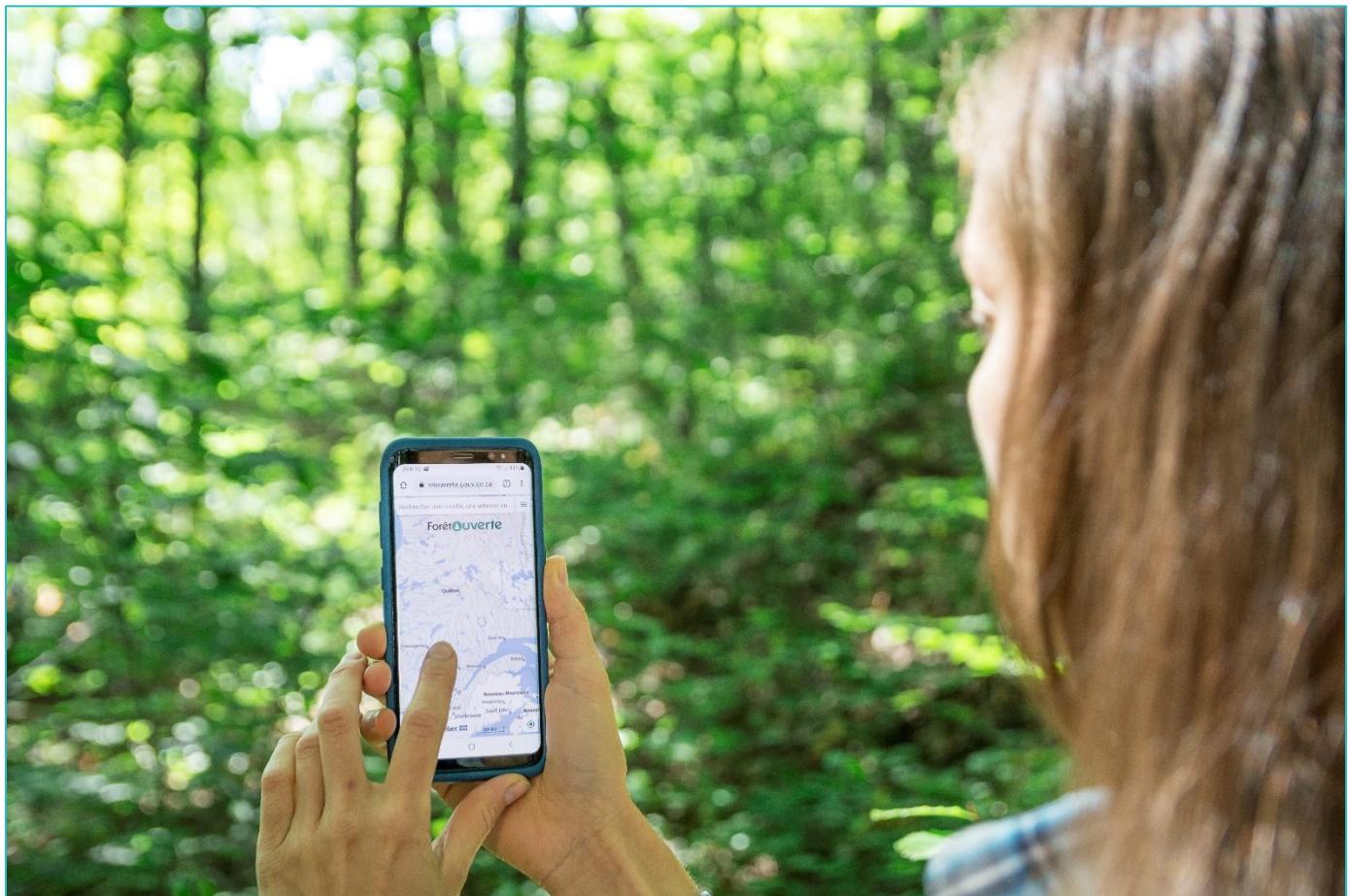


Forêt Ouverte User Guide

December 2023

MINISTÈRE DES RESSOURCES NATURELLES ET DES FORÊTS



For additional information, please contact the ministère des Ressources naturelles et des Forêts du Québec:

Direction des inventaires forestiers

5700, 4^e Avenue Ouest, A-108

Québec (Québec) G1H 6R1

Telephone : 418 627-8669

Toll-free : 1 877 936-7387

Fax: 418 646-1995

foret.ouverte@mffp.gouv.qc.ca

mffp.gouv.qc.ca/les-forets/inventaire-ecoforestier/foret-ouverte-wms/

© Gouvernement du Québec

Ministère des Ressources naturelles et des Forêts

Legal deposit - Bibliothèque et Archives nationales du Québec, 2022

ISBN (PDF) : 978-2-550-91439-6 (3rd edition, March 2022)

ISBN (PDF) : 978-2-550-86366-3 (1st edition, March 2020)

Authors

Mélanie Major, ing. f., M. Sc.¹
Victoria Chaguala, ing. f., M. Sc.¹
Jean Mercier, techn. forest.¹
Louise Noreau, préposée aux renseignements¹

Coordination

Isabelle Legault, ing. f., M. Sc.¹

Layout

Geneviève Barry, technicienne en administration¹

Translation and linguistic revision

Anne Theodorescu, ing. f.¹
Karine Flamand²
Laurence Carignan²

Cover page photography

Robin Lefrançois, techn. forest.¹

Reference

Ministère des Ressources naturelles et des Forêts (2023). *Forêt ouverte* User Guide, Québec, Secteur des forêts, Direction des inventaires forestiers, 68 p.

¹ Direction des inventaires forestiers, MRNF

² Direction des communications, MRNF

Table of Contents

Introduction.....	1
Interactive Tours.....	2
Main Menu Features	4
 Help.....	5
 Search Results and Positionning.....	6
Search for a location.....	6
Search for a Layer	7
Search by Wood Lot Number	7
Find a SNRC Mapsheet	8
Personalize Search Results	9
Cursor Position Option	10
Option to Display Search Result Geometries	11
Search by Coordinates.....	12
Identify the Coordinates of a Point	13
 Geolocation	13
 Map.....	14
Layer Display Options	14
Filter the Layers in the Map Feature	16
Legend Options.....	17
Query a Layer: Descriptive Window of a Layer's Features.....	19
Expand, Collapse, Hide or Close the Descriptive Window of a Layer's Features	19
Interrogate overlapping layers	20
Map Project Example	21
 Filter	22
Zoom and Layer Display Scales.....	25
Data Imprint	26
Downscaled Resolutions of LiDAR Products.....	26
 Map Themes	27
 Catalog.....	28
Add a Catalog Using a Web Map Service.....	30

 Measure	32
 Draw	34
 Import and Export	37
Import or Export a Layer, Measures or a Drawing	37
Import and Export a Personalized Map.....	39
 Share	40
 Print	41
Advanced toolbox.....	44
Swipe Tool	44
Map Center Coordinates Tool	46
Geolocation Tool	47
Download	48
Dowload layers	48
Données Québec	50
Access the data directory	52
Download icon	53
Appendix 1: List of Different Catalog Layers and Defined Display Scales	54
Appendix 2: Value of Grouped Fields in Legends of Certain Layers.....	61
Peuplements écoforestiers.....	61
Récolte et autres interventions sylvicoles.....	62
Infrastructures en milieu forestier	62
Végétations potentielles	63

Introduction

In 2017, the Ministry committed to offering free and up-to-date data to its external clients. This openness is part of Québec's commitment to be an open government, with the objective of promoting transparency and accessibility to data. The interactive Web map of ecoforest data of the Direction des inventaires forestiers (DIF) facilitates access to free data and makes it possible to explore this data without having to use specialized geomatics software.

The interactive Web map of ecoforest data produced by the DIF has, since April 2019, become *Forêt ouverte*. This new name better represents the interactive map's content.

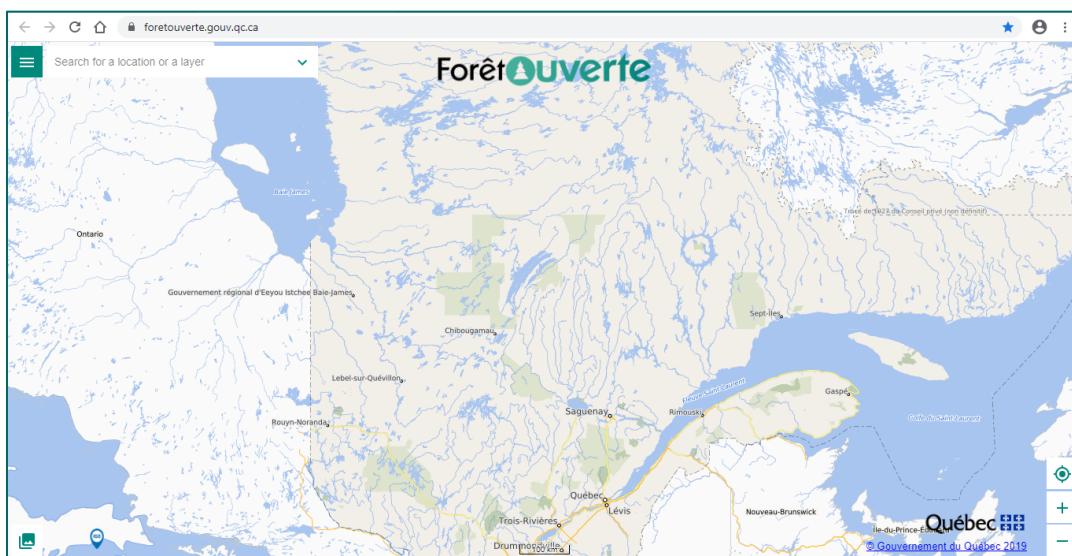
In April 2020, the Web map service of the "Subdivisions territoriales forestières (STF)" was added to *Forêt ouverte* following a partnership with the Direction de la gestion intégrée de l'information et des orientations (DGIIo). In July 2021, wildlife data were added to *Forêt ouverte* following a distribution agreement with the Faune sector of the MFFP.

Forêt ouverte is supported by the 2nd version of the [Open GIS infrastructure](#) (IGO2), an open geomatics Web solution which respects open international standards. IGO2 was recognised as the first open geomatics Web solution of Québec's public administration. Based on collaborative development, IGO2 is constantly improved for the benefit of its users. A new version already exists as of December 2019, allowing for an improved visual experience, and new functions have been added regularly.

To access *Forêt ouverte* :

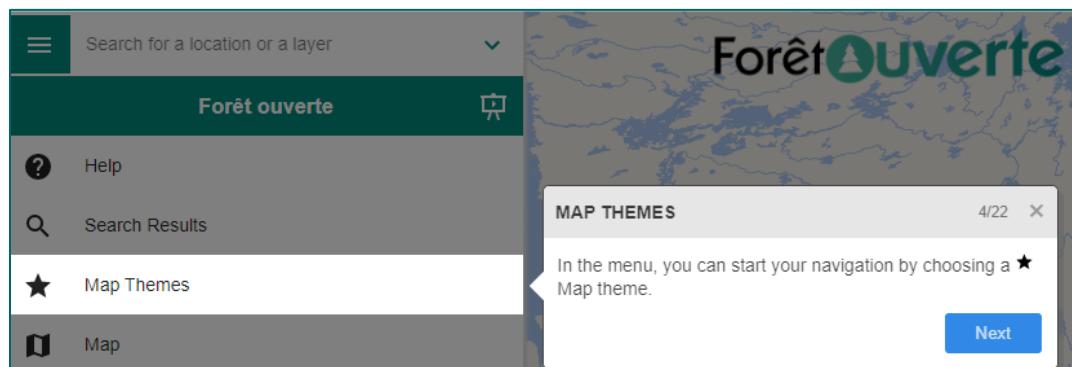
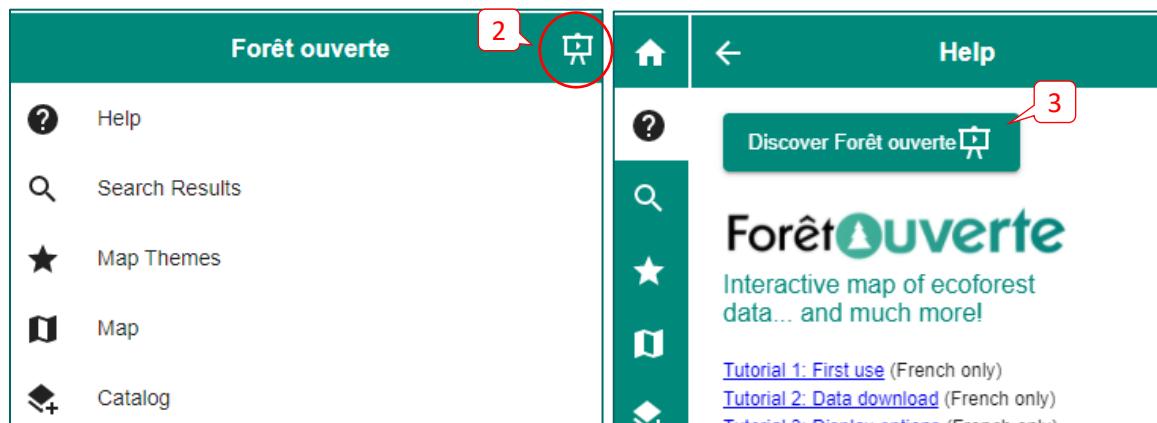
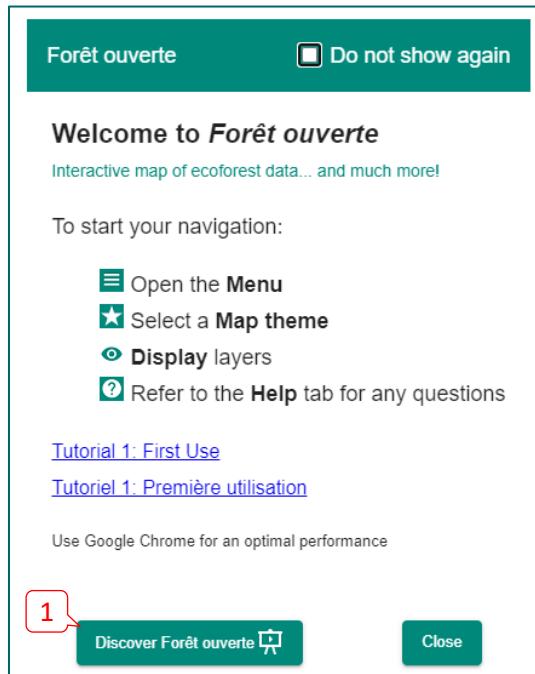
<https://www.foretoouverte.gouv.qc.ca>

Click on the image below to access a short [tutorial](#) which will help you understand the basics of the interactive map and greatly improve your first use of *Forêt ouverte*.

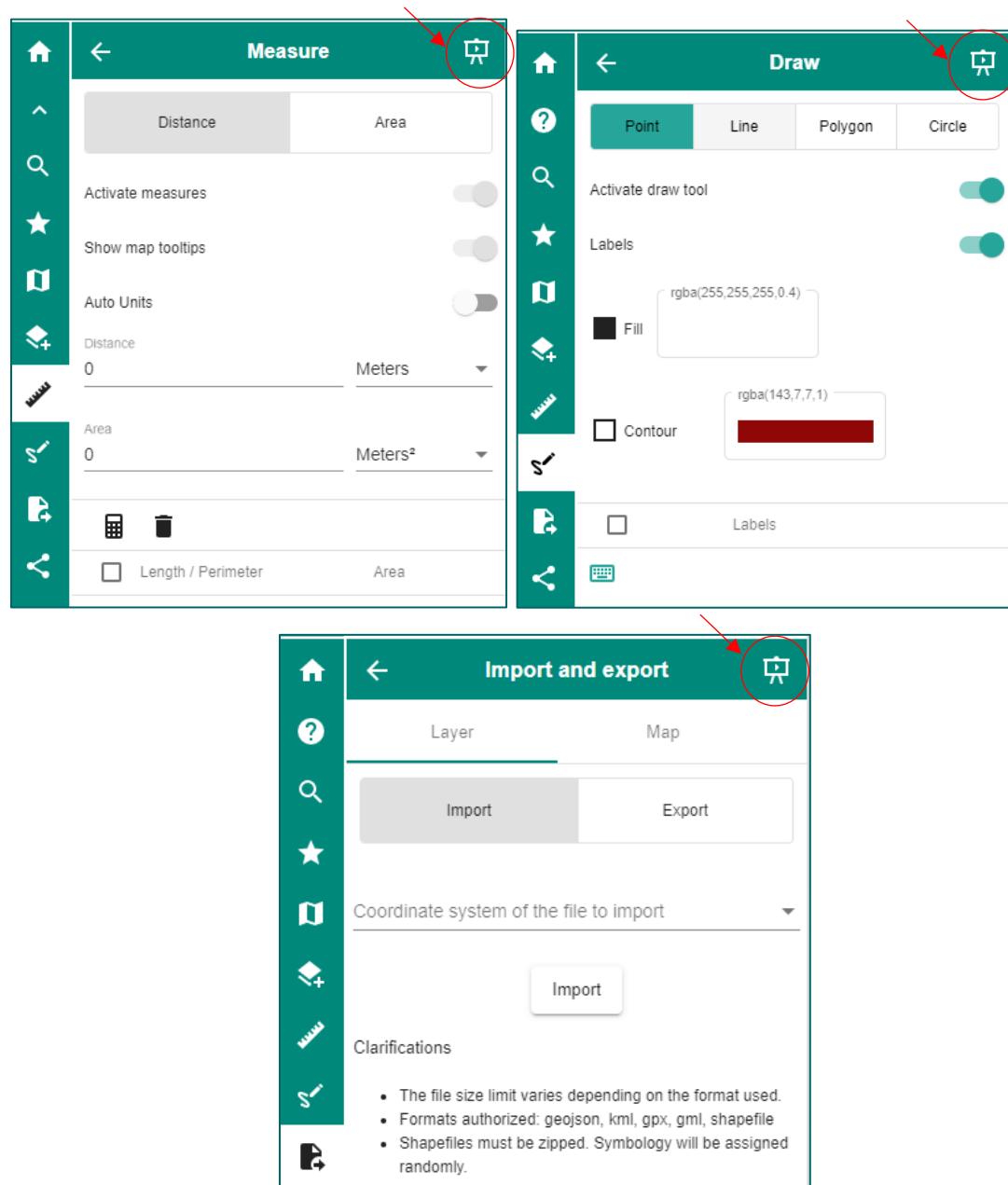


Interactive Tours

An interactive tour of *Forêt ouverte* is available to quickly discover the different features of the interactive map. Access the interactive tour via 1) the welcome window, 2) the shortcut button found in the main menu or 3) the “Help” tab.

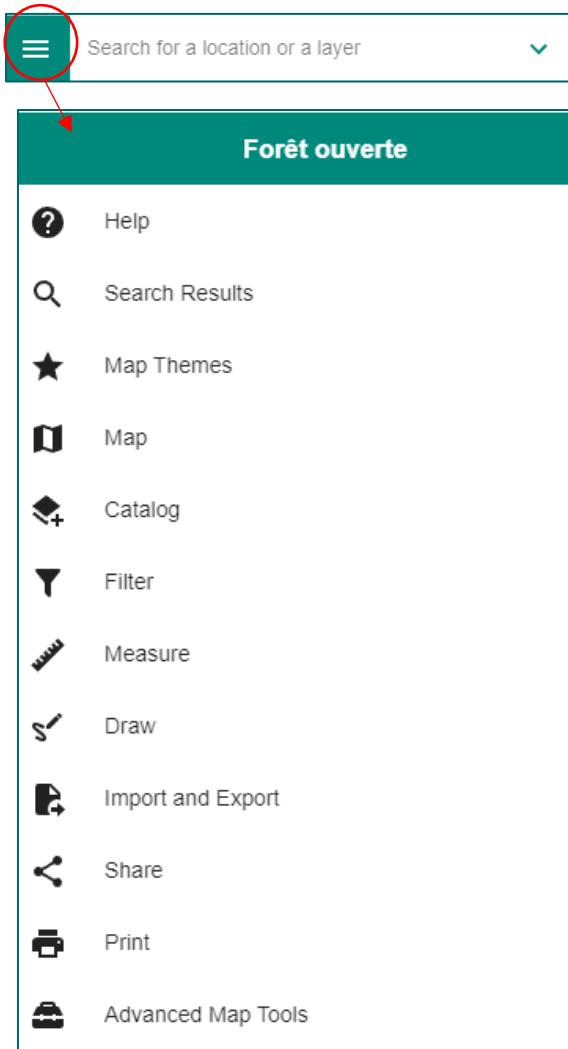


Specific interactive tours are also available for the “Measure”, “Draw” and “Import and export” features.



Main Menu Features

Click on the Main Menu icon in the upper left corner of the interactive map to access all of the menu's features.



?

Help

A brief description of all the features of the interactive map is found in the **Help** section as well as a list of the different resources available to facilitate the use of *Forêt ouverte*.

For example, you will find:

- 1) A section with the most useful links for first users, notably the interactive tour, several [tutorials](#) and [Forêt ouverte's user guide](#);
 - 2) A section with the [email address](#) to contact us for any questions, comments or technical issues and a link to a [survey](#) to help us improve *Forêt ouverte*;
 - 3) A section on how to download data, including a [tutorial](#) and a [guide](#);
 - 4) A section on Web Map Services (WMS), including a [tutorial](#), a [guide](#) and a list of web map services urls.
-

1 First use:

- Interactive tour: click on the [Discover Forêt ouverte](#) button above
- [Features overview](#)
- [Tutorial 1: First use \(French version\)](#)
- [Tutorial 3: Map display options](#) (French only)
- [Tutorial 4: Search options](#) (French only)
- [User's guide \(French version\)](#)

3 Data download:

- [Tutorial 2: Data download](#) (French only)
- [Download guide](#) (French only)

Choose the “Téléchargement” Map theme. Display the download layer of the desired product by clicking on the eye (it should be green). Click directly on the map to display the available products for a given territory (map sheet or other). Click on the “ACCÉDER” button to launch the download.

To download several files at once, use an FTP client (FileZilla, Cyberduck, etc.) to access the following server (copy the URL):

<https://transfert.mffp.gouv.qc.ca/>

2 Questions, comments or technical issues:

Contact us:
foret.ouverte@mffp.gouv.qc.ca

Survey:
[Help us to improve Forêt ouverte](#) (French only)

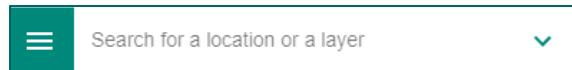
4 Web Map Services:

A web map service can be used to visualize and even query a map dataset in a geographic information system (GIS) without having to download the data.

- [Tutorial 11: Use a Web Map Service in QGIS and ArcMap](#) (French only)
- [Web Map Service Procedure](#) (French only)
- [Web Map Services URLs](#)

Search Results and Positionning

In the top left corner of the interface is the **Search bar** which allows you to search for an address, a location, a lot number or GPS coordinates. This tool can also be used to search for a specific layer.



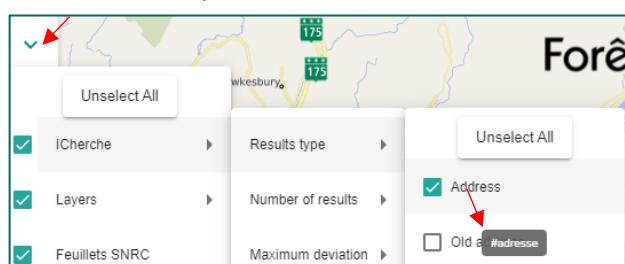
Search for a location

First, type the location in the **Search bar**, for example, “Québec”. The search results are displayed underneath. Different icons are used to distinguish the type of search results (e.g., a city, a lake, a mountain), found via the “iCherche” search engine. Click on “Display more results” if you do not see what you are looking for.

To cancel a search, click on the x. This also removes the turquoise selection that appears when clicking on one of the search results.

It is possible to use keywords (#) to refine a search. For example:

- #mun québec (to search for a municipality)
- #sante Lévis (to search for a health facility)
- #intersection of *liegeois* + *église* (to find an intersection, the # + can also be used)



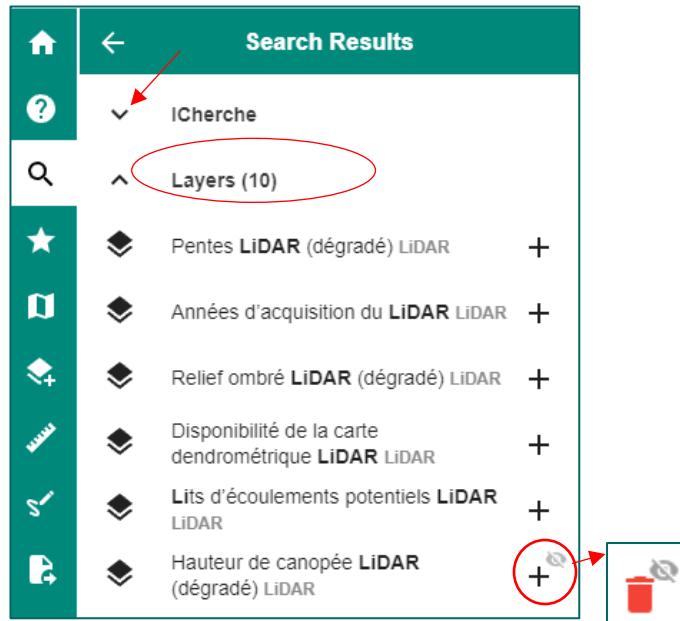
Tip: The keywords appear when hovering over a type of result in the “iCherche” search options.

Search for a Layer

Type the name of a layer or a keyword in the search bar, for example “LiDAR”. The layer search results are displayed in the Layers section. It is possible to hide a search result category, for example “ICherche”, by clicking on the arrow to the left of this category.

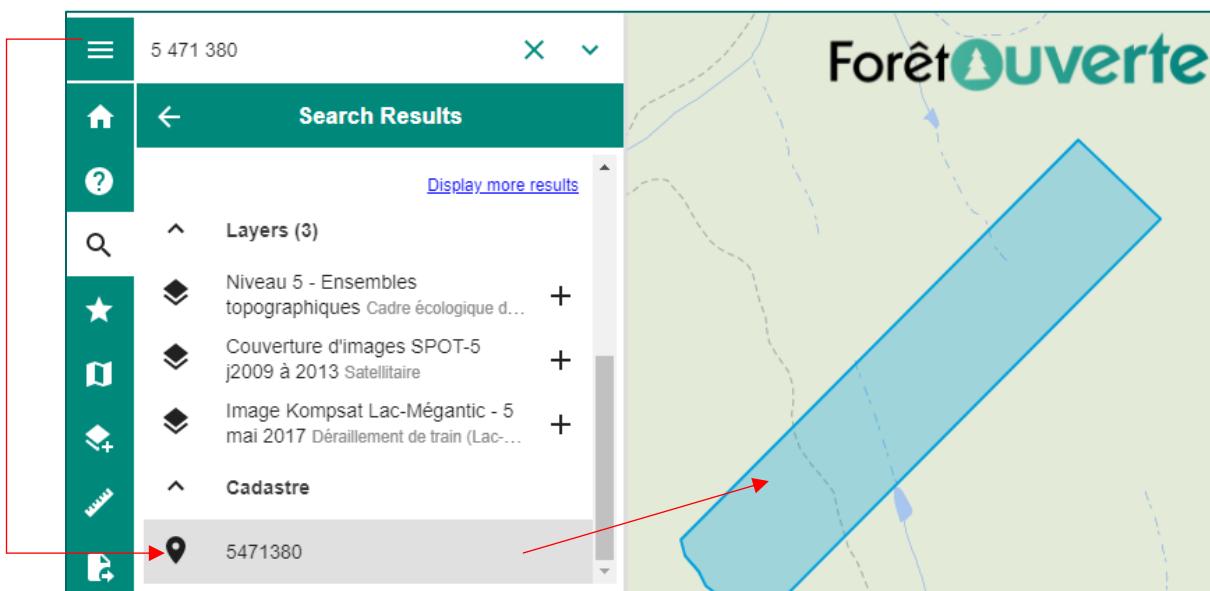
In order to add a layer to the map from the search results, click the + beside the layer name. The icon changes into a red garbage can to show that the layer has been added to the map.

A small grey eye above the red garbage can indicates that the current display scale is too small to see the layer. Simply zoom in and the layer will appear when the eye becomes green. Click on the [Map feature](#) to see the display options, or visit the [Layer Display Scale and Zoom](#) section of this guide.



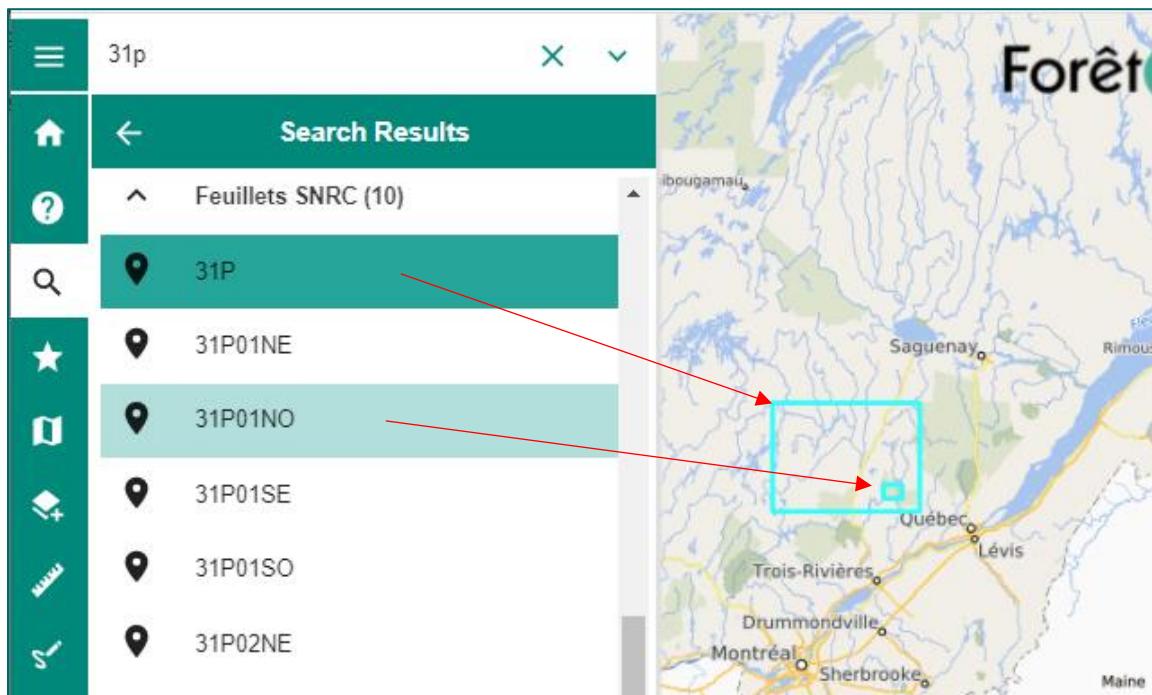
Search by Wood Lot Number

Type the wood lot number in the **Search bar**, for example the number “5 471 380”. Click on the result found under the category “Cadastre”.



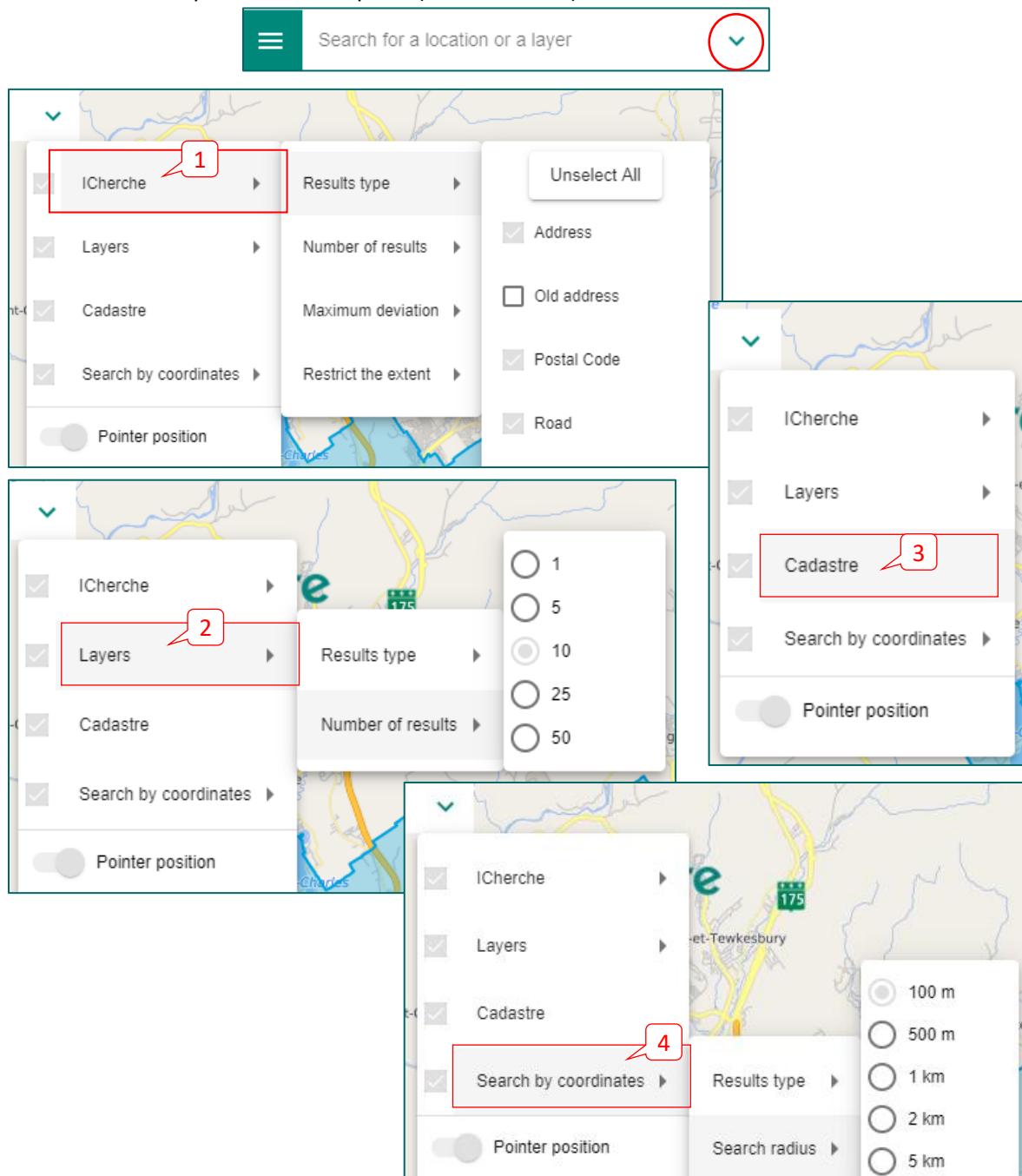
Find a SNRC Mapsheet

It is possible to search for a specific 1/250 000 or 1/50 000 SNRC mapsheet.



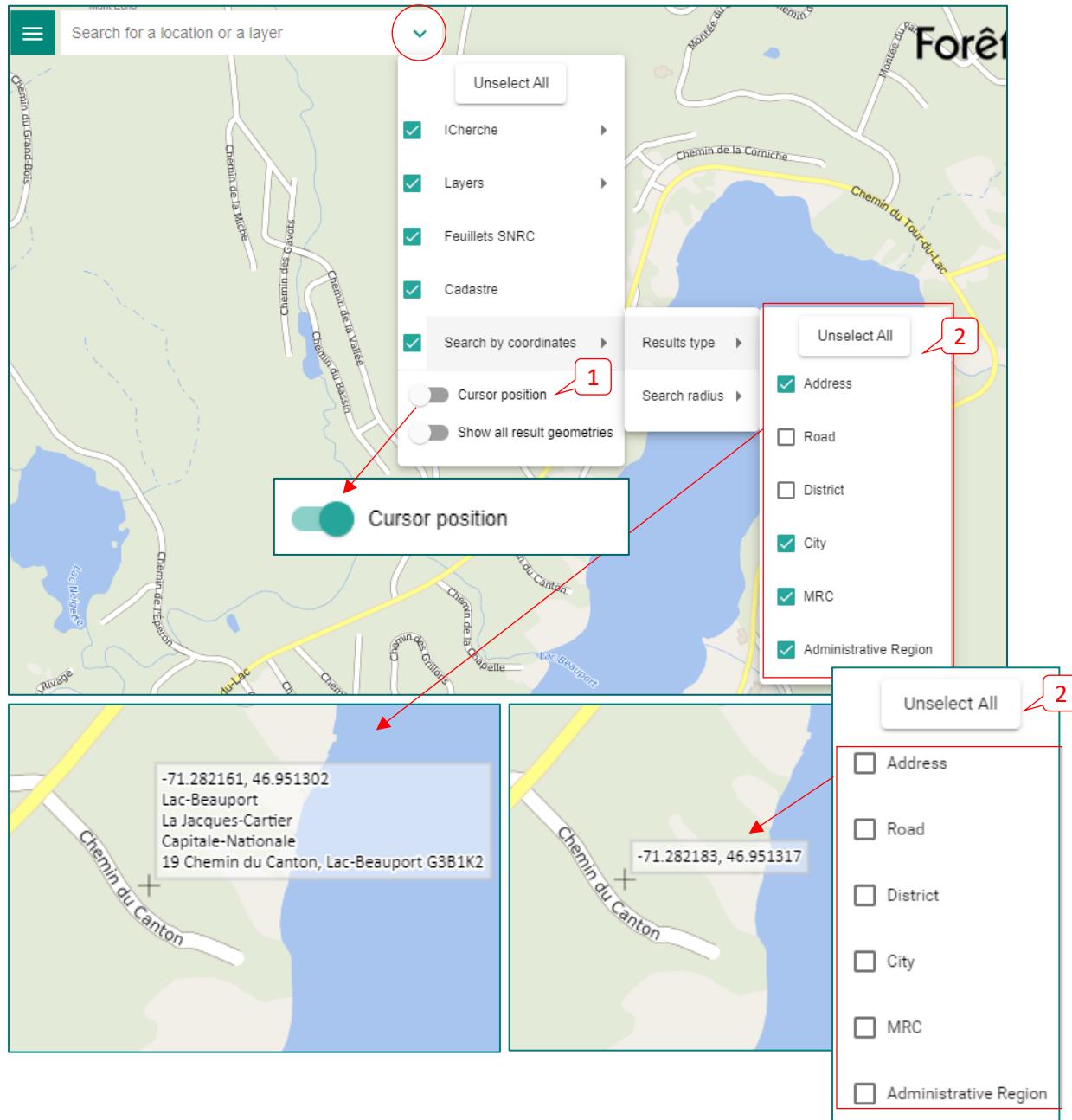
Personalize Search Results

You can personalize your search results by clicking on the arrow on the right of the **Search bar** and selecting the desired type and quantity of results. For example, you can (1) select the type of results you want for the “ICherche” search engine; (2) select the number of results shown for the layers; (3) search a lot number; (4) select the search radius for the search by coordinates or deactivate the mapsheet search option (not illustrated).



Cursor Position Option

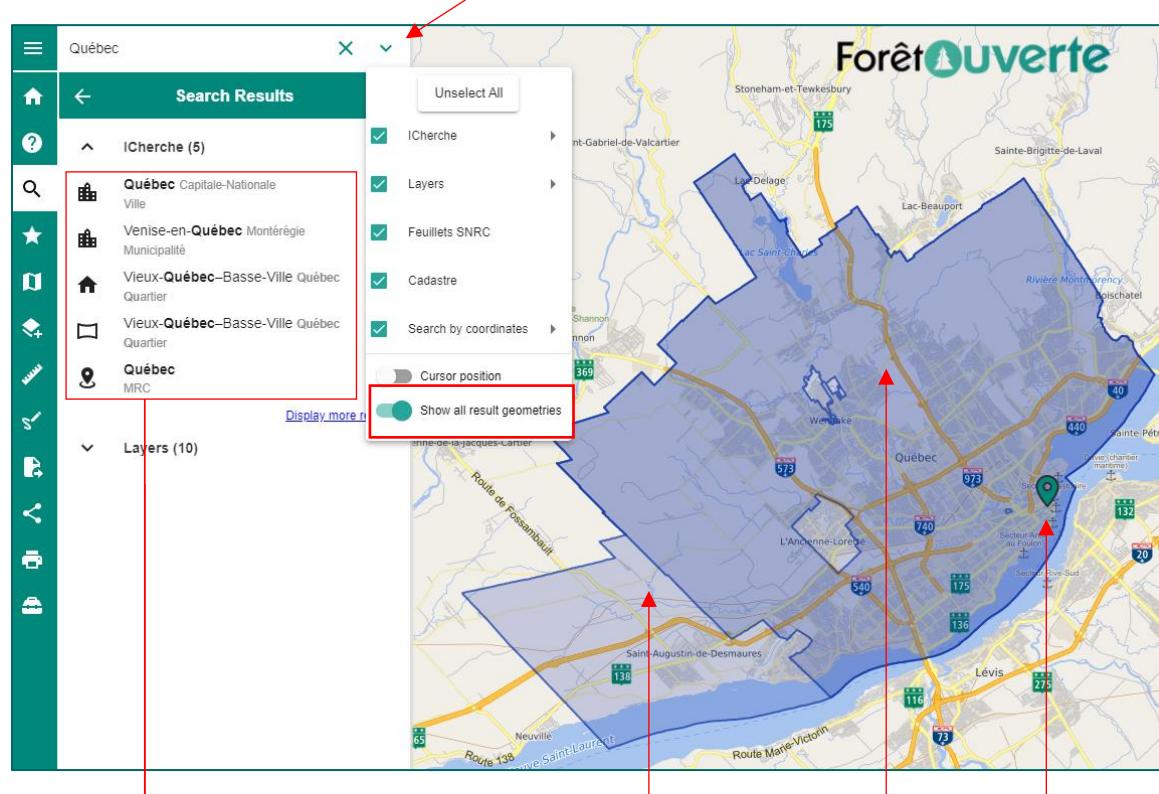
An option is available to activate a tooltip showing the mouse cursor coordinates. Click on the arrow on the right of the **Search bar** and (1) slide the **Cursor position** button to the right. When activated (activated by default), the coordinates of the mouse cursor as well as the other location properties that are selected in (2) the **Result types** of the **Search by coordinates** option appear near the mouse cursor.



Tip: Use the F2 key to activate/deactivate the cursor position option.

Option to Display Search Result Geometries

An option allows to display the geometries of all the search results of the "ICherche" search engine. This option is disabled by default. Simply click on the arrow to the right of the search bar to access the search options and slide the button of this option to the right to activate it (Show all result geometries).



Search by Coordinates

The search bar can also be used to locate specific coordinates on the map, using different formats, for example a decimal degrees format, in a geographical WGS 84 projection (EPSG : 4326) (e.g., 47.001835, -71.317186), or a degrees, minutes, seconds format (e.g., 47°00'06.6"N 71°19'01.9"W).

This screenshot shows the search results for the coordinates 47.001835, -71.317186. The search bar at the top contains the text "47.001835, -71.317186". The search results panel on the left lists the following items:

- Coordinates: -71.317186, 47.001835
- Search by coordinates (3)
- Lac-Beauport City
- La Jacques-Cartier MRC
- Capitale-Nationale Administrative Region

The map on the right shows a location marked with a blue pin near Lac Bonnet and Lac Bleu, with roads labeled Chemin des Broussailles, Chemin de la Rivière, and Chemin de la Tour.

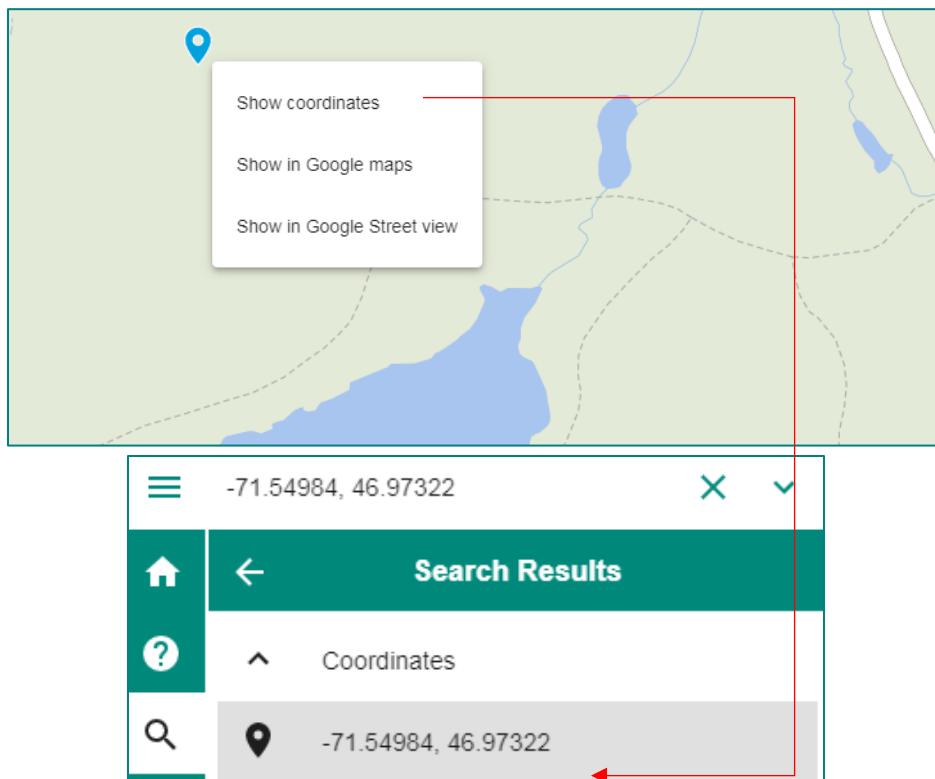
This screenshot shows the search results for the coordinates 47°00'06.6"N 71°19'01.9"W. The search bar at the top contains the text "47°00'06.6"N 71°19'01.9"W". The search results panel on the left lists the following items:

- Coordinates: -71.317194, 47.001833
- Search by coordinates (3)
- Lac-Beauport City
- La Jacques-Cartier MRC
- Capitale-Nationale Administrative Region

The map on the right shows a location marked with a blue pin near Lac Bonnet and Lac Bleu, with roads labeled Chemin des Broussailles, Chemin de la Rivière, and Chemin de la Tour.

Identify the Coordinates of a Point

In order to identify the coordinates of a desired point on the map, right click on the desired point and choose **Show coordinates**. The coordinates will appear in the **Main Menu** window. The selected point can also be displayed in Google Maps or Google Street View. When using a mobile device, simply hold a finger on the screen for a second to access this option.



Tip: Copy the coordinates of a point for later use by [coordinate search](#). It is also possible to save the display scale through map sharing. Consult the [Share](#) section of this guide for more information.

Geolocation

It is possible to find your current location using the **geolocation tool** found at the bottom right of the screen. This option allows you to center the map on your current location.

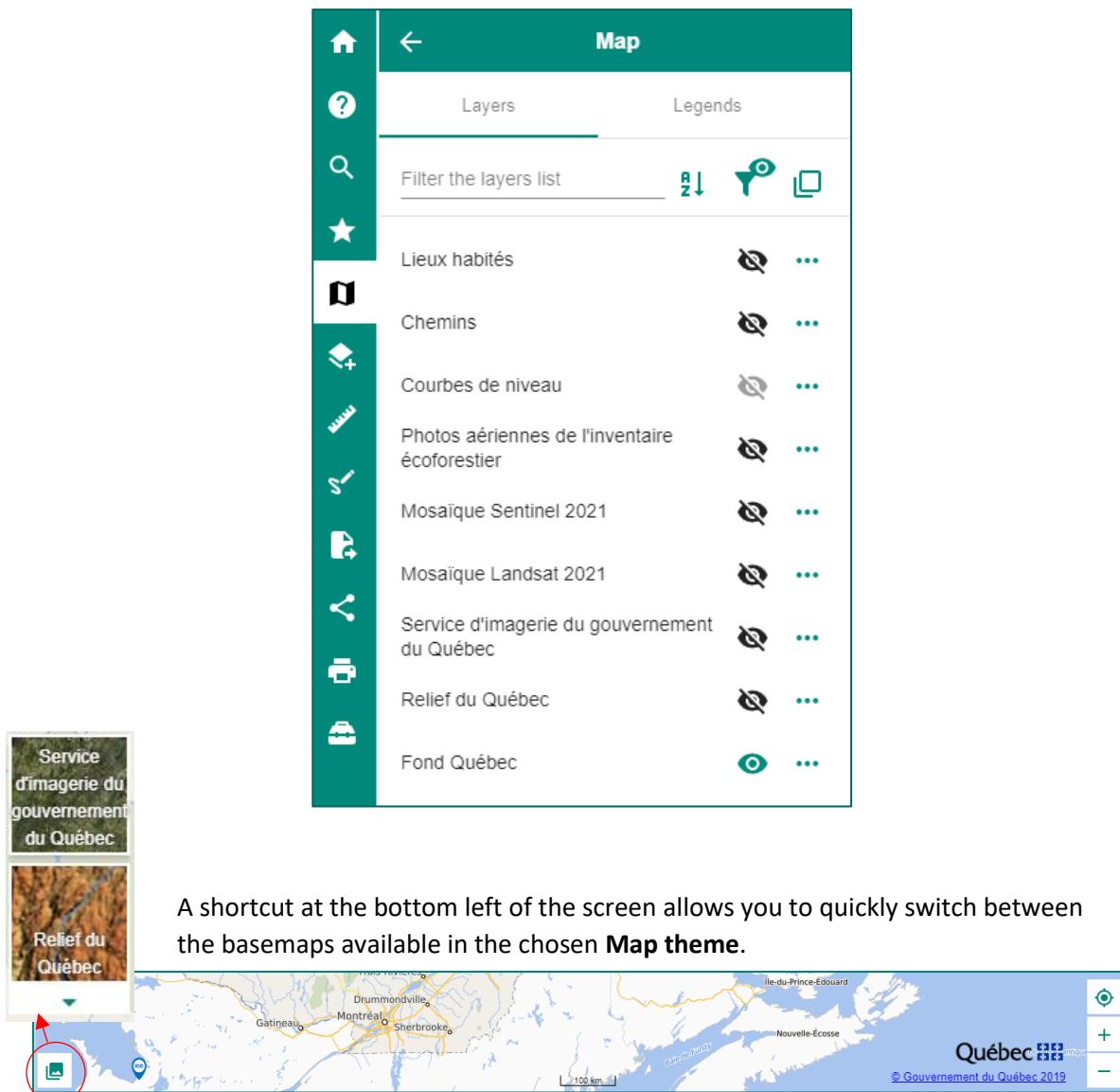
Clic a second time on a the tool to deactivate the geolocation. See the [Geolocation Tool](#) section for more information.



Map

The **Map** feature is the heart of *Forêt ouverte*. This feature allows you to display the list of layers added to the map, view their legends, access their display options, remove them from the map as well as download them. Layers can be added to the **Map** feature using the **Catalog**, the **Search bar** or by choosing a theme in the **Map themes** feature.

By default, the **Map** feature comprises the following layers: "Lieux habités", "Chemins", "Courbes de niveau", "Photos aériennes de l'inventaire écoforestier", "Mosaïque Sentinel 2021", "Mosaïque Landsat 2021", "Service d'imagerie du gouvernement du Québec", "Relief du Québec" and the "Fond Québec" basemap. By default, the basemap is the only visible layer . To make the other layers visible, click on the  (the eye becomes green).



Layer	Status	Actions
Lieux habités		...
Chemins		...
Courbes de niveau		...
Photos aériennes de l'inventaire écoforestier		...
Mosaïque Sentinel 2021		...
Mosaïque Landsat 2021		...
Service d'imagerie du gouvernement du Québec		...
Relief du Québec		...
Fond Québec		...

A shortcut at the bottom left of the screen allows you to quickly switch between the basemaps available in the chosen **Map theme**.

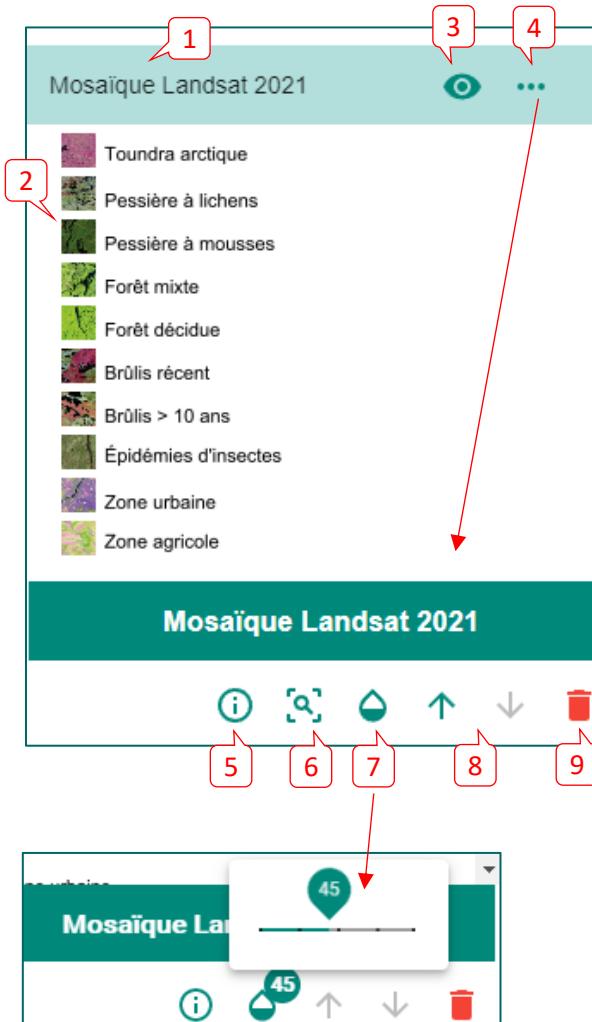
Layer Display Options

1. Layer name
2. Display or hide the legend³ by clicking on the name of the layer. When the layer is visible (green eye), the legend is visible by default.
3. Display or hide the layer. The layer is visible when the eye is green.
4. Additional options for the layer

When you click on the “...”, a window appears below the list of layers, showing the options available for this layer.

5. Consult the [Données Québec](#) data factsheet
6. Zoom to the layer's extent
7. Change the transparency of the layer
8. Change the order of the layers
- Note:** It is not possible to move a layer defined as a basemap layer.
9. Remove the layer from the Map

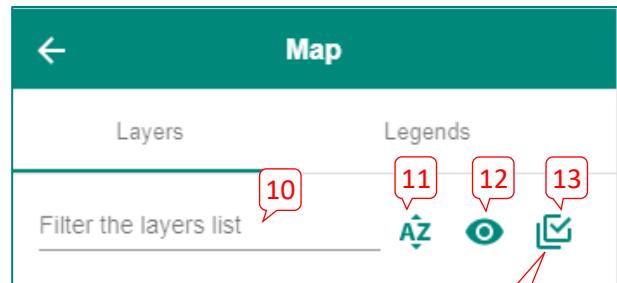
Note: It is not possible to remove a layer defined as a basemap layer.



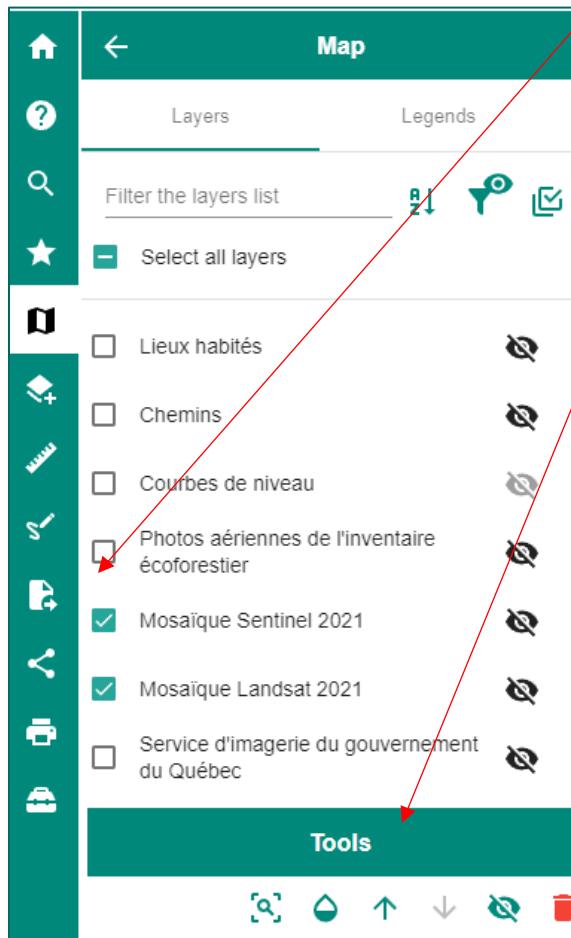
³ The values of grouped fields for the legends of certain layers can be found in [Appendix 2](#).

Filter the Layers in the Map Feature

10. Search for layers within the **Map**
11. Sort the layers in alphabetical order
12. Show only the visible (green eye) layers
13. Activate the multiple selection mode



The multiple selection mode can be used to apply layer options to multiple layers at once: zoom to the selected layers' extent, change the transparency, the order or the visibility of the layers or remove multiple layers. Simply click on the square that appears to the left of the layer's name when the mode is activated to select the desired layers.



Legend Options

By default, the legend appears when the layer is active (green eye). Click on the name of the layer to display its legend if it is hidden. Click on the name of the layer to hide the legend if needed.

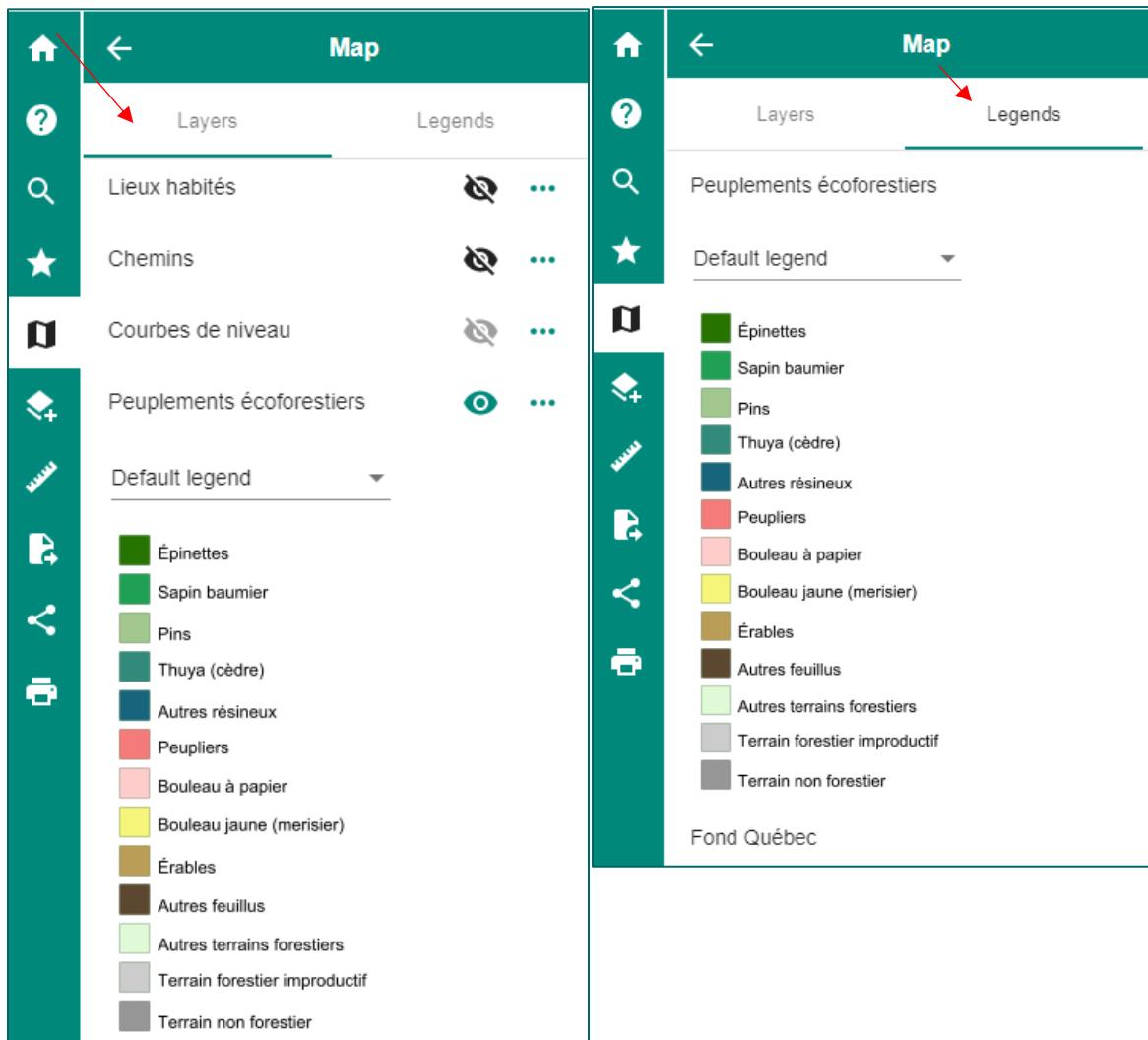
Certain layers have several legend options. You can choose the legend option that best corresponds to your needs. Click on the arrow to the right of the legend to access the drop-down menu with the available legend options.

The screenshot illustrates the legend options for the 'Peuplements écoforestiers' layer. A red circle highlights the 'Default legend' button, which is expanded to show four options: 'Contour avec étiquette', 'Couleur avec étiquette', 'Contour sans étiquette', and 'Couleur sans étiquette'. Below this, the 'Peuplements écoforestiers' layer is shown with its legend set to 'Contour avec étiquette'. The legend table lists various forest types with their corresponding colors:

Épinettes	[Dark Green]
Sapin baumier	[Medium Green]
Pins	[Light Green]
Thuya (cèdre)	[Teal]
Autres résineux	[Dark Blue]
Peupliers	[Red]
Bouleau à papier	[Pink]
Bouleau jaune (merisier)	[Yellow]
Érables	[Brown]
Autres feuillus	[Dark Brown]
Autres terrains forestiers	[Light Green]
Terrain forestier improductif	[Grey]
Terrain non forestier	[Dark Grey]

Below the legend, two maps are shown side-by-side. The left map displays forest areas with labels like 'SB40TO40EB20', '75 % 16 m', and '5.8 ha'. The right map shows the same area with yellow outlines around the forest plots, labeled with 'Contour avec étiquette'.

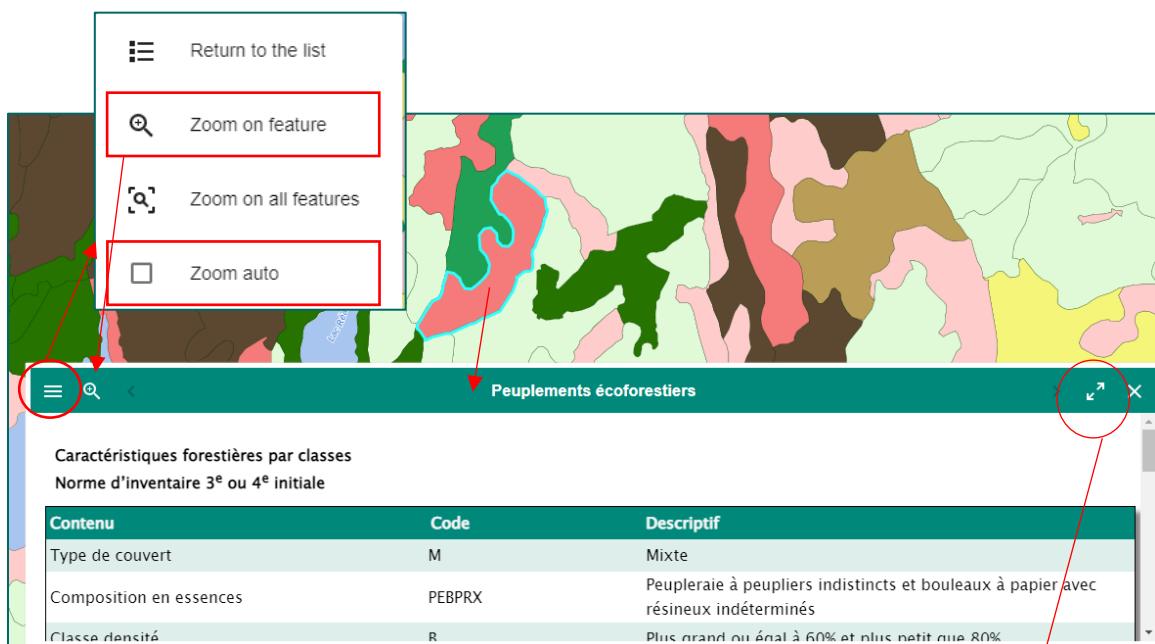
You can choose between the “Layers” and “Legends” tabs above the list of layers in the **Map** feature. The “Layers” tab is where you can see all of the layer options, whereas the “Legends” tab shows only the legends of active layers (green eye).



Query a Layer: Descriptive Window of a Layer's Features

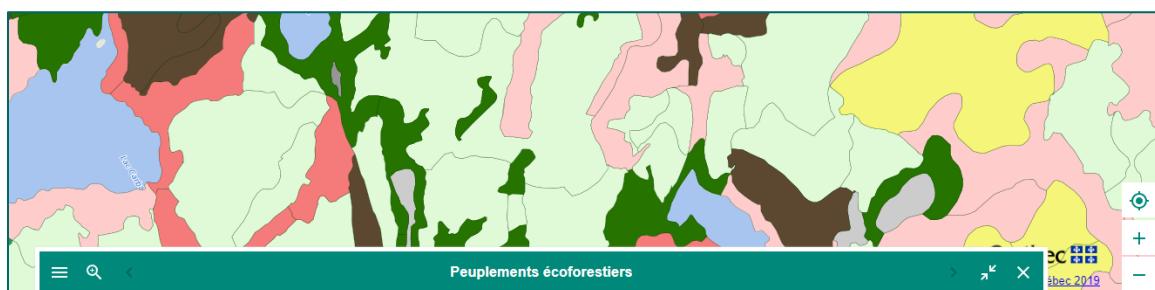
It is possible to obtain additional information on a layer's attributes if this information is available. Simply click on the desired feature of a layer to open its descriptive table. For example, if you are viewing the “Peuplements écoforestiers” layer and you click on a forest stand, a new window will appear presenting a detailed description of that stand.

The  icon at the top left of the window allows you to select different zoom options for the selected element. The “Zoom on feature” function allows to adjust the map scale to the selected feature. A shortcut to this option is available in the window’s header. Activating the “Zoom auto” function will automatically zoom on elements as soon as they are selected.



Expand, Collapse, Hide or Close the Descriptive Window of a Layer's Features

An arrows icon to the right of the window's title can be used to expand (maximize) or reduce (minimize) the window. The window is completely collapsed when you click on the title directly. Just click on the title again to enlarge it. The “x” icon closes the window.



Interrogate overlapping layers

When several layers overlap, it is necessary to select the icon next to the layer you wish to interrogate, in this case the “Peuplements écoforestiers” layer, in order to open the descriptive window associated to the selected stand. Once a layer has been selected, it is possible to consult the attributes of the other overlapping layers by using 1) the arrows found at the top right and left of the window title, or 2) by returning to the list of entities found on the map by clicking on the icon found at the top left of the window and then on “Return to list”. The “Zoom on all features” function adjusts the map scale to show all of the overlapping selected features.

Entities found on the map

- Peuplements écoforestiers
- Peuplements écoforestiers
- Pentes LiDAR (dégradé)
- Pentes LiDAR (dégradé)

Contenu	Code	Descriptif
Type de couvert	M	Mixte
Composition en essences	BPPBPSB	Bouleau à papier, bouleau à papier et sapin baumier
Classe densité	B	Plus grand ou égal à 60% et plus petit que 80%

Return to the list

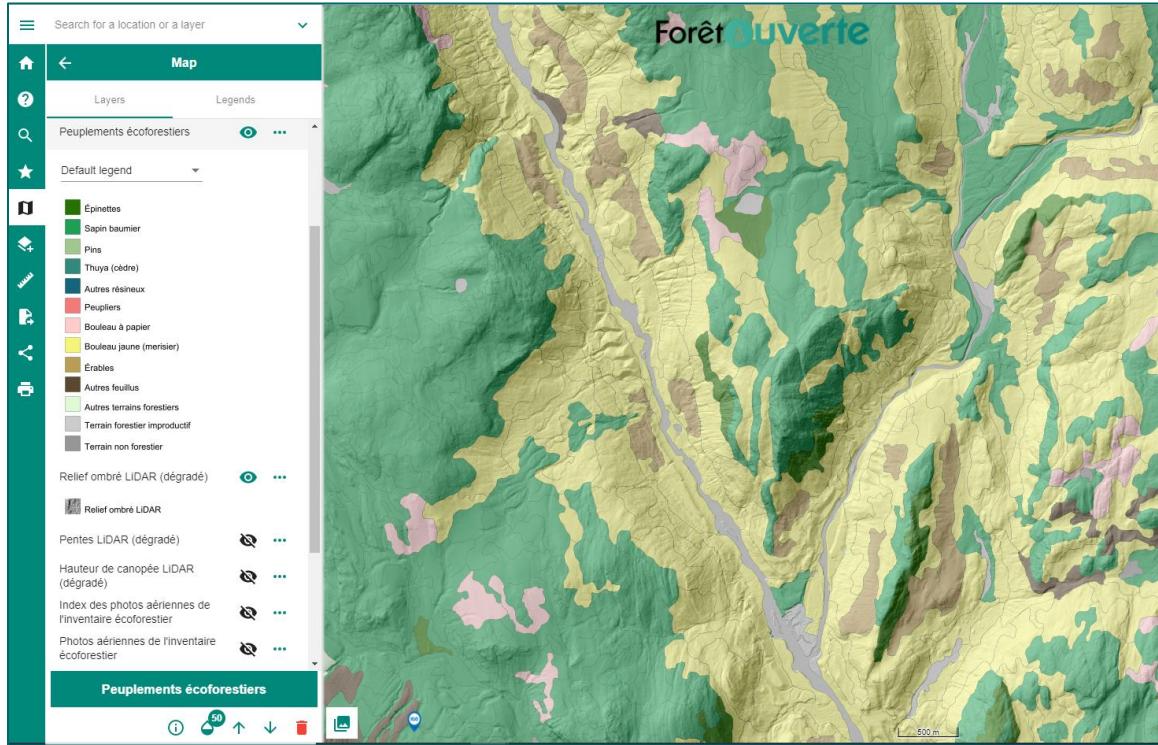
Zoom on feature

Zoom on all features

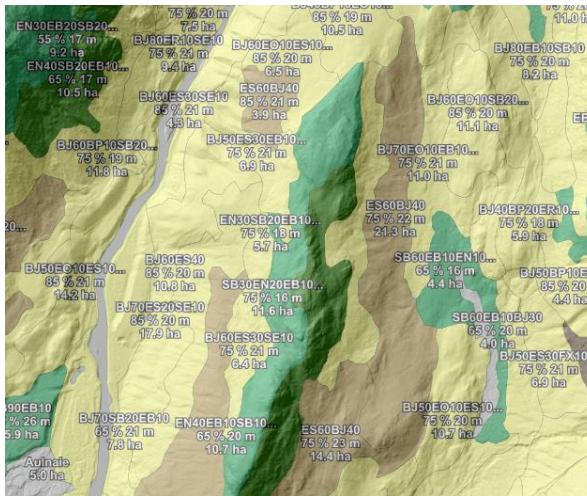
Zoom auto

Map Project Example

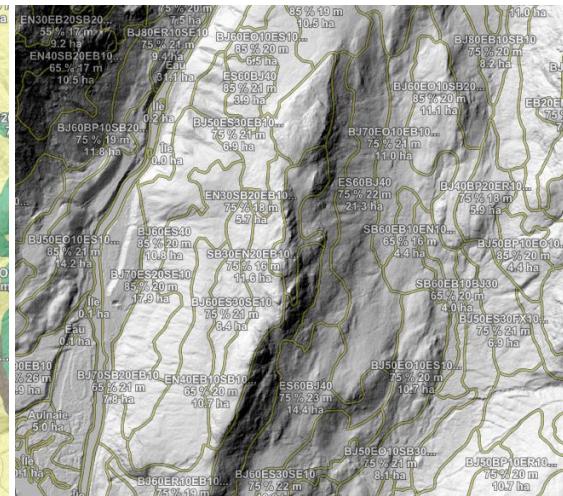
The “Peuplement écoforestier” layer with 50% transparency overlapping the “Relief ombré LiDAR” layer. Below, legend options are shown with color and labels, or simply with contours and labels.



Legend: “Couleur avec étiquette”



Legend: “Contour avec étiquette”

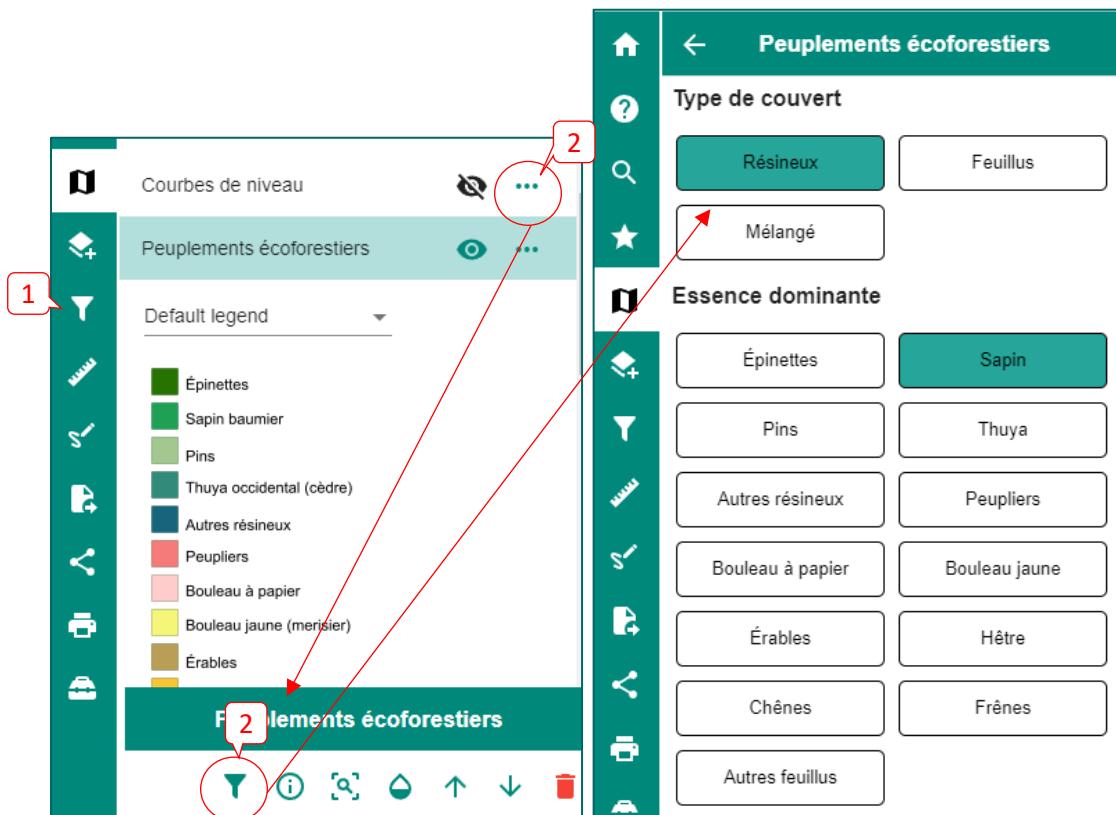


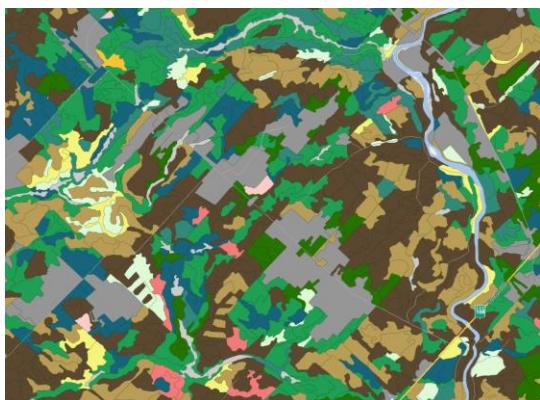
Filter

The time filter has been integrated to the attribute filter since July 2020. The combined filters allow you to select, using buttons or dates, the elements to be displayed in a layer based on certain attribute values. The filter is only available for certain layers, such as "Peuplements écoforestiers", "Perturbations naturelles et anthropiques", "Pentes numériques", "Dépôts de surfaces de la carte écoforestière" and some other layers of the "Classification écologique" group.

There are 2 ways to access the filter.

- 1) In the main menu, click on the filter tab. This option makes it possible to view all the layers that can be filtered within the same window. However, there could be no layer available to be filtered, depending on the chosen map theme.
- 2) Click on the ... to the right of the layer name to open the layer options window. Click on the filter icon, then on the different buttons to filter the layer. In the example below, the layer will only show **conifer (résineux)** stands that are **dominated by fir (sapin)**.



Map without a filter**Map with a filter**

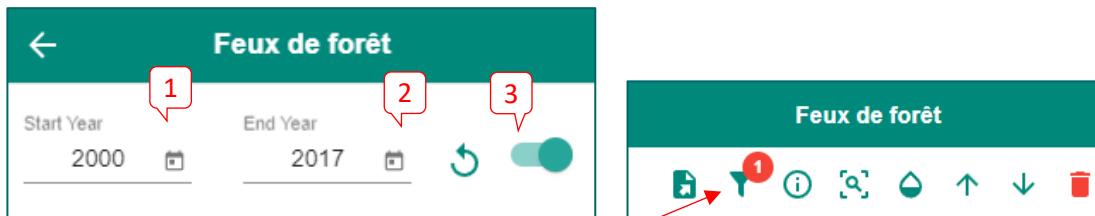
Warning: The filter is only available for certain layers that are already in a Map theme. If the layer is added using the catalog or search bar, the filter may not be available.

When accessing the filter using the main menu filter tab, the layers' legends can be viewed simply by clicking on the name of a layer, without going back to the Map tab. The crossed black eye indicates that the layer is not visible in the map.

Layer	Filter Options	Status
Contrainte de solidité du sol	Moyenne ou à surveiller Importante	Crossed eye (not visible)
Contrainte de rugosité		Crossed eye (not visible)
Contrainte d'ornierage		Crossed eye (not visible)
Contrainte d'érosion du sol		Crossed eye (not visible)
Contrainte d'appauvrissement des sols par la récolte		Crossed eye (not visible)
Pentes numériques		Crossed eye (not visible)
Peuplements écoforestiers		Crossed eye (not visible)
Dépôts de surface de la carte écoforestière		Crossed eye (not visible)

The filter can also be used to define a time lapse on the layer you wish to display. This feature is only available for the “perturbations naturelles et anthropiques” layers, available in the “Perturbations de la forêt” Map theme. The “Chasse et piégeage” Map theme also contains a layer that can be filtered by year.

First, choose the desired time lapse (1), such as the forest fires that occurred between 2000 and 2017. The circular arrow icon (2) can be used to reset the filter to default values. The filter can also be deactivated or reactivated using (3) the slider, which can be useful to visually compare results in the map.

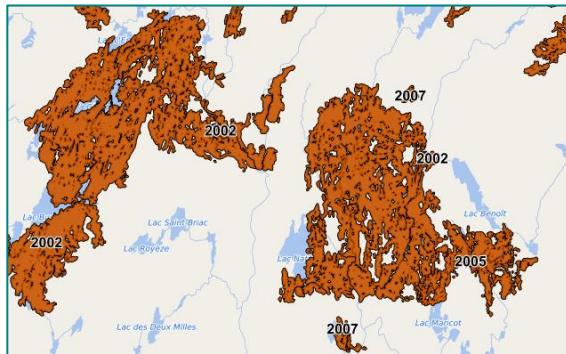


A red number appears in the layer options window, indicating that a filter is applied to the layer.

Map without a filter



Map with a filter



Tip: To visualize different types of disturbances that occur during non-consecutive years, it is possible to see the annual layers available in the “Données écoforestières” catalog. Consult the [Catalog](#) section in this guide for more information.

Layer Name	Description	Action
Feux de forêt 1976	Feux de forêt (empreinte)	+
Feux de forêt 1977	Feux de forêt (échelle rapprochée)	+
Feux de forêt 1978	Feux de forêt anciens (avant 1976)	+
Feux de forêt 1979	Feux de forêt 1976	+

Zoom and Layer Display Scales

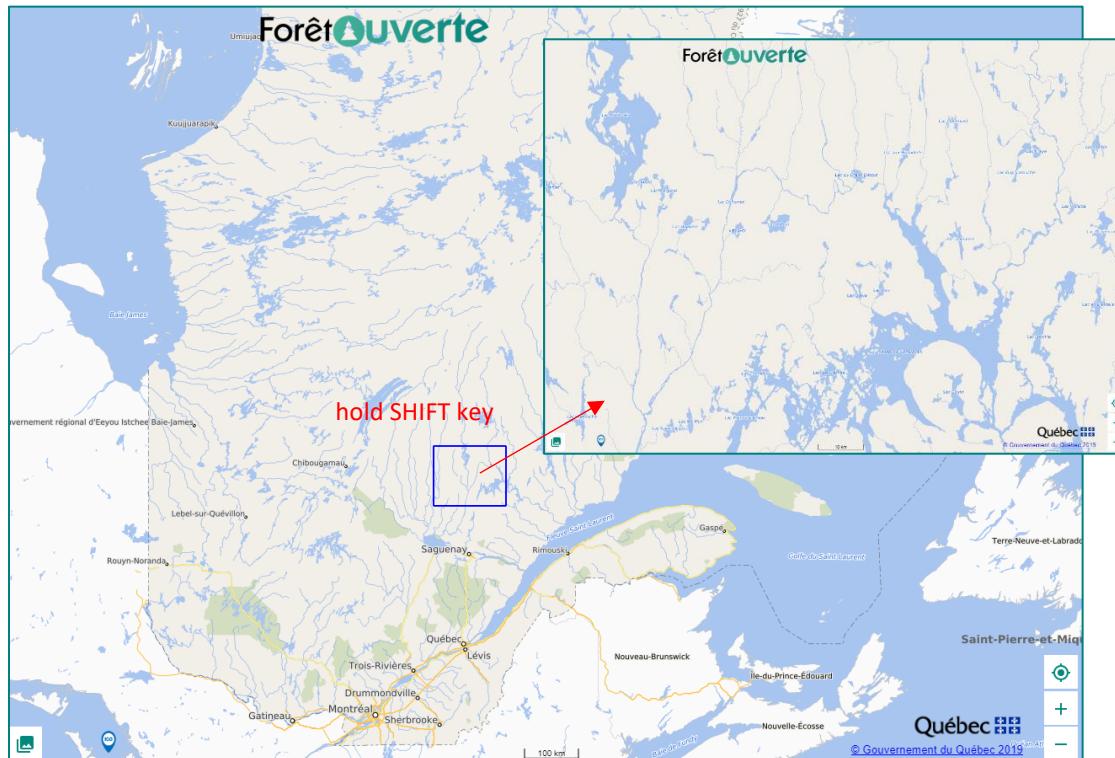
Certain layers, such as the “Peuplements écoforestiers” layer are too heavy to display on a provincial scale. To remedy this situation, display scales are set for certain layers. The display parameters for these layers can be found in [Appendix 1](#).

A grey eye  next to a layer indicates that the latter cannot be viewed in the active scale (the value of the active scale is found at the bottom of the map).



To view the layer, simply zoom closer to or, in some cases, further away from the layer until the eye becomes green. To zoom in or out, you can use the buttons at the bottom right of the screen or scroll using the mouse (in the case of a desktop computer). For mobile devices, use two fingers on the screen to zoom in or out.

Tip: A keyboard shortcut exists to zoom in or out using a square selection. Simply hold the Shift key while clicking the left mouse button and drawing a rectangle over the desired area.



Data Imprint

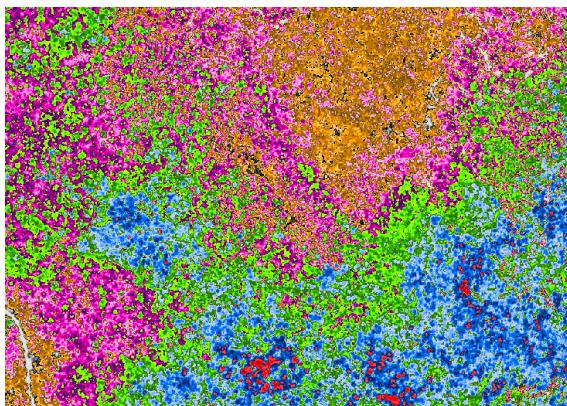
For certain layers, a salmon-colored imprint appears to show the areas where the data is available. Simply zoom in to the active view scale to view the content of the layer.



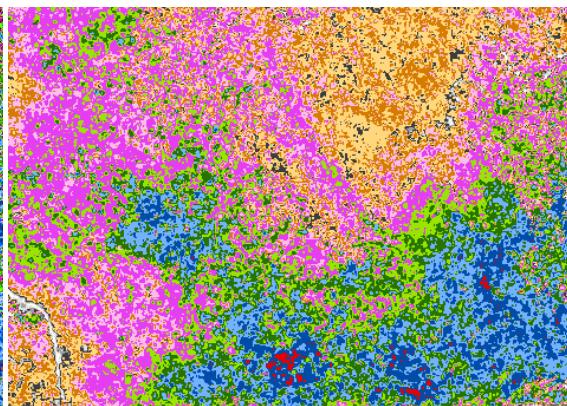
Downscaled Resolutions of LiDAR Products

In order to optimize the display of the LiDAR derived products (“MNT” [DTM], “Relief ombré” [Shaded Relief], “Hauteur de canopé” [Canopy height], “Pentes” [Slopes] and “Indice d’humidité topographique” [Topographic wetness index]), the resolution of these layers has been slightly downscaled. To view these layers at full resolution, simply download them (view the [Download](#) section of this guide) and add them to a GIS (e.g. Arcmap or QGIS).

Full Resolution Canopy Height Model



Downscaled Resolution Canopy Height Model



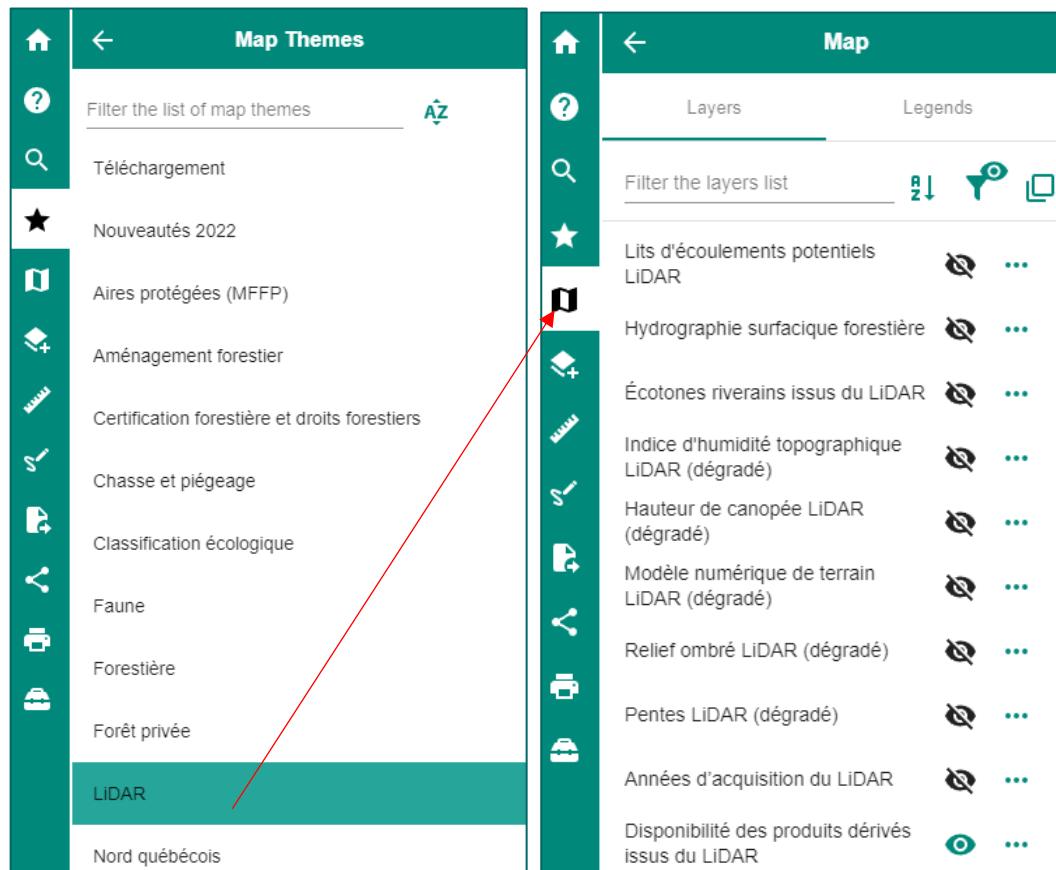
★ Map Themes

The **Map themes** feature allows for the quick display of layers grouped under different themes. The use of Map themes is a key concept that is central to the effective use of *Forêt ouverte*.

When you choose a theme from **Map themes**, the layers associated to this theme are added to the **Map**. The layers found by default in the **Map** are those found under the theme “À construire”. Depending on your interest, you may begin a project with the default map theme or choose another one. Then, to add layers to your map, you can browse the [Catalog](#) or use the [Search bar](#).

LiDAR Map theme example:

All LiDAR derived products, their download index layers and the maps showing their planned availability, as well as the index showing the acquisition years of LiDAR data are found in the “**LiDAR**” **Map theme**. When you choose the “**LiDAR**” theme, these layers are added to the **Map**.



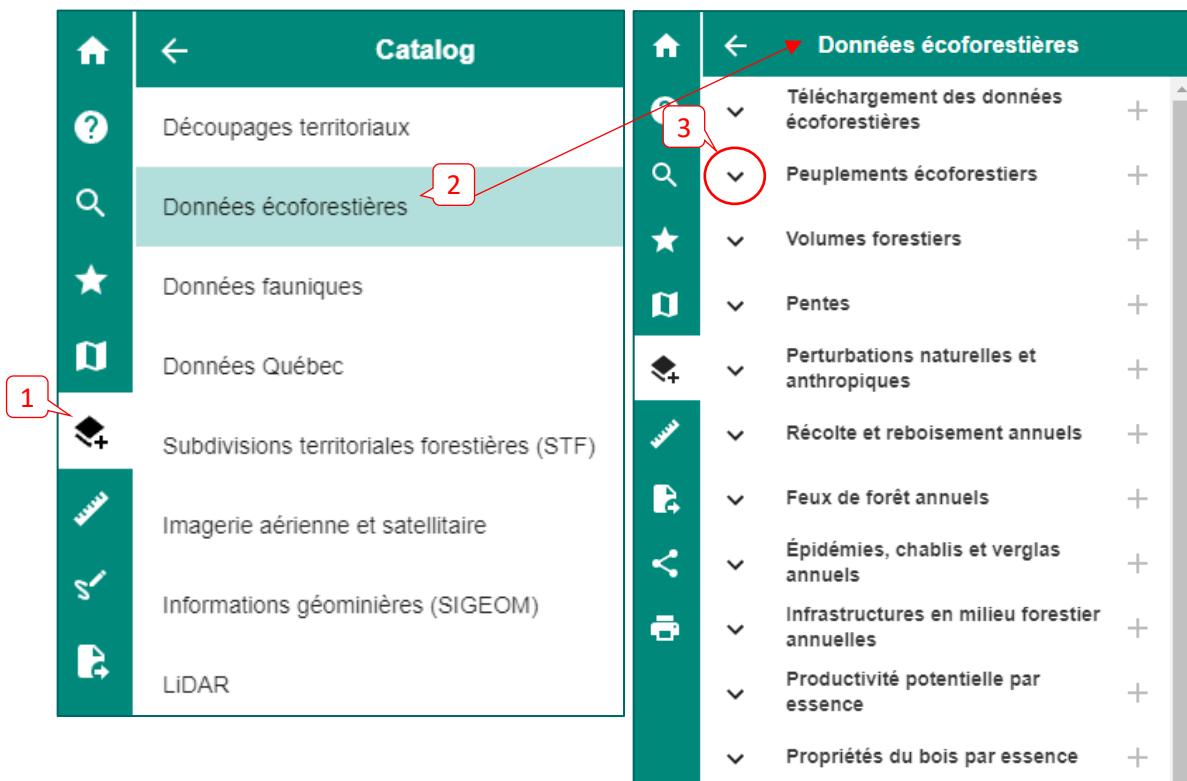
Warning: When you choose another theme in the Map theme feature, all layers found in the Map feature will be **replaced** by those of the new theme. Therefore, you will lose all the layers previously added through the Catalog or the Search bar.

Tip: Before changing your Map theme, [share](#) your map!

Catalog

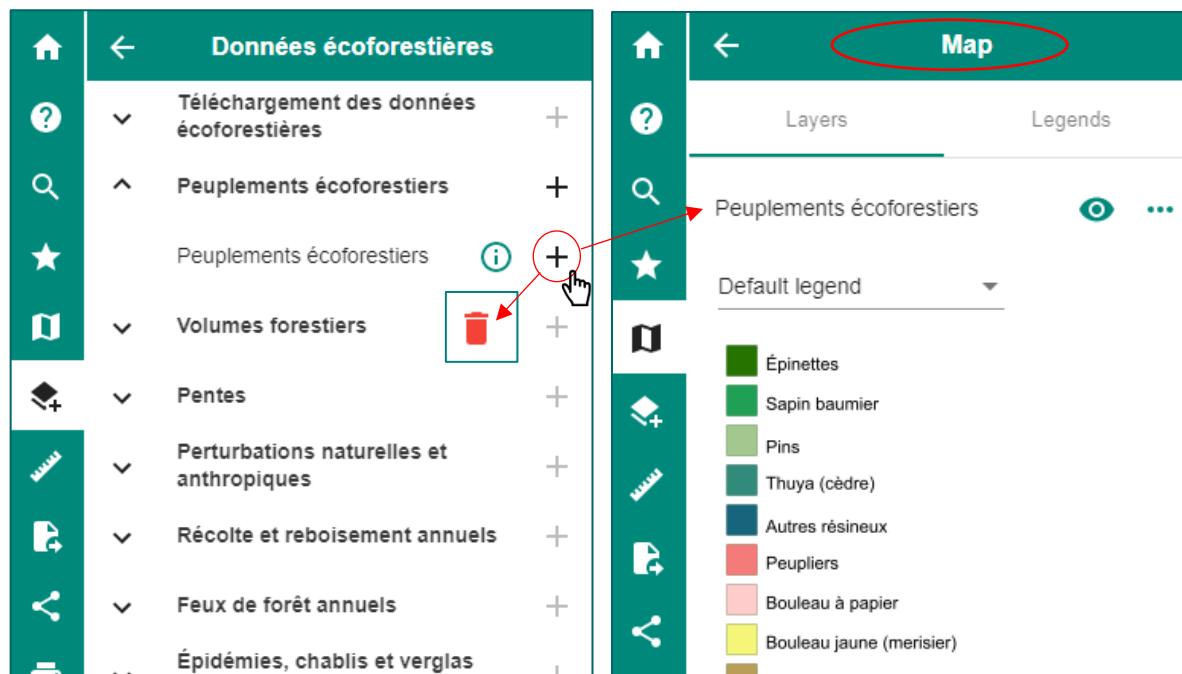
The **Catalog** contains all the layers that can be added to the **Map** feature. Click on the **+** to the right of the layer to add the latter to the **Map**. The **+** then becomes a red garbage can, which allows you to remove the layer if desired. It is possible to add an entire group of layers using the **+** next to the group name.

For example, to add the “Peuplements écoforestiers” layer to the **Map**, select the  **Catalog** and click on “Données écoforestières⁴”. Then click on the arrow next to “Peuplements écoforestiers” to see all the layers within this group.

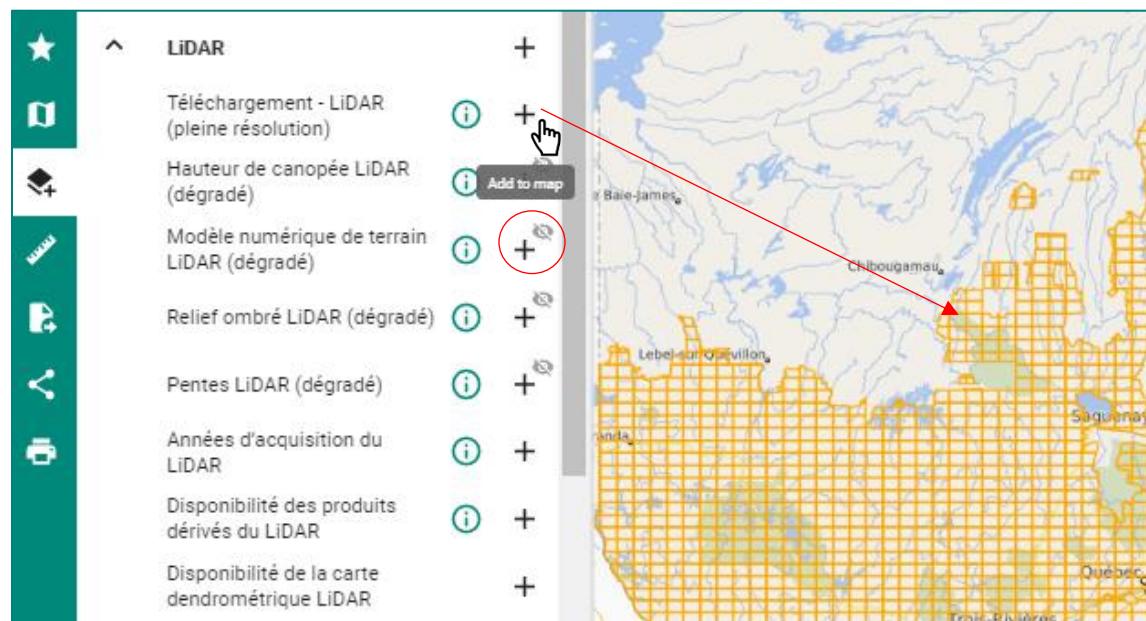


⁴ Refer to [Appendix 2](#) for a complete list of layers found in the different catalogs.

Click on the + to the right of the « Peuplements écoforestiers » layer. The + becomes a red garbage can and the layer is now available in the **Map** feature and visible in the map.

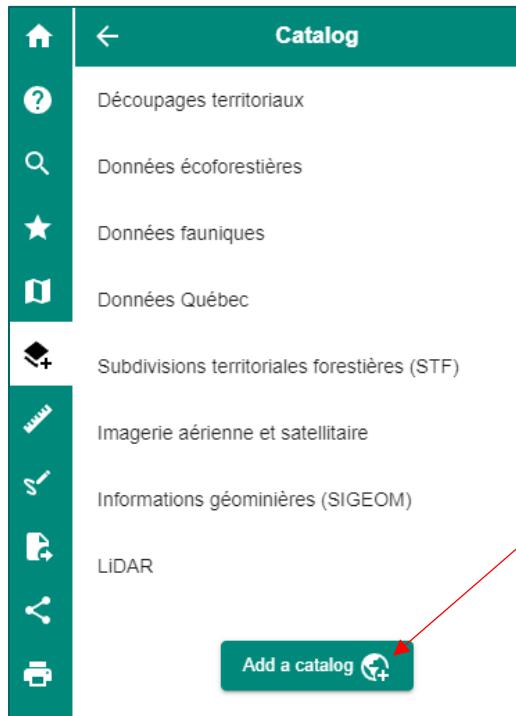


It is possible to preview a layer by simply hovering the cursor over the + beside a layer, without clicking on it. However, if there is a small grey eye above the +, the current map scale does not allow the preview.



Add a Catalog Using a Web Map Service

Since October 2021, it is possible to add a personalized catalog using the URL of a Web map service. In the Catalog, click on “**Add a catalog**”.



Paste your Web map service URL in the new window, add a title and choose the right type (or format) for your Web map service, then click on “**Add this catalog to the list**”.

A screenshot of a modal dialog box titled "Adding a catalog". It contains three input fields: "Title" (set to "MELCC"), "URL" (set to "https://www.servicesgeo.enviroweb.gouv.qc.ca/donnees/services/Public/Themes_publics/MapServer/WI"), and "Type" (set to "wms"). At the bottom are two buttons: "Cancel" and a green "Add this catalog to the list" button. A red arrow points from the text above to this button.

The new catalog is added to the list. It can be removed by clicking on the red garbage can.

The screenshot shows two panels of the Forêt ouverte Catalog interface. The left panel is titled 'Catalog' and lists various data sources: Découpages territoriaux, Données écoforestières, Données fauniques, Données Québec, Subdivisions territoriales forestières (STF), Imagerie aérienne et satellitaire, Informations géominières (SIGEOM), LIDAR, and MELCC. A red box highlights the 'MELCC' entry, which has a red trash can icon to its right. The right panel is titled 'MELCC' and displays a hierarchical list of environmental categories: Milieu terrestre / GTC - Répertoire des terrains contaminés, Milieu naturel et biodiversité, Milieu naturel et biodiversité / Cadre écologique de référence, Milieu naturel et biodiversité / Aires protégées, Milieu municipal / Article 269, Milieu atmosphérique, Milieu atmosphérique / Établissements émetteurs de GES..., Milieu aquatique / Suivi des pesticides, Eau, Eau / Réseau hydrologique GRHQ, Eau / Bassins hydrographiques, and Eau / Base de données sur les zones inondables - BDZI. Each category has a '+' sign to its right, indicating it can be expanded.

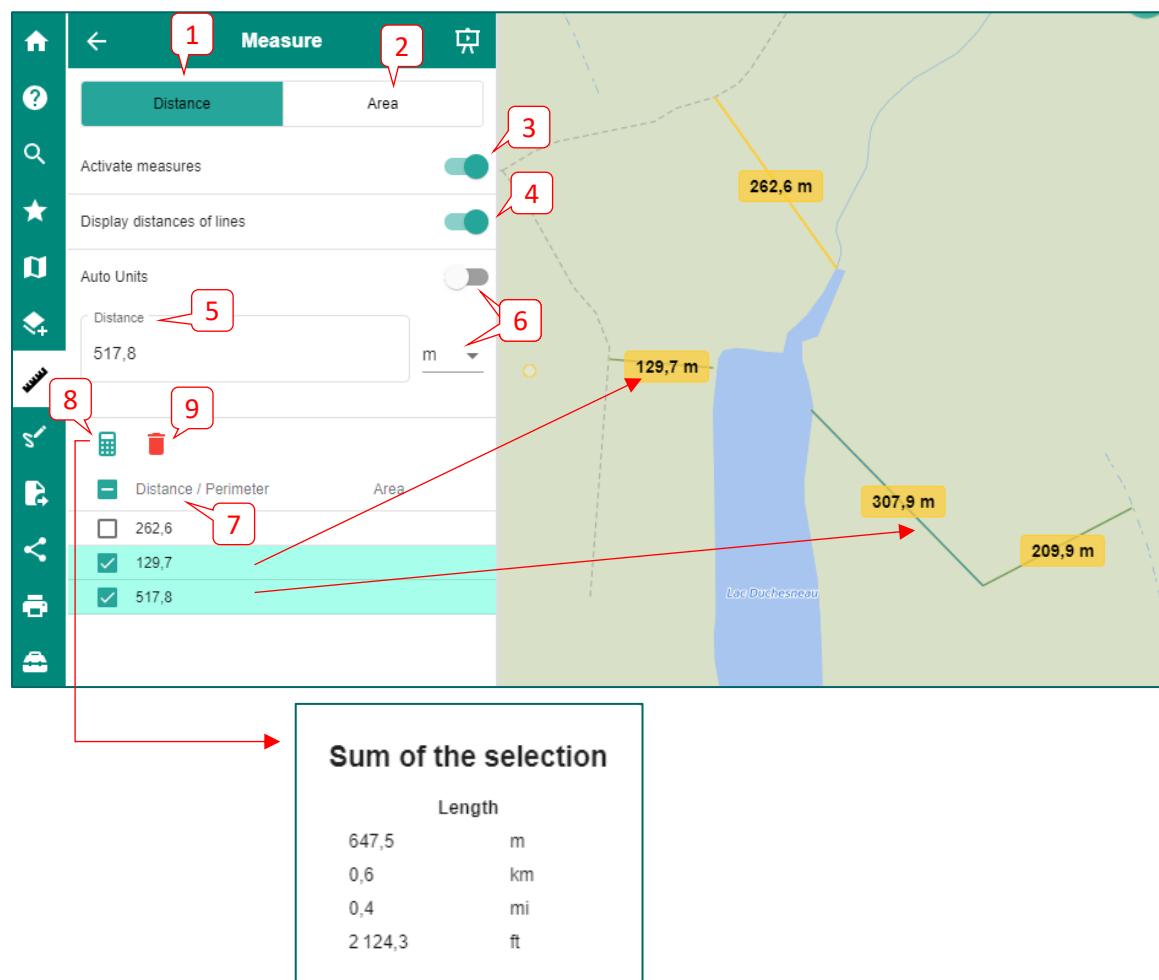
Warning: For security reasons, some URLs may be blocked. If you get the following error message, simply write to us to ask if we can authorize this specific URL connection (foret.ouverte@mffp.gouv.qc.ca).

The catalog 'http://cartes.geogratis.gc.ca/wms/nts_grid_fr' is unavailable at the moment or you don't have the required permissions.

Measure

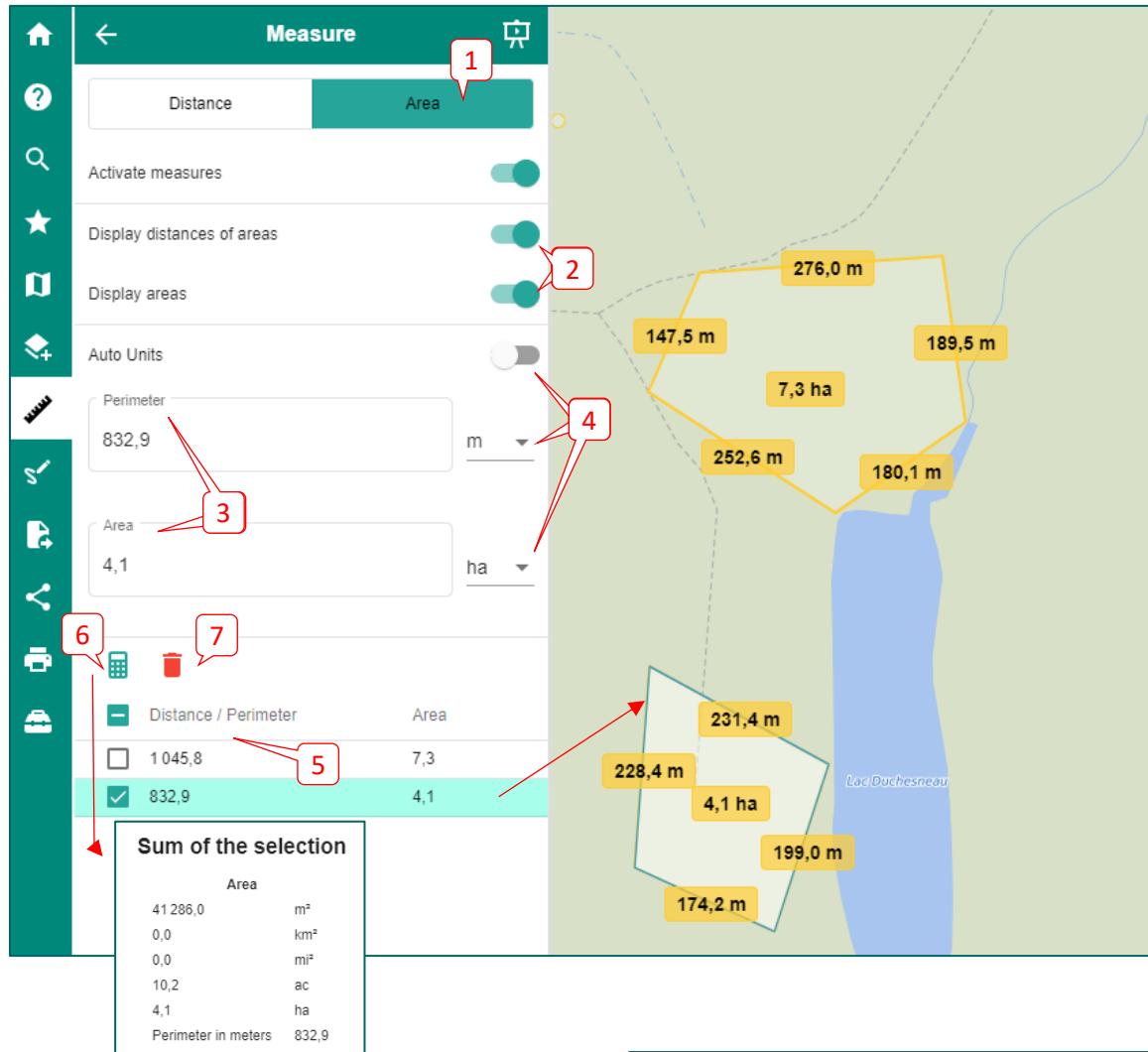
It is possible to measure different lengths (1) and areas (2) on your map using the **Measure** tool. Once the measure tool is activated (activated by default), (3) simply click on the map to measure a distance. It is possible to measure several segments whose distances are added until you double click to end the measure. Each segment has a length label if this option is activated (4) and the total distance is found in the “Distance” bar (5). The units can be changed by (6) clicking on the drop down menu or by activating the Auto Units option which adjusts the units to the map’s scale.

Previously measured distances are found at the bottom of the measure window (7). Simply click in the box to the left of a measure to select it (the line becomes green in the map). It is possible (8) to sum selected measures or (9) to delete them by clicking on the garbage can.

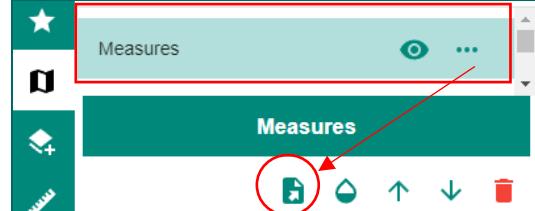


To measure an area, select the area option (1) and draw a polygon in the map, double clicking to close the shape. The area and perimeter labels appear in the map, if these options are activated (2), as well as in the measure window (3). It is possible to change the units for both area and perimeter measures by 4) clicking on the drop down menu or by activating the Auto Units option which adjusts the units to the map's scale.

Previously measured areas and perimeters are found at the bottom of the measure window (5). Simply click in the box to the left of a measure to select it (the polygon becomes green in the map). It is possible to sum selected areas (6) or to delete them by clicking on the garbage can (7).



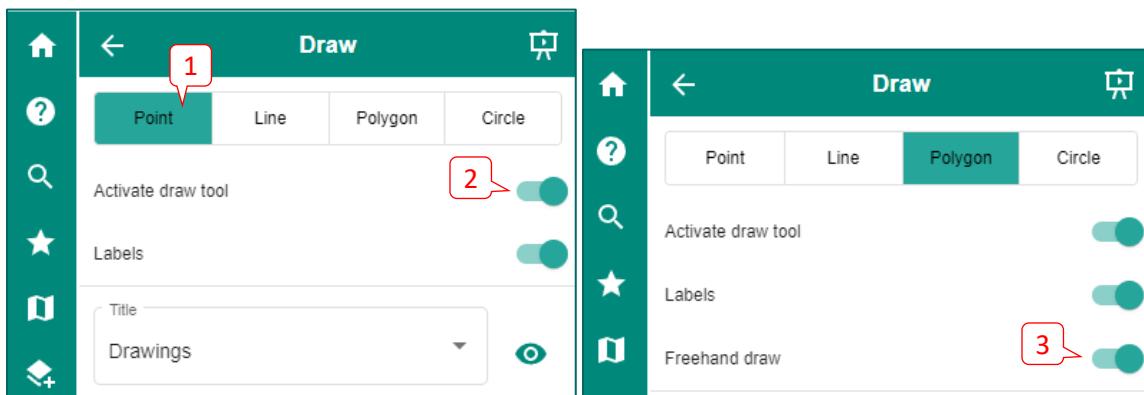
When you create a measure, a "Measures" layer is added to the list of layers in the Map. Thus the measures can be hidden by clicking on the eye. This layer can be printed using the "[Print](#)" tab or exported using the "[Import and Export](#)" tab. A shortcut to the export feature is also available in the layer's options.



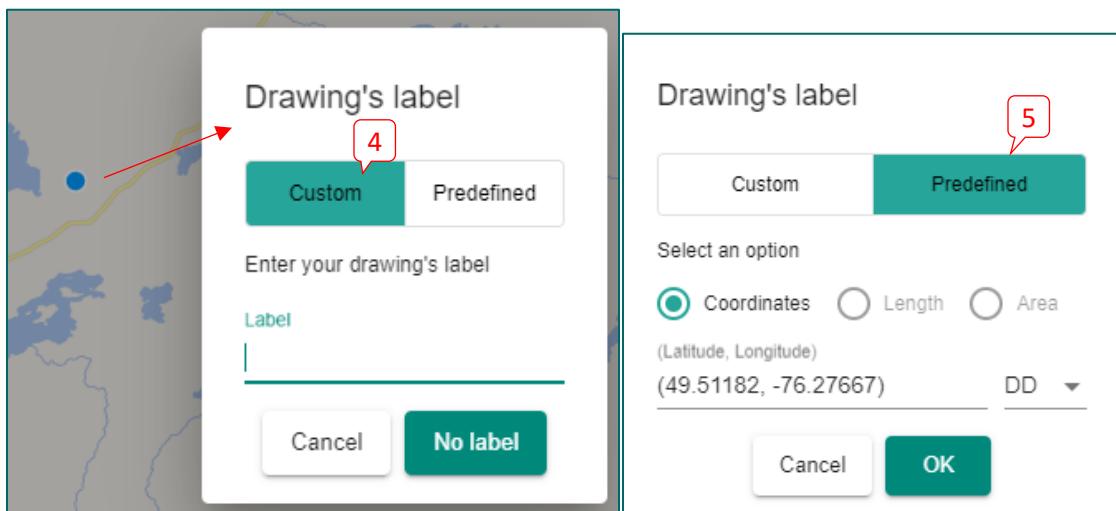
Draw

The Draw tool allows you to add (1) points, lines, polygons and circles to the map, depending on the selected tab. Simply click on the map when the drawing tool is activated (activated by default) (2).

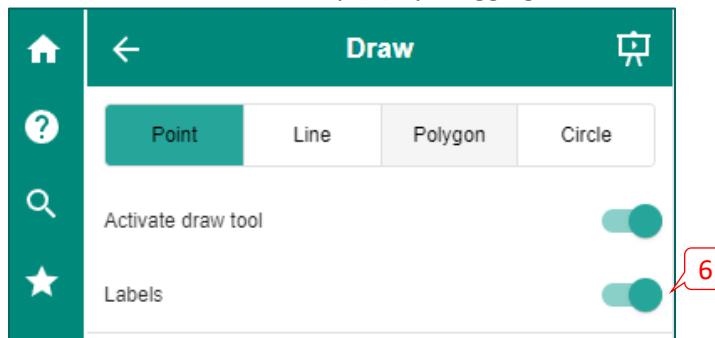
When the “Line”, “Polygon” or “Circle” option is selected, it is also possible to do a freehand drawing by dragging the button to the right for that option (3).



When creating a new entity, the tool offers to assign a customized (4) or predefined label to it (5).

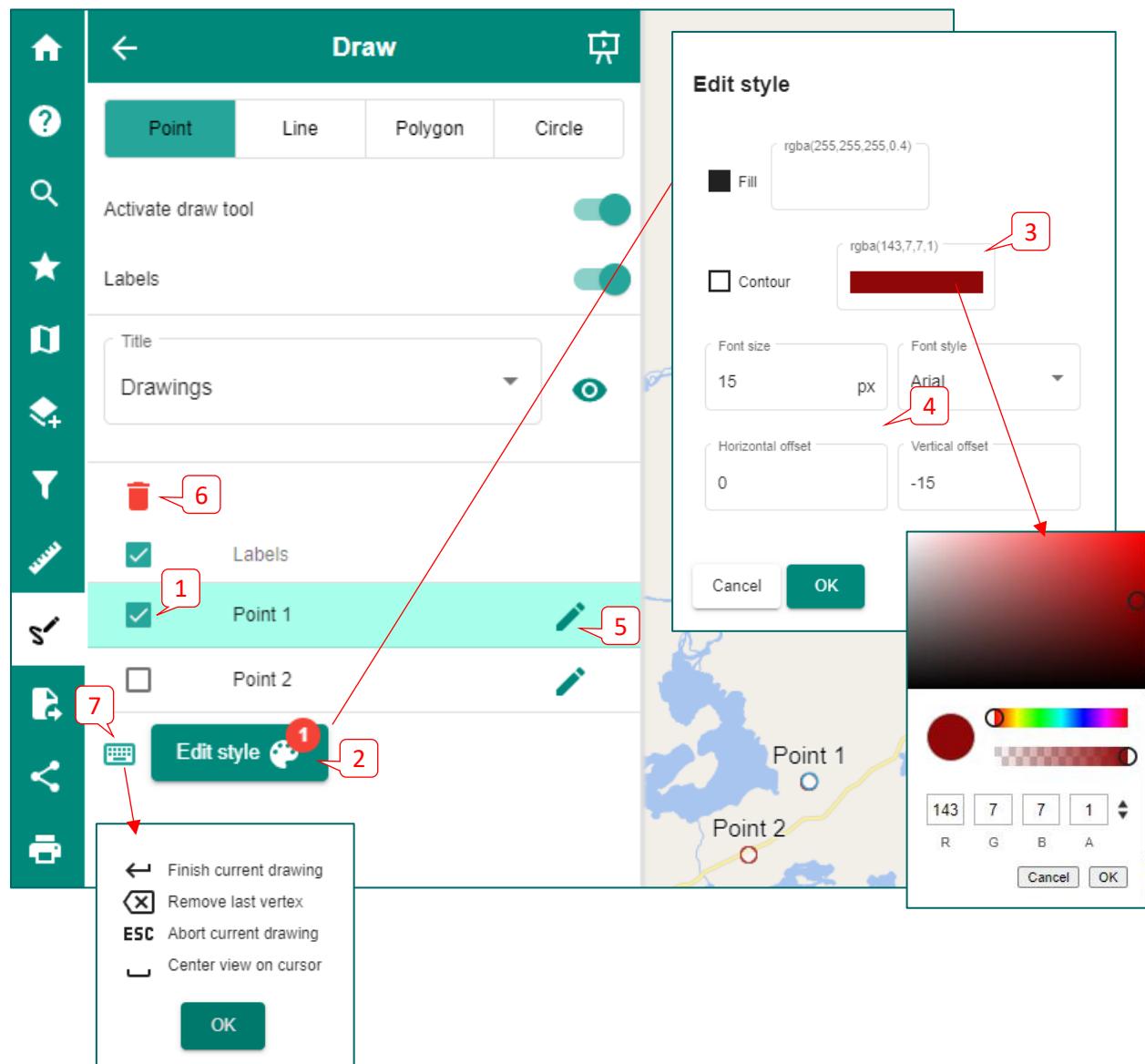


You can then hide the labels in the map (6) by dragging the button to the left.

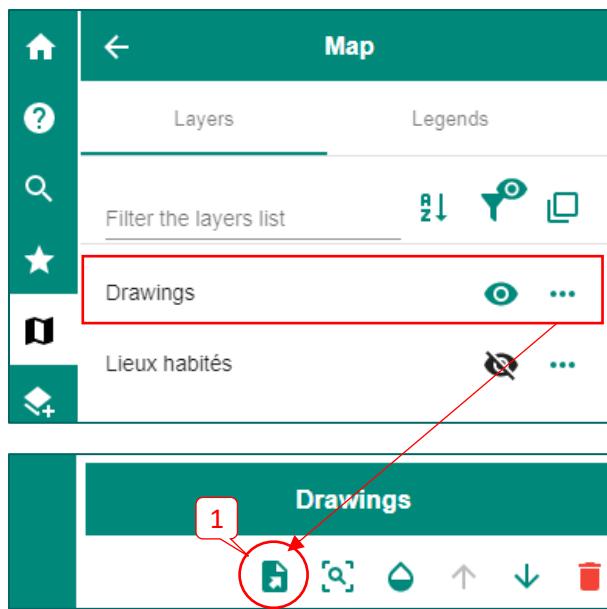


To change the parameters of a drawing, (1) click the check box to the right of the drawing to select it (the selected drawing is blue on the map), (2) then click the “Edit style” button. In the new window that appears, you can change the fill or contour colors of the selected drawing using (3) the color selectors. You can also change the label size and font and move it relative to the entity using the horizontal and vertical offset options (4). It is possible to modify multiple drawings at a time by selecting them before clicking on the “Edit style” option.

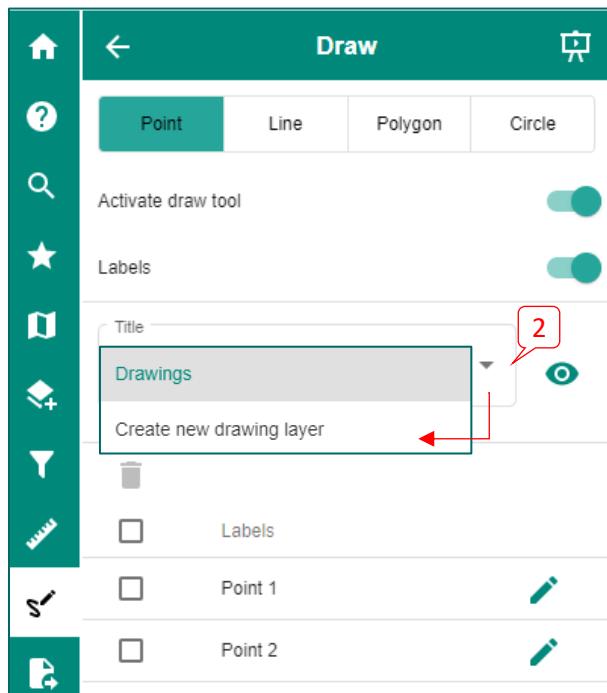
The label text can be modified by clicking on the pencil icon (5). Selected drawings can be deleted by clicking on the red garbage can (6). An icon at the bottom of the window indicates keyboard shortcut keys (7).



When you create a drawing, a "Drawings" layer is added in the list of layers in the Map. The layer can be printed using the [Print](#) feature or exported using the "Import and Export" feature. A shortcut to the export feature (1) is also available in the layer's options. See the [Import and Export](#) section of this guide for more details.



It is possible to create numerous "Drawings" layers by clicking on the drop-down arrow to the right of the layer name (2). Note that, while editing, the selected layer is the only one visible in the map. However, all drawing layers are visible when in the Map tab.



Import and Export

The import and export feature applies to a layer or a personalized map.

Import or Export a Layer, Measures or a Drawing

To import a layer, choose 1) the “Layer” tab, 2) the “Import” tab, 3) the coordinate system of the file you wish to import and 4) click on the “Import” button.

Notes:

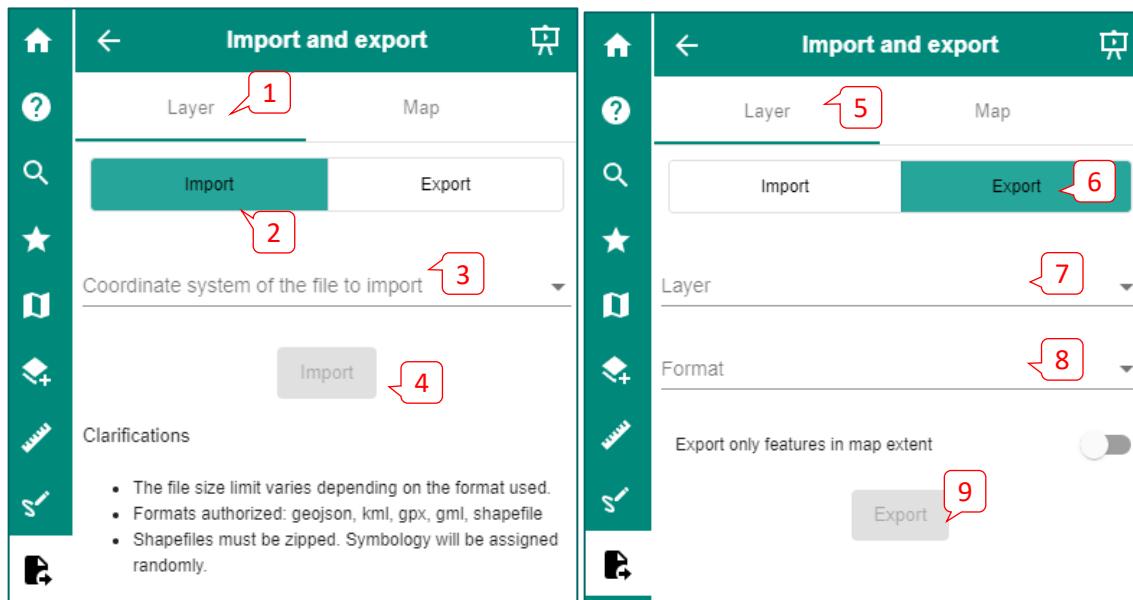
To import a layer in a shapefile format, it is important that the layer be in a .zip file.

If needed, refer to the .PRJ file (text file) of your shape file to know what coordinate system your shapefile is in.

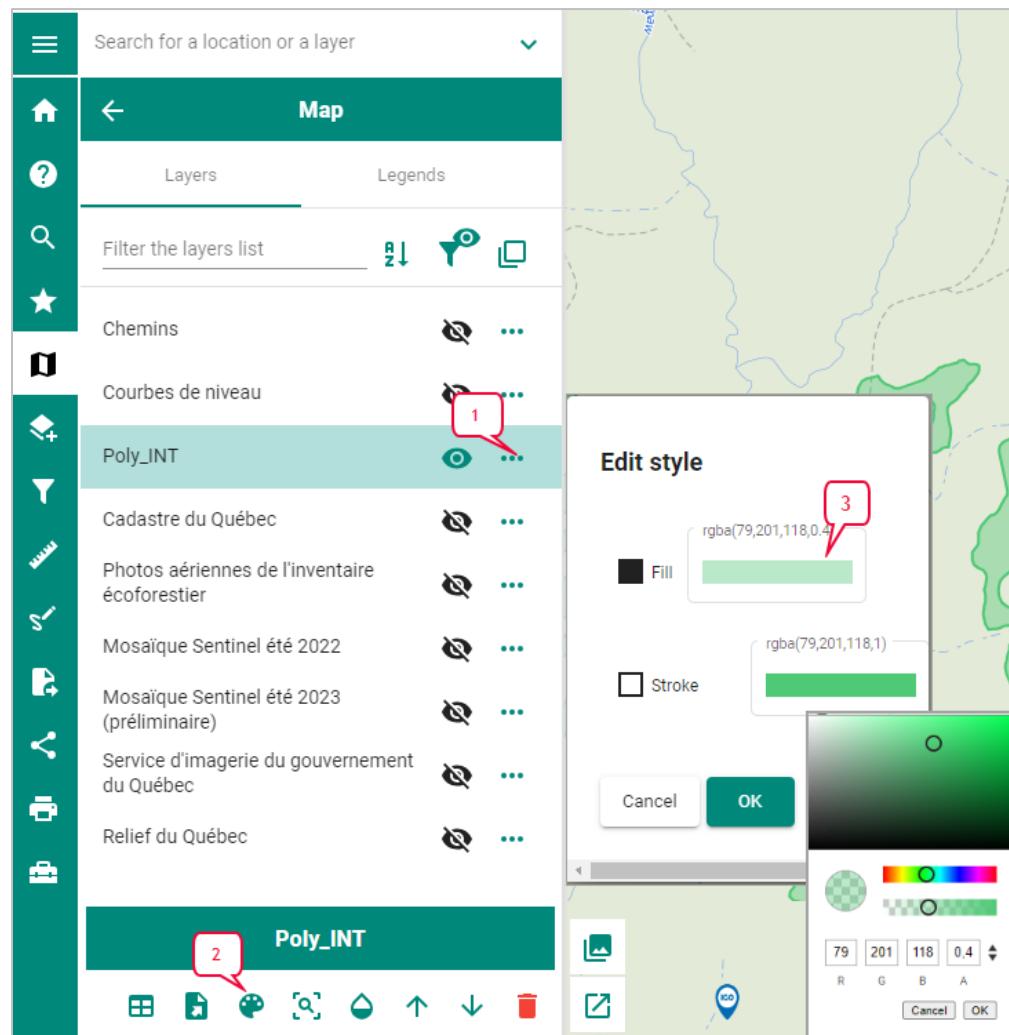
The size limit for importing a file varies depending on the format (GeoJSON, GML, GPX, KML, Shapefile). For larger files, use the GeoJSON format.

The export layer feature is possible only for Web Feature Service (WFS) layers. As the majority of *Forêt ouverte*'s layers are in WMS format for now, very few layers can be exported at the moment. However, the “Measures” and “Drawings” layers can be exported. First, select 5) the “Layer” tab, then (6) the “Export” tab. Next, (7) select the layer you wish to export, (8) choose a file format (GeoJSON, GML, GPX, KML, Shapefile, CSV (comma delimited) or CSV (semicolon delimited)) and (9) click on “Export”. A new file will be created in your computer’s “Downloads” folder.

Note: The exported layer’s coordinate system is WGS84 (EPSG: 4326). This is the coordinate system you must choose if you wish to import the layer back into your map.

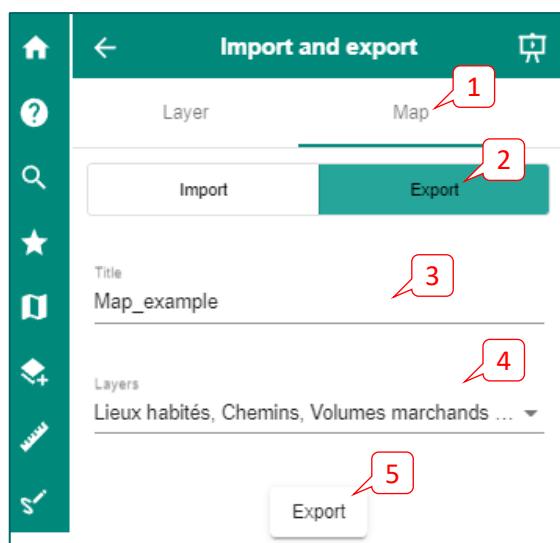


New: When a layer is imported, you can modify its style by; clicking on the three points to the left of the layer (1); going to the small palette icon located in the bar at the bottom (2); in the new window that appears, changing the fill and outline color using a color picker (3).



Import and Export a Personalized Map

It is also possible to export a personalized map, for example a map theme to which layers have been added. To export a map, simply (1) select the “Map” tab, (2) then select the “Export” tab, (3) choose a title for the map, (4) select the layers you wish to add to the exported map and (5) click on the “Export” button. The export tool will create a .JSON file in your computer’s “Downloads” folder. This feature, as opposed to the Share feature, does not maintain the zoom of the exported map, but does save the list of layers for future use.



Warning: It is not possible to export your map if you have “Measures” or “Drawings” layers. Unfortunately, you must delete these layers before exporting your map. However, you may export these layers individually before deleting them.

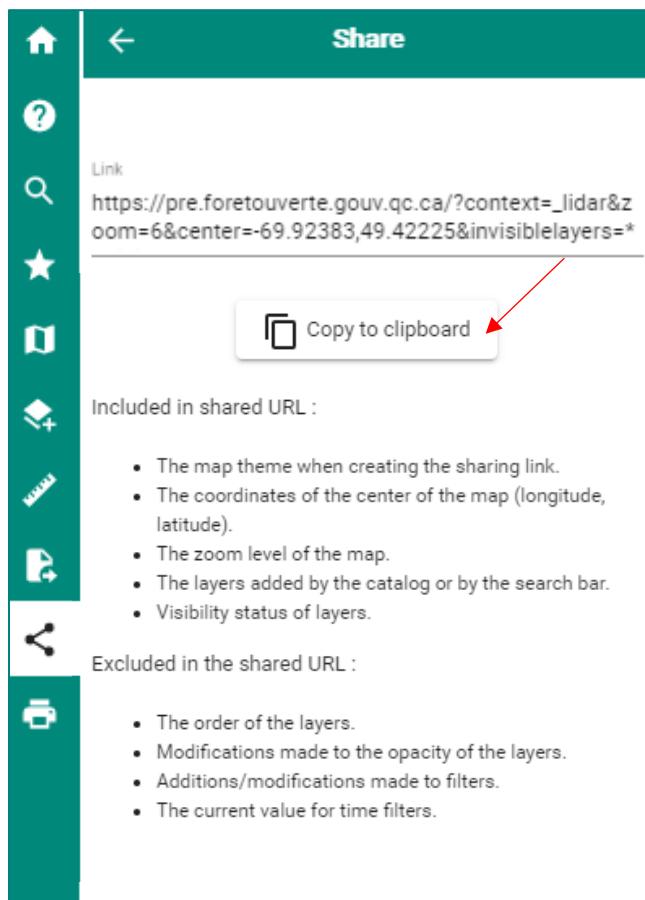
To import a map, select (6) the “Map” tab, then (7) the “Import” tab and (8) click on “Import”. Select a .JSON file from your computer that you have previously exported. Your map will be added to the list of map themes (9) and its layers will appear in the “Map” feature.

Warning: It is not possible to share a map that you have imported, since the map is locally saved on your computer. However, you can send the .JSON file to someone who will then be able to import the map.

Share

The **Share** option creates a hyperlink (URL) of your map that redirects you to an exact representation of what you see on your screen. It is possible to copy this link by clicking on “**Copy to clipboard**” and then paste it in a document or email and share it with someone or refer to it for later use.

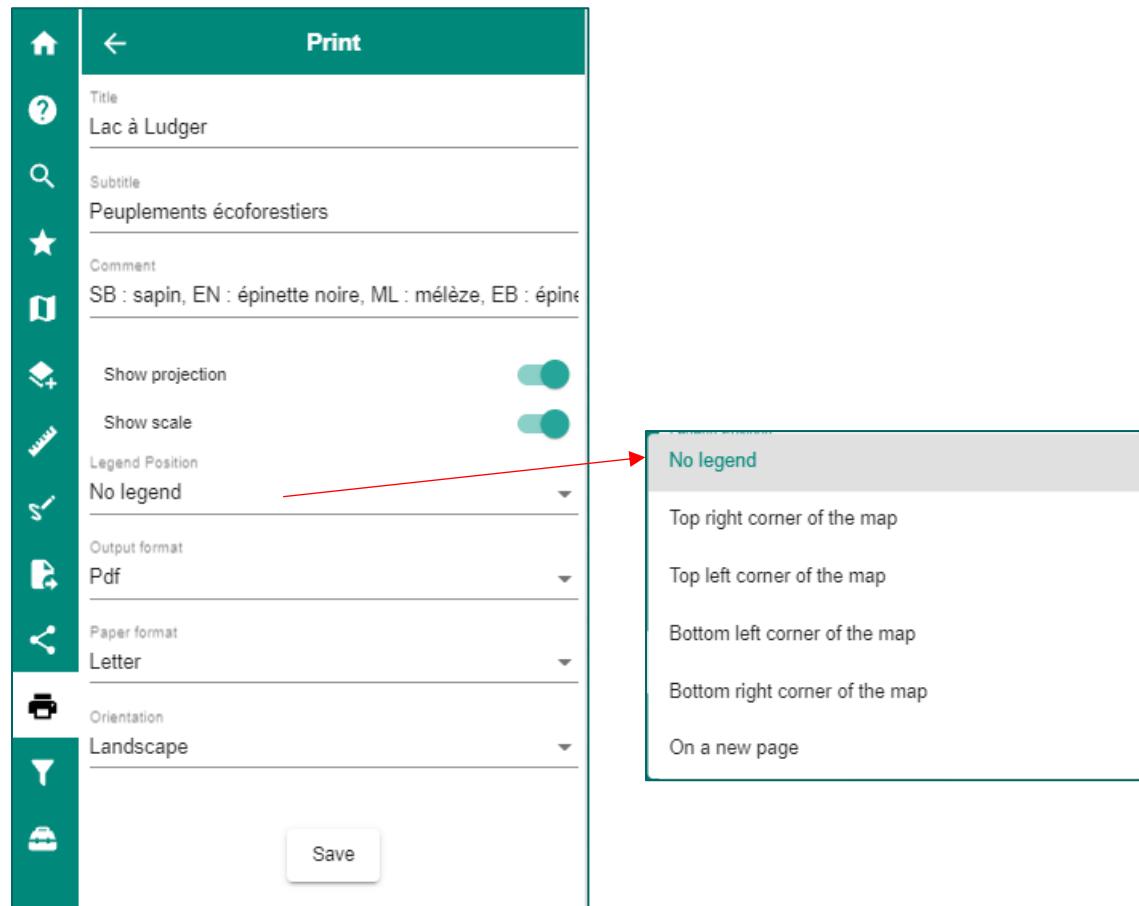
Warning: The “Measures” and “Drawings” layers will not be included in a shared map. However, these layers can be [printed](#) with the map, in a pdf or image format.



 Print

It is possible to print the map viewed on screen using the **Print** option. Add a title and a short description of the map, choose the output format (PDF or image [PNG, BMP, GIF or Tiff]), the page size (A0 through A5, letter or legal) and the desired layout (landscape or portrait).

It is also possible to show the projection, the scale and the legend of the map in the printed document. The legend can be positioned in different areas of the printed map. The options are presented in the drop-down menu.



No legend

- Top right corner of the map
- Top left corner of the map
- Bottom left corner of the map
- Bottom right corner of the map
- On a new page

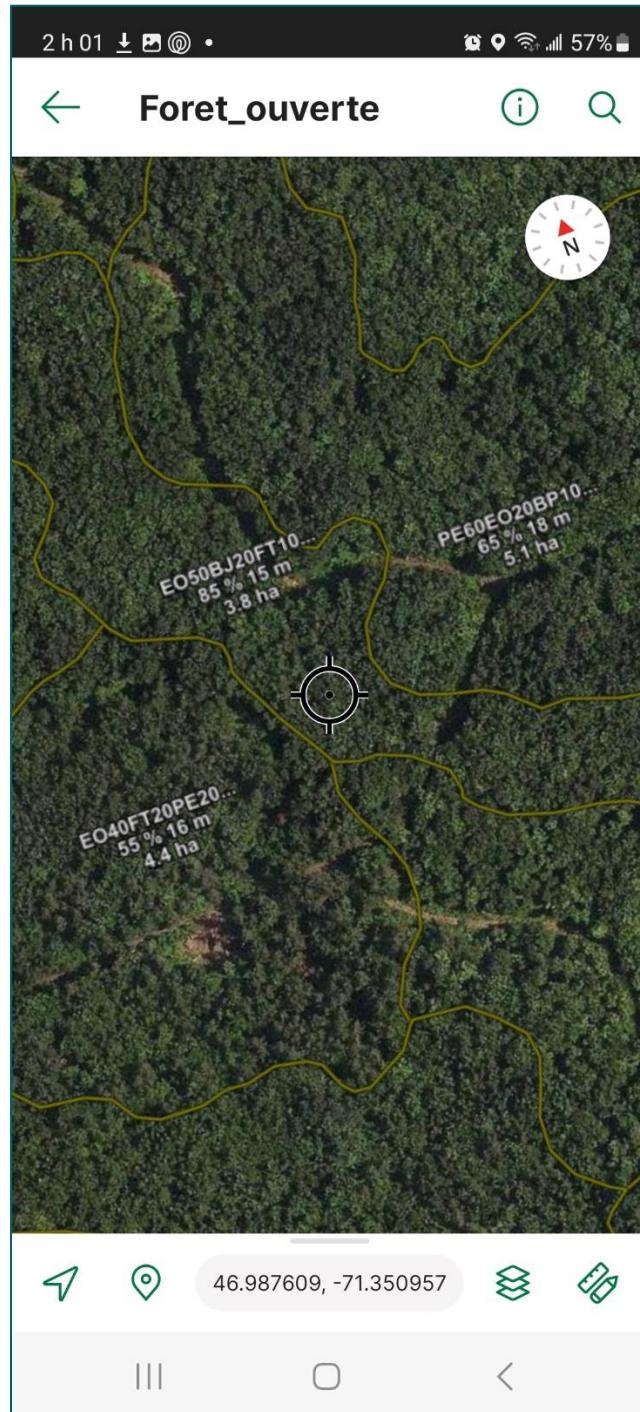
Note: Unfortunately, it is not yet possible to obtain a georeferenced PDF map usable offline, for example in Avenza maps, but seeing as this feature is in high demand, it will be evaluated for the following versions of *Forêt ouverte*.

Example of a printed PDF map



Tip: To avoid printing the cursor position box, deactivate this option by pressing the F2 key before printing or see the [Cursor position](#) section of this guide.

Maps printed in PDF format from *Forêt ouverte* are georeferenced. They can be used to navigate offline with mobile apps such as *Avenza Maps*.



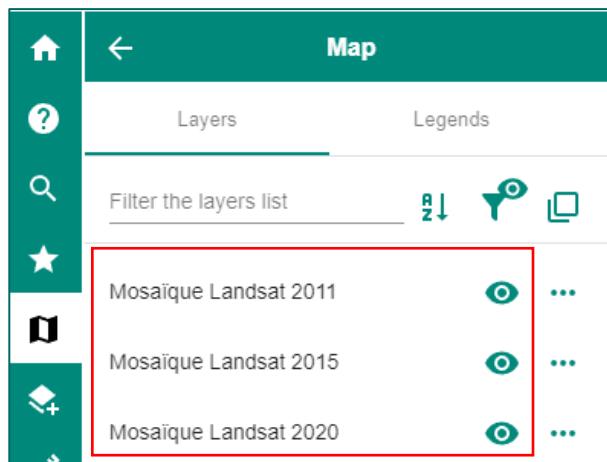
Advanced toolbox

An advanced toolbox was added to the *Forêt ouverte*'s features in October 2021. It includes a swipe tool for comparing layers and another for identifying the coordinates of the map's center based on different coordinate systems. In August 2022, a new geolocation option will be added to the advanced toolbox.

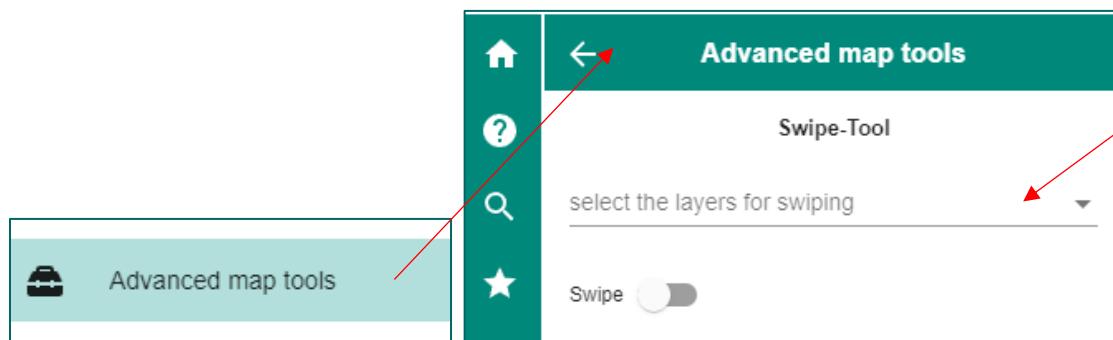
Swipe Tool

The swipe tool allows you to vertically split the map in two and swipe this division from left to right. This tool can be very useful for comparing opaque layers such as aerial photos or satellite images from different years. For example, the tool can be used to quickly observe the evolution of disturbances over time, such as regeneration following a forest fire.

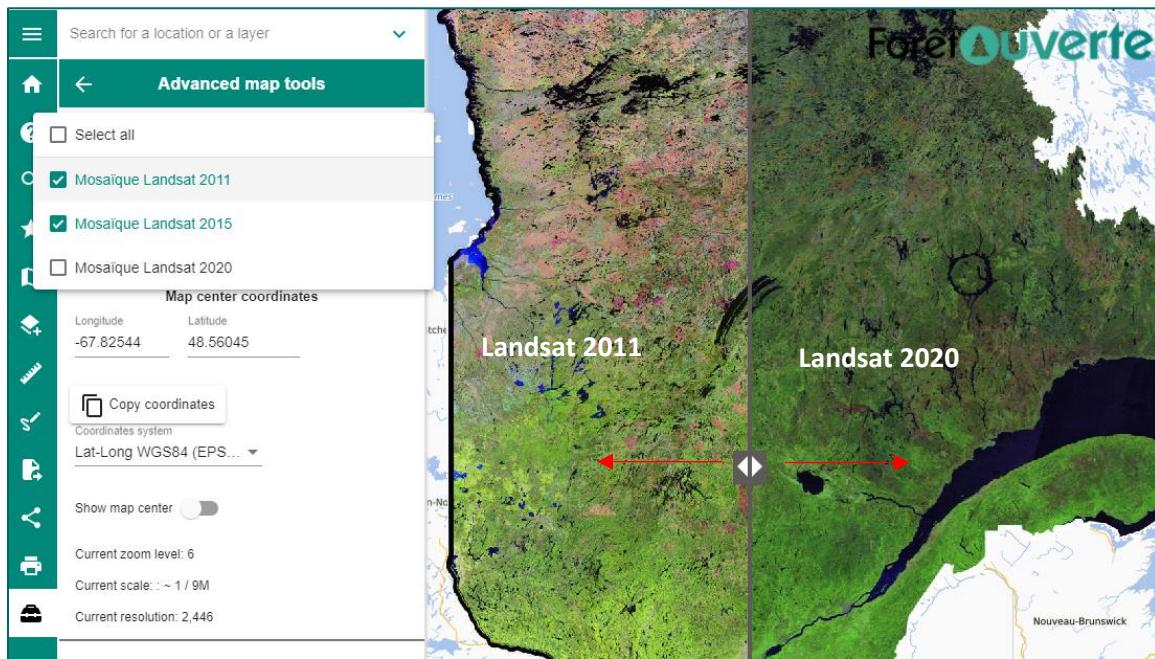
First, make sure the layers to compare are visible in the Map feature. The layers' order is also important to note, as the layers on the top can be compared to those underneath it. In the example below, Landsat mosaics 2011, 2015 and 2020 are visible (green eye) and they are in ascending chronological order.



Next, select the **Advanced map tools** feature and click in the box to "select the layers for swiping".



When you select a layer in the drop-down menu, the layer is removed to the right of the map division. You will therefore see the next visible layer, beneath the last selected layer. In the example below, we see the Landsat 2011 mosaic on the left and the Landsat 2020 mosaic on the right. The 2011 and 2015 mosaics have been removed to the right of the map division since they are both selected in the drop-down menu. You can then swipe the division arrows to compare the two layers.



Below, the swipe tool is used to compare, on the 2011 mosaic to the left and the 2020 mosaic to the right, a fire which occurred in 2010 and where the forest has regenerated since.



Map Center Coordinates Tool

This tool allows (1) to identify the center of the map with a black plus sign and (2) to identify the map's center coordinates. It also allows (3) to copy these coordinates, 4) to modify the coordinate system in which they are displayed and (5) to know the current zoom level and map scale.

Advanced map tools

Swipe-Tool
No layer is currently active on this map.
Customize it by adding layers using the:

- Search bar
- Catalog
- Map themes

Map center coordinates

Longitude	Latitude
-74.41723	49.52540

Coordinates system
Lat-Long WGS84 (EPS... ▾)

Show map center

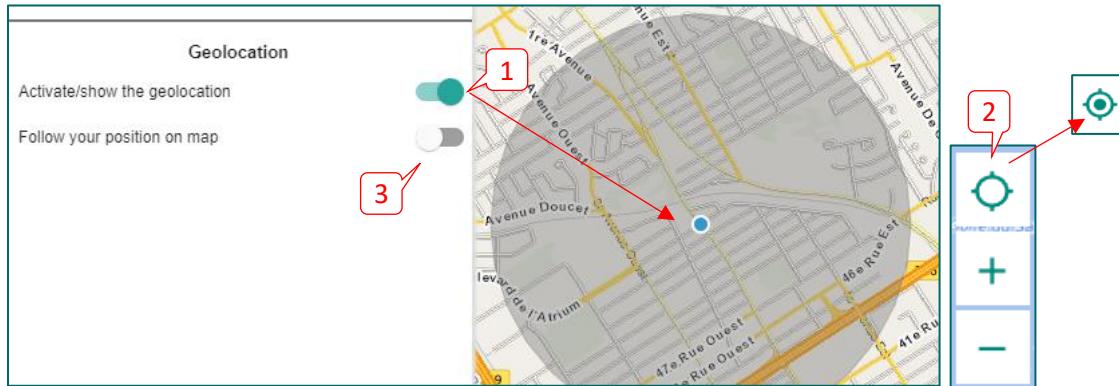
Current zoom level: 6

Current scale: ~ 1 / 9M

Current resolution: 2,446

Geolocation Tool

The geolocation tool shows your geographic position on the map (blue dot) and centers the map on your actual position. The tool can be activated by (1) using the slider or (2) by clicking on the geolocation icon located at the bottom right of the map.



It is also possible to activate position tracking on the map (3). The map will stay centered on your position while you move, for example in a vehicle.

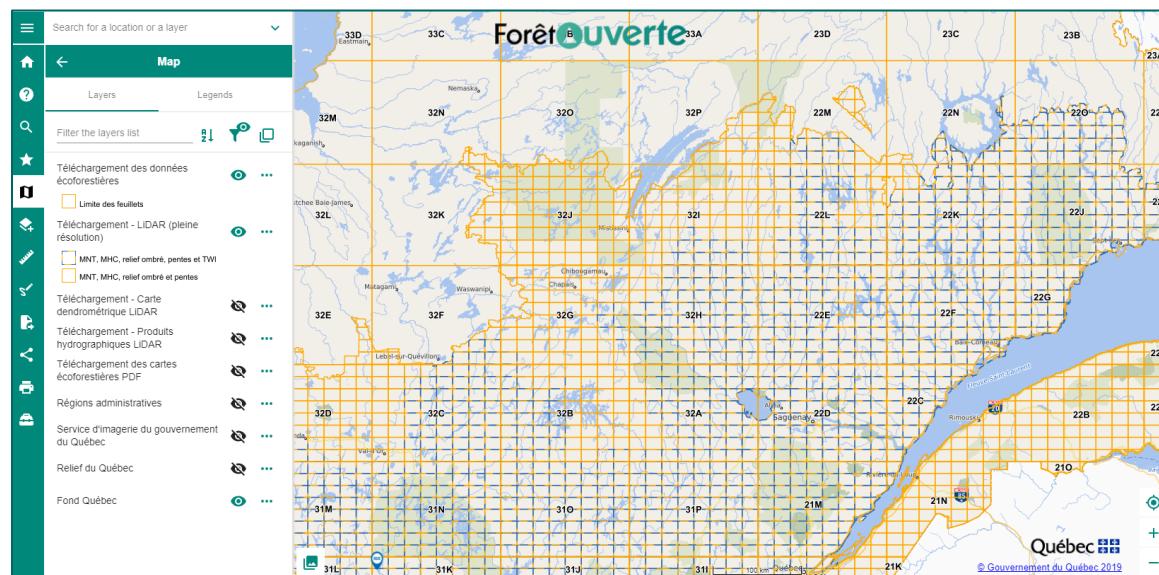
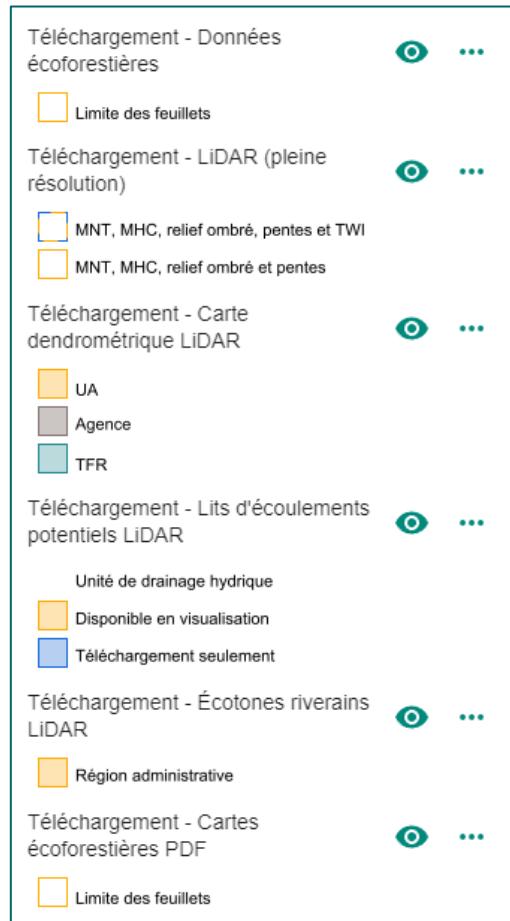
Download

The *Forêt ouverte* interface offers a few ways to download the data for free.

Download layers

The first way consists in choosing the Map theme “**Téléchargement**”. You will then find in the Map feature several download index layers, for example “Téléchargement - Données écoforestières”, “Téléchargement – LiDAR (pleine resolution)”, and “Téléchargement - Cartes écoforestières PDF”. Note that these layers can also be added to the Map feature using the **Catalog** or **Search bar**.

Two indexes with map sheets scaled at 1/20 000 for the PDF and LiDAR products and one index with map sheets scaled at 1/250 000 for other ecoforest data are used to locate the territories for which you wish to download data. The download layer for the “Carte dendrométrique LiDAR” is presented by “unité d’aménagement (UA)”, by “agence de mise en valeur des forêts privées” or by “territoire forestier résiduel (TFR)”. The download layer for the “écotones riverains issus du LiDAR” is presented by administrative region whereas the download layer for the “lits d’écoulements potentiels issus du LiDAR” is presented by “unité de drainage hydrique (UDH)”.



When you click in a map sheet associated to the index layer of the desired data, for example the 32A map sheet of the “Téléchargement des données écoforestières” index layer, a window will appear with a list of available products to download for this map sheet.

The screenshot shows a download interface for the 32A map sheet. On the left, under 'Données disponibles', there is a list of products:

- [Carte écoforestière originale et résultats d'inventaire](#) (with an ACCÉDER button)
- [Carte écoforestière à jour](#) (with an ACCÉDER button)
- [Régime de feux](#) (with an ACCÉDER button)
- [Feux de forêt](#) (with an ACCÉDER button)
- [Récolte et autres interventions sylvicoles](#) (with an ACCÉDER button)

On the right, under 'Répertoire données', there is a vertical list of ACCÉDER buttons corresponding to the items in the left list.

Click on the **ACCÉDER** button to download the product of your choice. You will then be redirected to a HTTPS site where you can choose the desired folder to download.

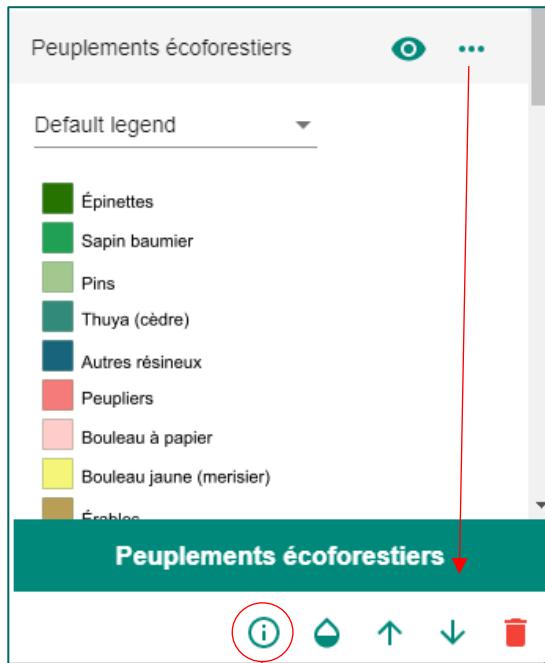
The browser shows a list of files:

- 6/23/2021 9:22 AM 365376817 [PRODUITS_TEOM_32A_10.zip](#)
- 6/23/2021 9:23 AM 365310791 [PRODUITS_TEOM_32A_93.zip](#)
- 6/25/2021 7:25 AM 567759585 [PRODUITS_TEOM_32A_GPKG.zip](#)

Note: The numbers 10 and 93 in the ZIP folder names above refer to versions of ArcMap. Use the 93 folder if you are using the 9.3 version, and use the 10 folder if you are using versions 10 and up. The data are also available, since 2021, in GPKG format.

Données Québec

The second way to download data is to click on the  of the desired layer in the **layer's options**. This button acts as a link to Données Québec's data factsheet where you can access different types of downloadable data (.shp, .csv, .gdb, .gpkg etc.) as well as complementary documents (metadata, normative files, indexes, etc.).



Québec  Quebec Data Partnership Contact U.S.

DATA GAMES ORGANIZATIONS APPLICATIONS Find Datasets ... 

/ Organizations / Government of Quebec / Ministry of Forests, ... / Inventory results and ...

Organization

Dataset  Categories  Historical  Applications

Inventory results and original ecoforestry map

The inventory results and the ecoforestry map constitute a collection of ecoforestry data comprising the original ecoforest map and many other tables providing information directly related to the forest stands. The information contained in this dataset corresponds to the portrait of the forest up to the year of the aerial photography. These data relate to five categories of information:

- The original eco-forest map;
- Forestry compilations (eg: volumes by species);
- Forest station characterization data (potential productivity of forest species, constraints to forest management)
- The given ...

To download data, simply open the drop down menu to the right of a resource and click on “Télécharger”. In the following example, csv and shp files are available to see the download links of individual mapsheets. These files correspond to the download layers in *Forêt ouverte*.

Données et ressources (22)

Carte interactive

HTML	Forêt ouverte Dernière modification : 2021-06-29 Visualisation	Explorer
HTML	Forêt ouverte Dernière modification : 2021-06-29 Téléchargement (versions ArcGIS 9.3 et 10)	Explorer

Données

CSV	Liens de téléchargement par feuillet 1/250 000 Dernière modification : 2021-06-29 Index - Versions ArcGIS 9.3 et 10	Explorer
SHP	Liens de téléchargement par feuillet 1/250 000 Dernière modification : 2021-06-29 Index - Versions ArcGIS 9.3 et 10	Explorer

Service Web

WMS	Service de cartographie Web Dernière modification : 2020-05-11 URL du WMS à copier : https://geoegl.msp.gouv.qc.ca/ws/mffpecofor.fog?	Explorer
PDF	Procédures pour utiliser un service Web Dernière modification : 2018-06-20 Procédures simples pour ajouter un service Web à un logiciel de cartographie.	Explorer

Documentation

PDF	Disponibilité des résultats de compilations forestières par peuplement -5e inventaire Dernière modification : 2020-05-12	Explorer
PDF	Guide d'utilisation de la carte écoforestière et des résultats d'inventaire... Dernière modification : 2020-05-12	Explorer

Access the data directory

It is possible to access all of the available data by clicking on “**Access the data directory**” in the “**Further information**” section of a Données Québec’s data factsheet. The data is generally presented by map sheet and therefore you must know in which map sheet you wish to find your data.

Dataset description sheet	
Organization	Ministry of Forests, Wildlife and Parks
Categories	Environment, natural resources and energy
Labels	Agency Wood characterization Ecological classification Forest compilation DIF Forest inventory department Forest Ecoforest inventory Integrated product Inventory result Forest station UA Volume
Licence	 Attribution (CC-BY 4.0)
Responsible	Forestry Sector-Direction of Forest Inventories (DIF)
E-mail	services.clientele@mffp.gouv.qc.ca
Update frequency	Annual
Geographic coverage	Other
Temporal coverage	1998-01-01/2016-01-01
Further information	Since 2014, all work processes supporting the production of this dataset have been certified according to ISO 9001:2015. Metadata: Geodetic reference system: NAD 1983 Quebec Lambert Map projection: Lambert conformal conic - EPSG: 32198 Access the data directory
Source (URL)	http://mffp.gouv.qc.ca/les-forêts/inventory-ecoforestier/



diffusion.mffp.gouv.qc.ca - /Diffusion/DonneeGratuite/Foret/DONNEES_FOR_ECO_SUD/Resultats_inventaire_et_carte_ecofor/

[To Parent Directory]

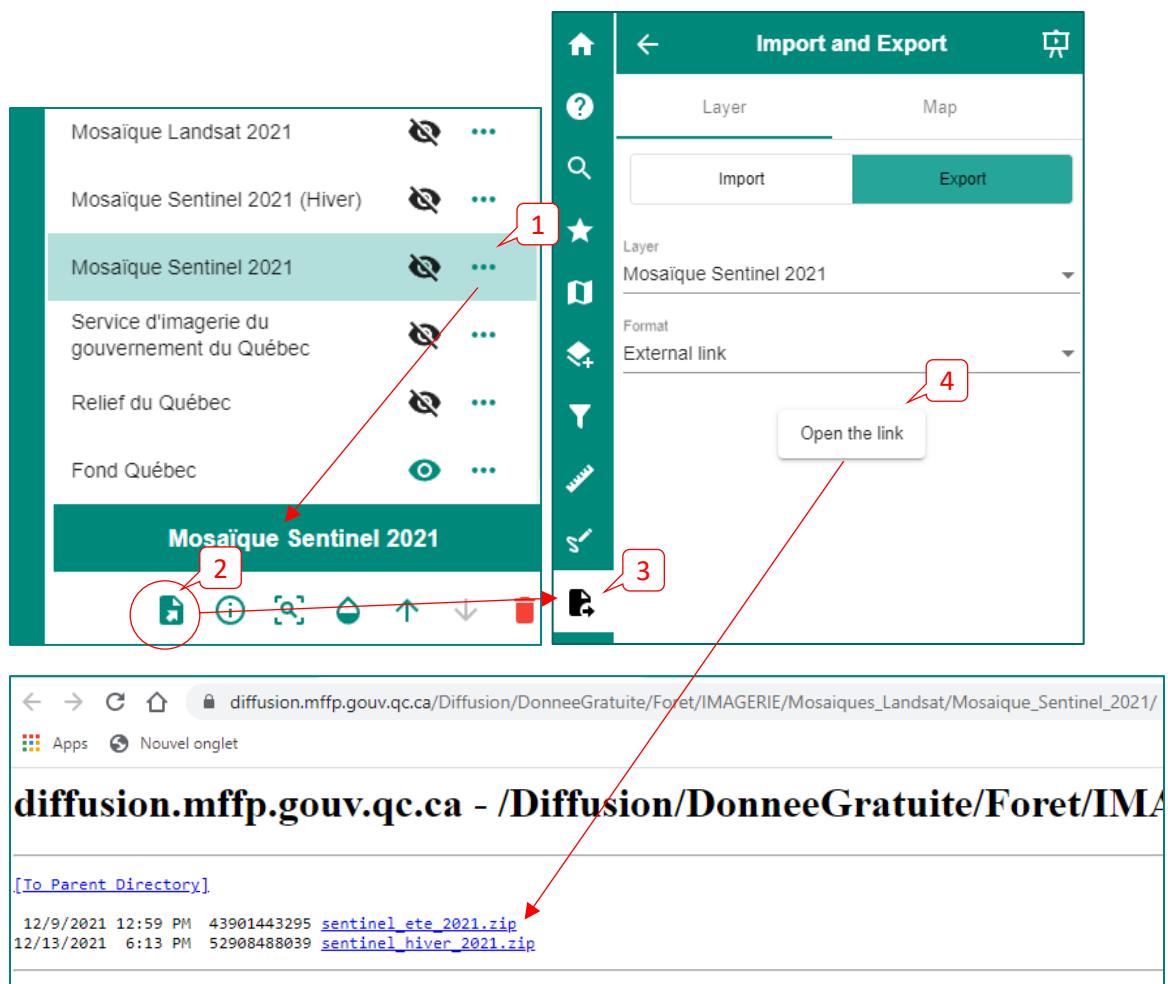
```
9/23/2021 6:09 AM <dir> 1-Documentation
6/28/2021 7:00 AM <dir> 11M
6/28/2021 7:00 AM <dir> 11N
6/28/2021 7:00 AM <dir> 12E
6/28/2021 7:00 AM <dir> 12F
6/28/2021 7:00 AM <dir> 12K
6/28/2021 7:01 AM <dir> 12L
```

To download more than one database at a time, for example several mapsheets, use an FTP client such as FileZilla or Cyberduck. Simply copy the following FTPS URL “[ftps://transfert.mffp.gouv.qc.ca/Diffusion/Foret/](https://transfert.mffp.gouv.qc.ca/Diffusion/Foret/)” to accès the server and explore the different data folders. Consult the following document for more details (only available in French): “[Téléchargement de données – méthode rapide de téléchargement](#)”.

Download icon

New: A new way to download data is to use the  icon of the layer options in the Map. This method is useful for layers with a provincial extent, for exemple satellite image mosaics, “classification écologique” layers, “subdivisions territoriales forestières” layers as well as any other undivided map dataset.

First, (1) click on the ... of a layer to access layer options and (2) click on the download data icon. (3) The button redirects to the Import and Export tool, where you can (4) open the link to download the data directly. The link either downloads a .zip file or opens an https data directory when several data formats are available.



Appendix 1: List of Different Catalog Layers and Defined Display Scales

Catalogues, groupes et couches
Découpages territoriaux
Découpages administratifs
<ul style="list-style-type: none"> • Agglomération • Communauté métropolitaine • Arrondissement • Municipalité • Municipalité régionale de comté • Région administrative
Découpages cartographiques
<ul style="list-style-type: none"> • Fuseau MTM • Fuseau UTM • Feuillet 1/20 000 • Feuillet 1/250 000
Données écoforestières
Index et téléchargement
<ul style="list-style-type: none"> • Téléchargement - Carte écoforestière PDF • Téléchargement - Données écoforestières • Disponibilité de la carte écoforestière du 5^e inventaire
Peuplement écoforestier
<ul style="list-style-type: none"> • Peuplement écoforestier
Volume forestier
<ul style="list-style-type: none"> • Volume marchand brut (7 m et +)
Biomasse et carbone forestiers
<ul style="list-style-type: none"> • Biomasse des arbres vivants • Carbone des arbres vivants
Dépôt de surface
<ul style="list-style-type: none"> • Dépôt de surface de la carte écoforestière
Pente
<ul style="list-style-type: none"> • Pente numérique
Perturbations naturelles et anthropiques
<ul style="list-style-type: none"> • Régime de feux • Feux de forêt • Infrastructures en milieu forestier • Récolte et autres interventions sylvicoles • Épidémie, chablis et verglas • Récolte et autres interventions sylvicoles récentes (après 1999)
Récolte et autres interventions sylvicoles annuelles
<ul style="list-style-type: none"> • Récolte et autres interventions sylvicoles anciennes (avant 1976)

• Récolte et autres interventions sylvicoles 1976
• ... 1977 à 2021
• Récolte et autres interventions sylvicoles 2022
Feux de forêt annuels
• Feux de forêt anciens (avant 1976)
• Feux de forêt 1976
• ... 1977 à 2021
• Feux de forêt 2022
Épidémies, chablis et verglas annuels
• Épidémie, chablis et verglas anciens (avant 1976)
• Épidémie, chablis et verglas 1976
• ... 1977 à 2021
• Épidémie, chablis et verglas 2022
Infrastructures en milieu forestier annuelles
• Infrastructures en milieu forestier 2003
• ... 2004 à 2021
• Infrastructures en milieu forestier 2022
Productivité potentielle par essence
• Hauteur potentielle à 50 ans (m) : EPN, EPB, EPR, SAB, PIB, PIG, BOP, PET, THO
• Accroissement potentiel ($\text{cm}^2/\text{ti/an}$) : ERS, BOJ, ERR
Propriétés du bois par essence
• EPN, densité (kg/m^3)
• SAB, densité (kg/m^3)
• EPN, rigidité (GPa)
• SAB, rigidité (GPa)
Contraintes à l'aménagement forestier
• Contrainte de sol mince
• Contrainte de solidité du sol
• Contrainte de rugosité
• Contrainte d'orniérage
• Contrainte d'érosion du sol
• Contrainte d'appauvrissement des sols par la récolte
Classification écologique du territoire québécois
• Végétation potentielle de la carte écoforestière
• Étage de végétation
• District écologique
• Unité de paysage régional
• Sous-région écologique
• Région écologique
• Sous-domaine bioclimatique

• Domaine bioclimatique
• Sous-zone de végétation
• Zone de végétation
Hydrographie forestière
• Hydrographie surfacique forestière
Couches écoforestières du Nord québécois
• Végétation du Nord québécois
• Dépôt de surface du Nord québécois
• Photographies obliques
• Distribution du pergélisol
• Susceptibilité aux affaissements du sol liés au dégel du pergélisol
• Végétation de l'inventaire écoforestier nordique (PIEN)
• Dépôt de surface de l'inventaire écoforestier nordique (PIEN)
Sondage terrestre
• Placette temporaire 2 ^e inventaire
• Placette temporaire 3 ^e inventaire
• Placette temporaire 4 ^e inventaire
• Placette temporaire 5 ^e inventaire
• Point d'observation écologique
Données Québec
<i>Catalogue non décrit</i>
Données fauniques
Gestion de la faune et des habitats
• Chasse interdite
• Habitats fauniques
• Station de nettoyage des embarcations
• Territoires fauniques structurés
• Unités de gestion des animaux à fourrure
• Zones et parties de zones de chasse
Protection de la faune
• Bureaux de la Protection de la faune du Québec
• Directions régionales de la Protection de la faune
Statistiques de chasse à l'orignal
• Récolte d'orignaux par zone de chasse
Statistiques de chasse à l'ours
• Récolte d'ours par zone de chasse
Statistiques de chasse au cerf
• Récolte de cerfs par zone de chasse
Statistiques de chasse au dindon
• Récolte de dindons par zone de chasse

Subdivisions territoriales forestières (STF)
Aires protégées
<ul style="list-style-type: none"> • Écosystème forestier exceptionnel - Point • Écosystème forestier exceptionnel classé • Projet de refuge biologique • Refuge biologique - Point • Refuge biologique désigné
Limites et territoires forestiers du domaine public
<ul style="list-style-type: none"> • Aire intensification de la production ligneuse • Bureau unité de gestion - UG • Certification forestière • Forêt enseignement et recherche • Forêt enseignement et recherche – Point • Forêt expérimentation • Forêt expérimentation – Point • Limite territoriale des forêts attribuables • Région de garantie approvisionnement 1/1 000 000 • Région de garantie approvisionnement 1/20 000 • Unité aménagement 1/1 000 000 • Unité aménagement 1/20 000 • Unité de gestion 1/1 000 000 • Unité de gestion 1/20 000 • Zone de tarification
Limites territoriales forestières du domaine privé
<ul style="list-style-type: none"> • Agence régionale de mise en valeur des forêts privées 1/1 000 000 • Agence régionale de mise en valeur des forêts privées 1/20 000 • Groupement forestier 1/1 000 000 • Groupement forestier 1/20 000 • Propriété privée • Syndicat et office de producteurs forestiers 1/1 000 000 • Syndicat et office de producteurs forestiers 1/20 000
Subdivisions territoriales forestières amalgamées
<ul style="list-style-type: none"> • Autres terrains publics • Conservation de la biodiversité • Forêt de proximité – FP • Forêt enseignement et de recherche • Forêt expérimentation – FE • Lacs et rivières importantes • Pépinière publique forestière – PPU • Station forestière Duchesnay • Terres privées

<ul style="list-style-type: none"> • Territoires autochtones • Territoires forestiers résiduels – TFR • Unité aménagement – UA
Terrain forestier par domanialité
<ul style="list-style-type: none"> • Forêt privée 1/1 000 000 • Forêt privée 1/20 000 • Forêt publique fédérale 1/1 000 000 • Forêt publique fédérale 1/20 000 • Forêt publique provinciale 1/1 000 000 • Forêt publique provinciale 1/20 000
Territoires forestiers publics sous droits consentis
<ul style="list-style-type: none"> • Convention de gestion territoriale - CGT • Entente de délégation - ED • Forêt enseignement et de recherche - FER • Garantie approvisionnement – GA • PRAU de bois marchand - PR • PRBIO pour PRAU de biomasse forestière - PRBIO • Station forestière • Terres de catégorie 1 - TC1
Imagerie aérienne et satellitaire
Téléchargement – mosaïques d'images satellite
<ul style="list-style-type: none"> • Téléchargement – Données écoforestières
Mosaïques d'images satellite
<ul style="list-style-type: none"> • Mosaïques Landsat (1986, 2011 à 2021) • Mosaïques Sentinel (2018 à 2022) • Mosaïque Sentinel 2023 (Été, préliminaire)
Photos aériennes de l'inventaire écoforestier
<ul style="list-style-type: none"> • Index des photos aériennes de l'inventaire écoforestier • Photos aériennes de l'inventaire écoforestier
Imagerie aéroportée forestière historique
<ul style="list-style-type: none"> • Index_Planification_Suivi_Controle_Historique • Index_Inventaire_Ecoforestier_Historique • <i>Ce groupe inclut de nombreuses couches, classées par année, par projet, par résolution et par type d'image</i>
Orthophotos
<ul style="list-style-type: none"> • 2021_Partenariat_Val-Dor_20cm_RVB • 2021_Partenariat_Rouyn-Noranda_20cm_RVB • 2021_Partenariat_RiviereDuLoup_LesBasques_20cm_RVB • 2021_Partenariat_CMQ_12cm • 2020_Partenariat_Chaudiere-Appalaches_15cm_RVB • 2020_Partenariat_Centre-du-Quebec_20cm_RVB

Informations géominière (SIGEOM)
<i>Catalogue non décrit</i>
LiDAR
Index et téléchargement
<ul style="list-style-type: none"> • Téléchargement - LiDAR (pleine résolution) • Téléchargement - Carte dendrométrique LiDAR • Année d'acquisition du LiDAR • Disponibilité des produits dérivés issus du LiDAR • Disponibilité de la carte dendrométrique LiDAR • Téléchargement – Produits dérivés hydrographiques LIDAR
Produits dérivés du LiDAR
<ul style="list-style-type: none"> • Hauteur de canopée LiDAR (dégradé) • Modèle numérique de terrain LiDAR (dégradé) • Relief ombré LiDAR (dégradé) • Pente LiDAR (dégradé)
Produits dérivés hydrographiques issus du LiDAR
<ul style="list-style-type: none"> • Écotone riverain issu du LiDAR • Lit d'écoulement potentiel LiDAR • Indice d'humidité topographie LiDAR (dégradé)
Réseau hydrographique du Québec (GRHQ)
Hydrographie linéaire
<ul style="list-style-type: none"> • Sens d'écoulement des cours d'eau • Cours d'eau intermittents (Rivières, ruisseaux, etc.) • Cours d'eau permanents (Fleuve, lacs, rivières, ruisseaux, etc.)
Hydrographie surfacique
<ul style="list-style-type: none"> • Plans d'eau (Fleuve, lacs, rivières, réservoirs, etc.)
Insectes et maladies
TBE - Défoliation annuelle
<ul style="list-style-type: none"> • TBE_DefoliationAnnuelle_5M • TBE_DefoliationAnnuelle_1M • TBE_Defoliation_Annuelle
TBE - Défoliation cumulative
<ul style="list-style-type: none"> • TBE_DefoCumulative_Grave_Tesselle_5M • TBE_DefoCumulative_Grave_Tesselle • TBE_DefoCumulative_5M • TBE_DefoCumulative_Annuelle
TBE - Historique
<ul style="list-style-type: none"> • TBE_Historique_Freq_Romer
TBE - Prévision des populations
<ul style="list-style-type: none"> • Prevision_population_TBE_L2_Annuelle • Prevision_population_TBE_L2_Annee_Precedente

TBE - Vulnérabilité des peuplements
• TBE_Vulnerabilite_PROV_1M
• TBE_Vulnerabilite_PROV_500k
• TBE_Vulnerabilite_PROV_250k
• TBE_Vulnerabilite_PROV
Couches de base (non disponibles dans le catalogue)
• Lieux habités
• Chemins
• Courbes de niveau
• Cadastre du Québec
• Service d'imagerie du gouvernement du Québec
• Relief du Québec
• Fond Québec

Appendix 2: Value of Grouped Fields in Legends of Certain Layers⁵

Peuplements écoforestiers

 Épinettes	Épinettes	EB, EN, EP, EU, EV, RE, EE, EF, EM
 Sapin baumier	Sapin baumier	SB, SE, SC, SS, SF, SM, SP
 Pins	Pins	PB, PG, PI, PR, PS, PC
 Thuya (cèdre)	Thuya (cèdre)	TO, CE
 Autres résineux	Autres résineux	ME, MH,MJ, ML, MR, PU, RB, RF, RM, RP, RS, RX, RZ,
 Peupliers	Peupliers	PA, PD,PE,PH,PO,PT
 Bouleau à papier	Bouleau à papier	BB,BG, ,BP
 Bouleau jaune (merisier)	Bouleau jaune	BJ
 Érables	Érables	EA,EI,EO,ER,ES
 Autres feuillus	Autres feuillus	FH, FI, FN, FX, FZ, MF, , FO, FP, FR FT, CC, NN, OA, OR, TA, FA, HG, CB, CH, CR
 Autres terrains forestiers	Autres terrains forestiers	PL, CPI_RL_F, CPPTM_U, CPHRS, CPPTM_DIS, CPRS_BA, BR, CBA, CBT, CDV, CEF, CHT, CPE, CPH, CPR, CPT, CRB, CRR, CRS, CT, DT, ENS, ETR, P, PLR, PRR, REA, RPS, VER, RIA, CPR_U-F, CPRS_U, RECUP_C-T
 Terrain forestier improductif	Terrain forestier improductif	AL, DH, DS, IMP
 Terrain non forestier	Terrain non forestier	A, AF, ANT, AEP, AER, AUT, BAS, BAT, BHE, CAM, CAR, CFO, CHE, CS, CU, DEF, DEM, DEP, ESG, FRI, GOL, GR, HAB, INC, INO, LTE, MI, MX, NF, NX, QUA, RO, TNP, TOE, US, VIL, VRG, RRG, ENR, DL, EPC_SYS, CP, EL, BRP, ENP, CHP

⁵ For the meaning of each code, consult the following document: [Cartographie du cinquième inventaire écoforestier du Québec méridional](#).

Récolte et autres interventions sylvicoles

 Mode de régénération	Mode de régénération	CON, ENM, ENR, ENP, ENS, P, PLB, PLN, PLR, PRR, RIA, RR, RRG, RRN, RRP, RRR, REA, FR
 Éclaircie et dégagement	Éclaircie et dégagement	DEG, DRC, DRM, , EPC, EPR
 Coupe partielle	Coupe partielle	CA, CAM, CB, CBT, CD, CDL, CE, CEA, CIP, CJ, CJP, CJT, CJG, CP, CPI, CPS, CPF, CPM, CPC, CTR, EC, ECE, ECL, ESI, PCP, PSP, PTA
 Coupe avec protection de la régénération	Coupe avec protection de la régénération	CPE, CPH, CPR, CPT, CDV, CRS, CEF, CRB, CS, CBA, CIF, CT, DLD, ETR, CRR, RBV, RPS

Infrastructures en milieu forestier

 Aire d'empilement et d'ébranchage	Aire d'empilement et d'ébranchage	AEP
 Camp forestier	Camp forestier	CFO
 Dépotoir	Dépotoir	DEP
 Gravière	Gravière	GR
 Ligne de transport d'énergie	Ligne de transport d'énergie	LTE
 Milieu perturbé par l'activité humaine	Milieu perturbé par l'activité humaine	NF, ANT
 Terrain agricole	Terrain agricole	AF, A
 Emprise de chemin	Emprise de chemin	RO

Végétations potentielles

<p>VÉGÉTATIONS POTENTIELLES FEUILLUES</p> <p>VÉGÉTATIONS POTENTIELLES MÉLANGÉES</p> <p>VÉGÉTATIONS POTENTIELLES RÉSINEUSES</p> <p>TOURBIÈRE, MARAIS ou MARÉCAGE ARBUSTIF</p> <p>VÉGÉTATIONS POTENTIELLES D'ALTITUDE</p> <p>VÉGÉTATIONS POTENTIELLES MARITIMES</p> <p>AUTRES VÉGÉTATIONS POTENTIELLES</p>	<p>Érablière à caryer cordiforme</p>	FE1
	<p>Érablière à tilleul</p>	FE2
	<p>Érablière à bouleau jaune ou hêtre</p>	FE3 ou FE4
	<p>Érablière à ostryer ou chêne rouge</p>	FE5 ou FE6
	<p>Autres végétations potentielles feuillues</p>	FO1 ou FC1
	<p>Bétulaie jaune à sapin ou sapinière à bouleau jaune</p>	MJ1, MJ2 ou MS1
	<p>Sapinière à bouleau à papier</p>	MS2
	<p>Autres végétations potentielles mélangées</p>	MF1, MS6, ME1 ou MS3
	<p>Sapinière à épinette noire</p>	RS2
	<p>Pessière noire à mousses ou à éricacées</p>	RE2
	<p>Pessière noire à lichens</p>	RE1
	<p>Végétations potentielles de milieu hydrique</p>	RS3, RE3 ou RC3
	<p>Autres végétations potentielles résineuses</p>	RP1, RT1, RS1, RB1, RS5 ou RB5
	<p>Tourbière, marais ou marécage arbustif</p>	MA1, MA2, TOB, TOF, TO1 ou TOI
	<p>Végétations potentielles d'altitude</p>	MS4, RS4, RE4, RB4, RB3, RE8, TA1, TA2, LL1, LL2, LL3 ou LL4
	<p>Végétations potentielles maritimes</p>	LM1, LM2, LM3, LM4, MS7, RE7, RS7 ou RB2
	<p>Autres végétations potentielles</p>	LA1, LA2, LA3, LA4, LI1, RI1, SM1 ou SM2

*Ressources naturelles
et Forêts*

Québec 