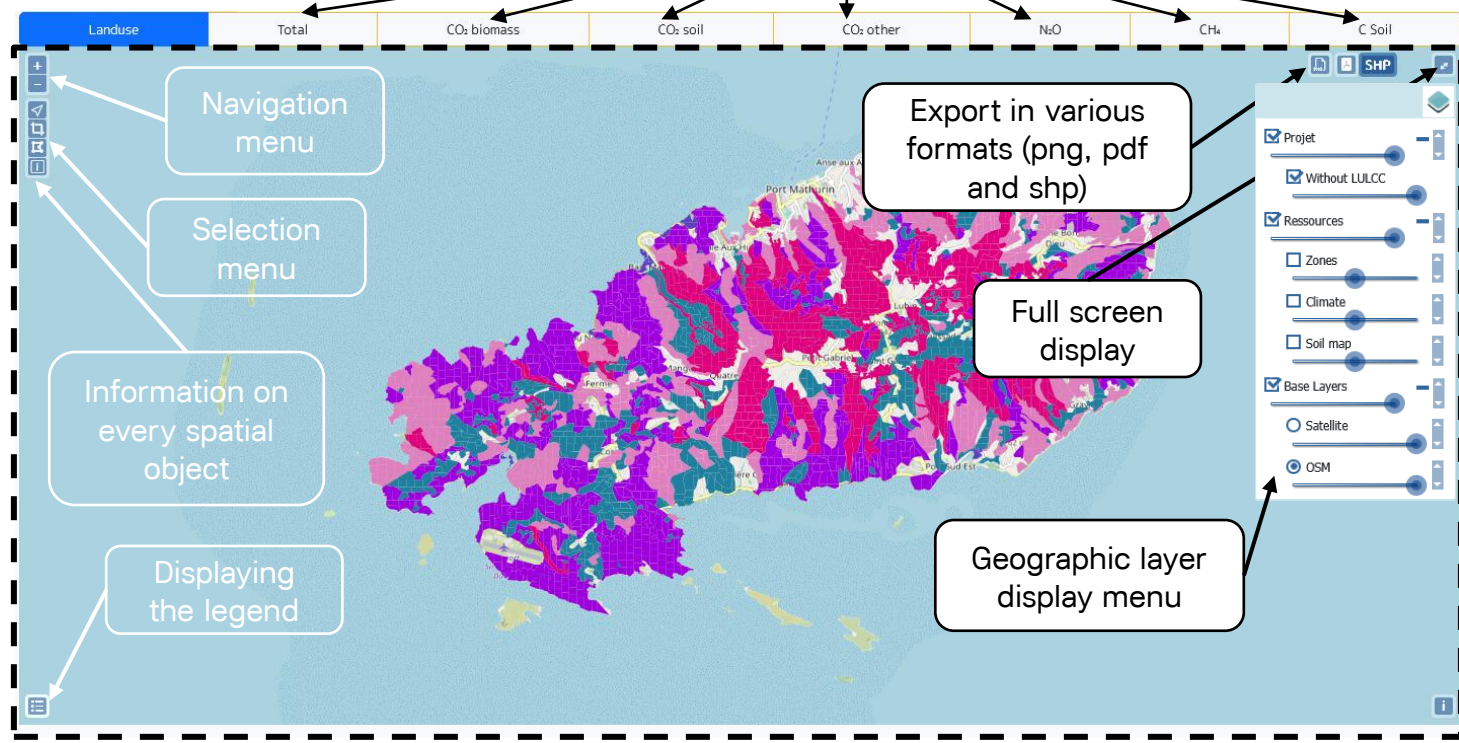
- In the web-mapping window : by default, the land use map is displayed.
- Above the web mapping window, several tabs allow you to choose the variable to be mapped: either land use, GHG balances (total or by GHG), or soil carbon stocks.



Web interface: what do we see?

Map display window

Choice of variable to display (land use, total GHG emissions and emissions by gas) and soil carbon stocks (Csoil)



Maps are displayed in the web-mapping window

Navigation menu

Selection menu






Information on every spatial object

Displaying the legend

Export in various formats (png, pdf and shp)

Full screen display

Geographic layer display menu

- At the top right, the button  allows you to enlarge the web mapping window to full screen.
- At the top right, the button  allows you to access the geographical layers menu, with sliders to choose the transparency. These layers are organised into three categories:
 - Project: geographical layers of GHG balances (by default, only the GHG balance information layer without scenario LULCC is displayed)
 - Resources: layers of the EPCI zones of La Réunion, and the two driving factors of soil carbon stocks at the territorial level: climate and soil.
 - Base Layers: choice of map backgrounds, satellite images or Open Street Map.
- At the top right, there are also buttons for exporting the geographical layer of the GHG balance without scenario in the form of:
 - Screenshot (.png et .pdf)  
 - shapefile (.shp) 



Web interface: what do we see?

Scenario definition zone

Select a land use for the entire territory using a drop-down list.

Choice of land use change (**Vegetation**, by default), or livestock numbers (Livestock) [not presented in this guide] using the slider

The screenshot shows a web interface for land use scenario definition. At the top, there is a navigation bar with a 'Selection by landuse' dropdown menu. Below this, a table displays various carbon-related metrics: Landuse, Total, CO₂ biomass, CO₂ soil, CO₂ other, N₂O, CH₄, and C Soil. The main area features a map of a territory with different land use types color-coded. A vertical toolbar on the left allows for spatial selection (single, rectangle, freeform). On the right, a 'Scenario' panel is enclosed in a dashed box, containing a 'Surface area of selected parcels (Ha)' input field, a list of scenarios (Forest and natural vegetation, Forest - dense, Forest - less dense, Crops and grasslands, Livestock, Coastal wetlands, Buildings), and 'Calculate' and 'Summary table' buttons. A 'Vegetation' vs 'Livestock' toggle is located above the scenario panel.

Choice of selection mode for spatial objects on the land use map (single, rectangle, freeform)

Land use change scenarios



Web interface: what do we see?

Scenario definition zone

Select a land use for the entire territory using a drop-down list.

Choice of land use change (**Vegetation**, by default), or livestock numbers (Livestock) [not presented in this guide] using the slider

After selecting the spatial objects for the scenarios, the **cumulative area in hectares** is automatically displayed.

List of **land uses to which** you would like to change the use of the selected object(s)
[or 'Livestock' list for scenarios involving changes in animal numbers]

The screenshot shows a web interface for land use scenario definition. At the top, there is a navigation bar with a 'Selection by landuse' dropdown menu. Below this is a table with columns for 'Landuse', 'Total', 'CO2: biomass', 'CO2: soil', 'CO2: other', 'N2O', 'CH4', and 'C Soil'. The main area features a map of a territory with various land use categories represented by different colors. To the right of the map is a 'Scenario' panel with a 'Vegetation' radio button selected and a 'Livestock' radio button. Below the radio buttons is a text input field for 'Surface area of selected parcels (Ha)' showing '0'. A list of land use categories is displayed, including 'Forest and natural vegetation', 'Forest - dense', 'Forest - less dense', 'Crops and grasslands', 'Livestock', 'Coastal wetlands', and 'Buildings'. At the bottom of the panel are 'Calculate' and 'Summary table' buttons.

Choice of selection mode for spatial objects on the land use map (single, rectangle, freeform)

List of **land uses for scenarios** organised into 5 sections



Web interface: what do we see?

Results access zone

The screenshot shows the SeqCol web interface. At the top, there's a navigation bar with 'SeqCol' logo and location options: 'La Réunion', 'Madagascar', 'Rodrigues', and 'Rodrigues' (selected). There are 'Help' and 'Connect' buttons, and a flag icon. Below the navigation, there's a 'Selection by landuse' dropdown menu. A table header shows columns: 'Landuse', 'Total', 'CO₂ biomass', 'CO₂ soil', 'CO₂ other', 'N₂O', 'CH₄', and 'C Soil'. The main area is a map of Rodrigues, colored by land use. On the right, there's a sidebar with 'Surface area of selected parcels (Ha)' (0.00), 'Scenario' (Forest and natural vegetation, Forest - dense, Forest - less dense, Crops and grasslands, Livestock, Coastal wetlands, Buildings), and 'Calculate' and 'Summary table' buttons. A dashed box highlights the 'Calculate' and 'Summary table' buttons.

The GHG balance **maps** will automatically display in the web mapping window, while the **tables** will display in a pop-up window after clicking on the 'Summary Table' button

Calculation of GHG balance **WITH** scenario

Access to tables of GHG balances **WITHOUT** and **WITH** scenario

Results in 1 click !



Web interface: what do we see?

[→ If you are logged in

The screenshot shows the SeqCOI web interface. At the top, there is a navigation bar with the SeqCOI logo and location options: La Réunion, Madagascar, Rodrigues, and Rodrigues. A 'Help' button and a language selector (set to 'allo') are also present. Below the navigation bar, there is a 'Selection by landuse' dropdown menu. The main interface is divided into a map area and a right-hand panel. The map area shows a grid overlay on a map of Rodrigues, with various land use categories color-coded. The right-hand panel contains a 'Surface area of selected parcels (Ha)' input field, a 'Scenario' list with expandable sections for 'Forest and natural vegetation', 'Crops and grasslands', 'Livestock', 'Coastal wetlands', and 'Buildings'. At the bottom of the right-hand panel, there are four buttons: 'Calculate', 'Save scenario', 'Open scenario', and 'Summary table'. A dashed box highlights the 'Save scenario' and 'Open scenario' buttons.

2 additional buttons are displayed

To save the scenario you have simulated

To open a scenario you have already saved



How to simulate a land use change scenario?

- a. Select 'parcels' of land within a territory
- b. Define a land use change scenario
- c. Calculate the GHG balance of the scenario
- d. Mapped and quantified results



How to simulate a land use change scenario?

- Select a **territory**: HERE, Rodrigues is the territory used as an illustrative example

The screenshot displays the SeqCol web application interface. At the top, the navigation bar includes the SeqCol logo, location dropdowns for 'La Réunion', 'Madagascar', 'Rodrigues', and 'Rodrigues', and buttons for 'Help' and 'Connect'. Below the navigation bar, there is a 'Selection by landuse' dropdown menu and a table with columns: 'Landuse', 'Total', 'CO₂ biomass', 'CO₂ soil', 'CO₂ other', 'N₂O', 'CH₄', and 'C Soil'. The main area features a map of Rodrigues with various land use categories color-coded. To the right of the map is a 'Scenario' selection panel with a 'Surface area of selected parcels (Ha)' input field showing '0'. The scenario list includes 'Forest and natural vegetation' (expanded), 'Forest - dense', 'Forest - less dense', 'Crops and grasslands', 'Livestock', 'Coastal wetlands', and 'Buildings'. At the bottom of the panel are 'Calculate' and 'Summary table' buttons.



How to simulate a land use change scenario?

- Select a **territory**:
- Create a **LAND USE CHANGE** scenario:

The **Vegetation** slider is enabled by default.

The screenshot shows a software interface for simulating land use change. At the top, there is a navigation bar with a dropdown menu labeled 'Selection by landuse'. Below this is a table with columns for 'Landuse', 'Total', 'CO₂ biomass', 'CO₂ soil', 'CO₂ other', 'N₂O', 'CH₄', and 'C Soil'. The 'Landuse' column is currently selected. Below the table is a map of a territory, likely Réunion, showing various land use categories in different colors. To the right of the map is a sidebar with a 'Vegetation' slider and a 'Livestock' section. The 'Vegetation' slider is currently turned on. Below the slider is a section titled 'Surface area of selected parcels (Ha)' with a value of 0. Below that is a 'Scenario' section with a list of scenarios: 'Forest and natural vegetation', 'Forest - dense', 'Forest - less dense', 'Crops and grasslands', 'Livestock', 'Coastal wetlands', and 'Buildings'. At the bottom of the sidebar are 'Calculate' and 'Summary table' buttons. A callout box points to the 'Vegetation' slider, stating 'The Vegetation slider is enabled by default.'



How to simulate a land use change scenario?

- Select a **territory**:
- Create a **LAND USE CHANGE** scenario:

After selecting the spatial objects for the scenarios, the **cumulative area in hectares** is automatically displayed.

Surface area of selected parcels (Ha) 2862.48

Scenario

- Forest and natural vegetation
- Forest - dense
- Forest - less dense
- Crops and grasslands
- Livestock
- Coastal wetlands
- Buildings

Calculate Summary table

Either **select a land use** (here, rangeland) **using the drop-down list** on the geographical area of your choice according to the selected zoom level (here, the entire island).

1. Select spatial objects, which will be referred to as 'parcels' in the rest of this guide.



How to simulate a land use change scenario?

- Select a **territory**:
- Create a **LAND USE CHANGE** scenario:

Selection by landuse

Landuse Total CO₂ biomass CO₂ soil CO₂ other N₂O CH₄ C Soil

Vegetation Livestock

Surface area of selected parcels (Ha) 51.54

Scenario

- Forest and natural vegetation
- Crops and grasslands
- Cropland
- Rangeland
- Livestock
- Coastal wetlands
- Buildings

Calculate Summary table

Either zoom in and manually select spatial objects by clicking on the method you want (single, rectangle, freeform)

1. Select spatial objects, which will be referred to as 'parcels' in the rest of this guide.

HERE, selection of rangeland parcels (51.54 ha)

After selecting the spatial objects for the scenarios, the **cumulative area in hectares** is automatically displayed.



How to simulate a land use change scenario?

- Select a **territory**:
- Create a **LAND USE CHANGE** scenario:

Selection by landuse

Landuse	Total	CO ₂ biomass	CO ₂ soil	CO ₂ other	N ₂ O	CH ₄	C Soil
---------	-------	-------------------------	----------------------	-----------------------	------------------	-----------------	--------

Vegetation Livestock

Surface area of selected parcels (Ha)

0.00

Scenario

- Forest and natural vegetation
- Crops and grasslands** (51.54)
- Cropland
- Rangeland
- Livestock
- Coastal wetlands
- Buildings

Calculate Summary table

Click on the **red arrow for the desired final use** to change the use of the selected object(s): the surface will then appear to the right of the arrow.

2. Define your scenario of land use change(s)

HERE, scenario of land use change from rangeland (51.54 ha) to cropland



How to simulate a land use change scenario?

- Select a **territory**:
- Create a **LAND USE CHANGE** scenario:

Selection by landuse

Vegetation Livestock

Landuse	Total	CO ₂ : biomass	CO ₂ : soil	CO ₂ : other	N ₂ O	CH ₄	C Soil
---------	-------	---------------------------	------------------------	-------------------------	------------------	-----------------	--------

Surface area of selected parcels (Ha)

0.00

Scenario

- Forest and natural vegetation
- Crops and grasslands
- Cropland 51.54
- Rangeland
- Livestock
- Coastal wetlands
- Buildings

Calculate Summary table

You want to define a **complex scenario** with multiple initial and final uses across numerous parcels: repeat steps 1 and 2 as many times as you like (even combining selections)!

You've made a mistake in the final use: no problem, just click on the red bin and everything will be deleted!

2. Define your scenario of land use change(s)



How to simulate a land use change scenario?

- Select a **territory**:
- Create a **LAND USE CHANGE** scenario:

[→ If you are logged in

2. Define your scenario of land use change(s)

The screenshot displays the SeqCoil web interface. On the left, a map shows a land use simulation with various colored polygons representing different land use types. The map is overlaid on a cadastral plan. The top navigation bar includes 'Selection by landuse' and tabs for 'Landuse', 'Total', 'CO₂ biomass', 'CO₂ soil', 'CO₂ other', 'N₂O', 'CH₄', and 'C Soil'. The right panel, titled 'Scenario', shows the 'Surface area of selected parcels (Ha)' as 0. The 'Scenario' section is expanded to show 'Crops and grasslands', which includes 'Cropland' (51.54 Ha) and 'Rangeland'. Below this, there are sections for 'Livestock', 'Coastal wetlands', and 'Buildings'. At the bottom of the panel, there are buttons for 'Calculate', 'Save scenario', 'Open scenario', and 'Summary table'. Arrows from the 'Save scenario' and 'Open scenario' buttons point to callout boxes on the right.

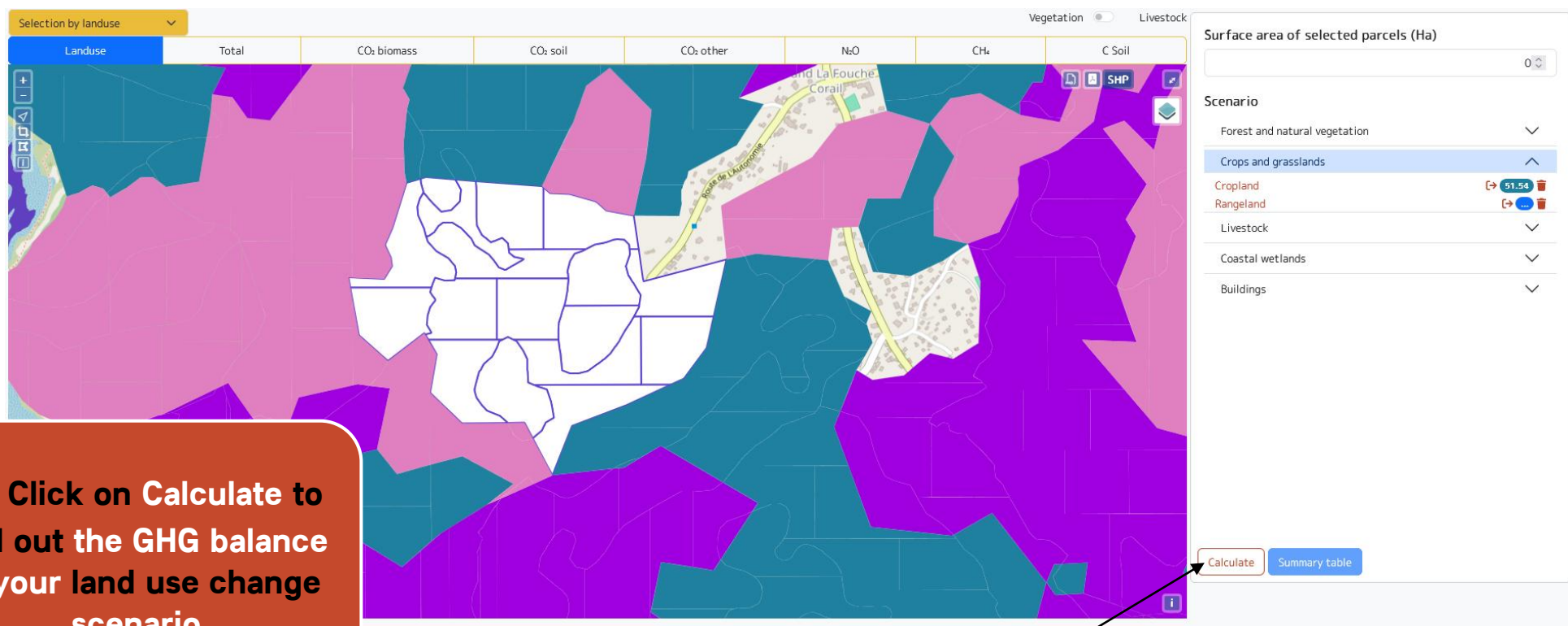
Save your scénario

To open it later



How to simulate a land use change scenario?

- Select a **territory**:
- Create a **LAND USE CHANGE** scenario:



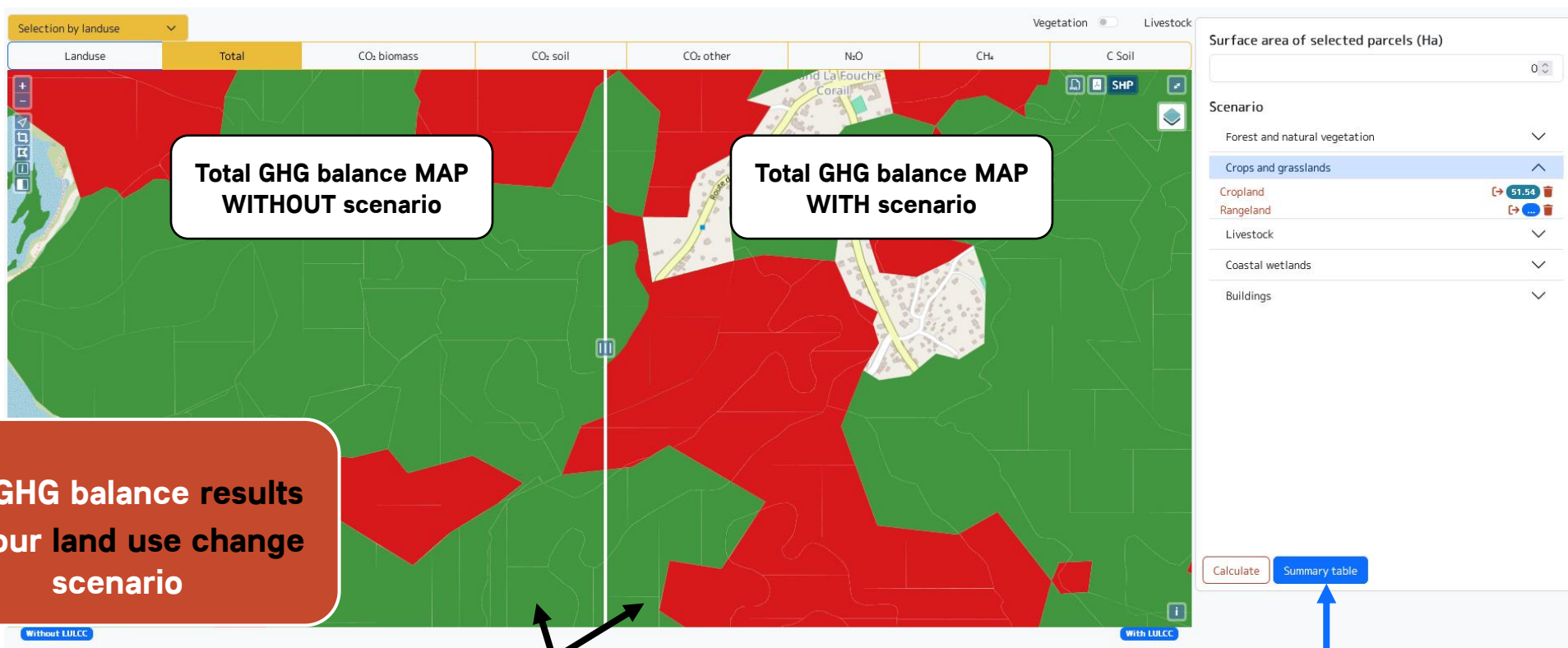
3. Click on Calculate to find out the GHG balance of your land use change scenario

Calculation of GHG balance WITH scenario



How to simulate a land use change scenario?

- Select a **territory**:
- Create a **LAND USE CHANGE** scenario:



4. GHG balance results of your land use change scenario

The **maps** showing the total GHG balances **WITHOUT** and **WITH LULCC** scenario (default) will automatically display in the web mapping window, while the **tables** will display in a full-screen pop-up window after clicking on the 'Summary Table' button

Access to tables of GHG balances **WITHOUT** and **WITH** scenario



How to simulate a land use change scenario?

- Select a **territory**:
- Create a **LAND USE CHANGE scenario**:

Select the **GHG balance variable** to display on the map: 'Total' (default) or by gas ('CO₂ biomass', 'CO₂ soil', 'CO₂ other', 'N₂O', "CH₄"), or soil carbon stock 'Csoil'.

Click on the button  to activate/deactivate the comparison of the GHG balance WITHOUT/WITH scenario

4. GHG balance results of your land use change scenario

GHG balance MAP WITH scenario

Access to tables of GHG balances WITHOUT and WITH scenario



How to simulate a land use change scenario?

- Select a **territory**:
- Create a **LAND USE CHANGE** scenario:

Duration of the project : 20 years

Summary Livestock summary C stocks summary

Select the summary table you want: here, by default, 'Summary' for GHG balances of land use changes

'C stocks summary' table for organic carbon stock balances

'Livestock summary' table for GHG balances of livestock

Component	Share per GHG				Result per year (tCO ₂ -eq / an)		
	CO ₂		N ₂ O	CH ₄	Without	With	Balance
	Soil	Other					
Landuse changes							
Deforestation	0	0	0	0	0	0	0
Afforestation	0	0	0	0	0	0	0
Agricultural land use changes	-552	0	38	0	0	1	1
Urbanisation of agricultural land	0	0	0	0	0	0	0
Agriculture							
Annual crops	0	-211	0	516	0	1 025	1 040
perennial crops	0	0	0	0	0	0	0
Flooded rice	0	0	0	0	0	0	0
Grasslands	0	0	0	0	0	0	0
Inputs	17 397	17 835	438	0	0	870	892
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
Total	37 900	38 671	771	542	-765	428	564
Total per ha	4.1	4.1	0.1	0.1	-0.1	0.0	0.1
Total per ha/yr	0.2	0.2	0.0	0.0	0.0	0.0	0.0

Summary tables WITH and WITHOUT scenario, which are displayed in a full-screen pop-up window after clicking on the 'Summary table' button

4. GHG balance results of your land use change scenario

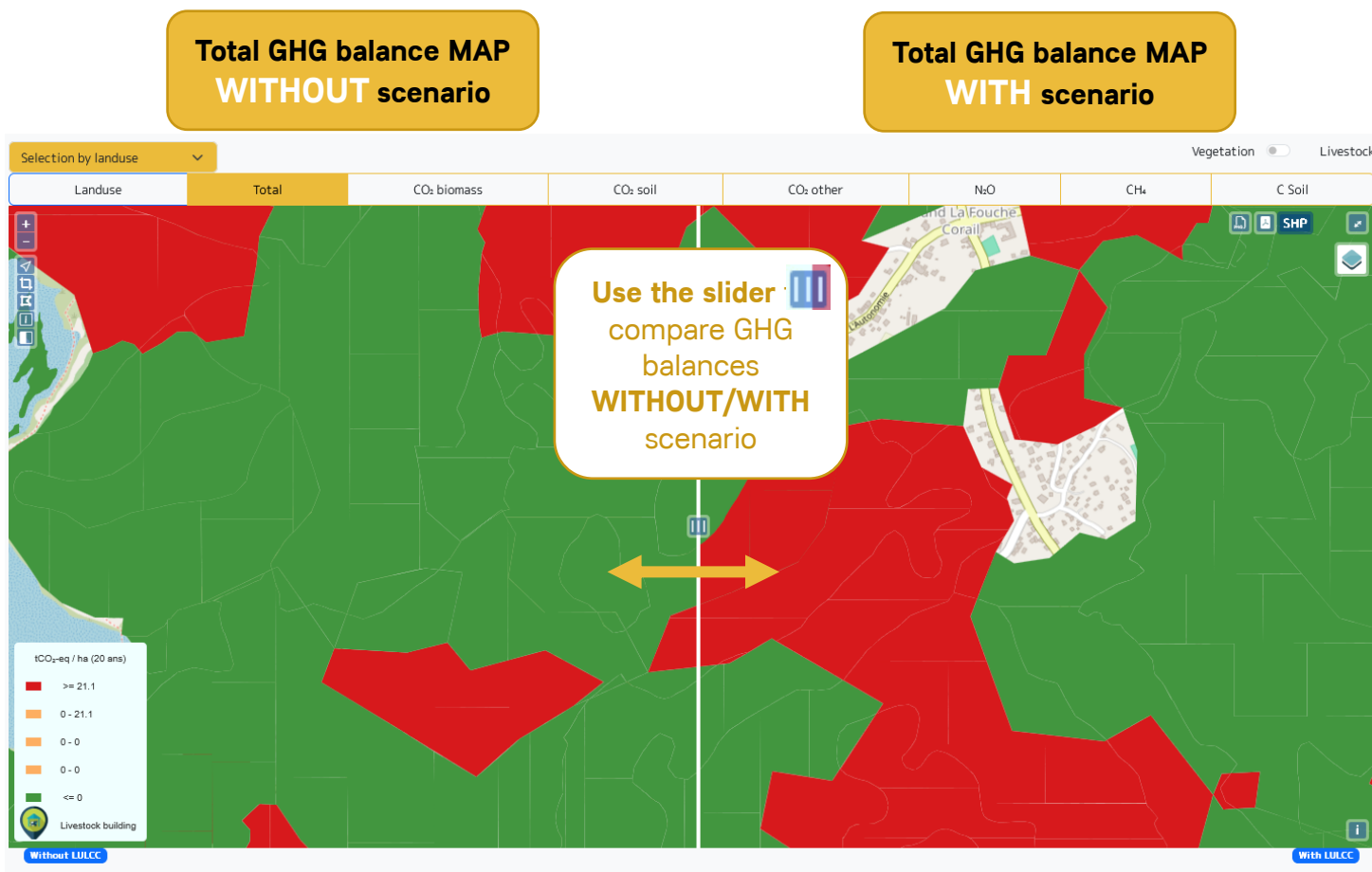


How to read the results?

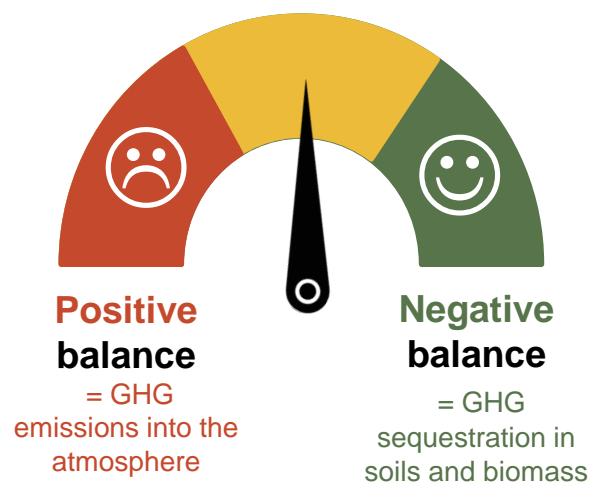
- a. The maps
 - i. WITHOUT scenario
 - ii. WITH scenario
- b. The summary tables
- c. How to export the results?



How to read the maps?



GHG balances & organic carbon sequestration



The total GHG balance **WITHOUT scenario** is the GHG balance at 't+20 years' for the territory with **current land uses**

The total GHG balance **WITH scenario** is the GHG balance at 't+20 years' for the territory with **the land use changes of your scenario**

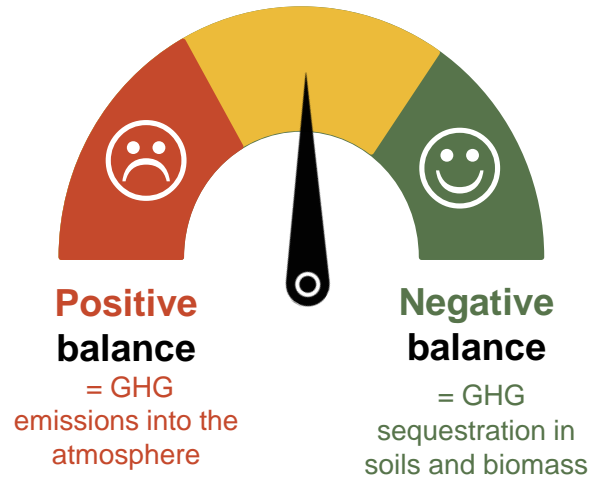


How to read the maps?

Click on each tab to understand where GHG emissions or carbon sequestration in soils and biomass come from in the total balances WITHOUT and WITH



GHG balances & organic carbon sequestration



The total GHG balance **WITHOUT** scenario is the GHG balance at 't+20 years' for the territory with **current land uses**

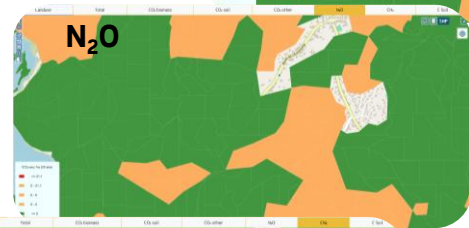
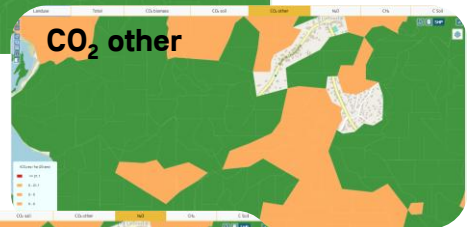
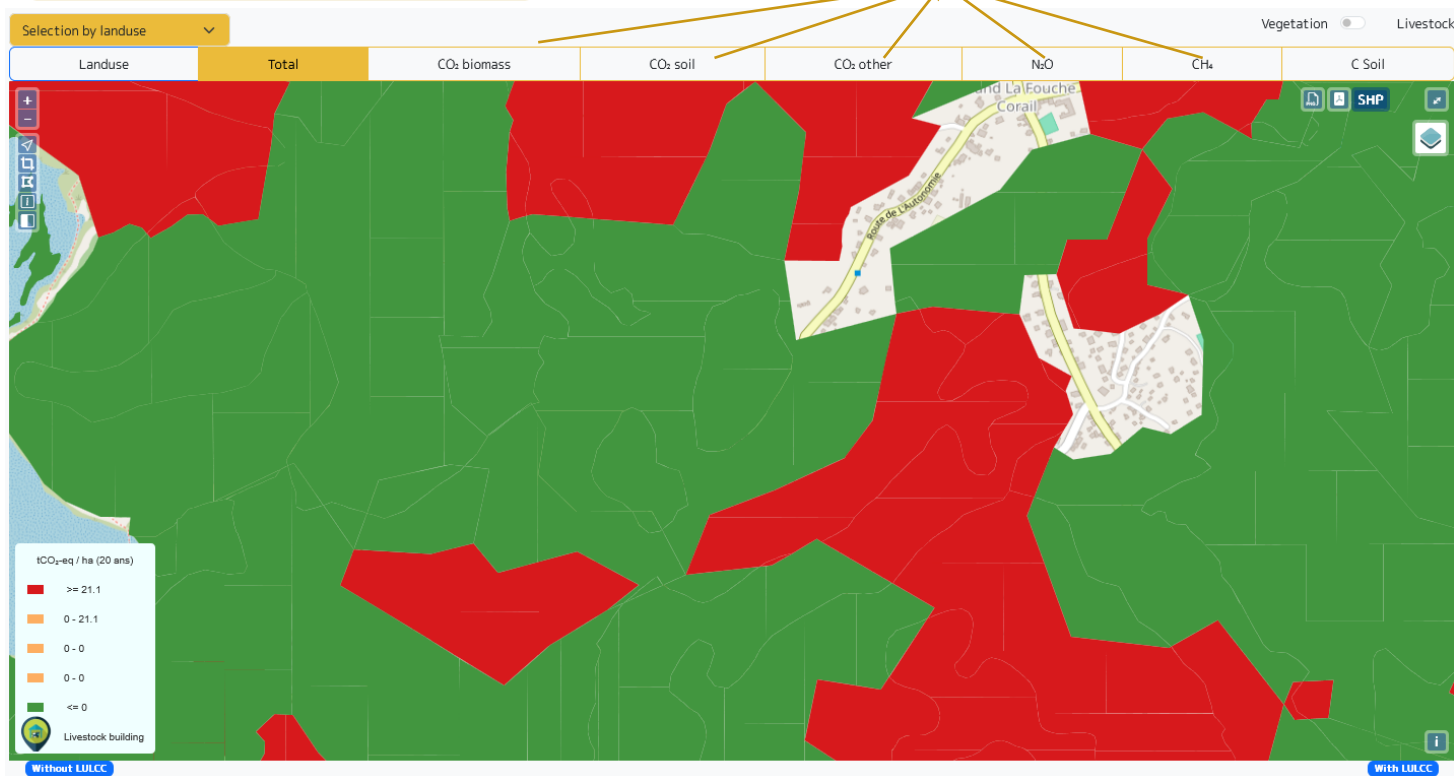
The total GHG balance **WITH** scenario is the GHG balance at 't+20 years' for the territory with **the land use changes of your scenario**



How to read the maps?

Total GHG balance MAP
WITHOUT scenario

Each GHG of the total balance
has its own map to identify
GHG sources or sinks

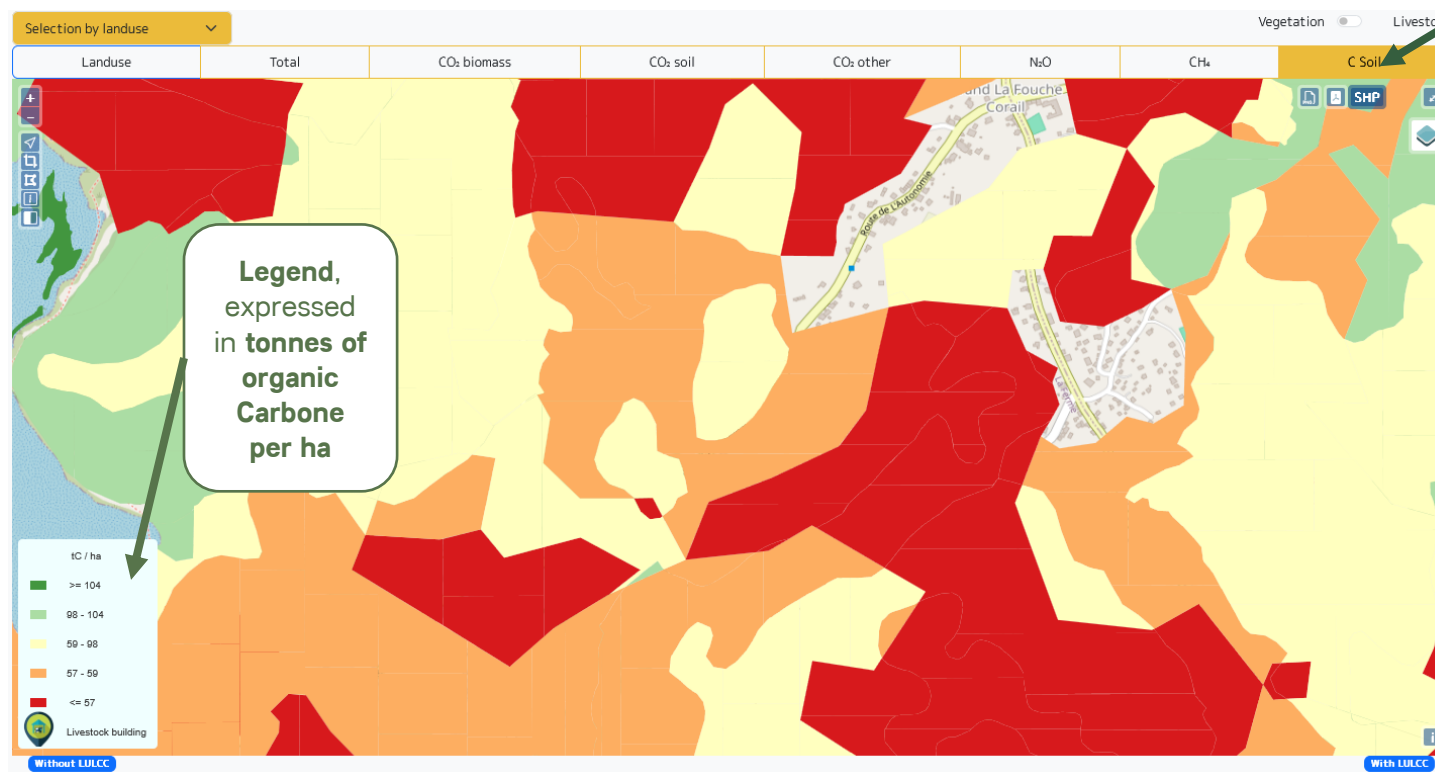


The total GHG balance **WITHOUT** scenario is the GHG balance at 't+20 years' for the territory with **current land uses**



How to read the maps?

SOC STOCKS map
WITHOUT scenario



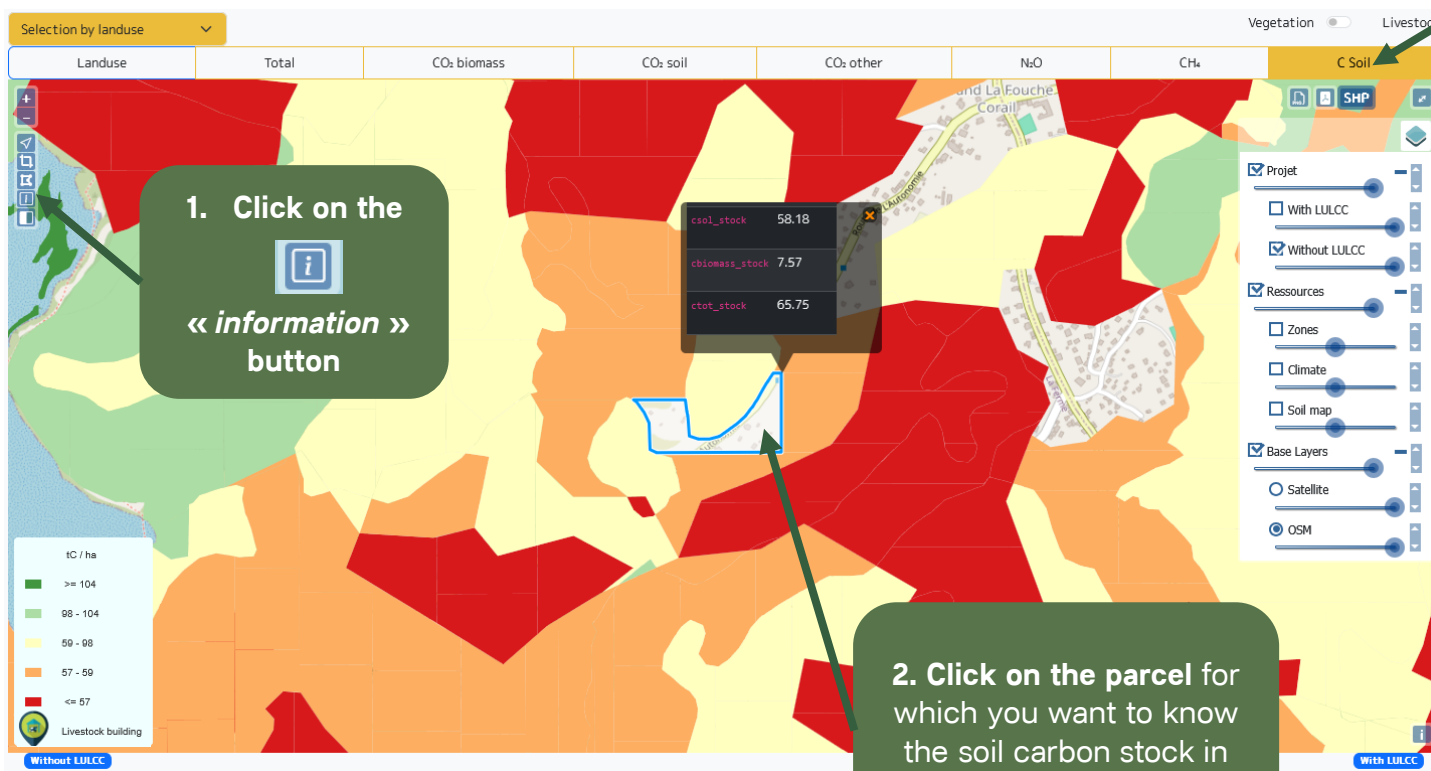
- Data on **Soil Organic Carbon (SOC) STOCKS** are at the heart of the **SeqCOI** project
- The SOC stocks map **WITHOUT scenario** can be accessed via the « **C Soil** » tab
- The colours indicate the value of the **SOC stock per hectare** of each plot: **green for a high soil carbon stock**, and **red for a lower soil carbon stock**.

The total GHG balance **WITHOUT scenario** is the GHG balance at 't+20 years' for the territory with **current land uses**



How to read the maps?

SOC STOCKS map
WITHOUT scenario



1. Click on the button

2. Click on the parcel for which you want to know the soil carbon stock in tC/ha ('csol_stock')

- The colours indicate the value of the **SOC stock per hectare** of each plot: **green for a high soil carbon stock**, and **red for a lower soil carbon stock**
- **For more information, click on** then on the plot for which you want to know the SOC stock, or other information, for the **WITHOUT scenario** option.
- The SOC stock per ha depends on the factors of **soil, climate and land use** for each « parcel »

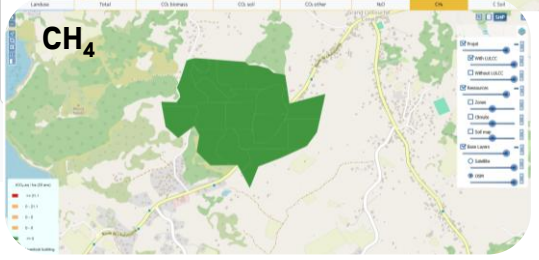
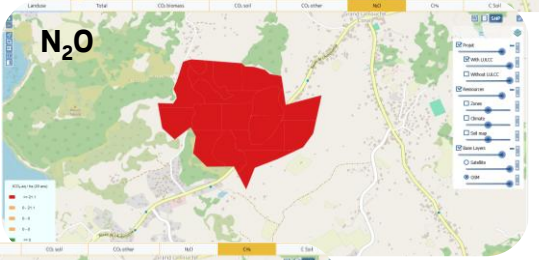
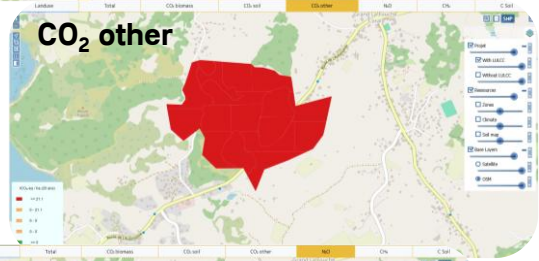
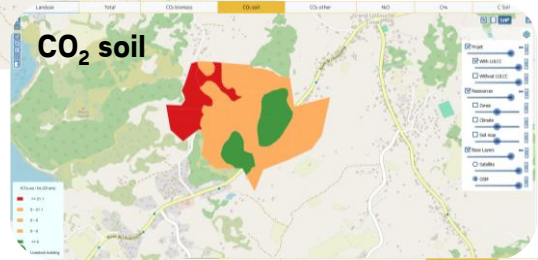
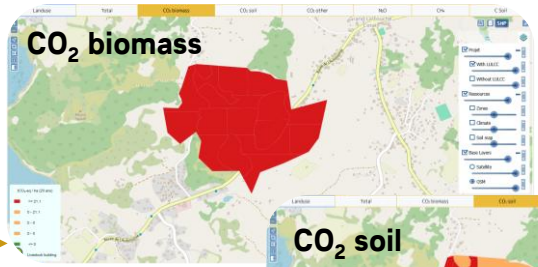
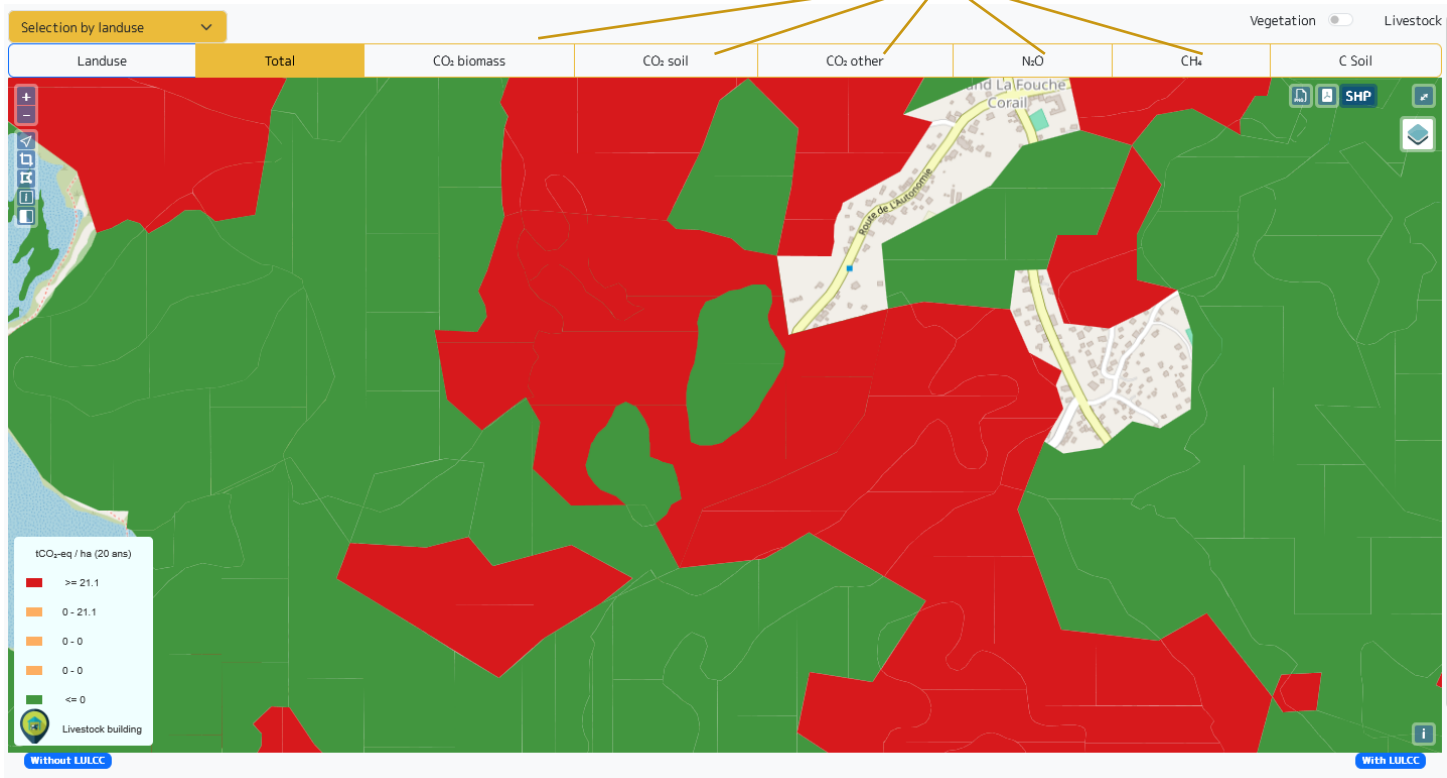
The total GHG balance **WITHOUT scenario** is the GHG balance at 't+20 years' for the territory with **current land uses**



How to read the maps?

Total GHG balance MAP
WITH scenario

Each GHG of the total balance
has its own map to identify
GHG sources or sinks

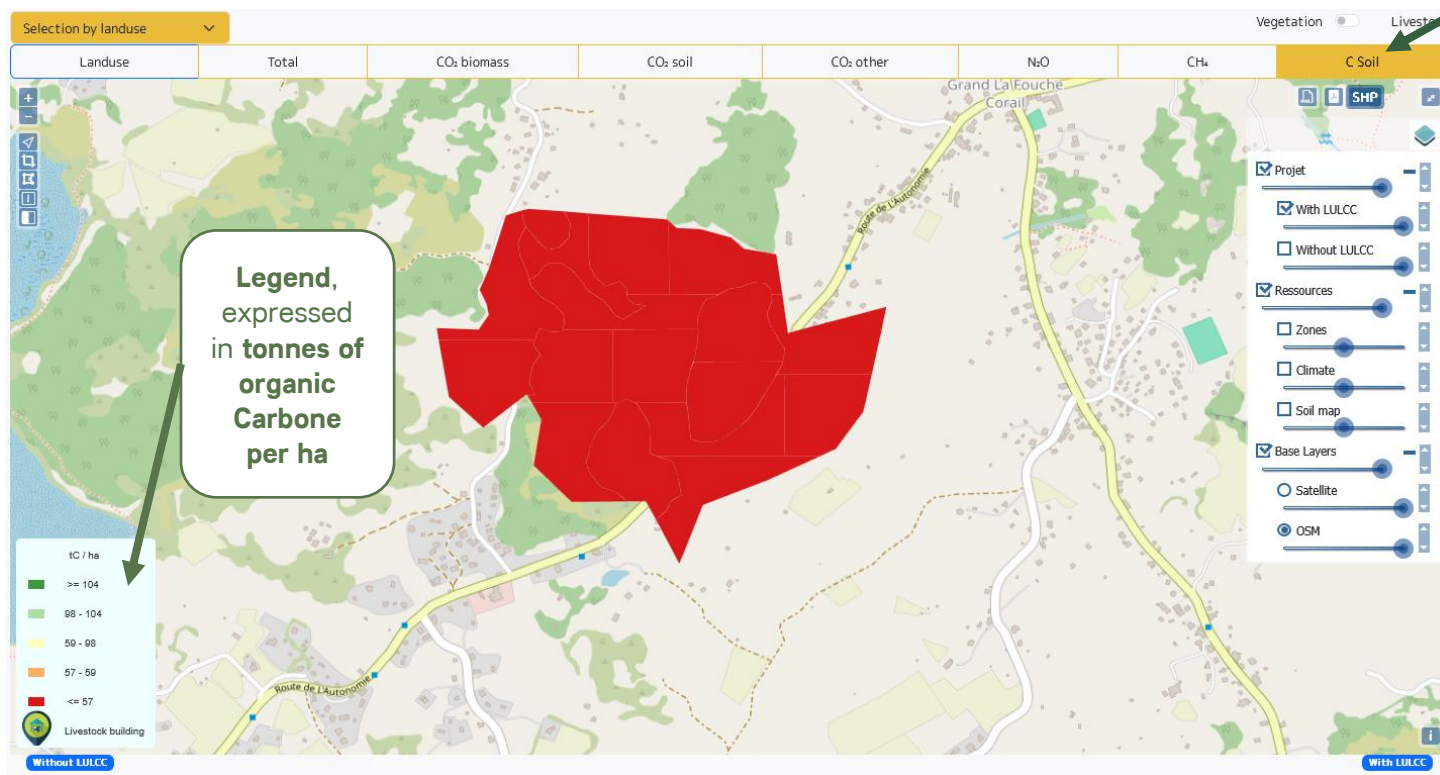


The total GHG balance **WITH scenario** is the GHG balance at 't+20 years' for the territory with the land use changes of your scenario



How to read the maps?

SOC STOCKS map
WITH scenario



Legend, expressed in tonnes of organic Carbone per ha

- Data on **Soil Organic Carbon (SOC) STOCKS** are at the heart of the **SeqCOI** project
- The SOC stocks map **WITHOUT scenario** can be accessed via the « **C Soil** » tab
- The colours indicate the value of the **SOC stock per hectare** of each plot: **green for a high soil carbon stock**, and **red for a lower soil carbon stock**.

The total GHG balance **WITH scenario** is the GHG balance at 't+20 years' for the territory with **the land use changes of your scenario**



'Summary' table for GHG balances of land use changes

How to read the tables?

Duration of the project : 20 years

Summary | Livestock summary | C stocks summary

GHG balances are calculated over a period of 20 years

GHG balance WITHOUT land use change scenario

GHG balance WITH land use change scenario

Net (WITH – WITHOUT) GHG balance over 20 years

Net GHG balance broken down by GHG

WITHOUT / WITH / net GHG balance reported on an annual basis

Component	Gross fluxes		Balance	Share per GHG					Result per year (tCO ₂ -eq / an)			
	Without	With		Biomass	CO ₂	Soil	Other	N ₂ O	CH ₄	Without	With	Balance
Landuse changes												
Deforestation	0	0	0	0	0	0	0	0	0	0	0	0
Afforestation	0	0	0	0	0	0	0	0	0	0	0	0
Agricultural land use changes	0	28	28	542	-552	0	38	0	0	1	1	1
Urbanisation of agricultural land	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture												
Annual crops	20 503	20 808	305	0	-211	0	516	0	1 025	1 040	15	15
perennial crops	0	0	0	0	0	0	0	0	0	0	0	0
Flooded rice	0	0	0	0	0	0	0	0	0	0	0	0
Grasslands	0	0	0	0	0	0	0	0	0	0	0	0
Inputs	17 397	17 835	438	0	0	428	10	0	870	892	22	22
Livestock												
	0	0	0	0	0	0	0	0	0	0	0	0
Forest fire												
	0	0	0	0	0	0	0	0	0	0	0	0
Coastal wetlands												
	0	0	0	0	0	0	0	0	0	0	0	0
Total												
Total	37 900	38 671	771	542	-763	428	564	0	1 895	1 934	39	39
Total per ha	4.1	4.1	0.1	0.1	-0.1	0.0	0.1	0.0	0.2	0.2	0.0	0.0
Total per ha/yr	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Components from which GHGs originate

Total = sum of GHG emissions from each component



How to read the tables?

'C stocks summary' table for organic carbon stocks

TOTAL organic carbon stocks
(biomass + soil) in tonnes of carbon

BIOMASS organic carbon stock
in tonnes of carbon

SOIL organic carbon stock
in tonnes of carbon

Areas in hectares

Land uses

Duration of the project : 20 years

Summary Livestock summary C stocks summary

Component	Total C stock (tC)			Biomass C stocks (tC)			Soil C stocks (tC)			Areas (Ha)		
	Without	With	Balance	Without	With	Balance	Without	With	Balance	Without	With	Balance
Forest and natural vegetation												
Forest - dense	344 451	344 451	0	118 118	118 118	0	226 504	226 504	0	2 148.7	2 148.7	0.0
Forest - less dense	387 850	387 850	0	137 628	137 628	0	250 245	250 245	0	2 503.6	2 503.6	0.0
Crops and grasslands												
Cropland	108 303	111 974	3 671	8 423	8 665	242	99 880	103 309	3 429	1 792.8	1 844.3	51.6
Rangeland	200 230	196 583	-3 647	21 593	21 203	-390	178 637	175 381	-3 257	2 862.5	2 810.0	-51.6
Mangroves												
Mangroves	15 137	15 137	0	3 587	3 587	0	11 550	11 550	0	25.5	25.5	0.0
Total	1 055 971	1 055 995	24	289 349	289 201	-148	766 816	766 989	172	9 333.1	9 333.0	0

Total = sum of organic carbon stocks (or areas) for each land use

WITHOUT scenario

WITH scenario

Net balance (WITH - WITHOUT)



How to export the results?

Duration of the project : 20 years

Summary Livestock summary C stocks summary

Component	Gross fluxes	
	Without	With
Landuse changes		
Deforestation	0	0
Afforestation	0	0
Agricultural land use changes	0	28
Urbanisation of agricultural land	0	0
Agriculture		
Annual crops	20 503	20 808
perennial crops	0	0
Flooded rice	0	0
Grasslands	0	0
Inputs	17 397	17 835
Livestock		
	0	0
Forest fire		
	0	0
Coastal wetlands		
	0	0
Total		
Total	37 900	38 671
Total per ha	4.1	4.1
Total per ha/yr	0.2	0.2

Vegetation Livestock

CO₂ other N₂O CH₄ C Soil

SHP

eco-sol UNION EUROPEENNE INTERREGV ocean Indien AVEC L'EUROPE, nos régions coopèrent PRÉFET DE LA RÉGION RÉUNION REGION R

- At the top right of the web mapping window, the geographic information layer of the **GHG balance WITHOUT scenario** can be exported as a **shapefile** **SHP**
- For GHG balances WITHOUT and WITH scenario, **export the results maps using screenshots**
- To compare the GHG balances WITHOUT and WITH scenario, with the net GHG balance, **export the results tables by simply copying and pasting them into a spreadsheet.**



How to interpret the results tables?

- a. How to interpret the GHG balances table?
- b. How to interpret the SOC STOCKS table?
- c. To go further...



How to interpret the GHG balances table?

Duration of the project : 20 years

Summary: HERE, scenario of land use change from rangeland (51.54 ha) to cropland

Net (WITH – WITHOUT) GHG balance over 20 years

Net GHG balance broken down by GHG

Net GHG balance reported on an annual basis

Positive balance = GHG emissions into the atmosphere

Negative balance = GHG sequestration in soils and biomass

Component	Gross fluxes			Share per GHG					Result per year (tCO ₂ -eq / an)			
	Without	With	Balance	Biomass	CO ₂	Soil	Other	N ₂ O	CH ₄	Without	With	Balance
Landuse changes												
Deforestation	0	0	0	0	0	0	0	0	0	0	0	0
Afforestation	0	0	0	0	0	0	0	0	0	0	0	0
Agricultural land use changes	0	28	28	542	-552	0	38	0	0	0	1	1
Urbanisation of agricultural land	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture												
Annual crops	20 503	20 808	305	0	-211	0	516	0	0	1 025	1 040	15
perennial crops	0	0	0	0	0	0	0	0	0	0	0	0
Flooded rice	0	0	0	0	0	0	0	0	0	0	0	0
Grasslands	0	0	0	0	0	0	0	0	0	0	0	0
Inputs	17 397	17 835	438	0	0	428	10	0	0	870	892	22
Livestock	0	0	0	0	0	0	0	0	0	0	0	0
Forest fire	0	0	0	0	0	0	0	0	0	0	0	0
Coastal wetlands	0	0	0	0	0	0	0	0	0	0	0	0
Total												
Total	37 900	38 671	771	542	-763	428	564	0	0	1 895	1 934	39
Total per ha	4.1	4.1	0.1	0.1	-0.1	0.0	0.1	0.0	0.0	0.2	0.2	0.0
Total per ha/yr	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Components from which GHGs originate

The quantified results (in tonnes of CO₂ equivalent) correspond to those of the selected territory. HERE, Rodrigues island.



How to interpret the SOC STOCKS table?

TOTAL carbon stock of net balance in tonnes of carbon

BIOMASS carbon stock of net balance in tonnes of carbon

SOIL carbon stock of net balance in tonnes of carbon

Areas in hectares

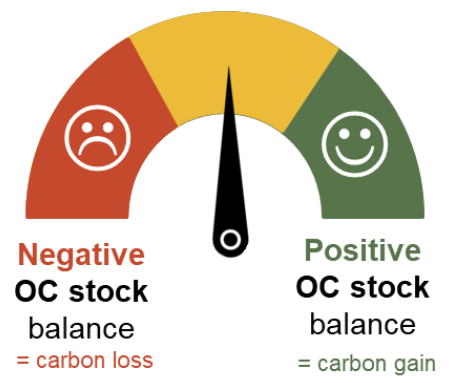
Land uses

Duration of the project : 20 years

Summary Livestock summary C stocks summary

Component	Total C stock (tC)			Biomass C stocks (tC)			Soil C stocks (tC)			Areas (Ha)		
	Without	With	Balance	Without	With	Balance	Without	With	Balance	Without	With	Balance
Forest and natural vegetation												
Forest - dense	344 451	344 451	0	118 118	118 118	0	226 504	226 504	0	2 148.7	2 148.7	0.0
Forest - less dense	387 850	387 850	0	137 628	137 628	0	250 245	250 245	0	2 503.6	2 503.6	0.0
Crops and grasslands												
Cropland	108 303	111 974	3 671	8 423	8 665	242	99 880	103 309	3 429	1 792.8	1 844.3	51.6
Rangeland	200 230	196 583	-3 647	21 593	21 203	-390	178 637	175 381	-3 257	2 862.5	2 810.9	-51.6
Mangroves												
Mangroves	15 137	15 137	0	3 587	3 587	0	11 550	11 550	0	25.5	25.5	0.0
Total	1 055 971	1 055 995	24	289 349	289 201	-148	766 816	766 989	172	9 333.1	9 333.0	0

HERE, scenario of land use change from rangeland (51.54 ha) to cropland





How to interpret the results?

- To learn more about interpreting GHG balances, see...

The technical document (in french)

- which provides details of the various components of GHG balances as well as all the principles for calculating GHG emissions in the SeqCOI tool!





SEQUESTRATION
DU CARBONE
DANS LES TERRITOIRES
DE L'OCEAN INDIEN

Seq  **COI**

SEQUESTRATION
DU CARBONE
DANS LES TERRITOIRES
DE L'OCEAN INDIEN

Seq  **COI**