Interactive map of ecoforest data... and much more!

Forêt ouverte User Guide

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

Peuplements écoforestiers

Récolte et reboisement

Infrastructures en milieu forestier
Introduction

In 2017, the ministère des Forêts, de la Faune et des Parcs 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).

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 the addition of new functions was made regularly throughout 2020.

To access Forêt ouverte:

[https://www.foresetouverte.gouv.qc.ca](https://www.foresetouverte.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 the shortcut button found in the main menu or the “Help” tab.
New: Specific interactive tours are also available for the “Measure” 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.

![Main Menu Features](image-url)
Help

A brief description of all the features of the interactive map is found in the Help section as well as a link to: 1) several tutorials, 2) Forêt ouverte’s User Guide, 3) the Download section and its user guide, 4) the Web Map Services (WMS) list and its user guide, 5) the Direction des inventaires forestiers (DIF) email for any questions or comments and finally, 6) a link to a satisfaction survey to help us improve Forêt ouverte.
Search Results

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 (new), or GPS coordinates. This tool can also be used to search for a specific layer.

![Search bar](image)

**Search for a location or a layer**

First, type the location or name of a layer 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 or a layer. 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 blue selection that appears when clicking on one of the search results.
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. 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”.

![Map feature and search results screenshot]
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 (new); or 4) select the search radius for the search by coordinates.
Pointer Position Options

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

Tip: Use the F2 key to activate/deactivate the pointer position option.
Search by Coordinates

The search bar can also be used to locate specific coordinates on the map, either by using 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).
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.

**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.

GPS Location

It is possible to find your current location using the **GPS location tool** found at the bottom right of the screen. This option allows you to center the map on your current location.
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”, “Index des photos aériennes de l’inventaire écoforestier”, “Photos aériennes de l’inventaire écoforestier”, “Mosaïque Sentinel 2019”, “Mosaïque Landsat 2019”, “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).

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 legend\(^1\) 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. Change the transparency of the layer

7. Change the order of the layers

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

8. Remove the layer from the Map

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

\(^1\) The values of grouped fields for the legends of certain layers can be found in Appendix 2.
Filter the Layers in the Map Feature

9. Search for layers within the **Map**

10. Sort the layers in alphabetical order

11. Show only the visible (green eye) layers

12. Activate the multiple selection mode

The multiple selection mode can be used to apply layer options to multiple layers at once: 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

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

It is possible to obtain additional information on a layer’s attributes when 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 table allows you to select different zoom options for the chosen 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 table’s header. Activating the “Zoom auto” function will automatically zoom on elements as soon as they are selected.
When several layers overlap, it is necessary to select the icon next to the desired layer, in this case the “Peuplements écoforestiers” layer, in order to open the descriptive table associated to the selected stand. It is also possible to consult the attributes of the overlapping layers by using the arrows found at the top right and left of the table title, or by returning to the list of entities found on the map by clicking on the the icon found at the top left of the table and then on “Return to list”. The “Zoom on all features” function adjusts the map scale to show all of the selected features.
Map Project Example

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

Legend: “Couleur avec étiquette”

Legend: “Contour avec étiquette”
Time Filter

The Time filter feature allows you to define a time lapse on the layer you wish to display. This feature is only available for certain layers (layers with a ). The four main layers which can be filtered are grouped in the “Perturbations de la forêt” Map theme. The “Chasse” Map theme also contains a layer that can be filtered.

Perturbations de la forêt

<table>
<thead>
<tr>
<th></th>
<th>Chasse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructures en milieu forestier</td>
<td>Réculte et reboisement récents (après 1999)</td>
</tr>
<tr>
<td>Épidémies, chablis et verglas</td>
<td>Modèle de régénération</td>
</tr>
<tr>
<td>Récolte et reboisement</td>
<td>Coupe avec protection de la régénération</td>
</tr>
<tr>
<td>Feux de forêt</td>
<td></td>
</tr>
</tbody>
</table>

To access the time filter, click on the ... next to the layer, such as next to the “Feux de forêt” layer. A new window appears below the list of layers.
Click on the time filter icon in this window and then choose the desired time lapse, such as the forest fires that occurred between 2000 and 2007. A red number appears indicating that a filter is applied to the layer.

**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 (DIF)” Catalog. Consult the Catalog section in this guide for more information.
The time filter can be accessed in the main menu features for the “Perturbations de la forêt” and “Chasse” Map themes. This option makes it possible to view all the layers that can be filtered within the same window. The layer legends can also be visualised within this window, by simply clicking on the layer name if the legend is hidden.
Attribute filter

**New:** The attribute filter allows you to select, using buttons, the elements to be displayed in a layer based on certain attribute values. For now, the filter is only available for the "Peuplements écoforestiers" layer. 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 stands that are 17-22 metres tall.
Layer Display Scale and Zoom

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. 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).

**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 and Satellite Mosaics

In order to optimize the display of the LiDAR derivative products (“MNT” [DTM], “Relief ombré” [Shaded Relief], “Hauteur de canopé” [Canopy height] and “Pentes” [Slopes]) as well as the Satellite Image Mosaics, 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).
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.

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. Before changing your Map theme, share your map!

LiDAR Map theme example: All four LiDAR derivative products, their download index layer and the maps showing their planned availability, as well as the index showing the acquisition years of LiDAR data and the planification map for the availability of the LiDAR dendrometric map, are found in the “LiDAR” Map theme. When you choose the “LiDAR” theme, these layers are added to the Map.
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 écoforestières²”. Then click on the arrow next to “Peuplements écoforestiers” to see all the layers within this group.

² Refer to [Appendix 1](#) 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 positionning 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.
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 (3), simply click on the map. It is possible to measure several segments. Double click to end the segments and add up their distances. Each segment has a length label if this option is activated (4) and the total distance is found in the “length” bar (5). Also, previously measured lengths are found at the bottom of the window (6) and it is possible to delete them by clicking on the garbage can (7).

To measure an area, select this option (2) and form a polygon in the map, double clicking to close the shape. The area and perimeter are calculated in the associated bar (8). It is possible to change the units (9) for both area and length measures.
Draw

New: The Draw tool allows you to add 1) points, lines, polygons and circles to the map. Simply click on the map when the drawing tool is activated (activated by default) (2). When creating a new entity, 3) the tool offers to assign a label to it. It is then possible to 4) hide the labels in the map. The color of the 5) fill and the 6) contour of the entities can be changed, however this choice affects all drawings for now. Finally, it is possible to 7) select each drawing and delete it if necessary.

When you create a drawing, a "Drawings" layer is added in the list of layers in the "Map" tab. The layer can be exported using the "Import and Export" tab. A shortcut to the export feature is also available in the layer’s options. See the "Import and export" section of this guide for more details.
**Import and Export**

The import and export feature applies to a layer or a personalized map. 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. To import a layer in a shapefile format, it is important that the layer be in a .zip file. Refer to the .PRJ file of your shapefile if needed.

Note: 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 “Drawings” layer created by the Draw tool can be exported. Select 5) the “Layer” tab, then 6) the “Export” tab. The “Drawings” layer is selected by default for export (7). Next, 8) choose a file format (GeoJSON, GML, GPX, KML, Shapefile, CSV (comma delimited) et CSV (semicolon delimited) and 9) click on “Export”. A new file will be created in your computer’s “Downloads” folder.
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.

To import a map, select 6) the “Map” tab, then 7) the “Import” tab and 8) click on “Import”. Select a .JSON file that you have previously exported. Your map will be added to the list of map themes and its layers will appear in the “Map” feature.
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 in a document or email and share it with someone or refer to it for later use.

![Share option diagram](image)

**Link:**

https://pre.foretouverte.gouv.qc.ca/?context=lidar&zoom=6&center=69.92383,49.42225&invisiblelayers=*

**Included in shared URL:**

- The map theme when creating the sharing link.
- The coordinates of the center of the map (longitude, latitude).
- The zoom level of the map.
- The layers added by the catalog or by the search bar.
- Visibility status of layers.

**Excluded in the shared URL:**

- The order of the layers.
- Modifications made to the opacity of the layers.
- Additions/modifications made to filters.
- The current value for time filters.
Print

It is possible to print the map viewed on screen using the Print option. It is possible to 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.

Note: The display of the legends in printed maps should be improved in later versions of Forêt ouverte. Also, it is not yet possible to obtain a georeferenced map usable offline, but seeing as this feature is in high demand, it will also be evaluated for the following versions of Forêt ouverte.
Download

The Forêt ouverte interface offers two ways to download the data for free.

1. The first way consists in choosing the Map theme “Téléchargement”. You will then find in the Map feature three download index layers: “Téléchargement – LiDAR (pleine resolution)”, “Téléchargement des données écoforestières”, and “Téléchargement des 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.
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 table will appear with a list of available products to download for this map sheet.

Click on the button to download the product of your choice. You will then be redirected to an FTP site where you can choose the desired folder to download.
Note: The numbers 10 and 93 in the ZIP folder names 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.

It is also possible to download more than one map sheet by clicking on the [parent directory] link. You can then copy the FTP address in a Windows explorer window or use the free software FileZilla, and copy and paste all the folders of interest. Consult the following document for more details (only available in French): “Téléchargement de données – méthode rapide de téléchargement”.

Forêt ouverte

Index of /Public/Diffusion/DonneeGra

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</tr>
</tbody>
</table>

Ministère des Forêts, de la Faune et des Parcs
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2. The second way to download data is to click on the information icon of the desired layer in the Map feature. This button acts as a link to Données Québec’s data sheet where you can access different types of downloadable data (.shp, .csv, .gdb, etc.) as well as complementary documents (metadata, normative files, indexes, etc.).
It is possible to access the available data by clicking on the “Download” button of the Access the data directory in the “Data & Resources” section of the Données Québec’s data sheet. The data is generally presented by map sheet and therefore you must know in which map sheet you wish to find your data. It is also possible to download several map sheets at once by copying the FTP address in a Windows explorer window or by using the free Filezilla software. Consult the following document for more details (only available in French): « Téléchargement de données – méthode rapide de téléchargement ». 
Appendix 1: List of Different Catalog Layers and Defined Display Scales

(Maximum scale value that allows display. Example: \( \frac{200 \text{ km}}{200 \text{ km}} \))

<table>
<thead>
<tr>
<th>Catalog, group and layer names</th>
<th>Layer</th>
<th>Labels</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Découpages territoriaux</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Découpages administratifs</td>
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<td></td>
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<tr>
<td>• Agglomération</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>• Communauté métropolitaine</td>
<td>-</td>
<td>20 km</td>
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<tr>
<td>• Arrondissement</td>
<td>-</td>
<td>20 km</td>
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<tr>
<td>• Municipalité</td>
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<td>• Municipalité régionale de comté</td>
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<td>-</td>
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<tr>
<td>• Région administrative</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Découpages cartographiques</td>
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<tr>
<td>• Fuseaux MTM</td>
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<tr>
<td>• Peuplements écoforestiers</td>
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<td>200 – 500 m</td>
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<td>200 – 500 m</td>
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<td>• Infrastructures en milieu forestier</td>
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<td>• Récolte et reboisement</td>
<td>2 km</td>
<td>500 m</td>
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<td>• Récoltes et reboisement récents (après 1999)</td>
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<td>• SAB, densité (kg/m³)</td>
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### Couches écoforestières du Nord québécois

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### Sondage terrestre

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### Données Québec

#### Catalogue non décrit

### Données subdivisions territoriales forestières

#### Conservation de la biodiversité

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#### Limites et territores forestiers du domaine public

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Catalog, group and layer names

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- Permis de récolte approvisionnement usine de biomasse – PRBIO
- Station forestière
- Terres de catégorie

Imagerie aérienne et satellitaire

Téléchargement – mosaïques d’images satellites

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- Téléchargement données écoforestières

Mosaïques d’images satellites

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- Mosaïque Sentinel (2018, 2019)

Photos aériennes de l’inventaire écoforestier

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- Index des photos aériennes de l’inventaire écoforestier
- Photos aériennes de l’inventaire écoforestier

Informations géominière (SIGEOM)

Catalogue non décrit

LiDAR

Index et téléchargement

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- Téléchargement – LiDAR (pleine qualité)
- Années d’acquisition du LiDAR
- Disponibilité des produits dérivés du LiDAR

Produits dérivés du LiDAR

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- Hauteur de canopée LiDAR (dégradé)
- Modèle numérique de terrain LiDAR (dégradé)
- Relief ombré LiDAR (dégradé)
- Pentes LiDAR (dégradé)

Base layers (unavailable in the catalog)

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- Lieux habités
- Chemins
- Courbes de niveau 1000 m 200 – 500 m
- Service d’imagerie du gouvernement du Québec
- Relief du Québec
- Fond Québec

Ministère des Forêts, de la Faune et des Parcs
**Appendix 2: Value of Grouped Fields in Legends of Certain Layers**

**Peuplements écoforestiers**

| Épinettes | EB, EN, EP, EU, EV, RE, EE, EF, EM |
| Sapin baumier | SB, SE, SC, SS, SF, SM, SP |
| Pins | PB, PG, PI, PR, PS, PC |
| Thuya (cèdre) | TO, CE |
| Peupliers | PA, PD, PE, PH, PO, PT |
| Bouleau à papier | BB, BG, BP |
| Bouleau jaune | BJ |
| Érables | EA, EI, EO, ER, ES |
| 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 | 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 | AL, DH, DS, IMP |
| 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 |
### Récolte et reboisement

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<td>Coupe avec protection de la régénération</td>
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### Infrastructures en milieu forestier

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