

# Sessions #4: Raster processing - Vector data capture

# Objectifs du TP

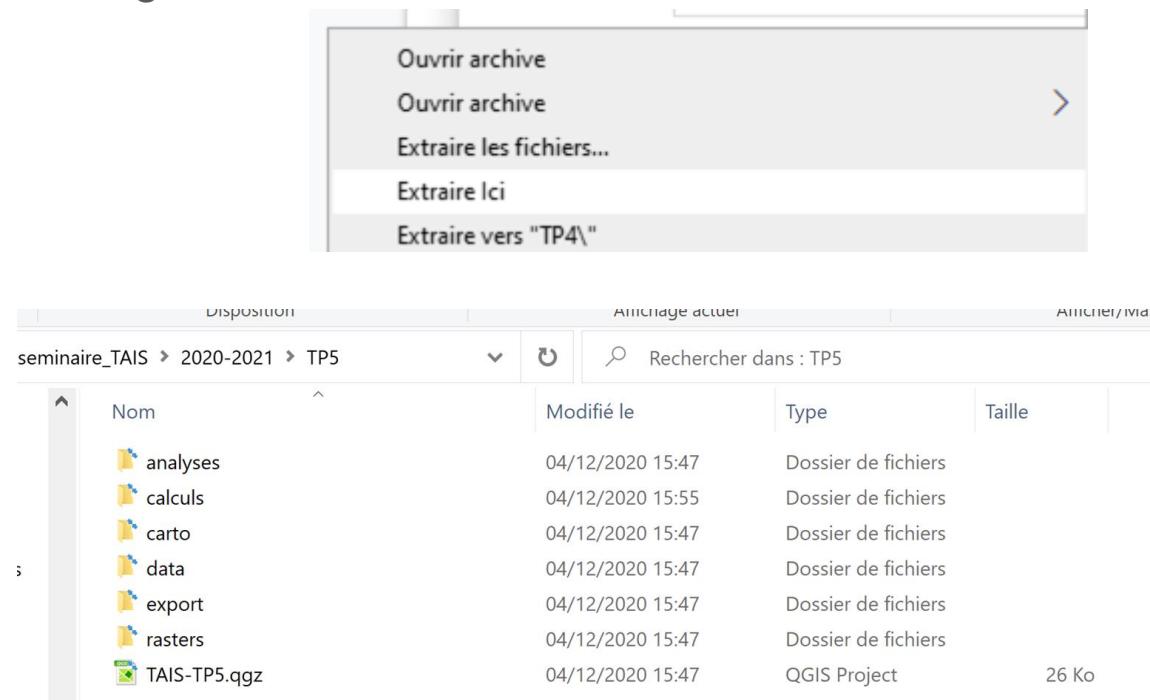
- [Download data](#)
- Understanding georeferencing
  - image coding
  - Raster data
  - Repositories
- Perform georeferencing
  - Checkpoints
  - Warp algorithm
  - Evaluate the error

For this TP, it will be very useful for you to use a mouse with wheel!



# Télécharger les données du TP

1. [Data to download](#)
2. Unzip the directory to a working directory
3. Open TP5 File



# Open Qgis project file

DISPOSITION      ATTACHEMENT ACTUEL      ATTACHER / MISES À JOUR

seminaire\_TAIS > 2020-2021 > TP5

Rechercher dans : TP5

Nom	Modifié le	Type	Taille
analyses	04/12/2020 15:47	Dossier de fichiers	
calculs	04/12/2020 15:55	Dossier de fichiers	
carto	04/12/2020 15:47	Dossier de fichiers	
data	04/12/2020 15:47	Dossier de fichiers	
export	04/12/2020 15:47	Dossier de fichiers	
rasters	04/12/2020 15:47	Dossier de fichiers	
<b>TAIS-TP5.qgz</b>	04/12/2020 15:47		

TAIS-TP5 — QGIS

Projet Éditer Vue Couche Préférences Extension Vecteur Raster Base de données Internet Maille HCHGIS MMQGIS Traitement Aide

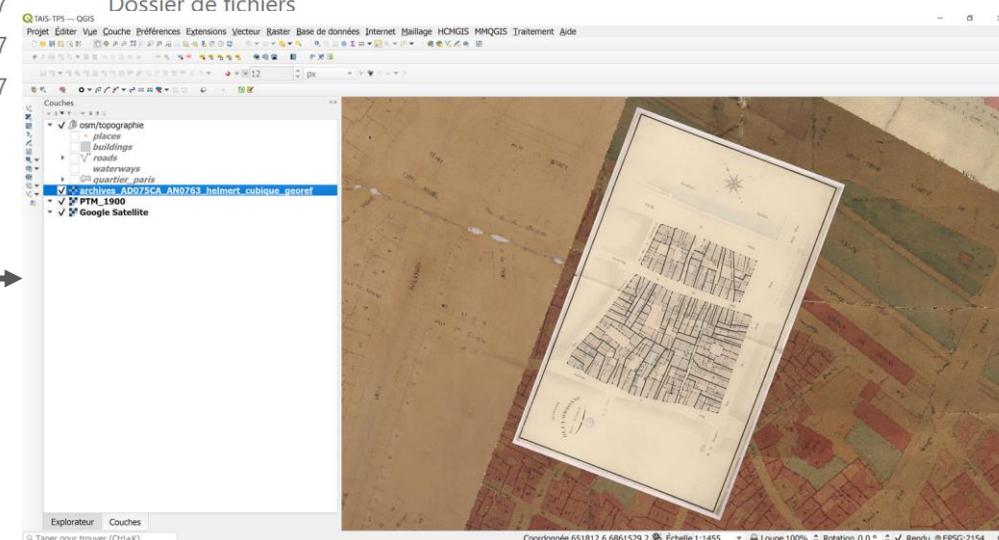
Couches

- topographie
- places
- buildings
- roads
- waterways
- osm
- osm\_toponymes
- archives\_AD075CA\_AN0763\_helmert\_cubique\_georef
- PTM\_1900
- Google Satellite

Explorateur      Couches

Taper pour trouver (Ctrl+K)

Coordonnée 651812.6,6801529.2      Échelle 1:1455      Loupe 100%      Rotation 0,0 °      Rendu EPSG:2154



Open Qgis project file  
TAIS-TP5.qgz

# Part One: Rasters (Continuation and End)

Trimming a georeferenced image

Creating a manually entered right-of-way

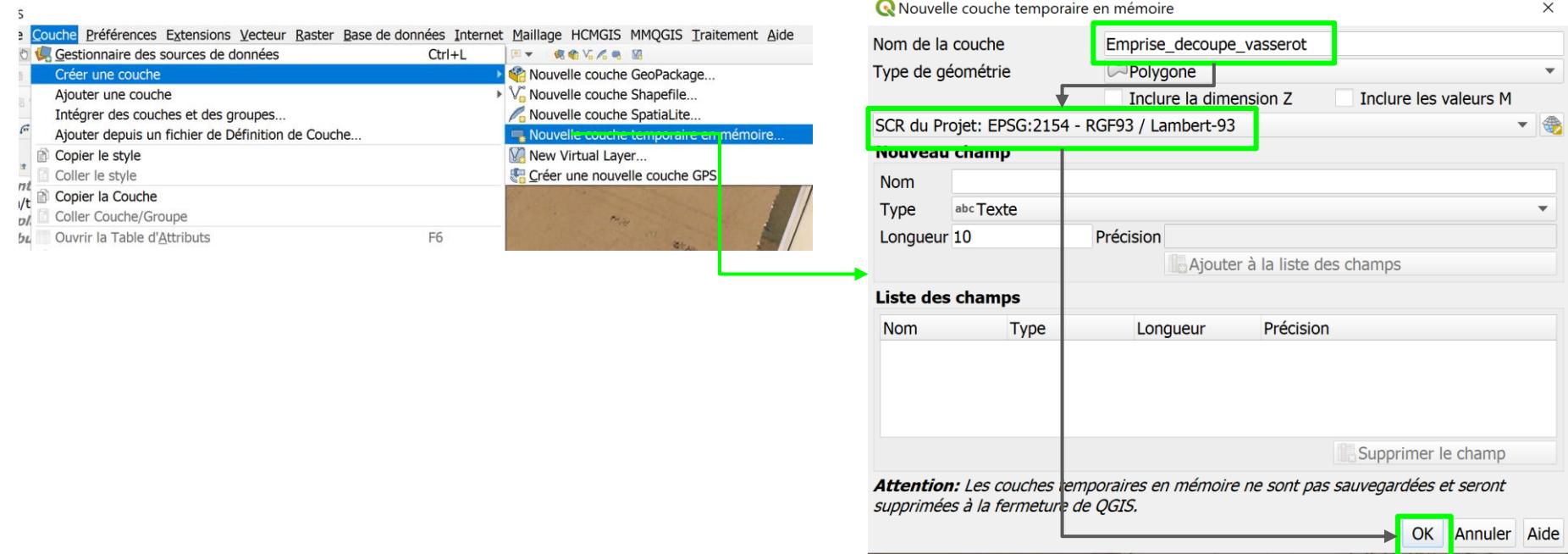
Load elevation data

Cut this data on a calculated right-of-way

Transform a raster into a vector: retrieving level lines

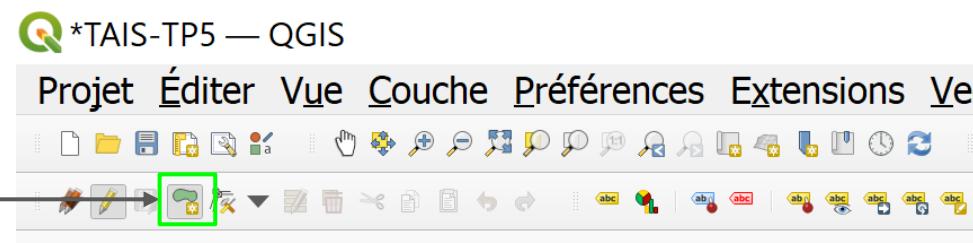
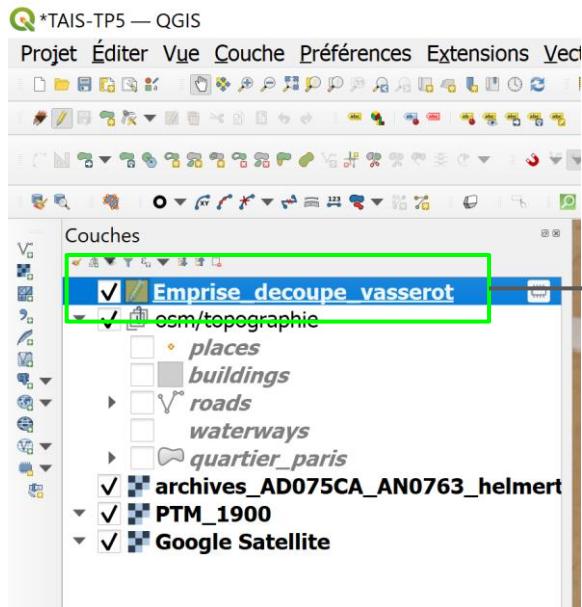
# Raster slicing

It can sometimes be useful to cut images according to a particular footprint. A polygonal footprint must first be drawn. That is what we are going to do in this first step.



# Draw a right-of-way in a temporary layer

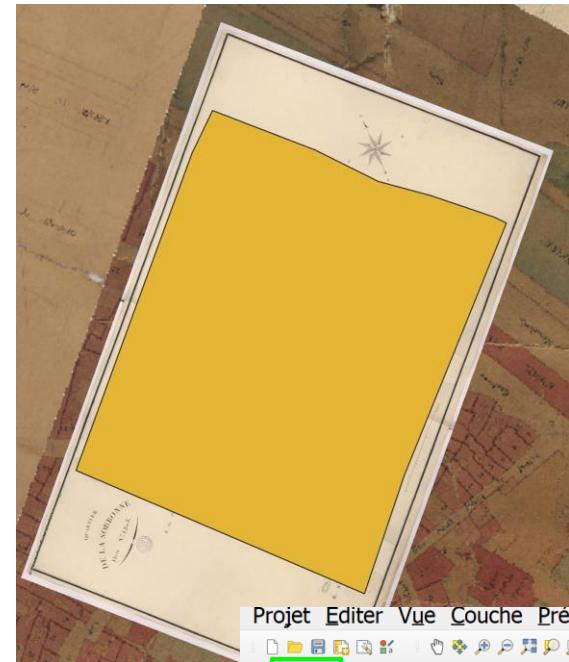
A vector layer is created, it is activated as soon as it is added in edit mode.



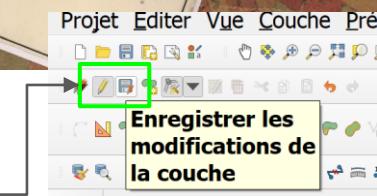
In the toolbar, click on the "Add polygonal entity" tool.

# Draw a right-of-way in a temporary layer

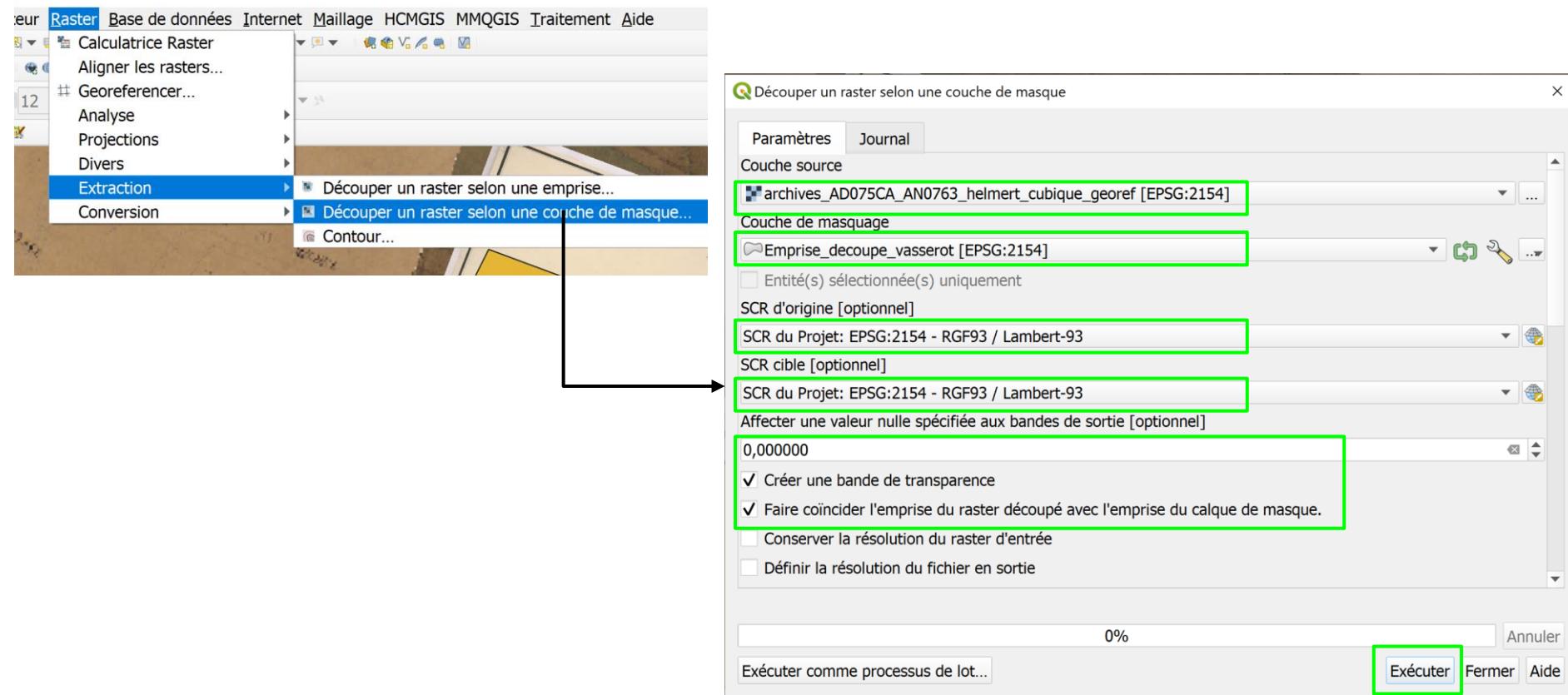
Gradually draw a polygonal footprint on the map. The area in red will be the one that will be kept on the raster.



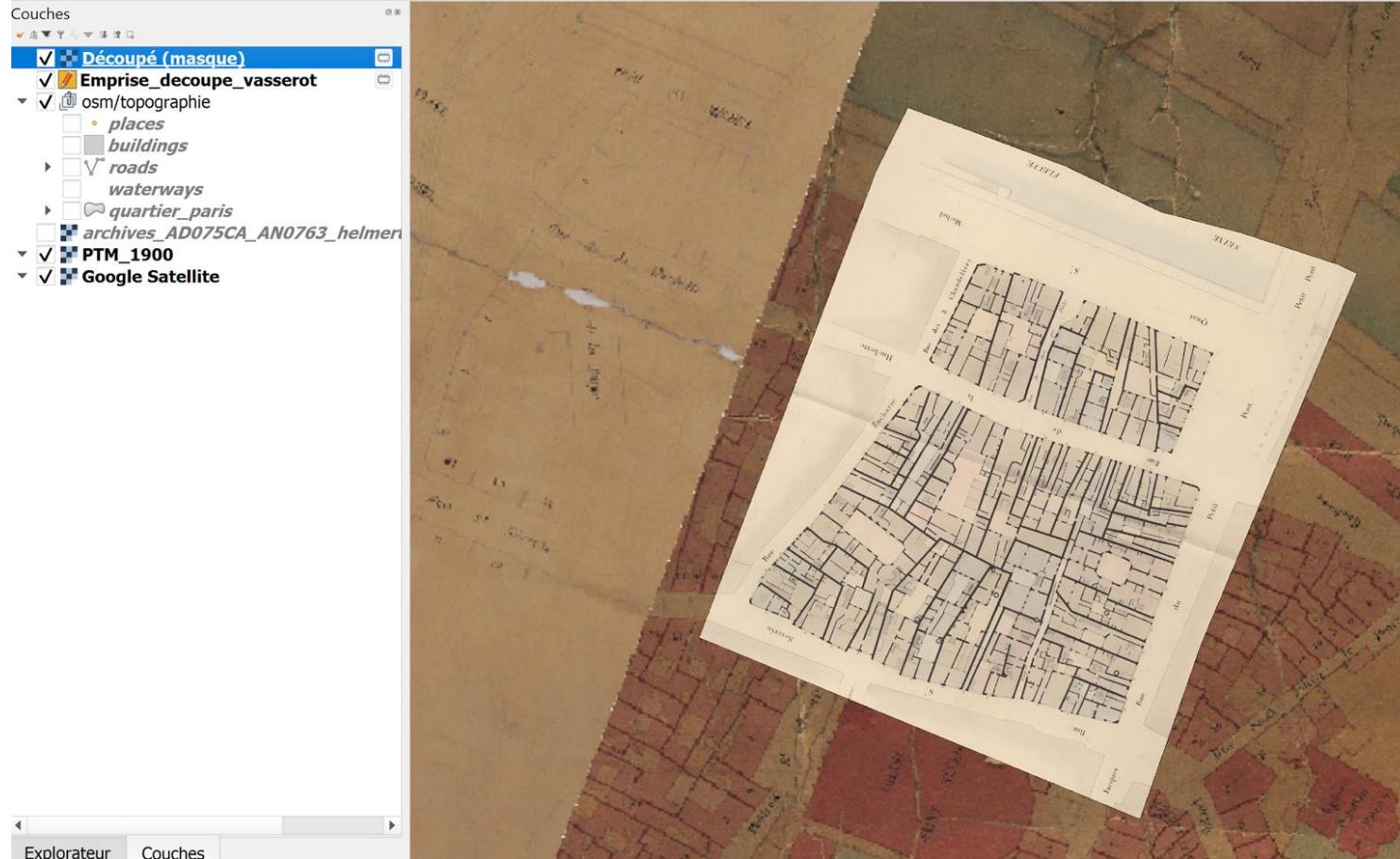
Left-click to plot the points of the polygon, right-click to finish it.  
Don't forget to save the layer changes and then exit edit mode.



# Cutting the raster from the right-of-way polygon



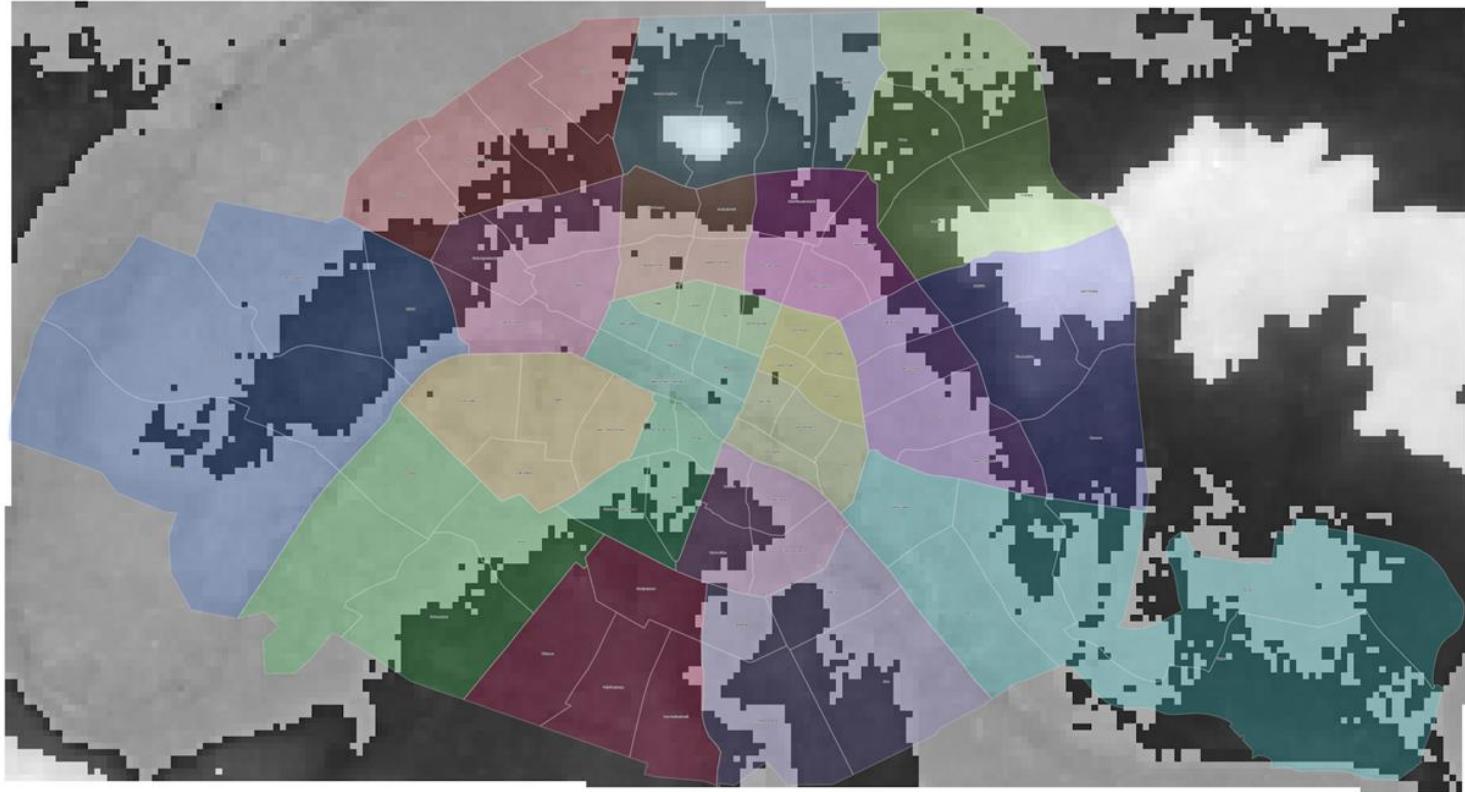
# Cut raster layer



# Raster exercise: cut an elevation layer

1. Load the layer in the /data/srtm/srtm\_37\_03.tif folder
2. Organize data to see neighborhoods above
3. Extracting the footprint of the neighborhood layer
  1. The right-of-way is the bounding rectangle of the displayed data
  2. Vector/Search Tools/Extract Layer Extent...
4. Cut the raster according to the footprint of the neighborhoods
5. [See the correction](#)

# Result: Paris elevation layer from SRTM



Questions: Why have colors evolved? What is the pixel resolution?

# Formatting raster symbology

Layer Properties — srtm\_37\_03 — Symbologie

- Rendu des bandes raster

Type de rendu Pseudo-couleur à bande unique

Bande Bande 1 (Gray)

Min -16 Max 1829

PARAMÈTRES DE VALEURS MIN/MAX

Interpolation Linéaire

Palettes de couleurs

Suffixe de l'étiquette d'unité

Label precision 0

Valeur	Couleur	Étiquette
-16	Dark Green	-16
445,25	Light Green	445

Mode Continu

Classez

Écarter les valeurs en dehors de la plage

RENDU DE LA COULEUR

Mode de fusion Normal

Luminosité 0 Contraste 0 Réinitialiser

Gamma 1,00 Saturation 0

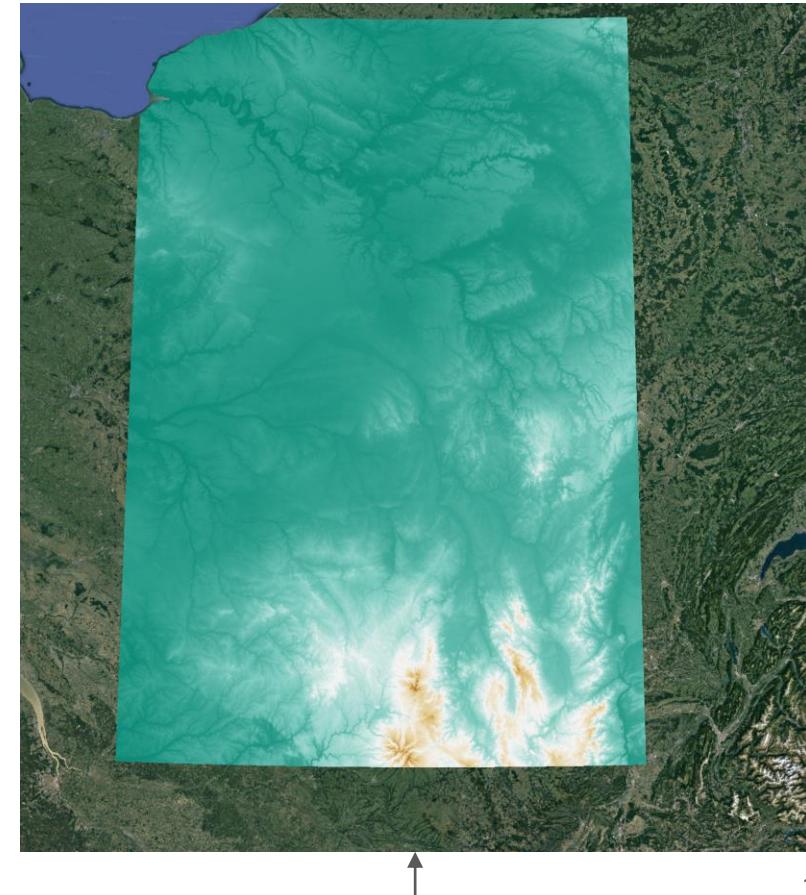
Dégradé de Gris Off

Teinte Coloriser Force 100%

RÉ-ÉCHANTILLONNAGE

Zoom avant Plus proche voisin arrière Plus proche voisin Suréchantillonage 2,0x Early resampling

Style OK Annuler Appliquer Aide



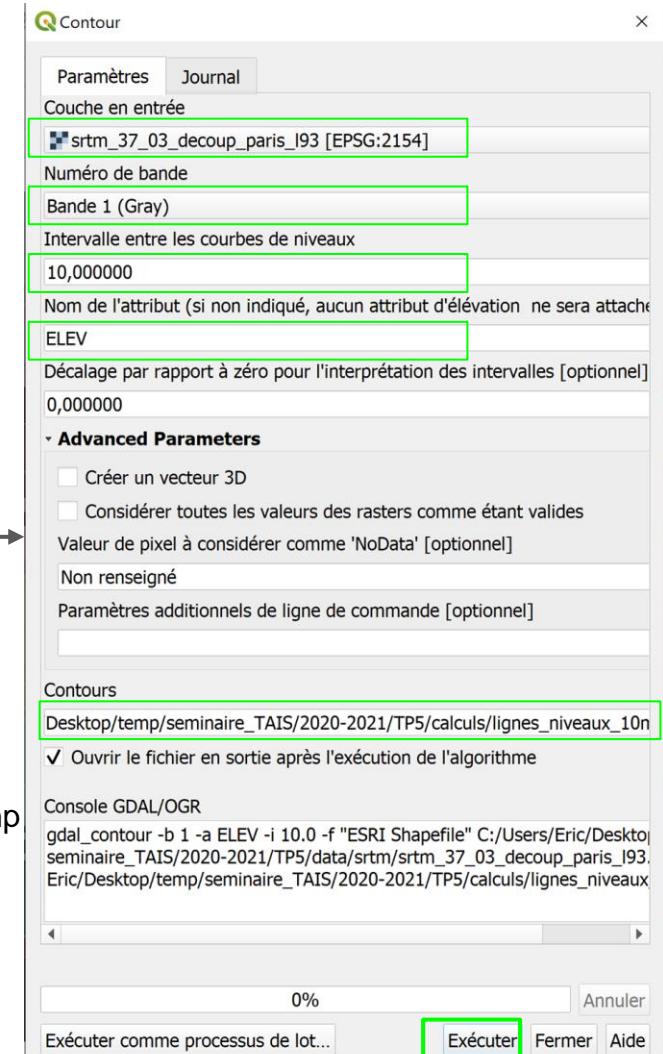
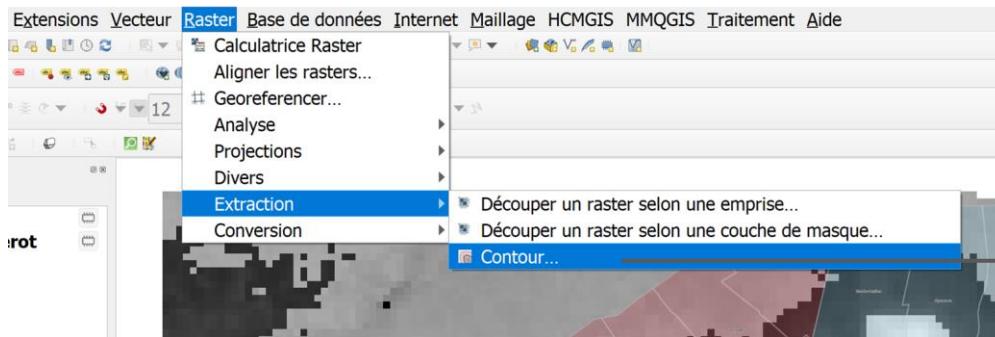
# Raster transformation -> vector

An interesting operation would be to extract the level lines from an altimetry file.

Benefits:

- Be able to better select data.
- More interesting symbology and mode of representation.
- Possibility to see other data more than through transparency.

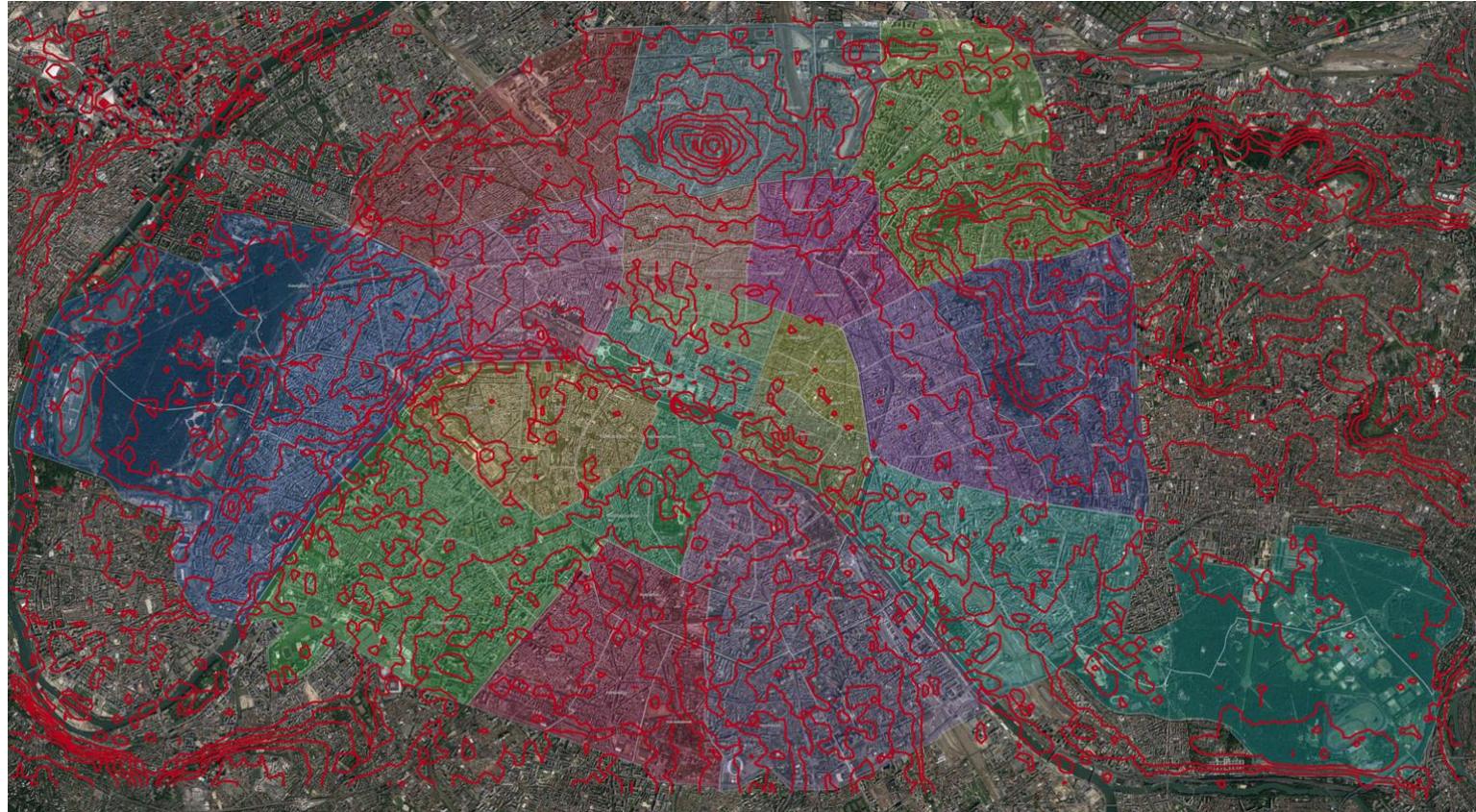
# Raster transformation -> vector



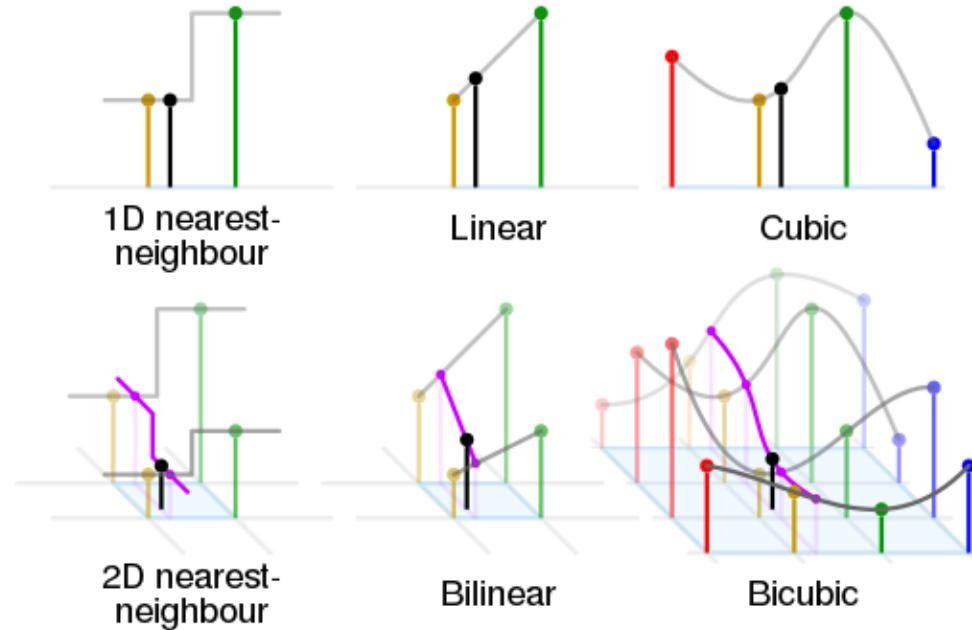
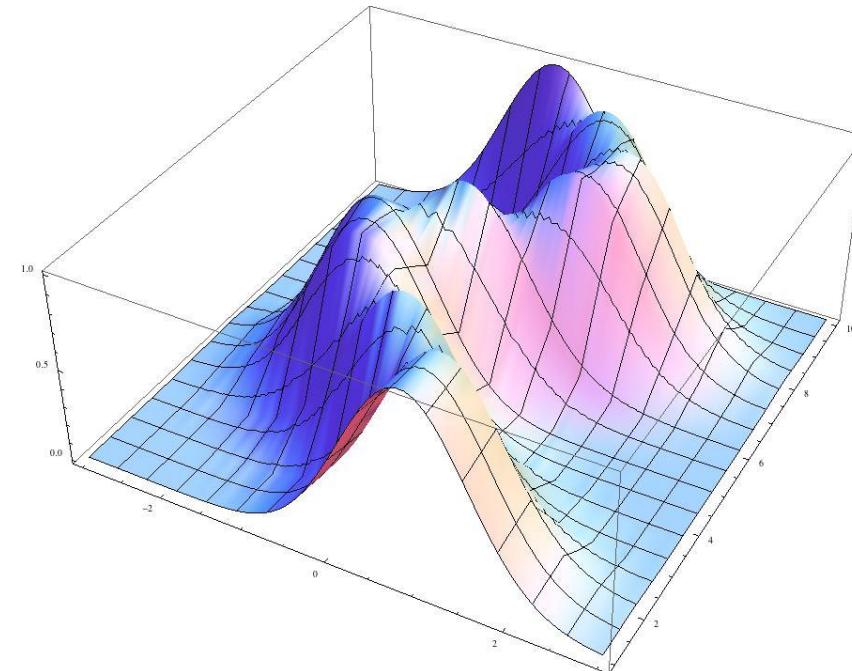
Parameters:

input layer: srtm\_37\_decoup\_Paris\_I93  
Band number: Band 1  
Interval between curves: 10 m  
Attribute Name: ELEV  
Outlines (output file): /TP5/calculations/lignes\_niveaux\_10m.shp

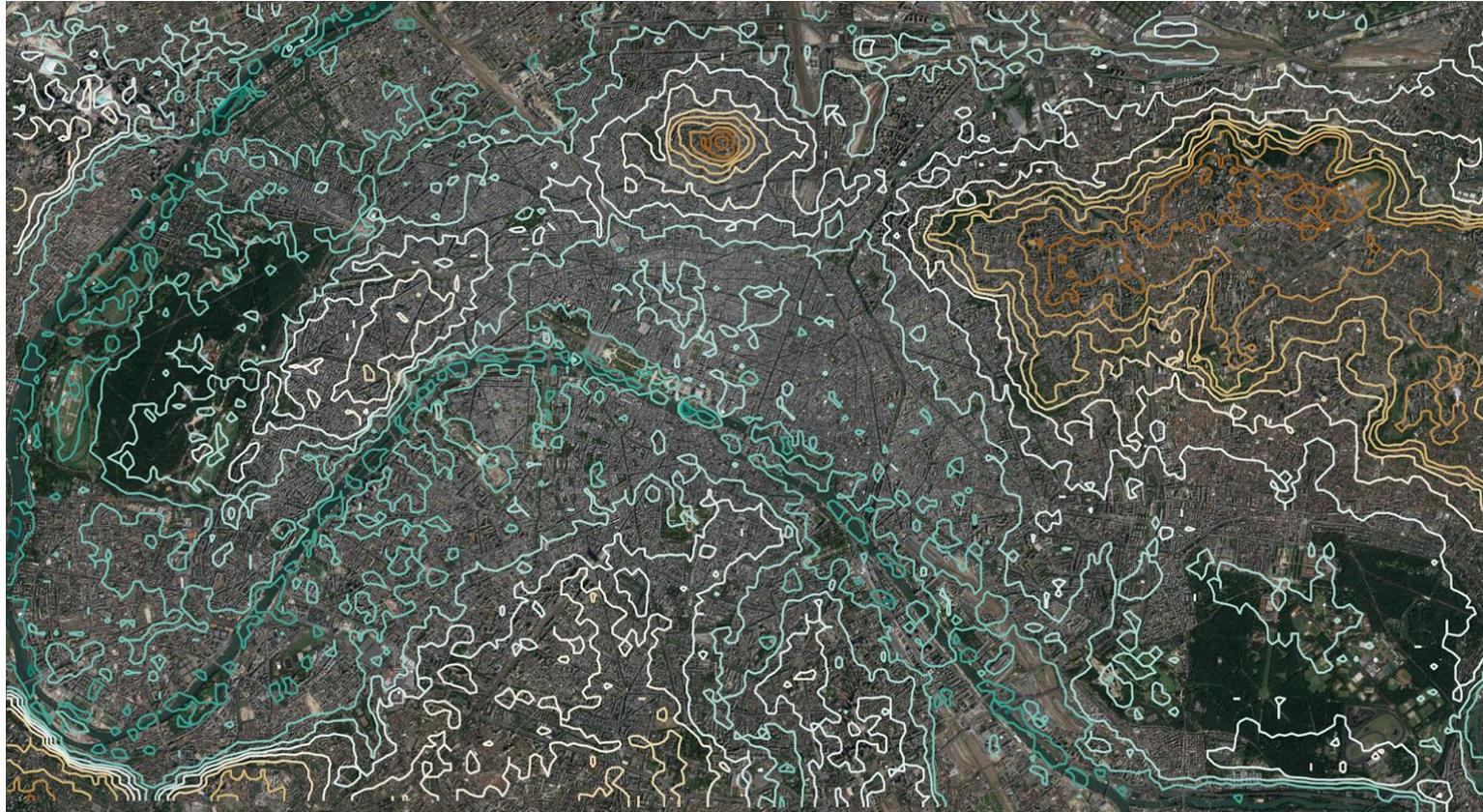
# Getting level lines by interpolation



# About interpolation



# Formatting level rows



# Part Two: Creating Vector Layers

Create data layers:

Point layers:

seize the wells from the Vasserot plan

Linear layers:

An update on topology and snapping

Enter roads from the plan

Polygonal layers:

enter the islands / then enter the frames by cutting

# Capturing a point layer: the wells



# Create a point vector layer

The screenshot shows the QGIS application interface. The top menu bar is visible with options like Couche, Préférences, Extensions, Vecteur, Raster, Base de données, Internet, Maillage, HCMGIS, MMQGIS, Traitement, and Aide. The 'Couche' (Layer) option is highlighted. A context menu is open under the 'Créer une couche' (Create a layer) option, with 'Nouvelle couche Shapefile...' (New Shapefile layer...) selected. A black arrow points from this menu item down to the 'Nouvelle couche Shapefile' configuration dialog. This dialog has several fields: 'Nom de fichier' (File name) set to '\seminaire\_TAIS\2020-2021\TP5\saisie\points\_puits\_l93.shp', 'Codage du fichier' (File encoding) set to 'UTF-8', 'Type de géométrie' (Geometry type) set to 'Point', and 'Dimensions supplémentaires' (Additional dimensions) set to 'Aucune'. Below these, there's a 'Nouveau champ' (New field) section with a 'Nom' (Name) field containing 'abc' and a 'Type' (Type) dropdown set to 'Donnée texte' (Text data). The 'SCR du Projet' (Project CRS) is listed as 'EPSG:2154 - RGF93 / Lambert-93'. At the bottom of the dialog, there's a 'Liste des champs' (List of fields) table with one entry: 'id' (Nom), 'Integer' (Type), '10' (Longueur), and 'Précision'. Buttons at the bottom right include 'Supprimer le champ' (Delete field), 'OK', 'Annuler' (Cancel), and 'Aide' (Help).

Create a new Shapefile: Layer menu/Create Layer/New Shapefile, then:

give a file name "points\_puits\_l93".shp, to be saved in the "entry" folder of the project folders,

Choose a point geometry type  
select the SCR of project 2154/Lambert-93

# Enable layer editing mode

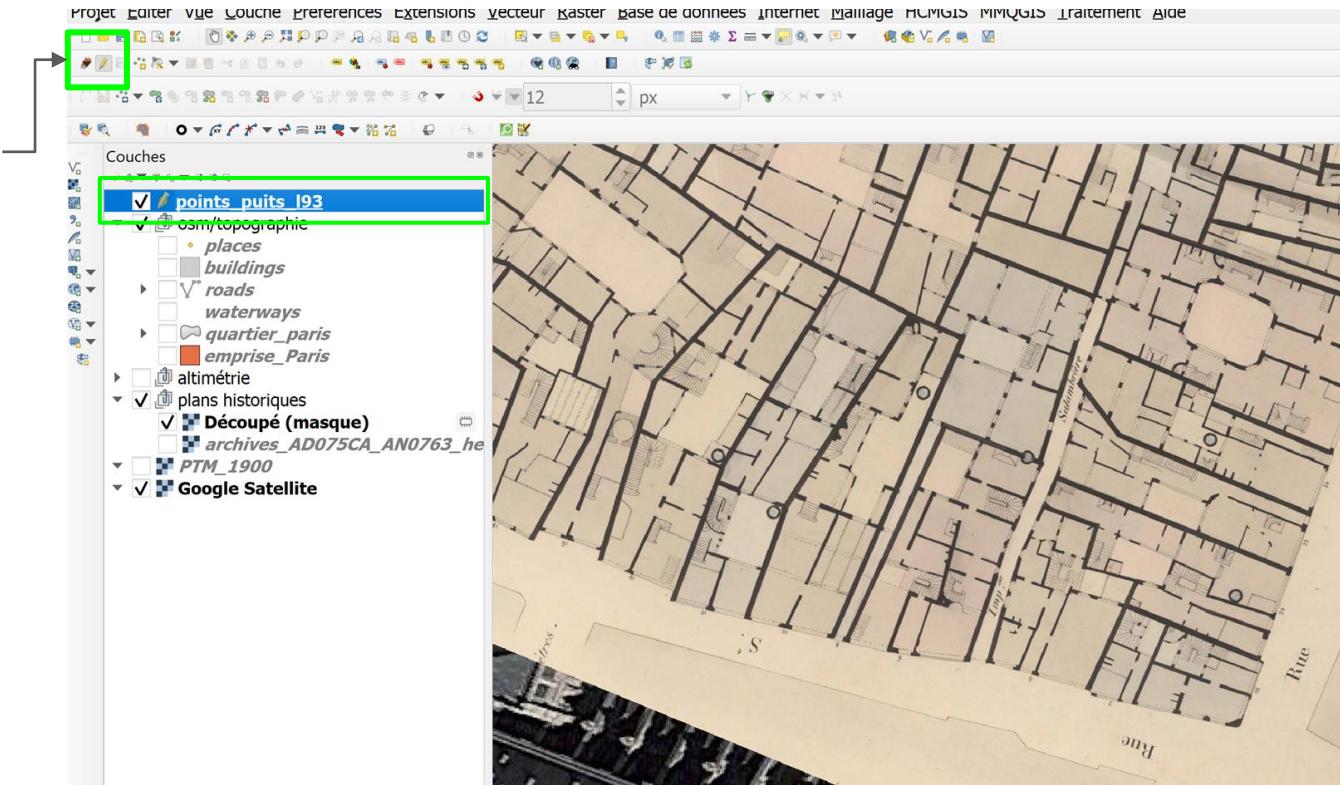
By default, layers are not editable to avoid errors.

You must switch the layer to edit to modify:

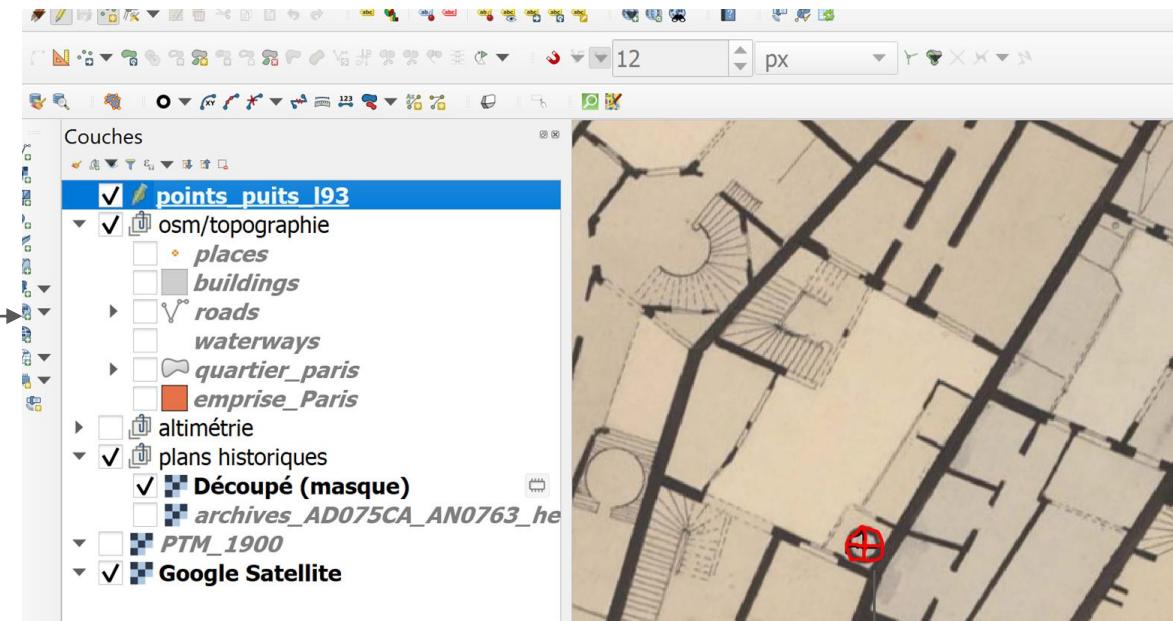
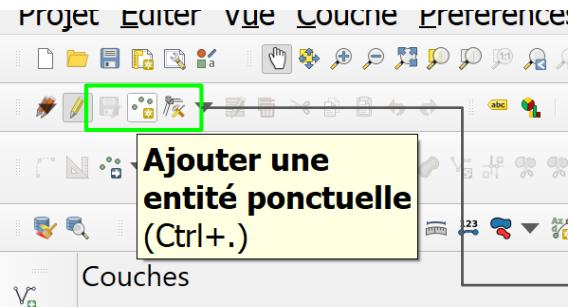
- attributes.
- geometries.

Select the layer to edit.

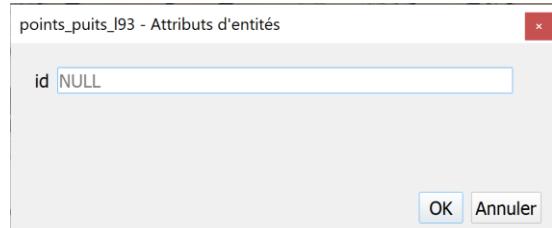
Enable edit mode



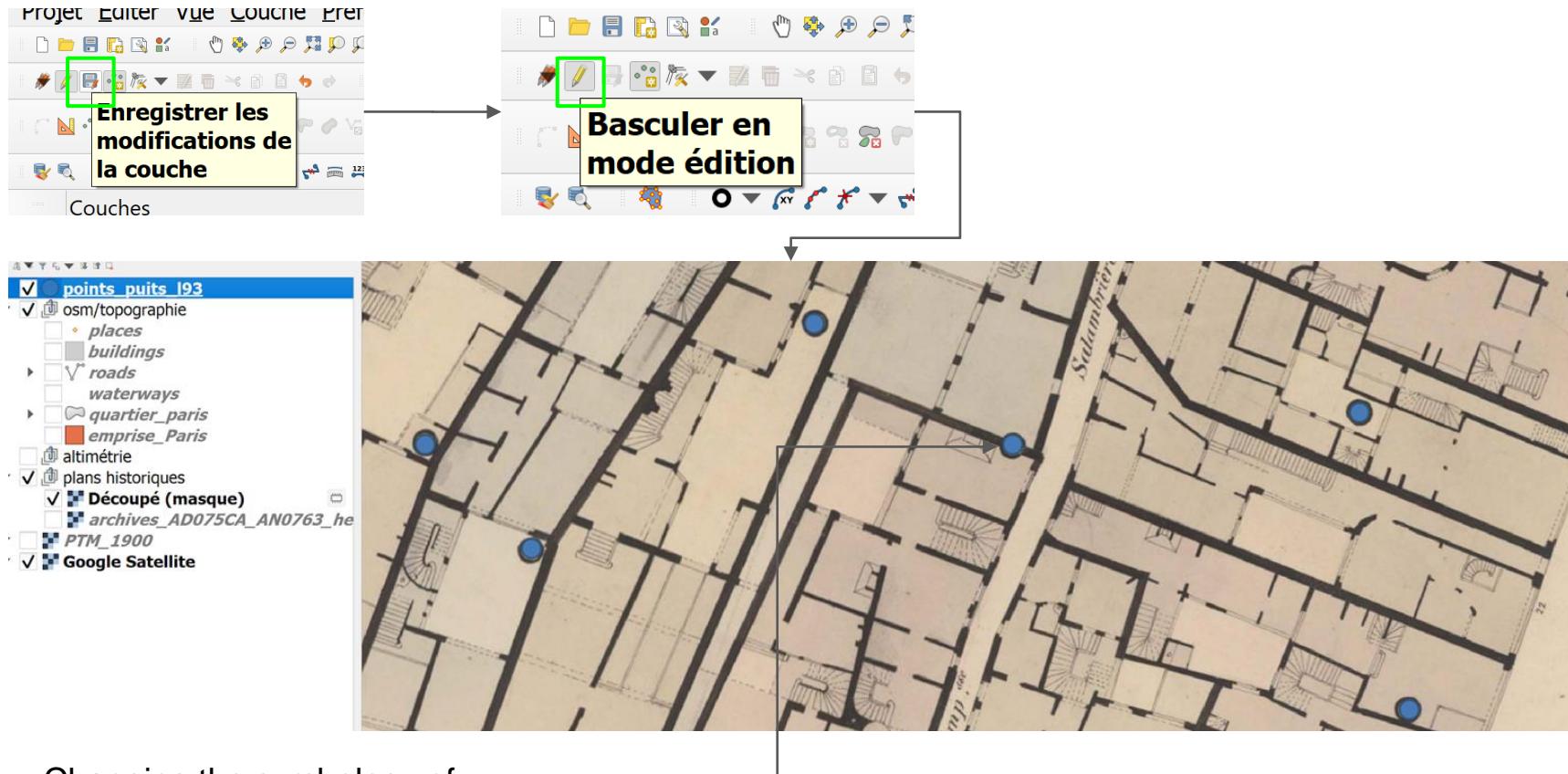
# Perform a point capture



1. Activate the "add a point entity" tool.
2. Enter the points one by one
3. Each time you enter, an interface asks you to enter an id.
4. Click ok, leaving the cell blank



# Save input / change symbology



Changing the symbology of wells

# Populate the attribute table

The screenshot illustrates the workflow for populating the attribute table of a well layer in QGIS.

**Left Panel (Layers Panel):** Shows the project layers. The "points\_puits" layer is selected. A context menu is open for this layer, with the "Ouvrir la table d'attributs" option highlighted.

**Middle Panel (Attribute Table):** The attribute table for the "points\_puits" layer is displayed. It shows a single column named "id" with all values currently set to NULL. A red box highlights the first six rows of the table.

**Right Panel (Field Calculator):** The "Field Calculator" dialog is open for the "points\_puits\_J93" layer. The "Créer un nouveau champ" tab is active, and a new field named "id" is being created of type "Nombre entier (entier)" with a length of 10 and precision of 3. The expression \$id is entered in the Expression field. The "Mise à jour d'un champ existant" checkbox is checked, and the value "123 id" is specified. The "OK" button is highlighted with a green box.

**Bottom Panel (Message Bar):** A message states: "Cette couche n'est pas en cours d'édition. Si vous cliquez sur OK, le mode édition sera automatiquement activé." (This layer is not currently being edited. If you click OK, edit mode will be automatically activated.)

**Text at the bottom:** "The "id" attributes of each well will fill with an increment."

# Modeling discussion: track capture

Entering the tracks, choice of geometric primitive and semantics:

So linear?

Advantages / disadvantages?

If polygon?

Advantages / disadvantages?

# Create a line vector layer

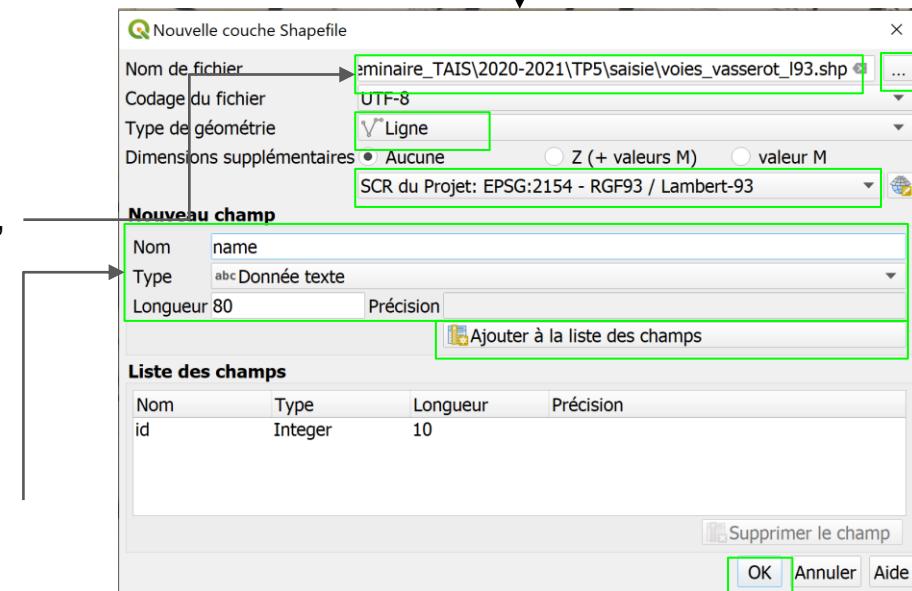


Create a new Shapefile: Layer menu/Create Layer/New Shapefile, then:

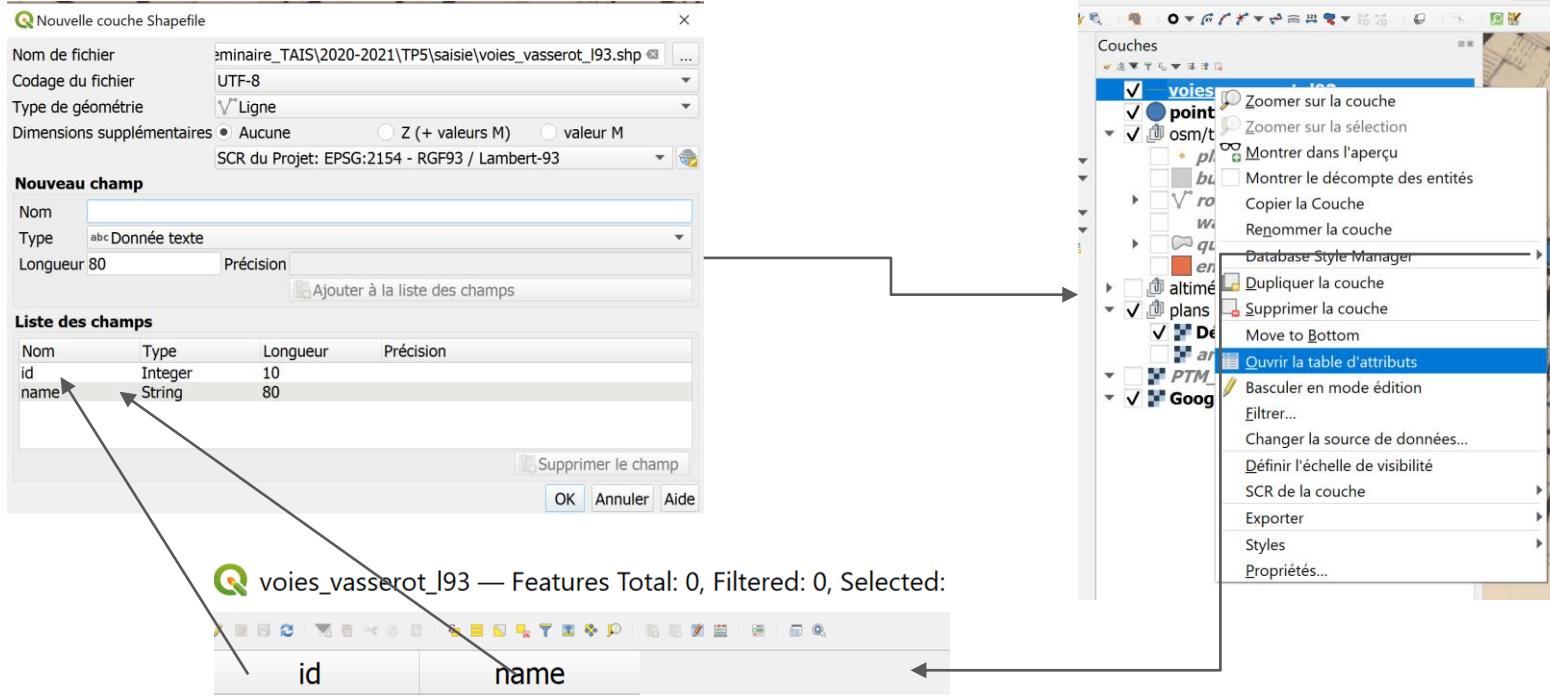
- give a file name "voies\_vasserot\_I93".shp, to be saved in the "entered" folder of the project folders,

Choose a line geometry type

- select the SCR of project 2154/Lambert-93
- Add a name, text and length 80 attribute
- Tap "Add to list of fields"
- Then on "Ok"



# Adding an attribute field and table



Les champs sont les colonnes de la table attributaire.

# Track Linear Capture

1. Switch the layer to edit mode
2. Take the "Add linear feature" tool
3. Start the seizure of Zacharie Street:



First point (left click):

at the rough intersection between St-Severin and Zacharie streets

Next points (left clicks):  
roughly in the middle of the street.

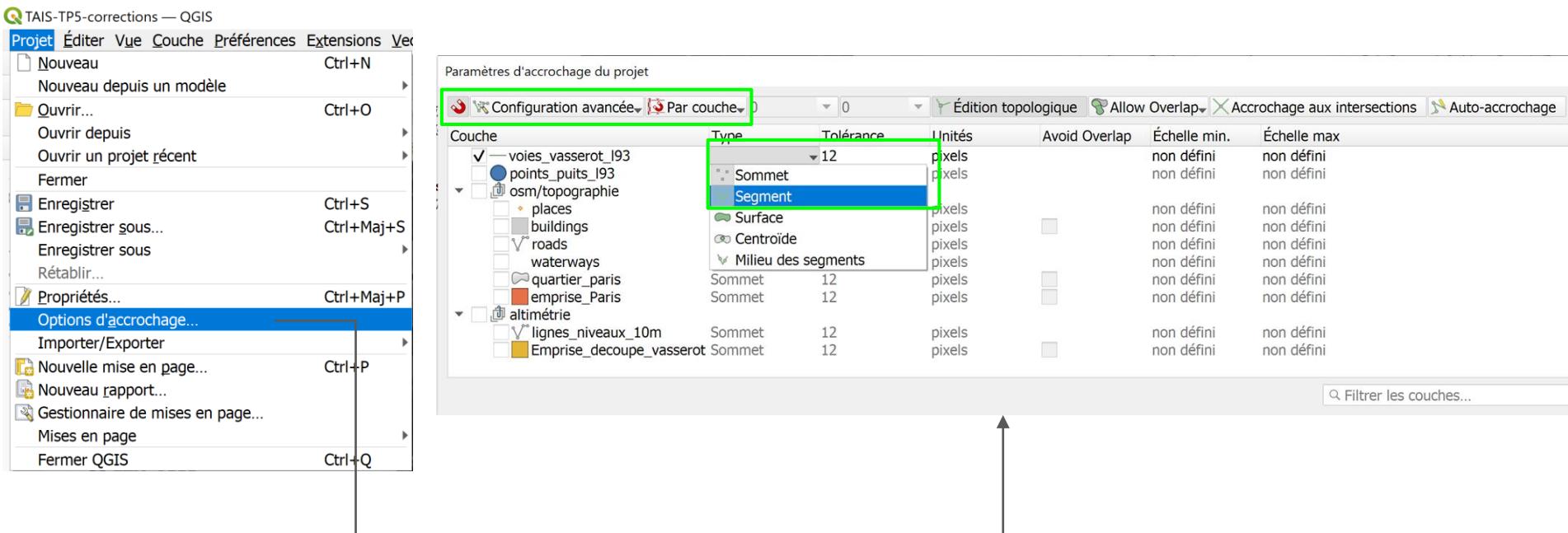
Last point (left click):  
at the intersection of Zacharie and de la Huchette streets.

To complete the capture of the street:  
Right-click



# Topology and snapping

Before starting the entry of a new street, you must activate the snapping topologies of the entities:



# Capture with hanging of other streets



When snapping is enabled, a pink square is highlighted when the mouse moves to less than 12 pixels, to inform you of the snap to the exact point of the line



Make a point at the intersection of St-Severin and des Prêtres streets to anticipate the next hanging points.

# Shaping the channel layer



Format the channel layer:

Symbology:

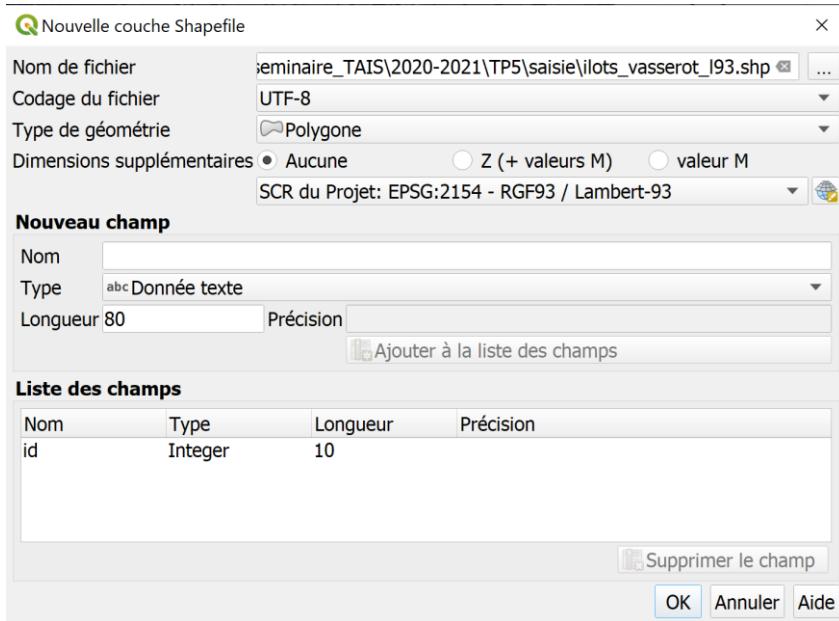
- 4 meters wide (fixed width)
- Interior color: #e9d8be
- Exterior color: #000000
- Enable entity blending mode

Labels:

- Font + stamp
- Curved labels
- Labels follow the line

# Entering island polygons

1. Create a layer with the parameters:



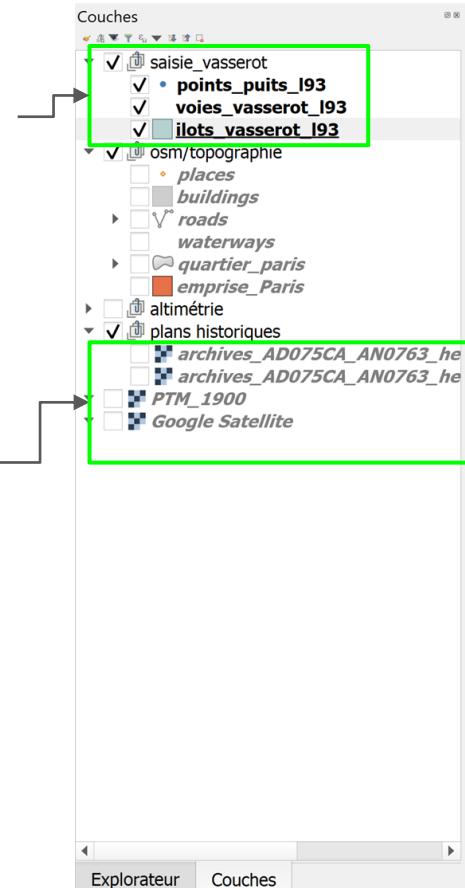
2. Enter the 3 islands of the plan by drawing the polygons



3. Enter the 8 border islands. Don't forget to save the input layer.

# Shaping the island layer

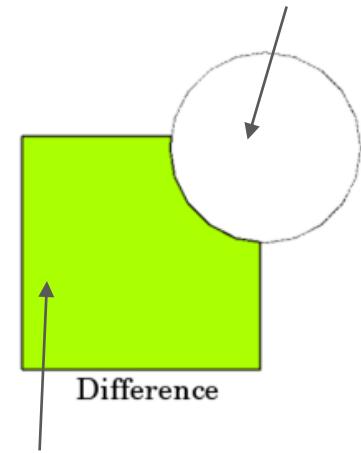
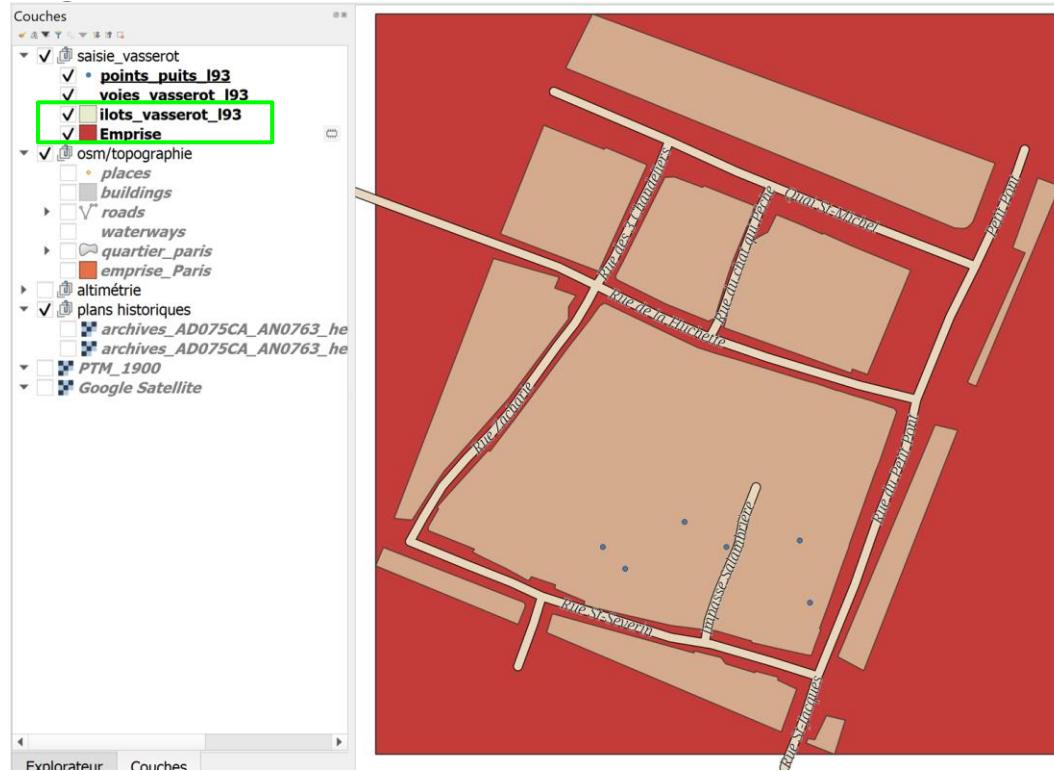
Creating a layer group:



On peut désactiver les couches rasters

# Extraction of polygons from the track right-of-way

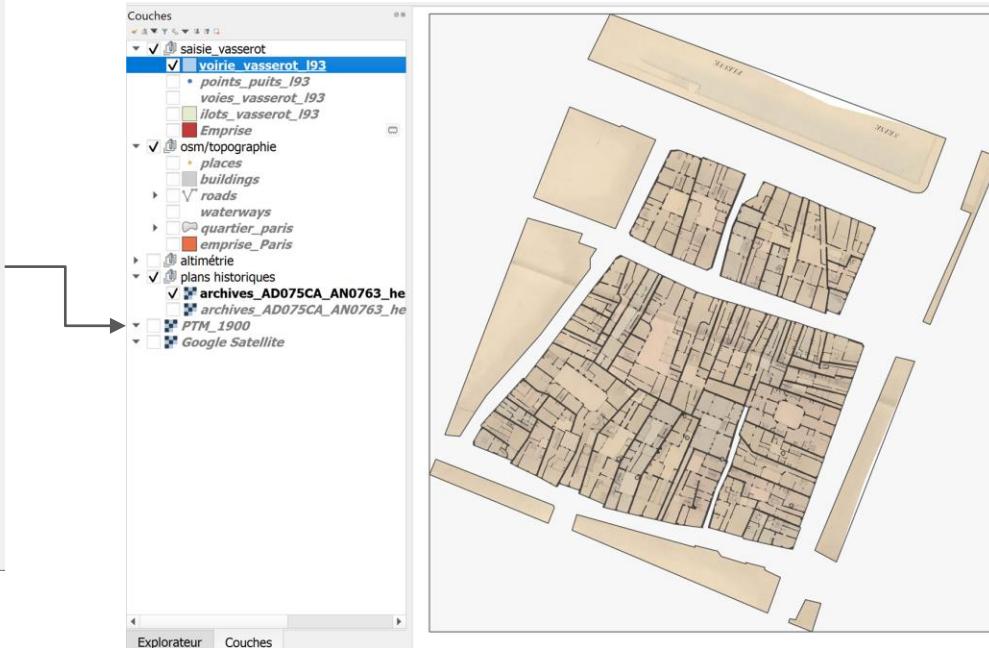
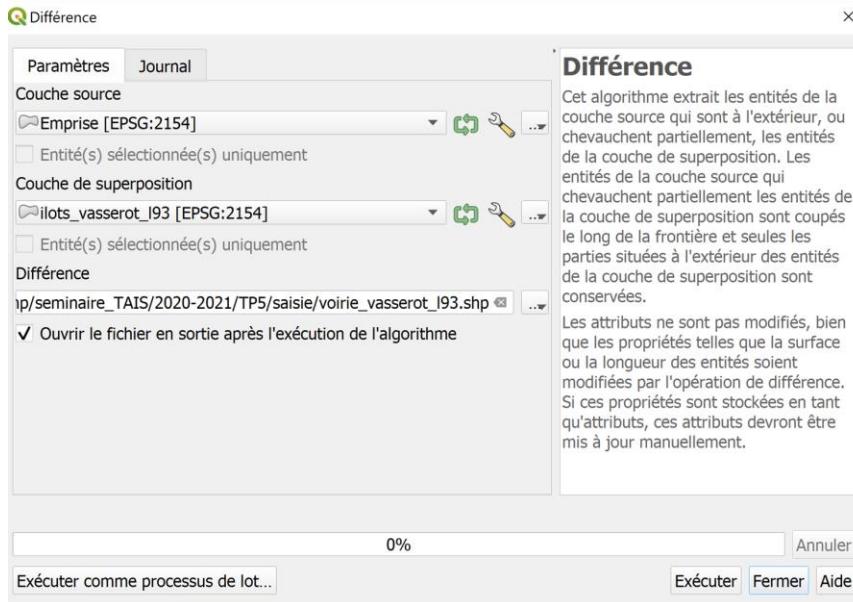
1. Extract the right-of-way of the islands ([see slide here if necessary](#)) îlots Vasserot



Emprise des îlots

# Extraction of polygons from the track right-of-way

2. Perform a difference operation (Vector menu/Geoprocessing tools/Difference) with the following parameters:

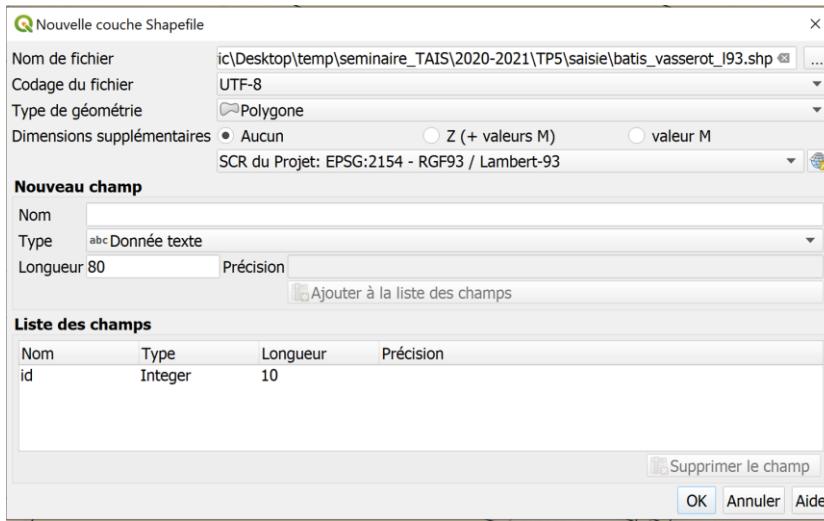


# Seizure of frames

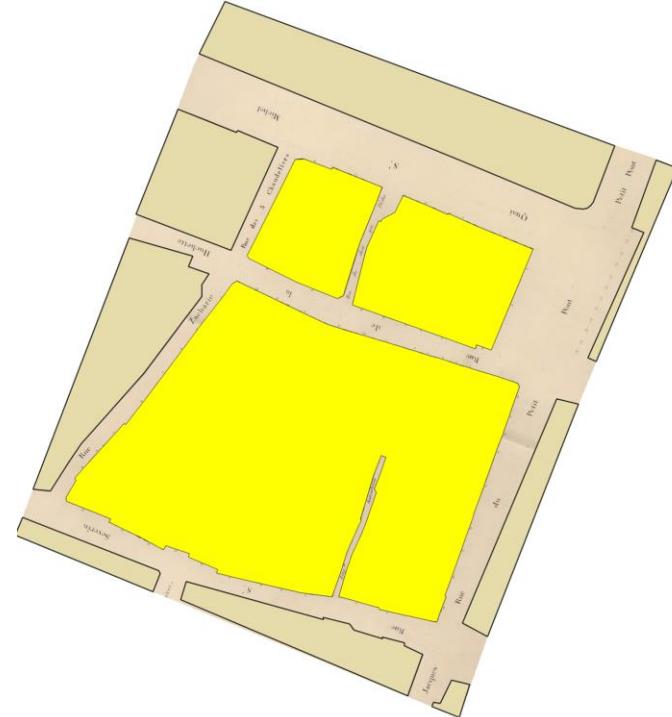
We have two options:

Direct entry of the polygons of the frames (by ensuring the topology, i.e. the attachment)

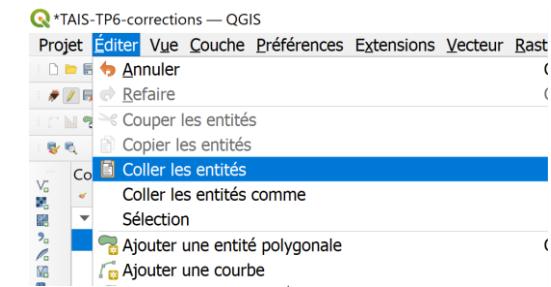
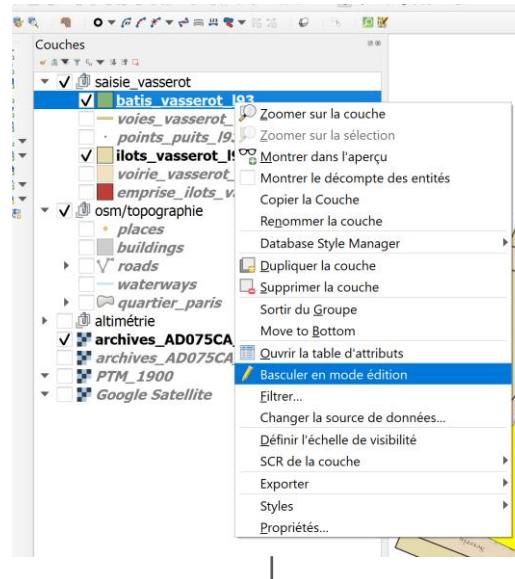
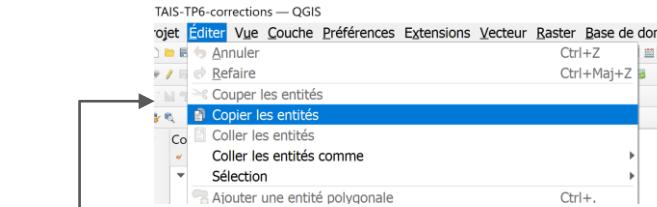
copying islands into a new layer and slicing (implicit guarantee of topology)



# Selection of islands and copying into the frame layer



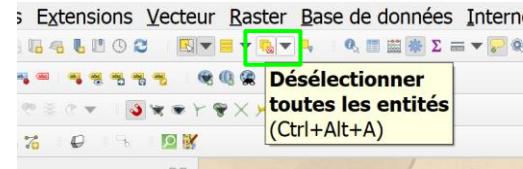
Select the 3 islands of the island layer  
represented in the map  
Shift + click



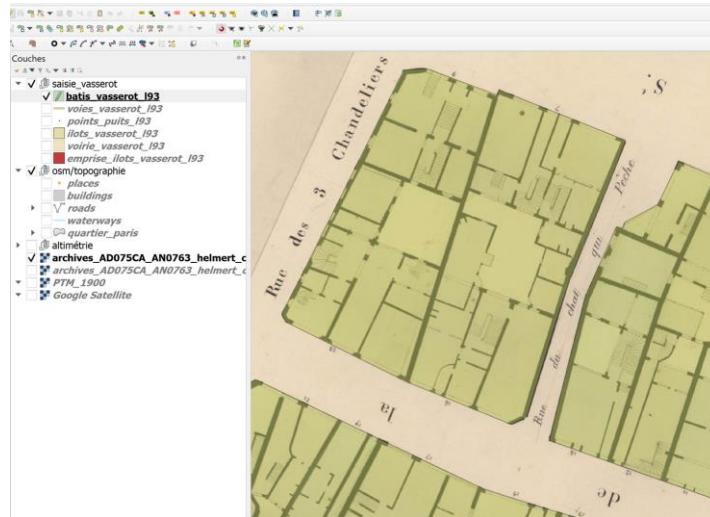
**Coller les polygones dans la couche des bâts**

# Préparer la saisie par découpage

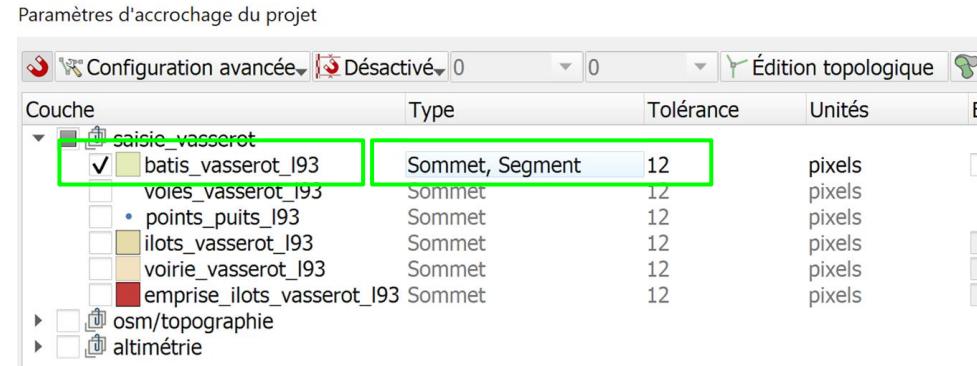
1. Deselect all entities



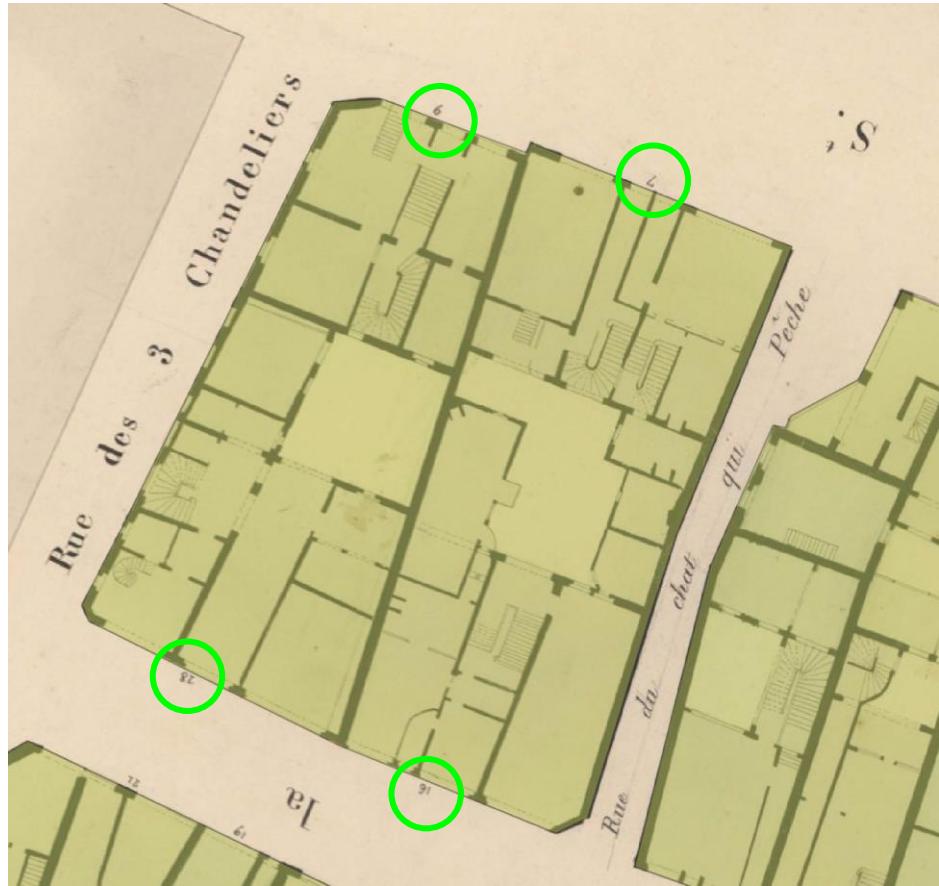
2. Give transparency to the layer of the frames to see the features of the walls below



3. Enable snapping only for the frame layer



# Modeling choices



# Cutting polygons to create frames

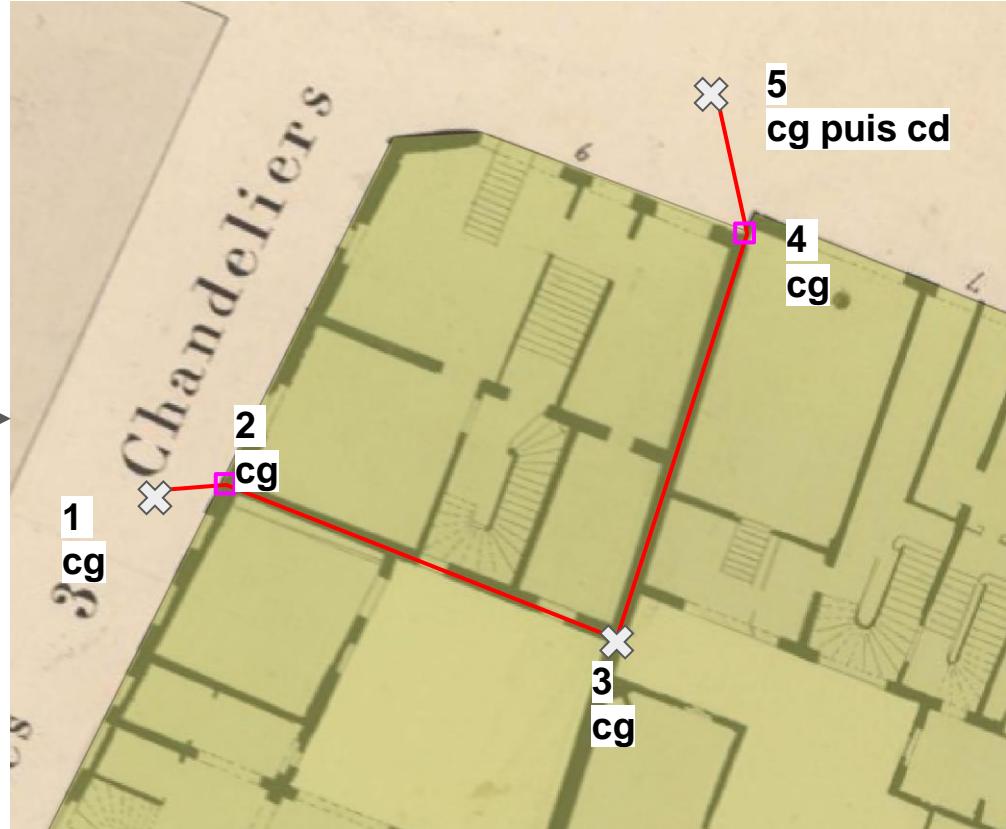


Separation into two entities:  
two polygons



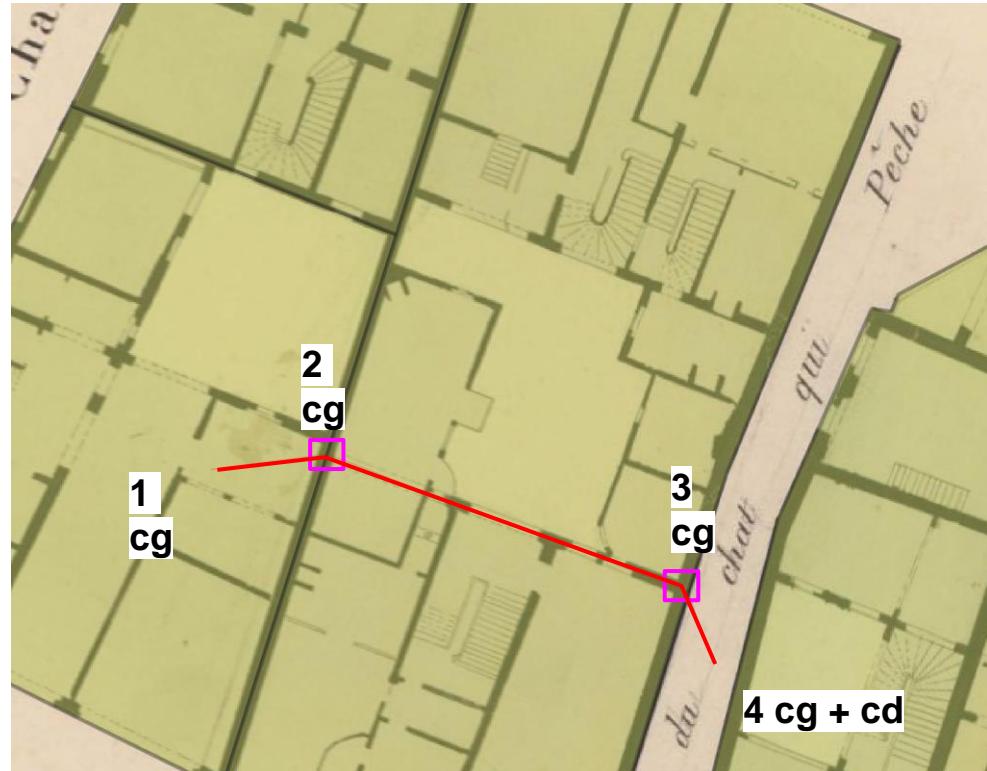
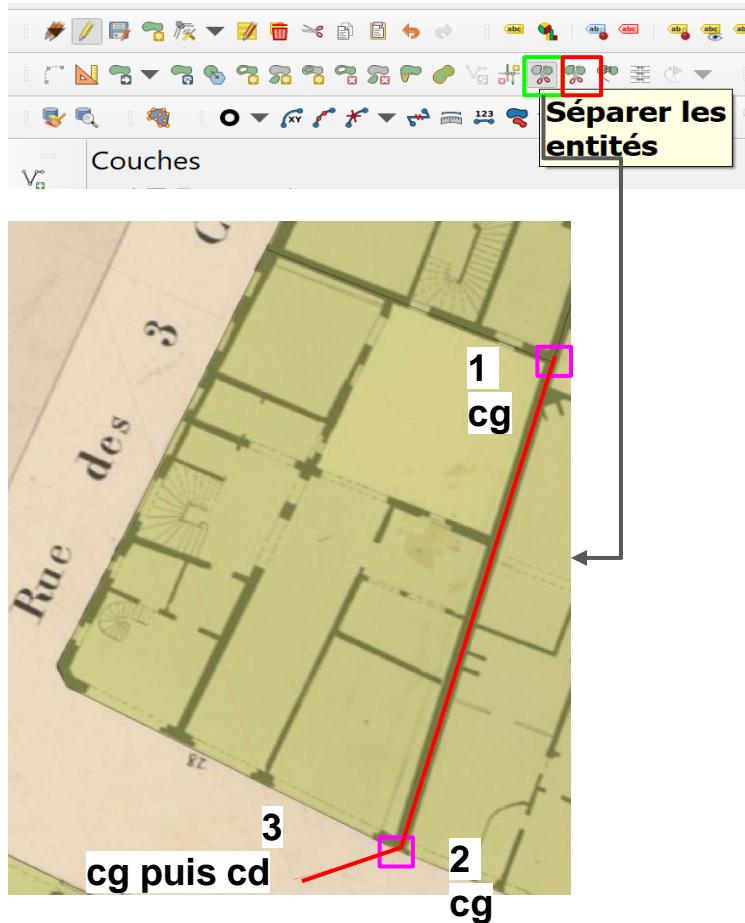
Separation of the entity in two: but creation  
of a multipolygon.

One row in the attribute table, but several  
polygons (for example, France + Corsica +  
islands: several polygons for the same  
entity).

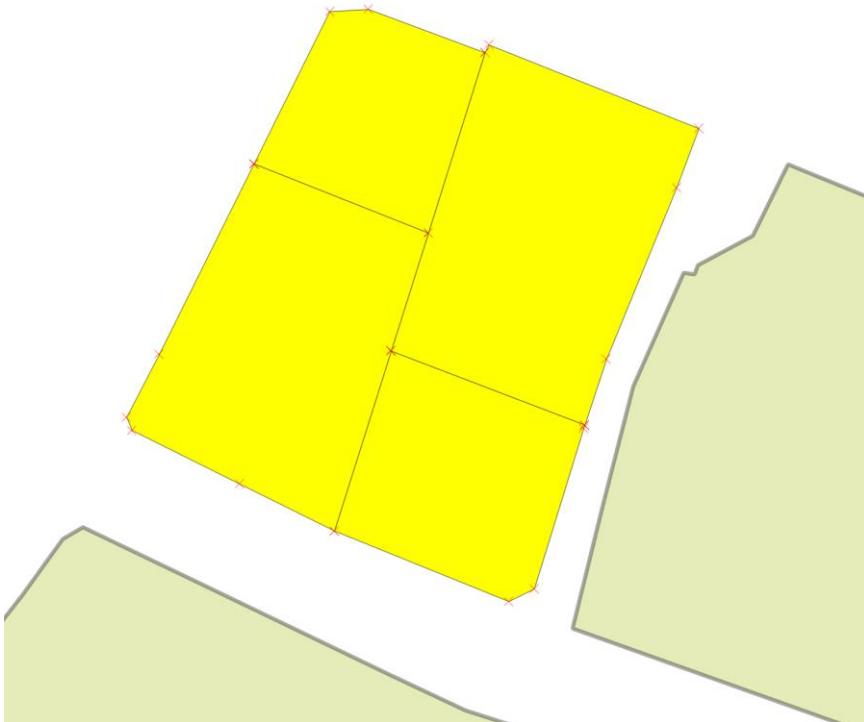


cg : clic-gauche; cd : clic-droit

# Cutting polygons to create frames



# Result of the clipping in the attribute table



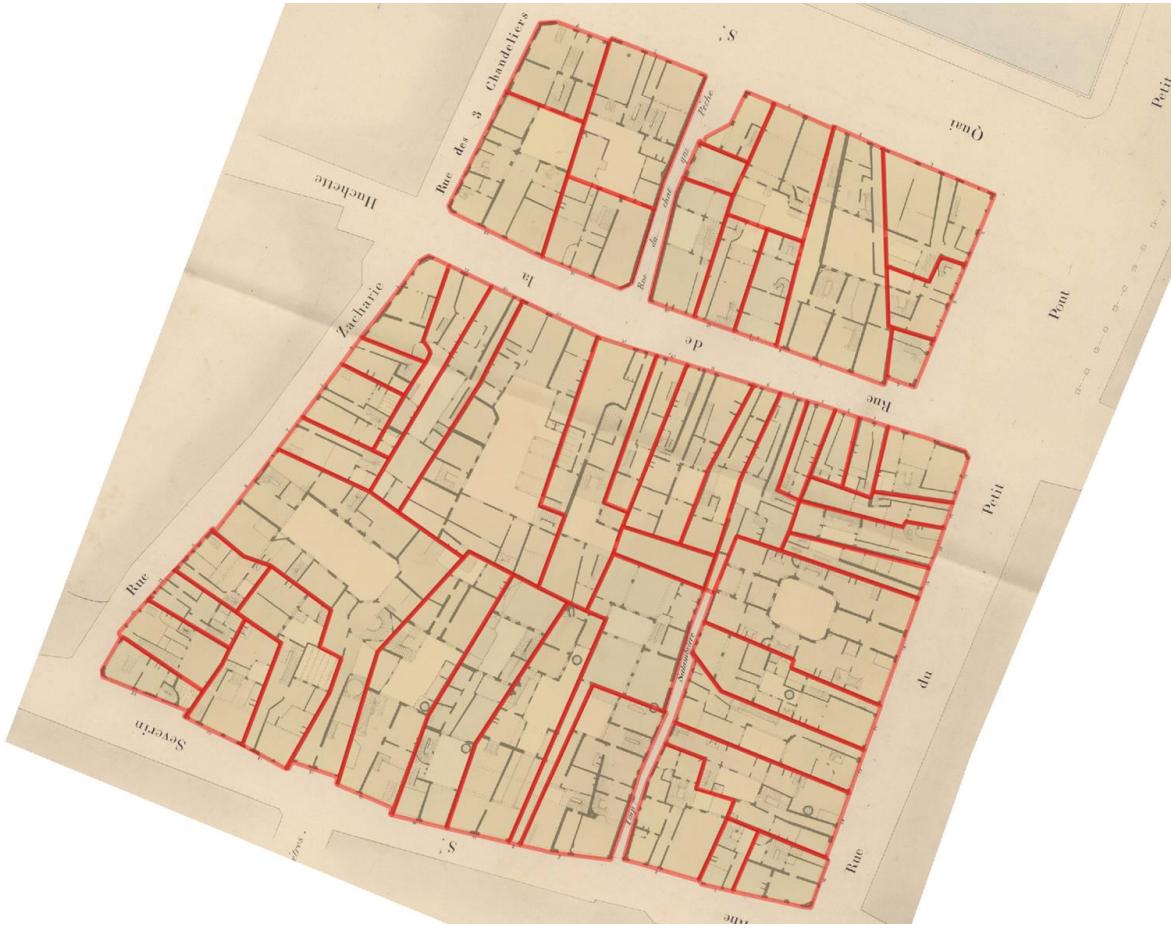
batis\_vasserot\_l93 — Total des entités: 6, Filtré...

123 ic = 123 id Tout mettre à jour Mettre à jour la sélection

id	
1	NULL
2	NULL
3	NULL
4	NULL
5	NULL
6	NULL

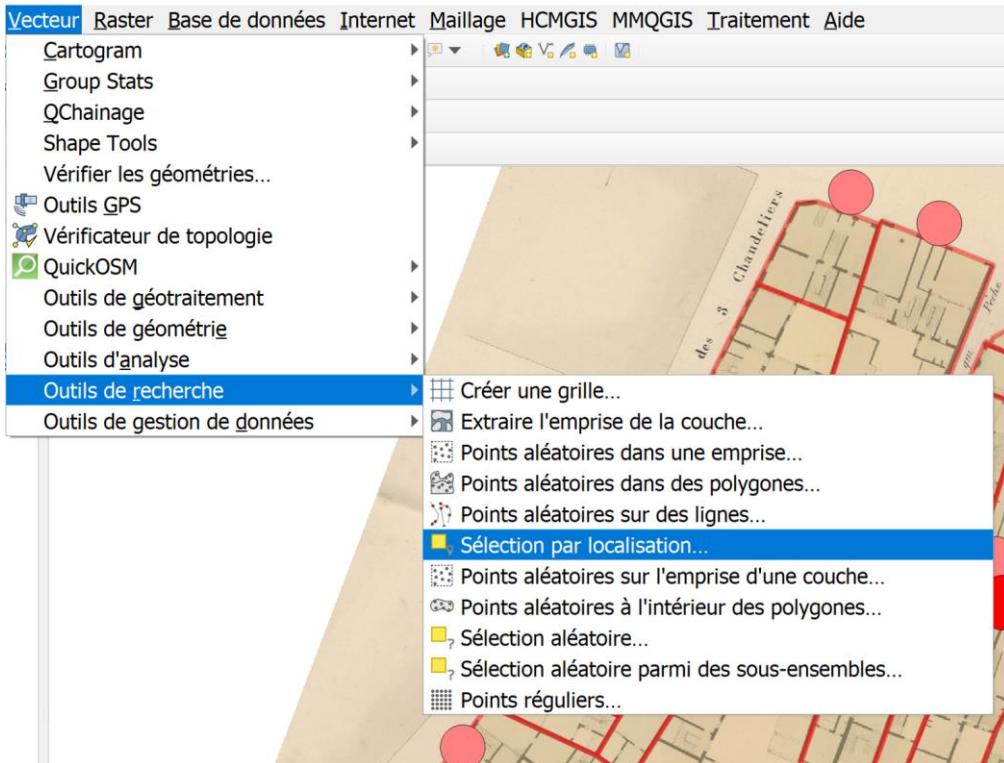
Montrer toutes les entités

# Exercise: finish cutting the frames



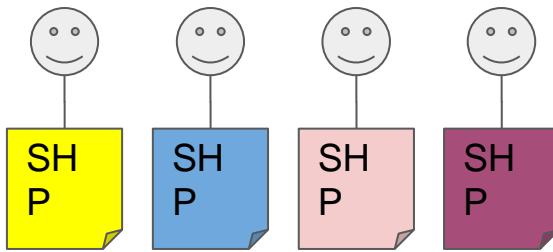
# Spatial question?

Which buildings have wells?



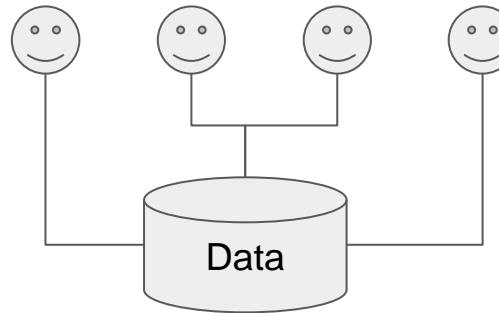
# Configuring Database Access

Until now, we have used local files.



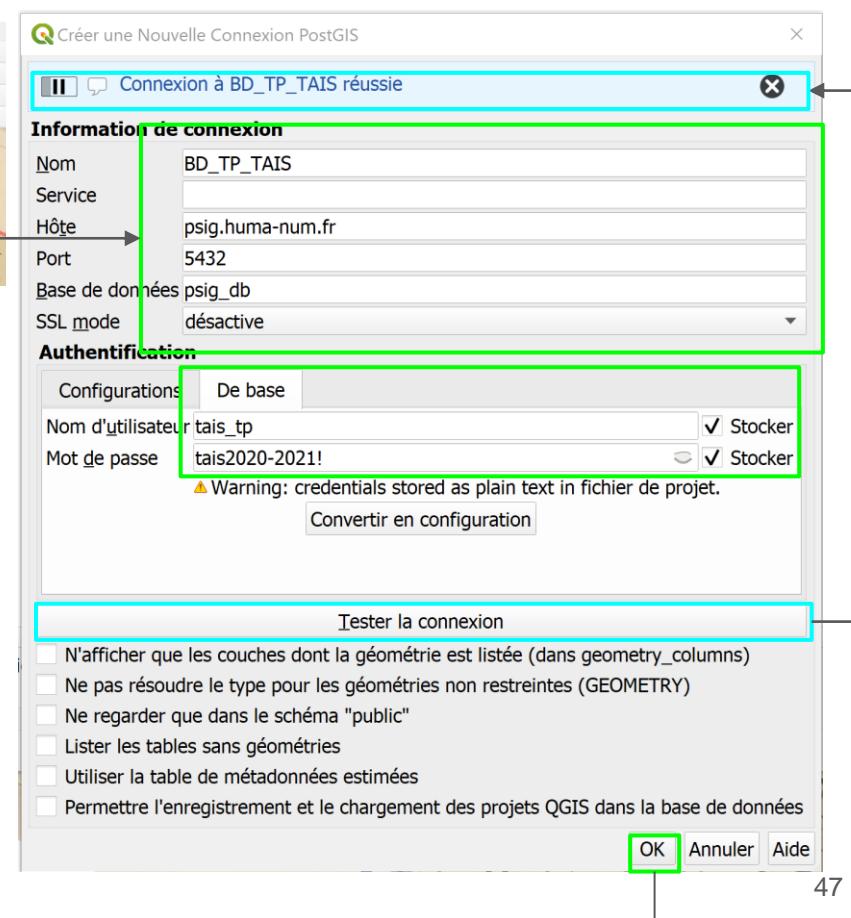
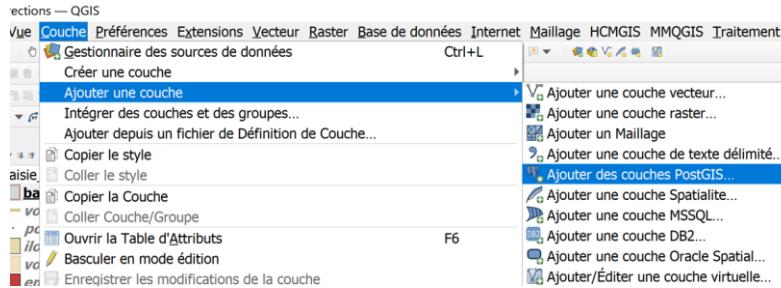
A change made to a file is not transmitted.

A remote database allows us to connect to the same data.



A change made on the basis will benefit all connected users.  
Warning: this is also the flaw!

# Configuration d'un accès à une base de données

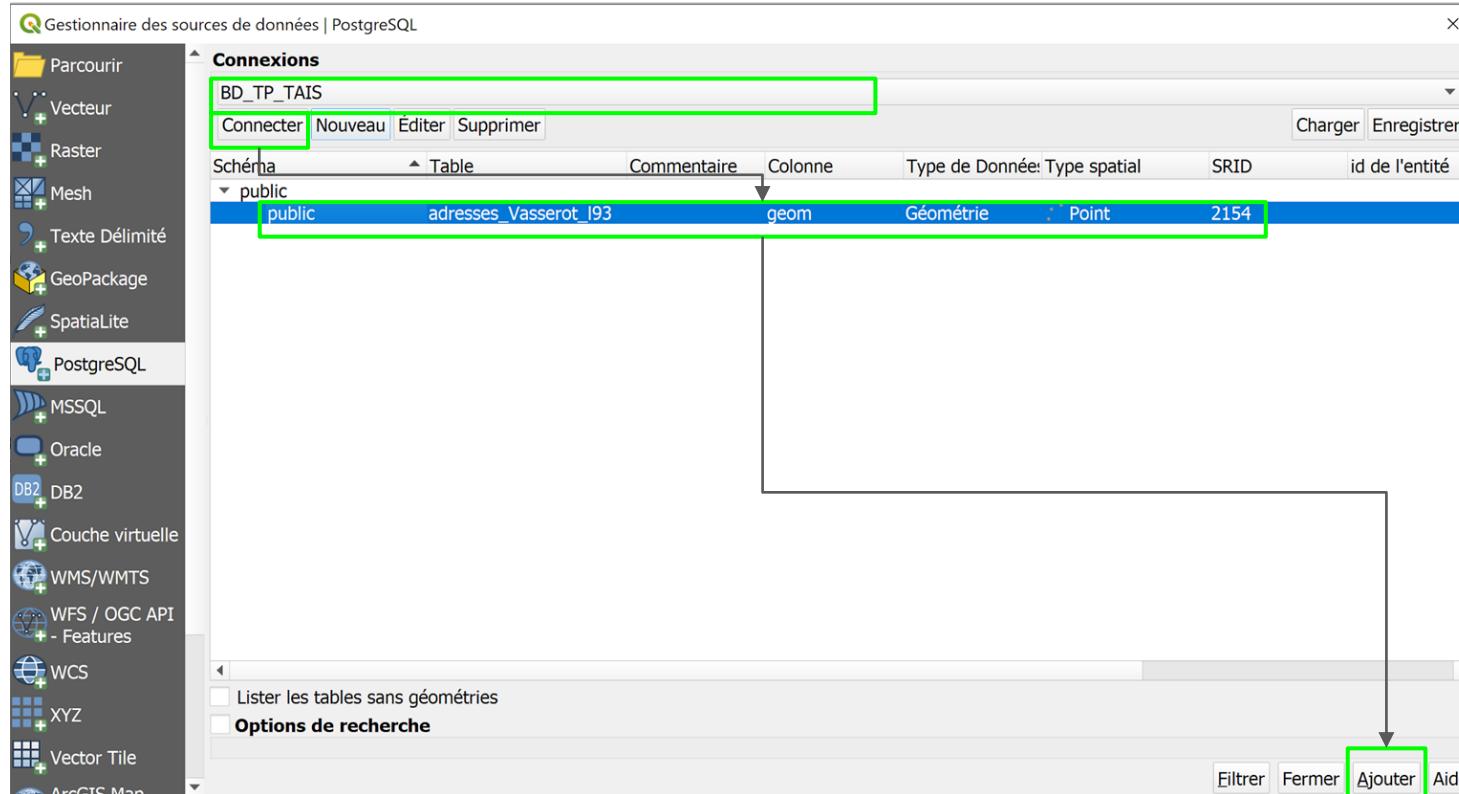


Name: BD\_TP\_TAIS  
Hosted by psig.huma-num.fr  
Port: 5432  
Database: psig\_db  
Username: tais\_tp  
Password: Shut up2020-2021!

- a) Ne fournissez pas de mot de passe dans les paramètres de connexion - il sera demandé de manière interactive si nécessaire;
- b) Utilisez l'onglet Configuration pour ajouter vos informations d'identification dans une méthode d'authentification HTTP basique et les stocker dans une base de données chiffrée.

OK Annuler

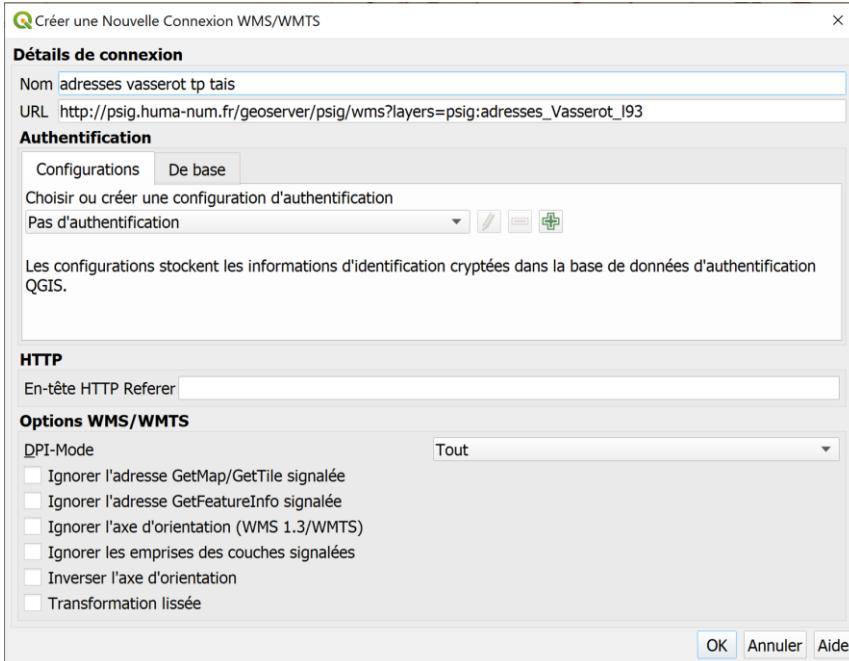
# Adding a layer from a database



# Other ways to access data (feeds)

## WMS (Web Map Service)

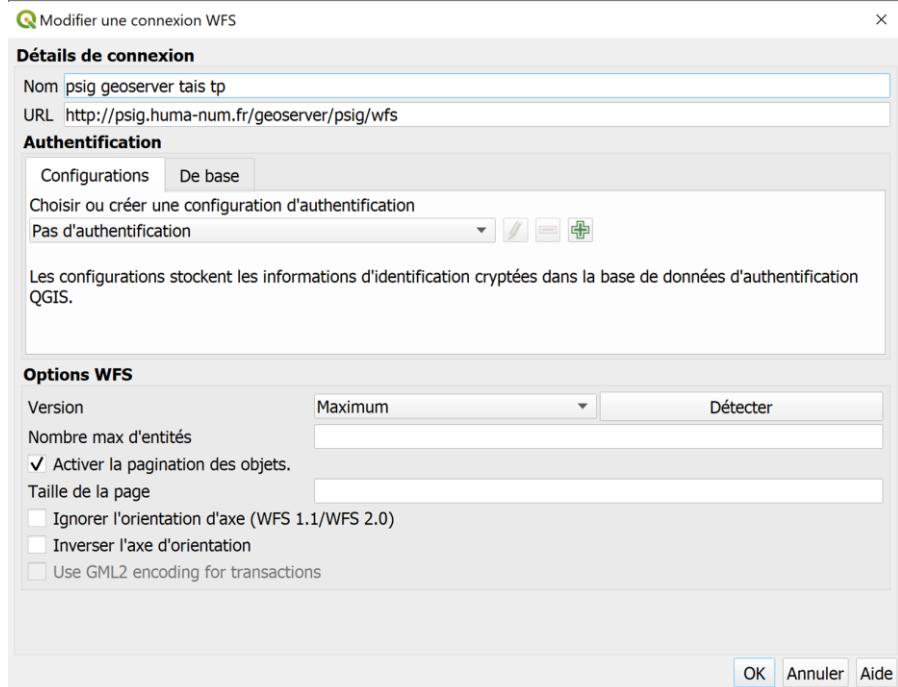
Menu Couche / Ajouter une couche / Couche WFS



<http://psig.huma-num.fr/geoserver/psig/wms>

## WFS (Web Feature Service)

Menu Couche / Ajouter une couche / Couche WFS

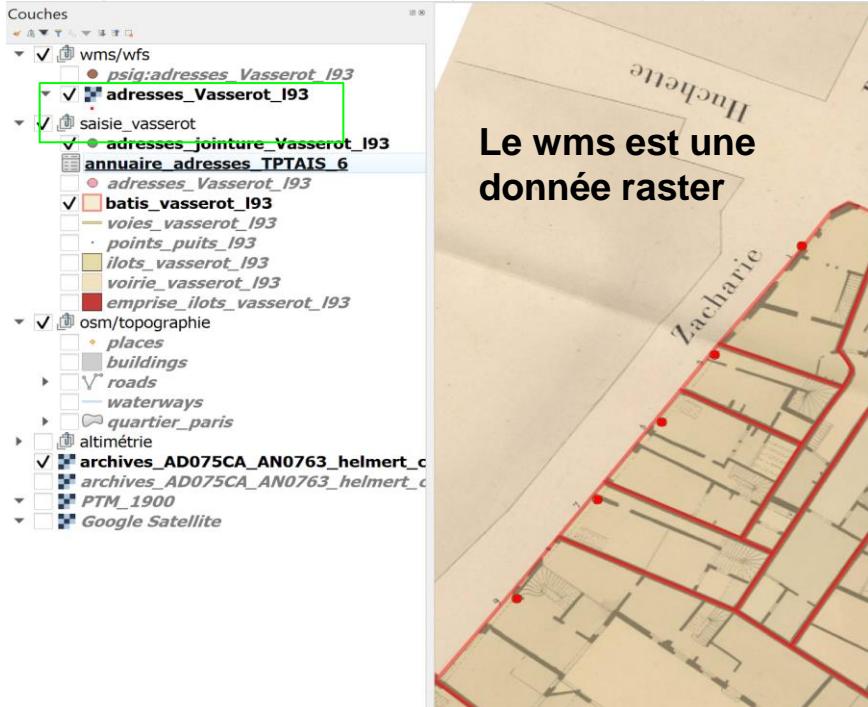


<http://psig.huma-num.fr/geoserver/psig/wfs>

# Other ways to access data (feeds)

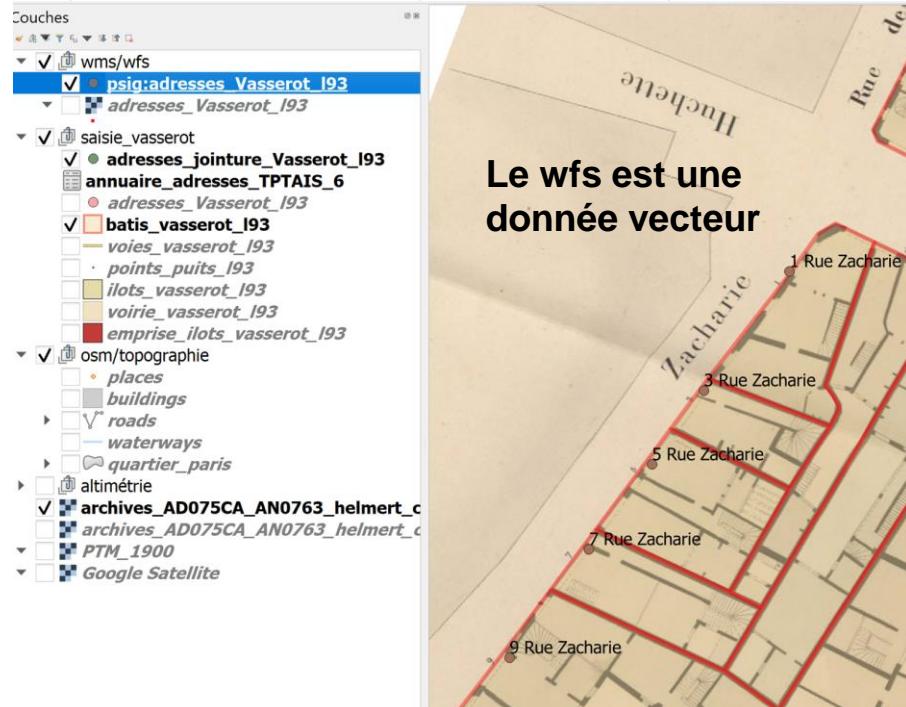
WMS (Web Map Service)

Layer Menu / Add Layer / WFS Layer



Web Feature Service (WFS)

Layer Menu / Add Layer / WFS Layer



Voir ici : [http://psiq.huma-](http://psiq.huma-ss.ens.fr/)

# Load a directory table

1. Download this directory type data file (right-click and select "save link as" to save the file):
2. <https://sharedocs.huma-num.fr/wl/?id=JldWjYkt3kKgW9EpWepBgB973LDV3Gmu>

1. Load it into Qgis :

(either click-drop,

via Menu/Add Layer

of delimited text)

The screenshot shows the QGIS interface. On the left, the 'Couches' (Layers) panel is open, displaying a tree structure of layers. Under the 'saisie\_vasserot' group, the 'annuaire\_adresses\_TPTAIS\_6' layer is selected, indicated by a checkmark. This layer contains sub-layers such as 'adresses\_Vasserot\_I93', 'batis\_vasserot\_I93', 'voies\_vasserot\_I93', 'points\_puits\_I93', 'ilot\_vasserot\_I93', 'voirie\_vasserot\_I93', and 'entreprise\_ilots\_vasserot\_I93'. Below this group is 'osm/topographie' with sub-layers like 'places', 'buildings', 'roads', 'waterways', 'quartier\_paris', 'altimetrie', and several 'archives...' layers. At the bottom of the layer tree are 'PTM\_1900' and 'Google Satellite'. To the right of the layer tree is a table viewer window titled 'annuaire\_adresses\_TPTAIS\_6 — To...'. The table has columns 'adresse', 'metier', and 'demographie'. A green box highlights the first two columns. The data in the table is as follows:

	adresse	metier	demographie
1	12 Rue Saint S...	serrurier	9
2	10 Rue Saint S...	marchand de ...	6
3	20 Rue Zacharie	quincaillier	3
4	1 Rue Zacharie	marchand de ...	10
5	3 Rue Zacharie	fabrique de ga...	10
6	5 Rue Zacharie	chapelier	7
7	7 Rue Zacharie	charcutier	1
8	9 Rue Zacharie	fondeur-cisele...	7
9	11 Rue Zacharie	fabrique de ga...	5

A button at the bottom of the table viewer says 'Montrer toutes les entités'.

There is a column that contains the addresses  
in the format: num rue

# Prepare a join

Observe the address layer ...

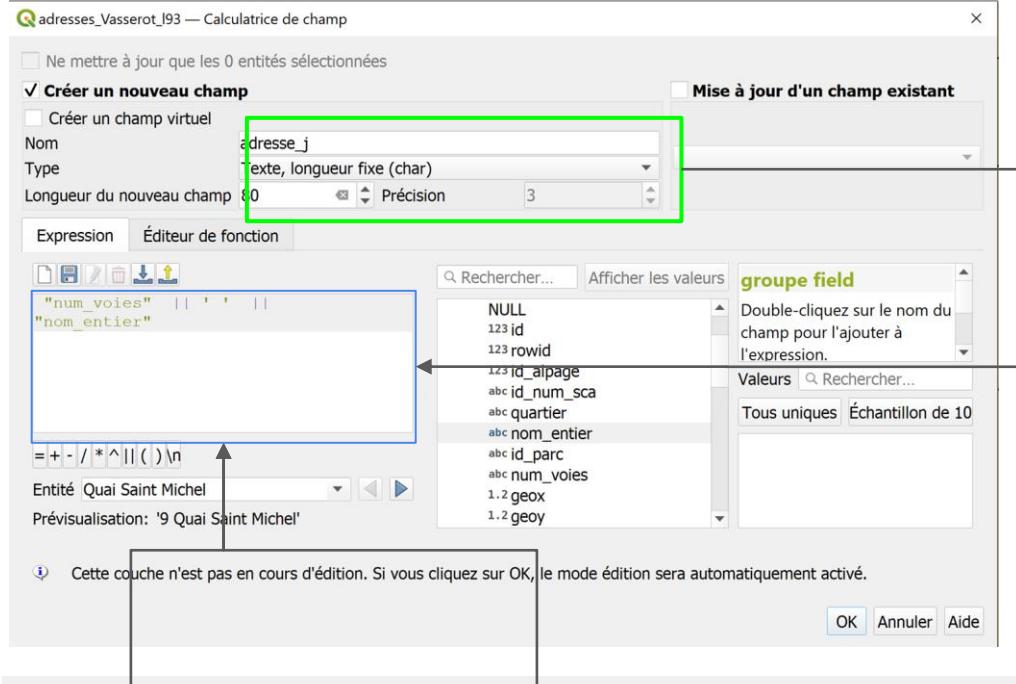
	id	rowid	id_alpage	id_num_sca	quartier	nom_entier	id_parc	num_voies	geox	geoy	style	css_class	extra
1	41	23249	23249 ADO75CA_AN...	Sorbonne	Rue Saint Seve...	PA3575	12	600672	127982	fill-rule:eveno...	x1L84	—	
2	40	23248	23248 ADO75CA_AN...	Sorbonne	Rue Saint Seve...	PA3574	10	600679	127980	fill-rule:eveno...	x1L84	—	
3	55	23310	23310 ADO75CA_AN...	Sorbonne	Rue Zacharie	PA26181	20	600633	128006	fill-rule:eveno...	x1L84	—	
4	54	23262	23262 ADO75CA_AN...	Sorbonne	Rue Zacharie	PA3571	1	600669	128051	fill-rule:eveno...	x1L84	—	
5	53	23261	23261 ADO75CA_AN...	Sorbonne	Rue Zacharie	PA3571	3	600664	128043	fill-rule:eveno...	x1L84	—	
6	52	23260	23260 ADO75CA_AN...	Sorbonne	Rue Zacharie	PA3570	5	600660	128038	fill-rule:eveno...	x1L84	—	
7	51	23259	23259 ADO75CA_AN...	Sorbonne	Rue Zacharie	PA3569	7	600656	128033	fill-rule:eveno...	x1L84	—	
8	50	23258	23258 ADO75CA_AN...	Sorbonne	Rue Zacharie	PA3577	9	600651	128025	fill-rule:eveno...	x1L84	—	

What to do?

Attention the preparation operation is not to be carried out on the base!

Only one person needs to perform the operation.

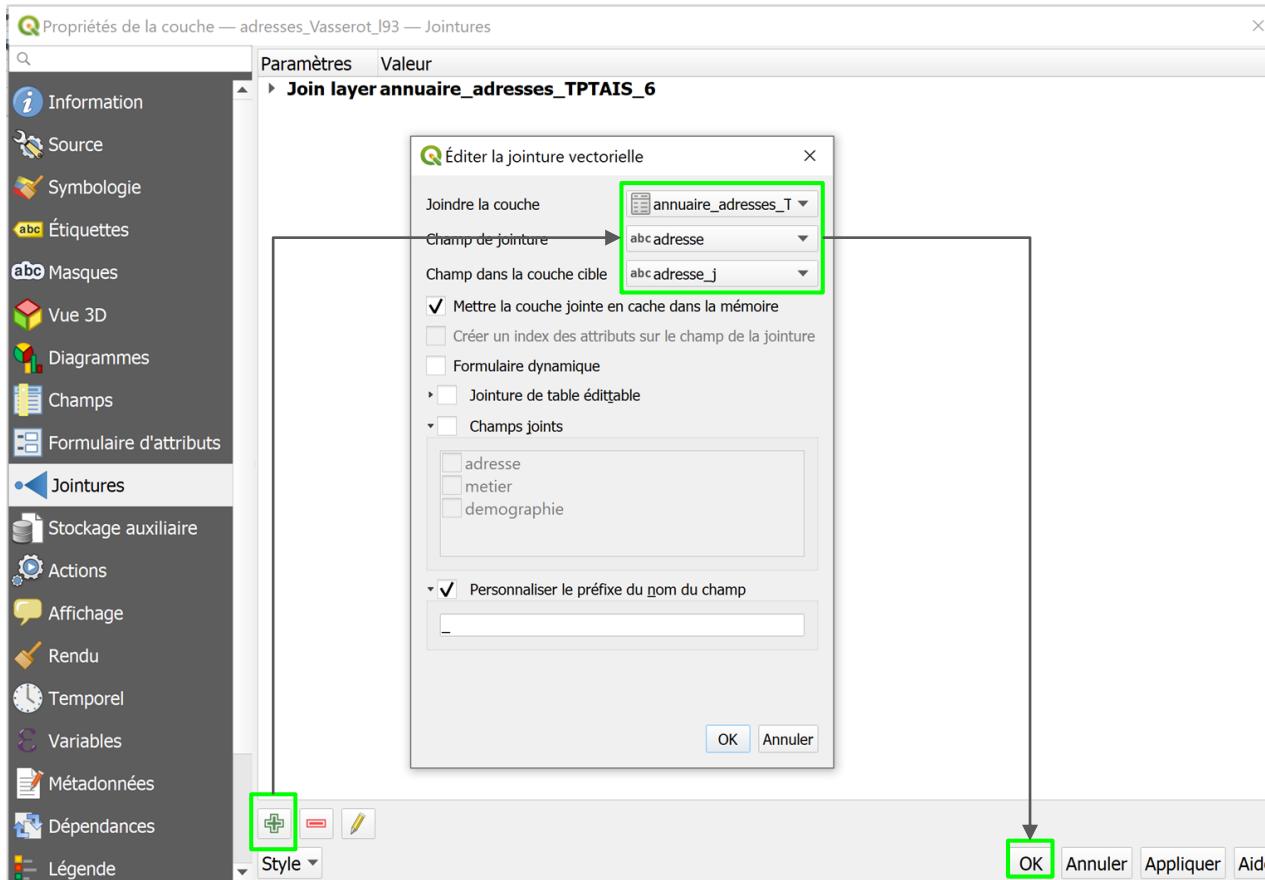
# Concatenation of strings in a new field



"num\_voies" || ' ' || "nom\_entier"

nom_entier	id_parc	num_voies	geox	geoy	style	css_class	extra	adresse_j
Rue du Petit Pont	PA3542	24	600725	127983	fill-rule:eveno...	x1L84	—	24 Rue du Petit Pont
Rue Saint Severin	PA3603	4	600702,00000...	127976	fill-rule:eveno...	x1L84	—	4 Rue Saint Severin
Rue Saint Severin	PA3604	2	600709	127974	fill-rule:eveno...	x1L84	—	2 Rue Saint Severin

# Perform join on text fields

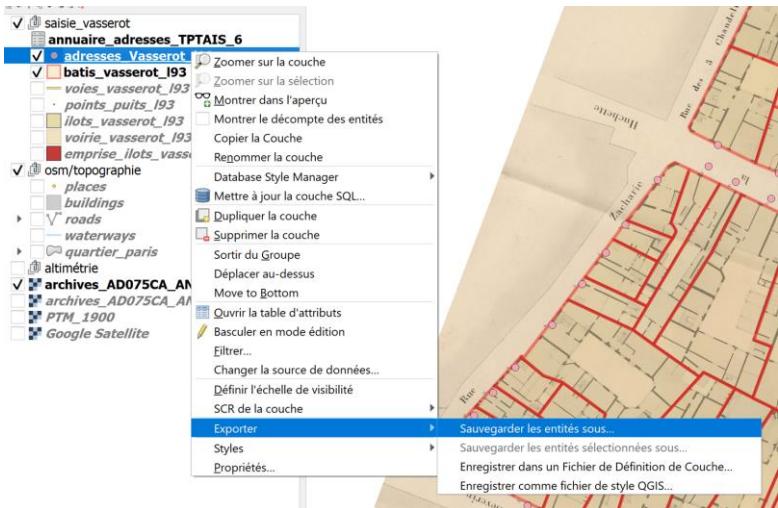


Attach attributes:

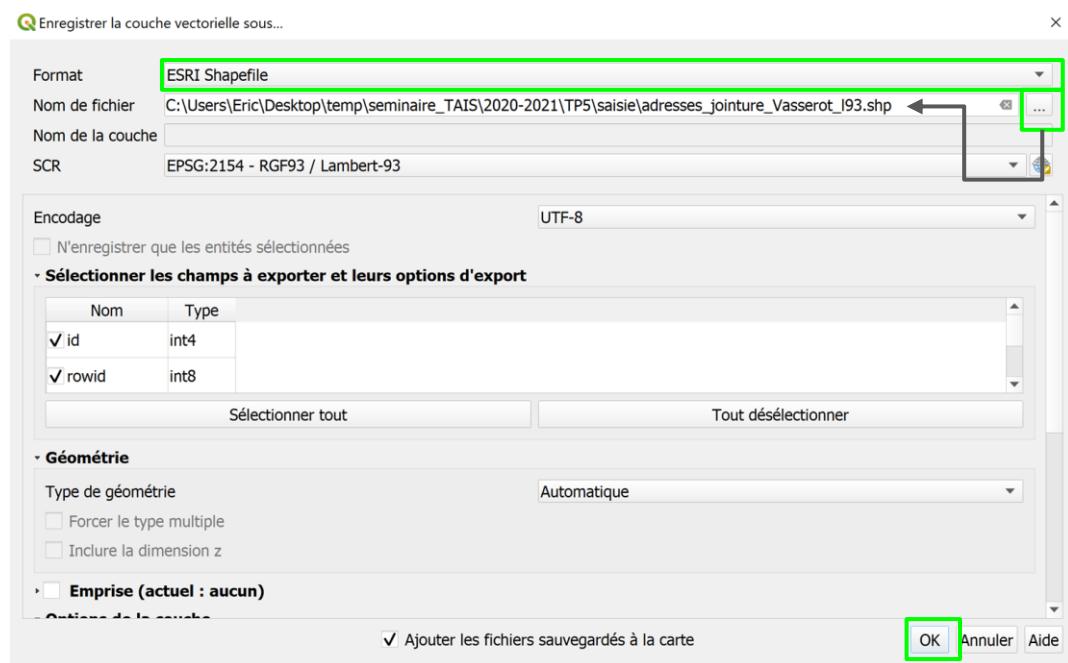
On the one hand in the table annuaire\_adresses the Address field

on the other hand, the field adresse\_j

# Recording the layer locally with join



Right click on the address/Export/Save entities as layer...



# Type conversion in a table

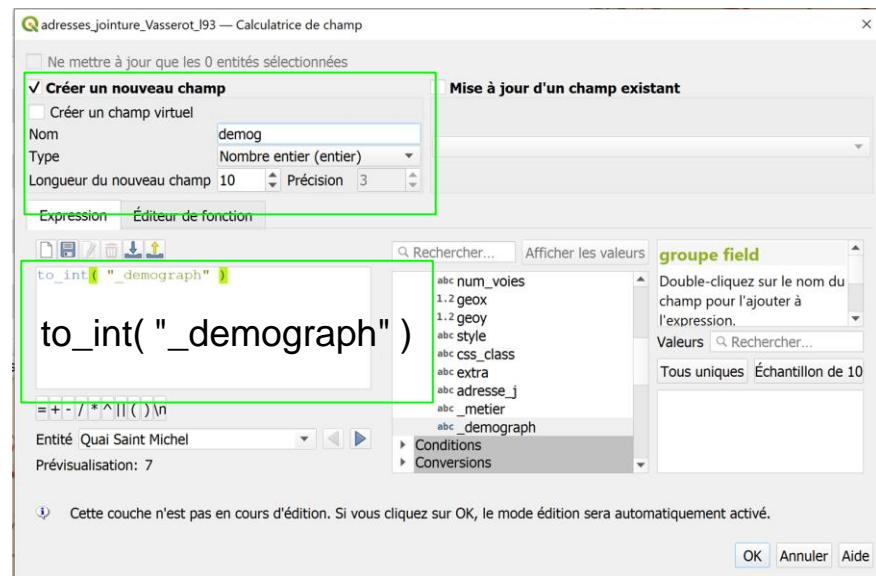
Propriétés de la couche — adresses\_jointure\_Vasserot\_I93 — Champs

Id	Nom	Alias	Type	Type identifié	Longueur	Précision	Commentaire	Configuration
123 0	id		qulonglong	Integer64	10	0		
1..2 1	rowid		double	Real	20	0		
1..2 2	id_alpage		double	Real	20	0		
abc 3	id_num_sca		QString	String	18	0		
abc 4	quartier		QString	String	25	0		
abc 5	nom_entier		QString	String	50	0		
abc 6	id_parc		QString	String	10	0		
abc 7	num_voies		QString	String	10	0		
1..2 8	geox		double	Real	23	15		
1..2 9	geoy		double	Real	23	15		
abc 10	style		QString	String	80	0		
abc 11	css_class		QString	String	11	0		
abc 12	extra		QString	String	1	0		
abc 13	adresse_j		QString	String	80	0		
abc 14	_metier		QString	String	254	0		
abc 15	_demograph		QString	String	254	0		

!!!! The type of the demograph field is a String = character string with a length of 254 characters...  
This type is not compatible with a graduated display or symbology using a numeric type.

To remedy this, it is common to perform type conversion operations.

Open the field calculator by first selecting the adresses\_jointure\_Vasserot\_I93 layer, and then:



# Filtering and formatting - proportional symbol

The screenshot illustrates the process of defining a proportional symbol in QGIS. On the left, the 'Symbologie' tab of the 'Propriétés de la couche' dialog is open, showing settings for a 'Symbole simple'. A context menu is open over a symbol in the preview area, with the 'Assistant...' option highlighted. This leads to the 'Taille du symbole' (Size of the symbol) dialog on the right.

**Propriétés de la couche — adresses\_jointure\_Vasserot\_J93 — Symbologie**

**Symbologie**

**Information**

**Source**

**Symbologie**

**Étiquettes**

**Masques**

**Vue 3D**

**Diagrammes**

**Champs**

**Formulaire d'attributs**

**Jointures**

**Stockage auxiliaire**

**Actions**

**Affichage**

**Rendu**

**Temporel**

**Variables**

**Métadonnées**

**Dépendances**

**Légende**

**Symbole Unique**

**Symbole**

Unité: Millimètres  
Opacité: 100,00%  
Couleur:  
Taille: 2,00000  
Rotation: 0,00 °

Tous les symboles

airport arrow capital circle city diamond diamond blue

Valeur définie par des données

Description...  
Stocker les données dans le projet  
Champs d'attribut  
Type de champ:entier, double, string  
Expression  
Variable  
Éditer...  
Coller

Assistant...

Boîte à outils de traitements

Rechercher...  
Utilisé récemment  
Analyse de réseau  
Analyse de terrain ra...  
Analyse raster  
Analyse vectorielle  
Base de données  
Cartographie  
Création de vecteurs  
Création d'un raster

**Taille du symbole**

**Source**

Source: 123demog  
Valeurs depuis: 1,000000  
à: 12,000000

Appliquer la transformation en cours

**Sortie**

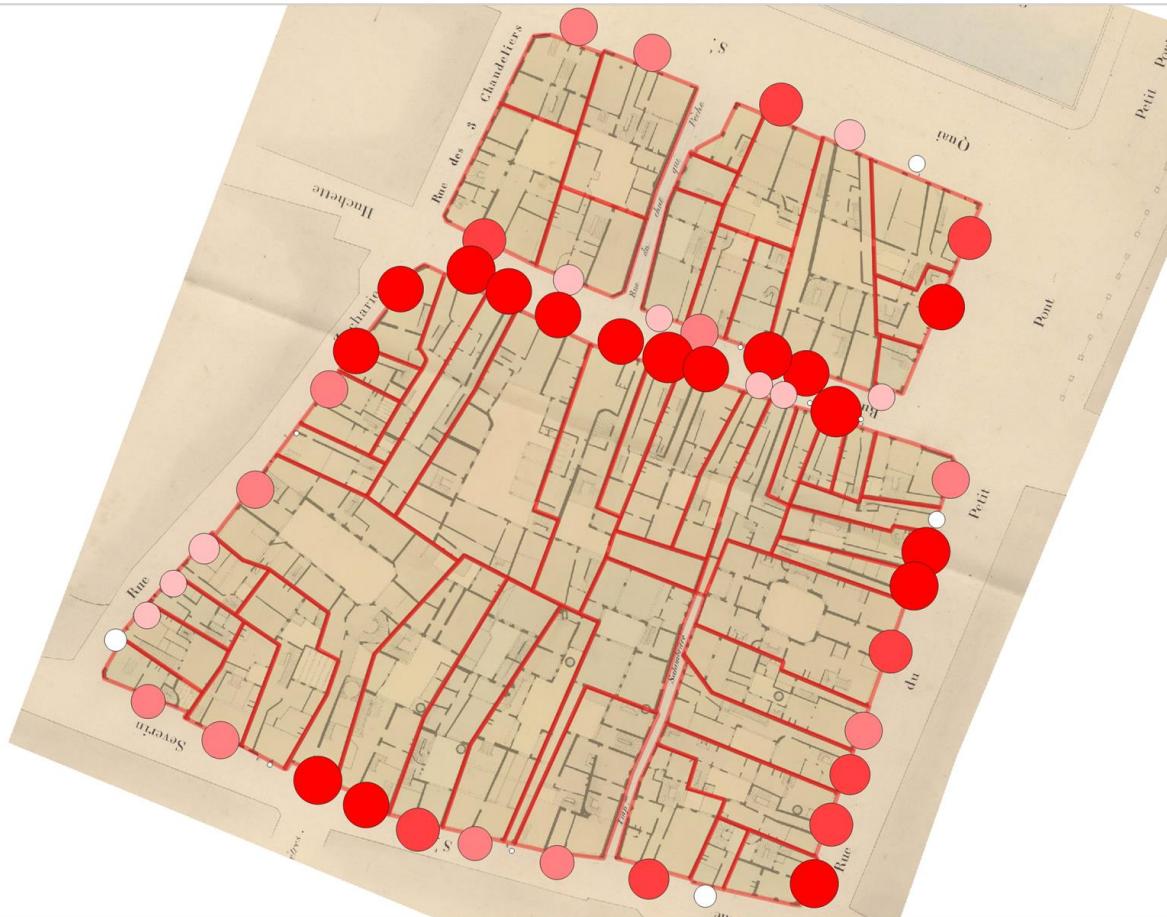
Taille depuis: 1,000000  
à: 10,000000  
Méthode de calcul: Flannery  
Exposant: 0,57  
Taille quand la valeur est NULL: 0,000000

OK Annuler Aide

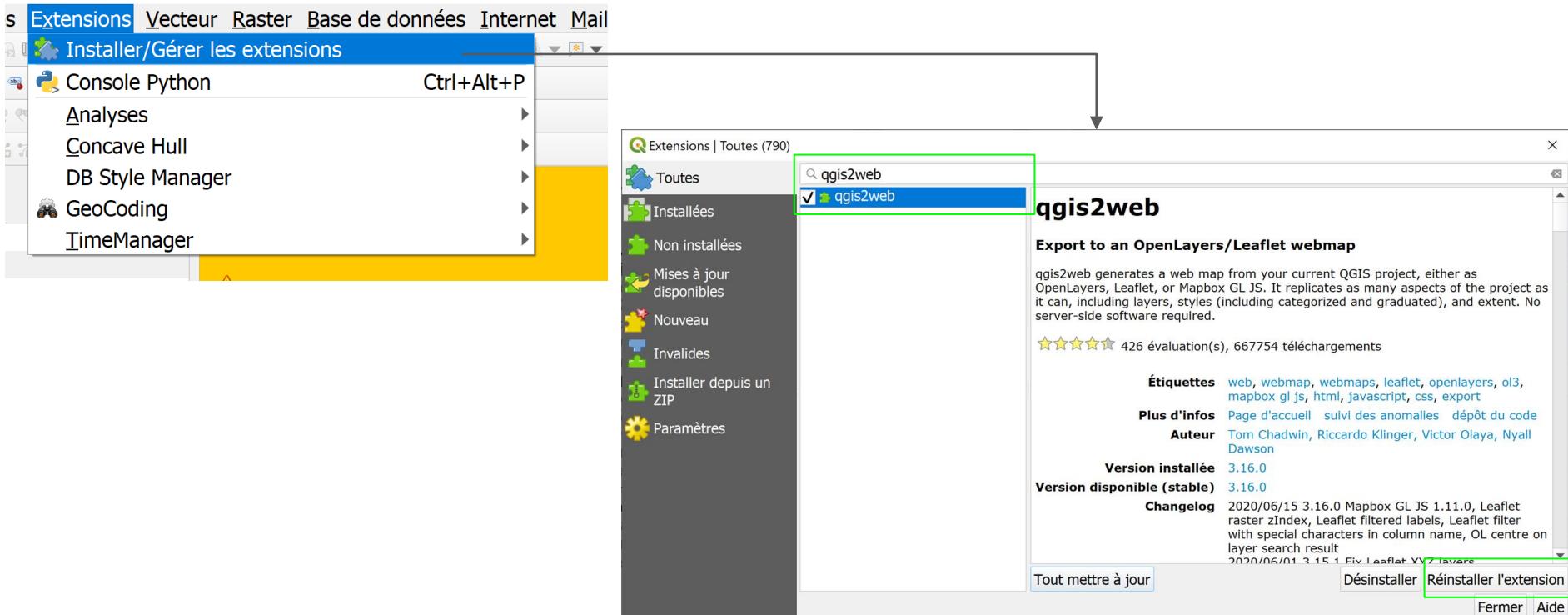
2 3 4 5 6 7 8 9 10 11 12

OK Annuler Aide

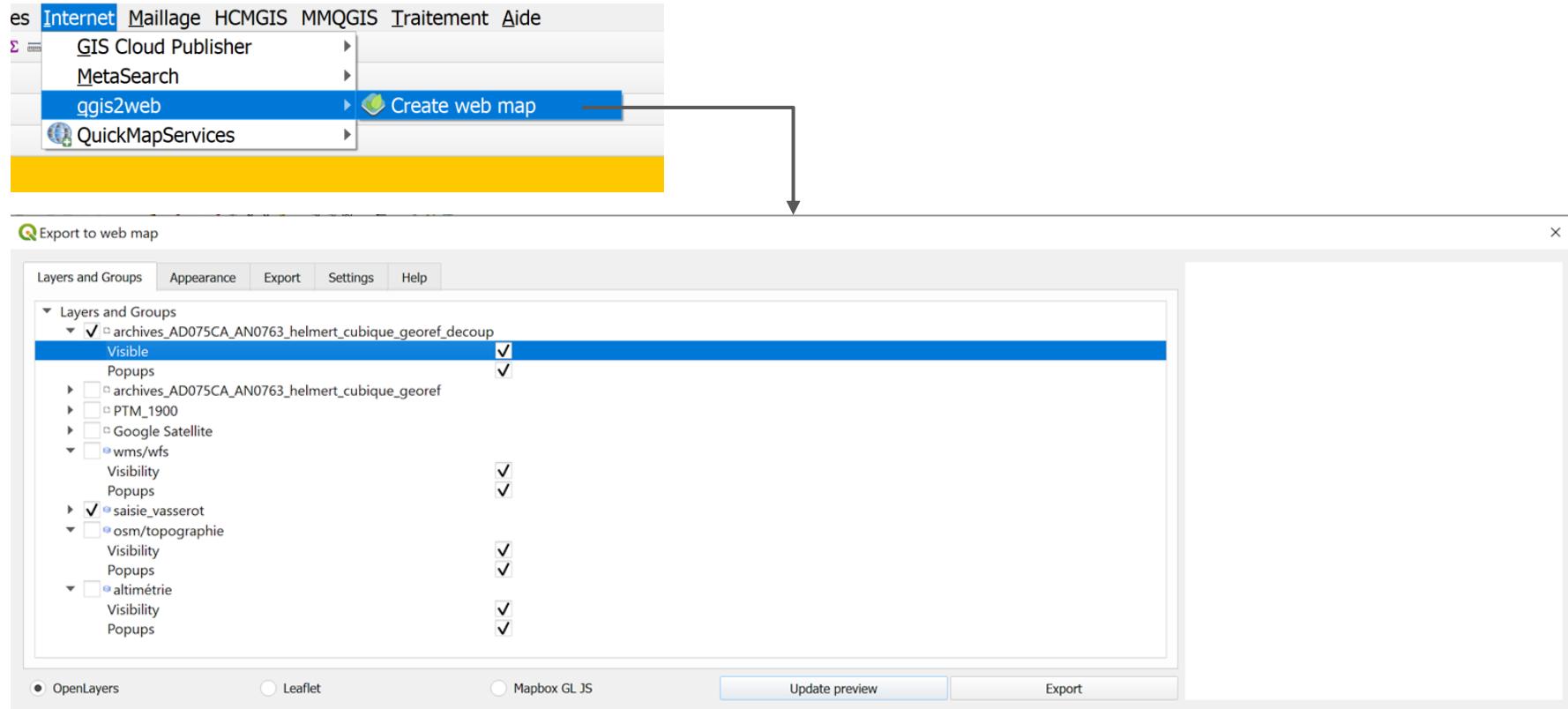
# Cumulative symbology - graduated / proportional symbol



# Export web : install plugin qgis2web



# Web export: configuring a web export



# Settings and export

Export to web map

Layers and Groups   Appearance   Export   Settings   Help

**Appearance**

- Add abstract
- Add address search
- Add layers list
- Attribute filter
- Geolocate user
- Highlight on hover
- Layer search
- Match project CRS
- Measure tool
- Show popups on hover
- Template
- Widget Background
- Widget Icon

**Scale/Zoom**

- Extent
- Max zoom level
- Min zoom level
- Restrict to extent

upper right

Collapsed

id:alpage:real:adresses\_jointure\_Vasserot\_I93  
MINY: real: emprise\_ilots\_vasserot\_I93|voirie\_vasserot\_I93  
extra: str: adresses\_jointure\_Vasserot\_I93  
PERIM: real: emprise\_ilots\_vasserot\_I93|voirie\_vasserot\_I93  
democ: int: adresses\_jointure\_Vasserot\_I93

None

None

full-screen

Canvas extent

28

1

OpenLayers    Leaflet    Mapbox GL JS   Update preview   **Export**

# Visualisation d'un export web

① Fichier | s/Eric/Desktop/temp/seminaire\_TAIS/2020-2021/TP5/export\_web/qgis2web\_2020\_12\_14-14\_51\_14\_972810/index.html#1...

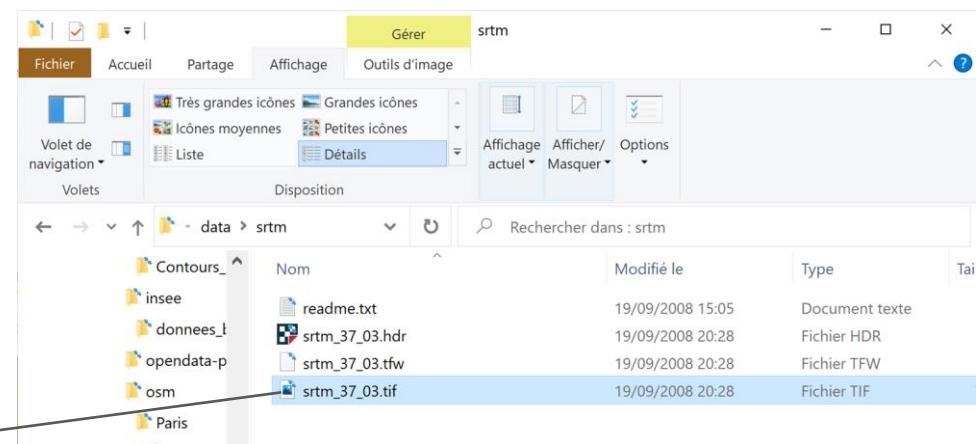
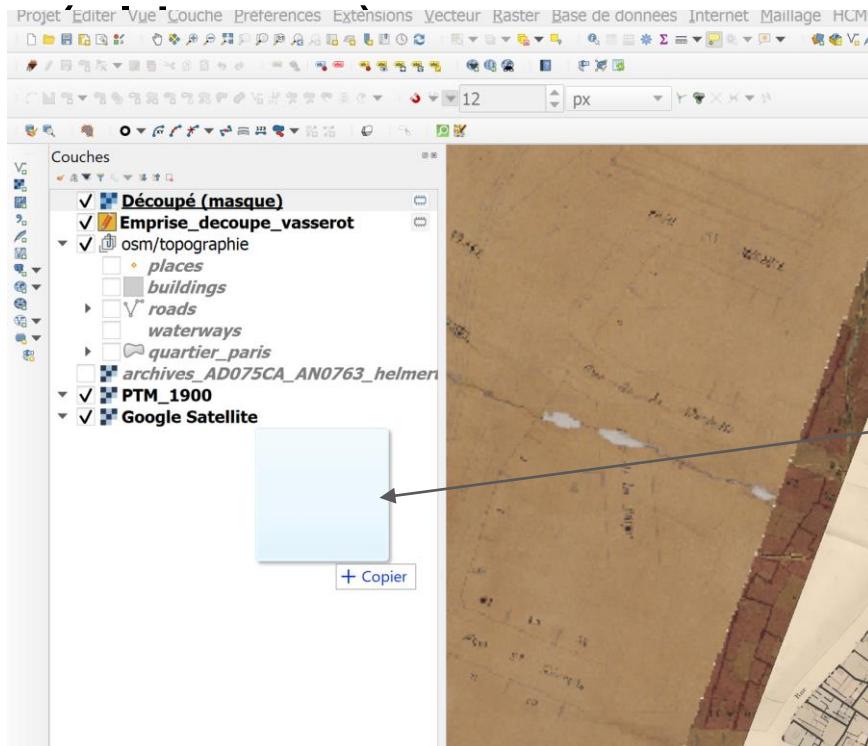


Eric Mermel / Saisie  
plan Vasserot /  
EHESS - 2020



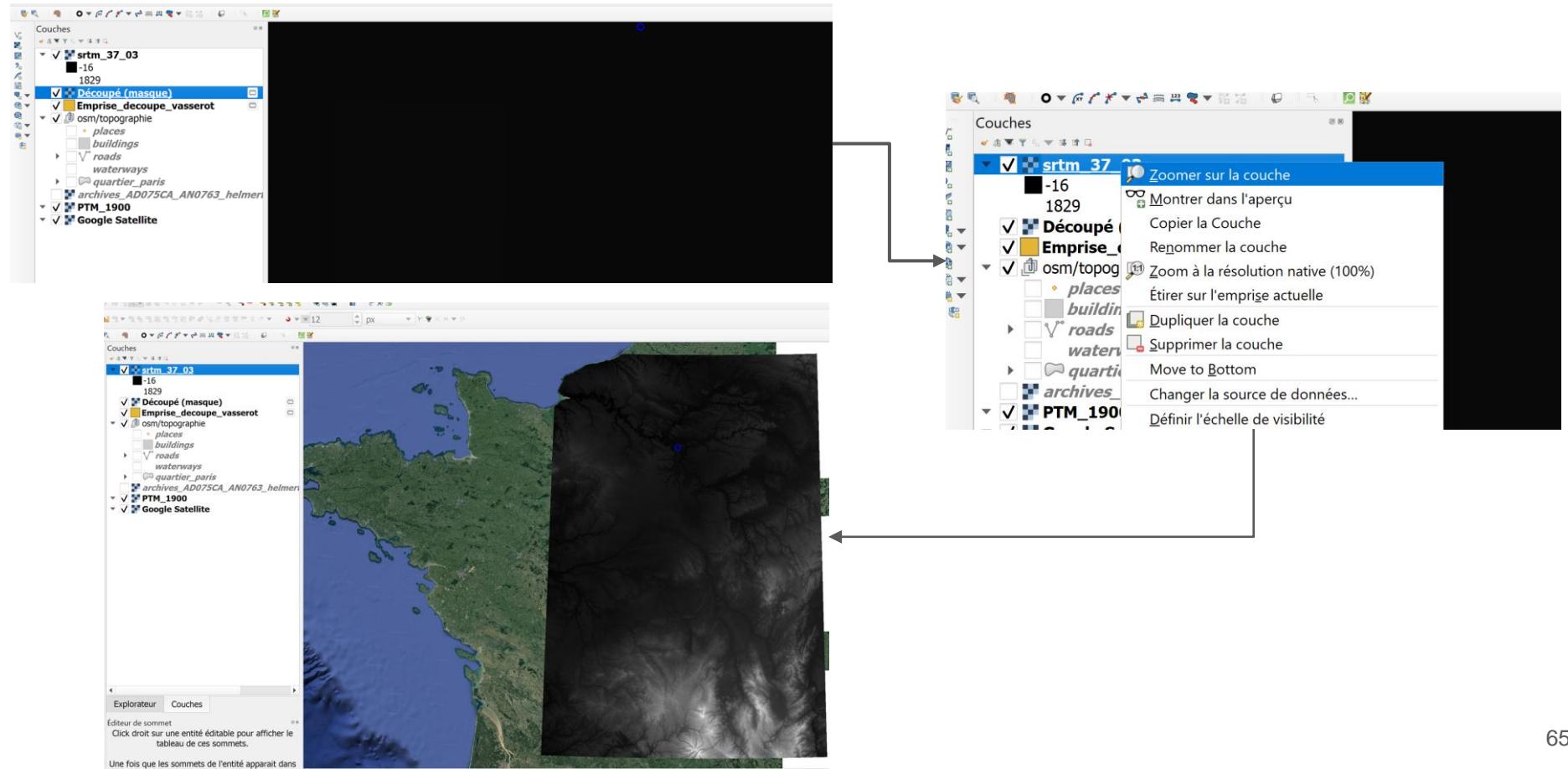
# Annexes

# Raster exercise correction: load an srtm file



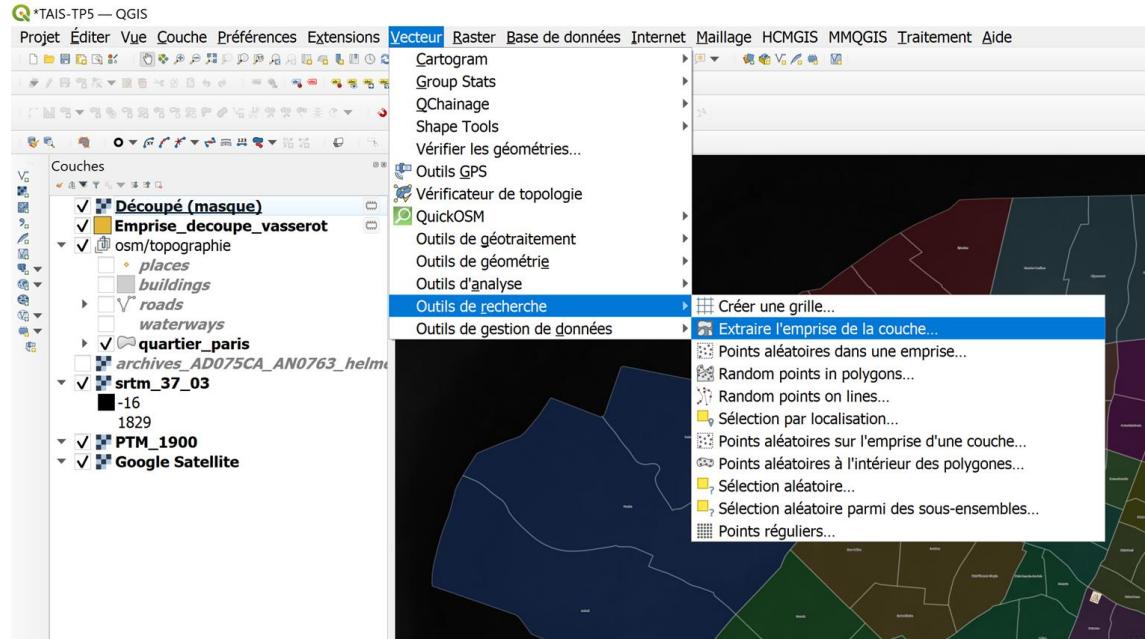
See <http://srtm.cgi.cgiar.org/srtmdata/>  
Worldwide altimetry data.

# Raster exercise fix: crop the view on the srtm file



# Correction exercise: create a hold of Paris

1. Place the srtm layer on top of the PTM 1900 layer.
2. The layer of neighborhoods must be above to distinguish neighborhoods.



3. Then in Vector/Search Tools/Extract Layer Footprint menu...

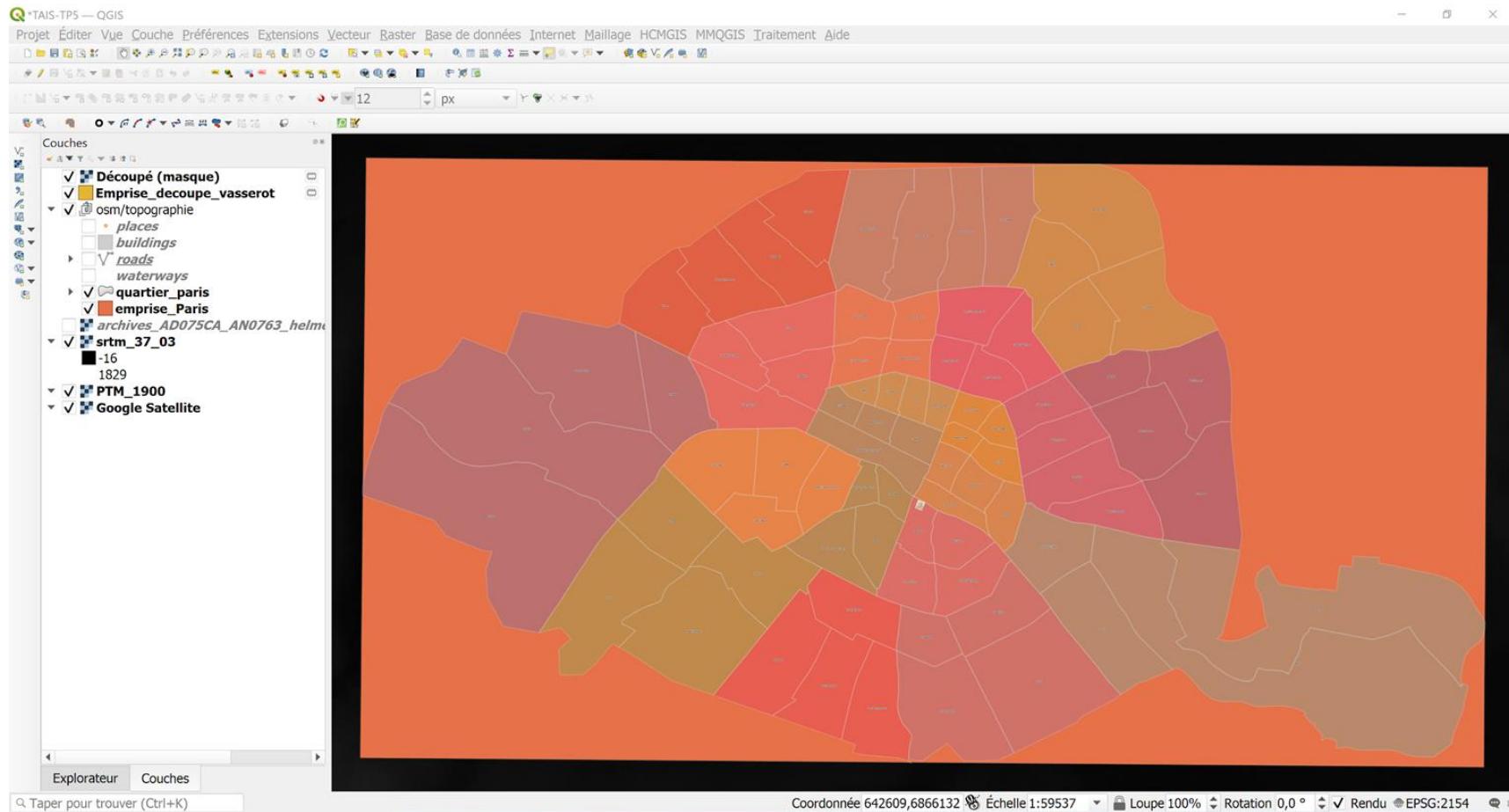
# Correction exercise: extraction of the right-of-way of neighborhoods

The screenshot shows the QGIS interface with a map of Paris neighborhoods. A context menu is open over a layer named "Emprise\_decoupe\_vasserot". The "Outils de recherche" option is selected, highlighting the "Extraire l'emprise de la couche..." command. This command is also highlighted in the "Extraire l'emprise de la couche" dialog box, which is displayed on the right. The dialog box contains the following settings:

- Paramètres** tab is selected.
- Couche source**: "quartier\_paris [EPSG:4326]"
- Advanced Parameters** section:
  - "Arrondir les coordonnées à": "0,000000" (degrees)
- Emprise**: "C:/Users/Eric/Desktop/temp/seminaire\_TAIS/2020-2021/TP5/calculs/emprise\_Paris.shp"
- "Ouvrir le fichier en sortie après l'exécution de l'algorithme"

A progress bar at the bottom of the dialog box shows "0%" and an "Exécuter" button is visible.

# Correction exercise: the influence of the districts of



# Exercise correction: cut the raster according to the footprint of the neighborhoods

