

Dynamic Layers plugin

A single project to rule them all

Etienne TRIMAILLE

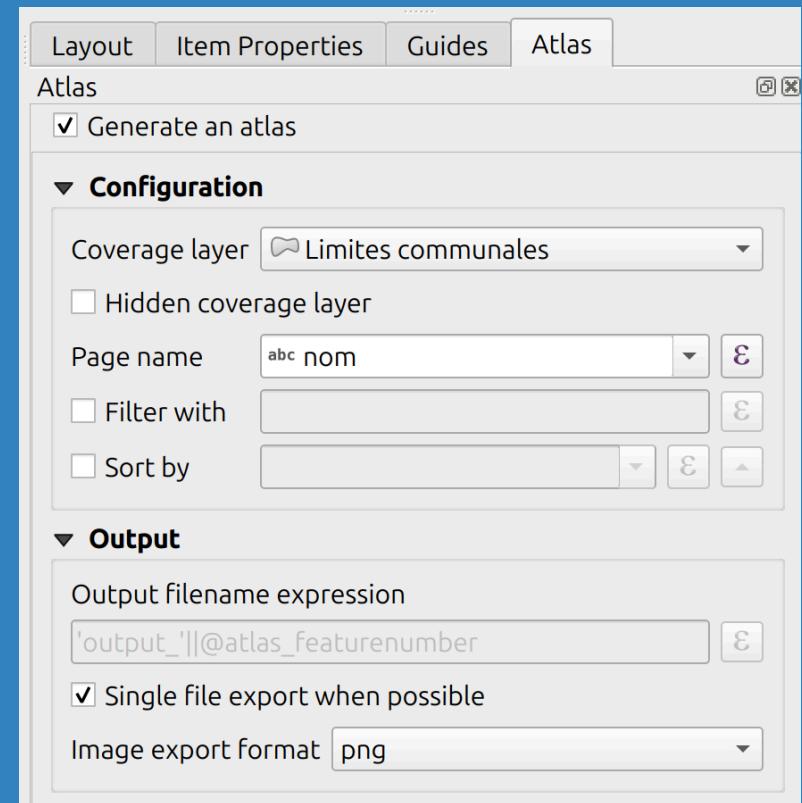


QGIS Atlas

Many of you know the atlas
in a layout

Based on a vector layer,
iterate over every features

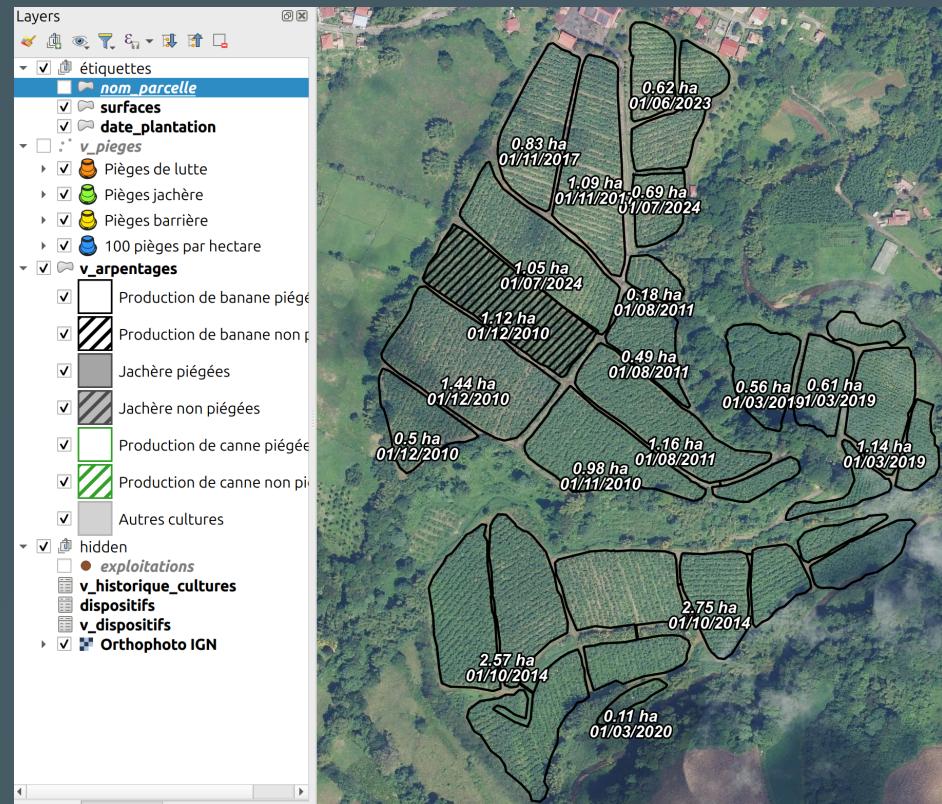
- Labels
- Map extent
- Attribute table



Initial state

- Our customer Cartophyl / Presta'SCIC, based in French carribean islands Guadeloupe and Martinique
- Land surveying about pesticides in farms, pest control

QGIS project for a given farm :



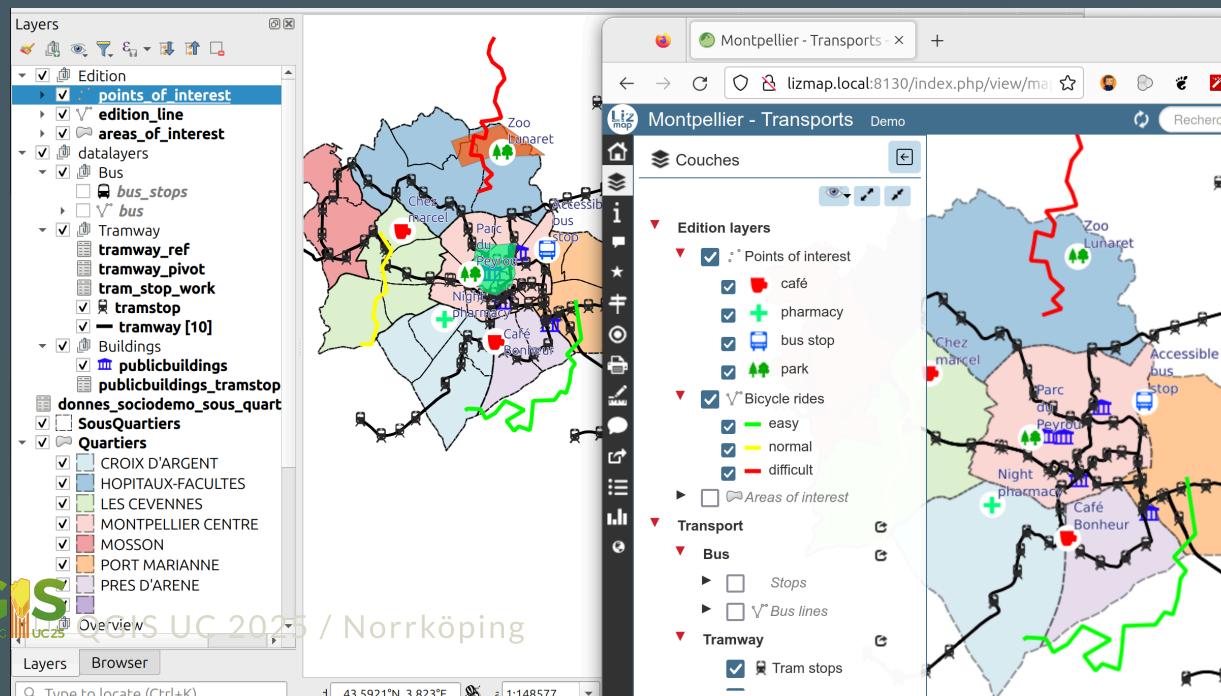
Initial state

- Each "farm" has its own "datastore":
 - **Postgresql schema** for table, fields
 - **folder** on the filesystem for linked files
- Therefore, the structure for the QGIS project is the **same**, except the datasource : legend, graduated rendering

- ▼ ↗ Demo DynamicLayers
 - ▶ 02_Camille
 - ▶ 03_perinelle
 - ▶ 03_perinelle_sf
 - ▶ 04_bamaryl
 - ▶ 04_bamaryl_sf
 - ▶ 05_pecoul
 - ▶ 05_pecoul_sf
 - ▶ 06_bagatelle_carte
 - ▶ 06_bagatelle_sf
 - ▼ 08_fermepolyagricole
 - ▶ arpentes
 - ▶ compte_rendu_trim
 - ▶ decorticages
 - ▶ dispositifs
 - ▶ historique_cultures
 - ▶ lizmap_table
 - ▶ pieges
 - ▶ qfield_arpentages
 - ▶ qfield_pieges
 - ▶ releves_arpentage

Initial state

- Use of **Lizmap Web Client** to publish their QGIS projects on the web, thanks to QGIS Server
 - opensource
 - same symbology, QGIS layouts, QGIS forms... are published, to their own customers, with login and password
 - <https://lizmap.com>
 - <https://github.com/3liz/lizmap-web-client>



Initial state

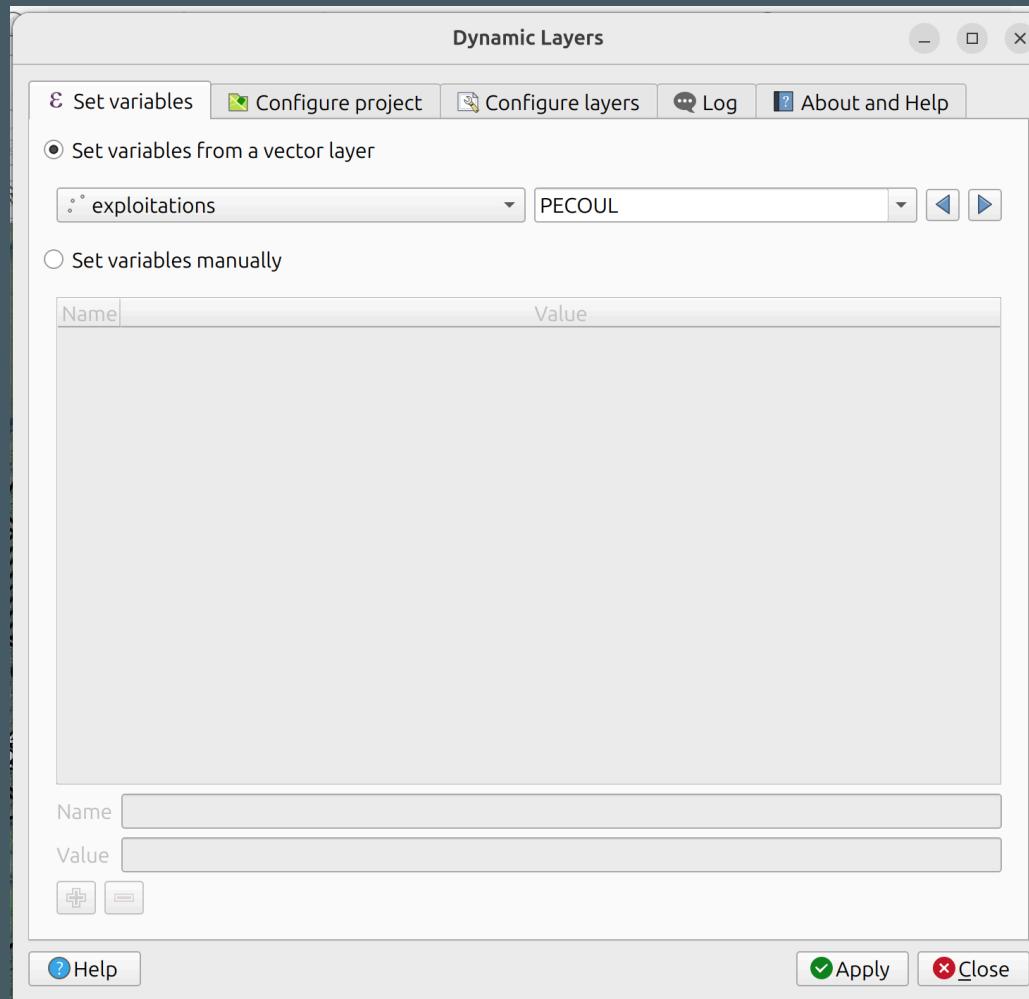
1. How to manage these "hundreds" of QGIS projects, to give to **their** own customers, linked to the data of **their** farm ?
2. How to report one change in the "main" QGIS project and to distribute a new version ?
3. Pan and zoom the map in these different projects



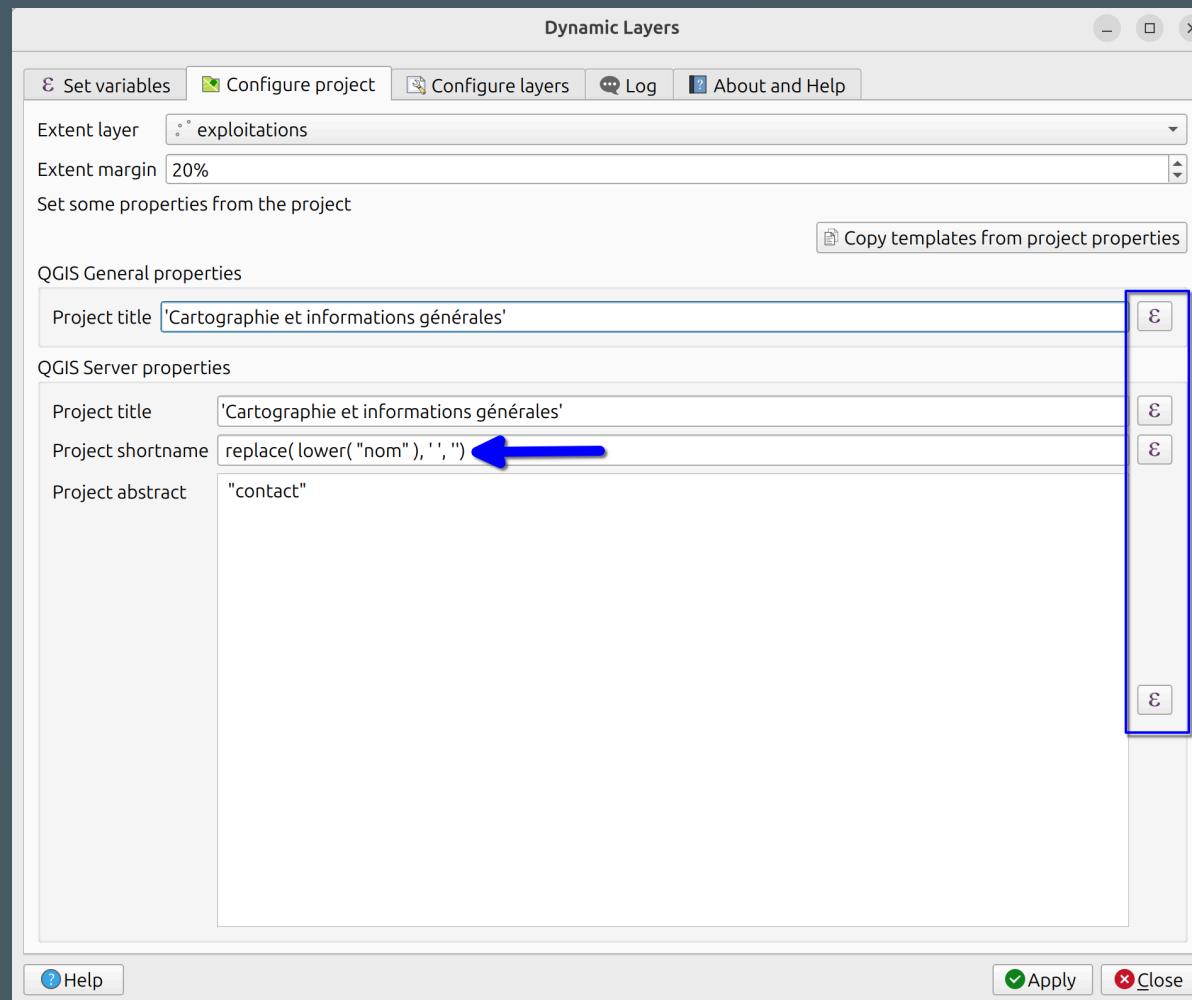
Dynamic Layers plugin



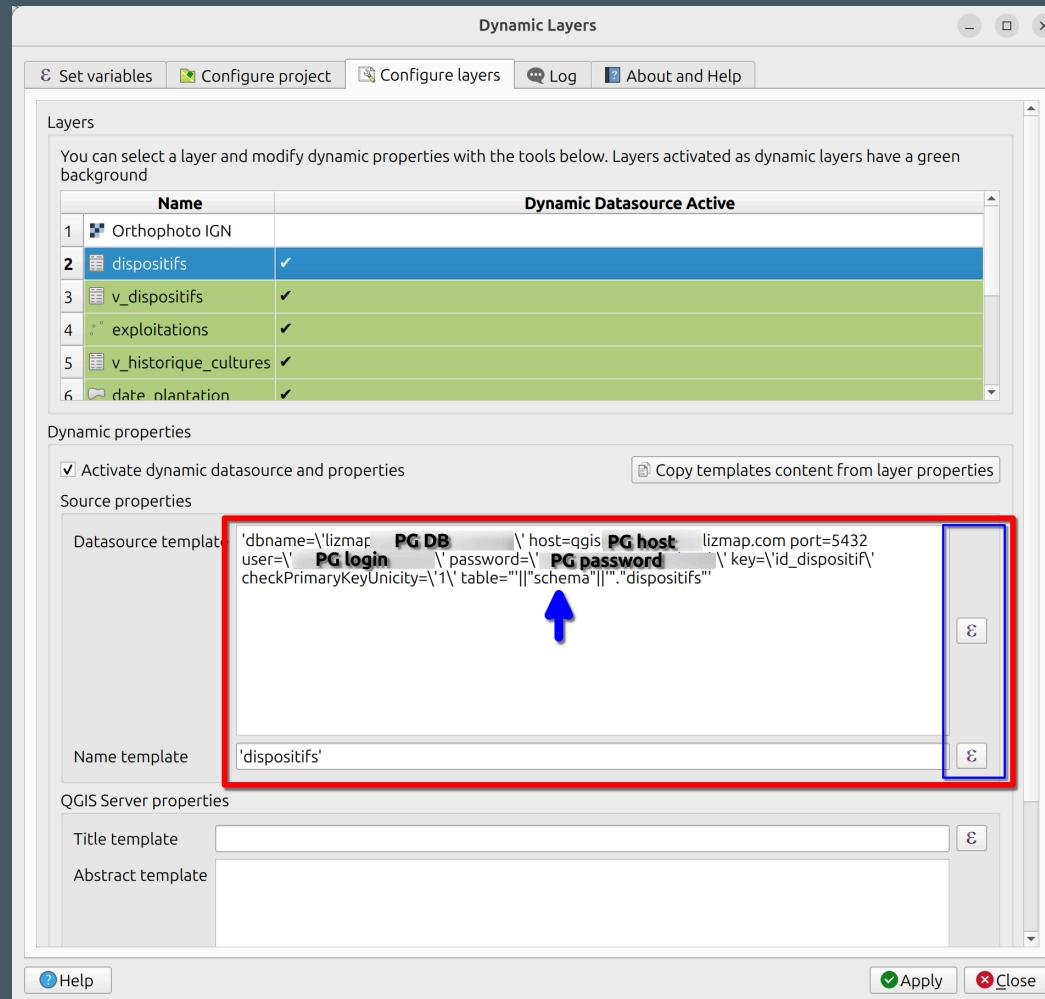
Coverage layer/variables



Extent and project properties

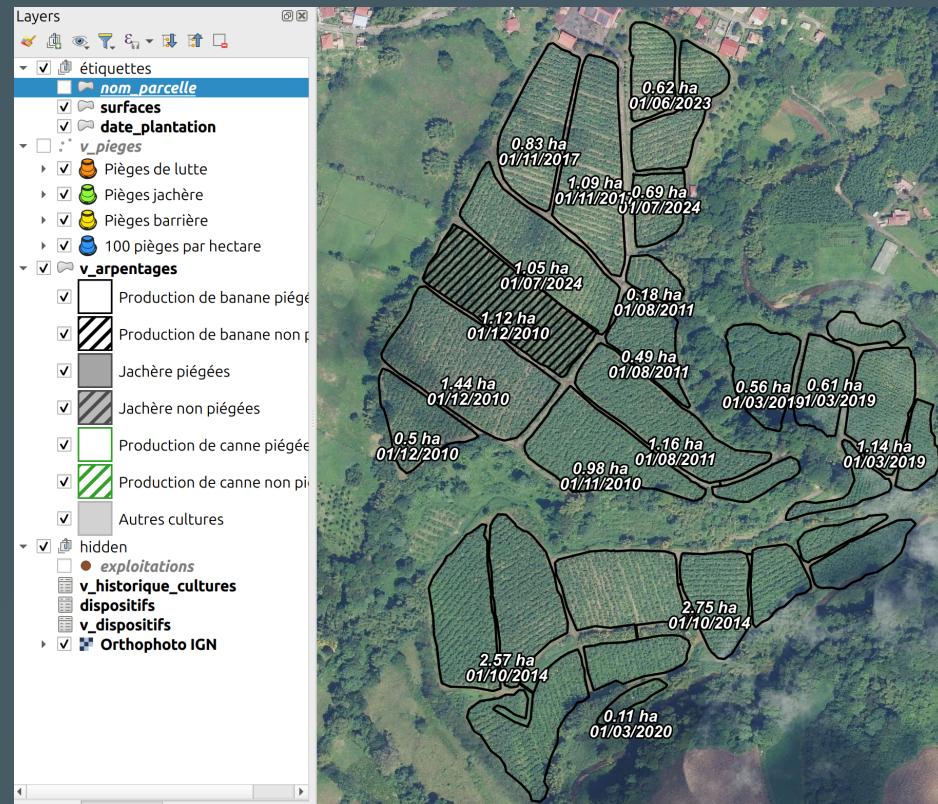


Layer properties



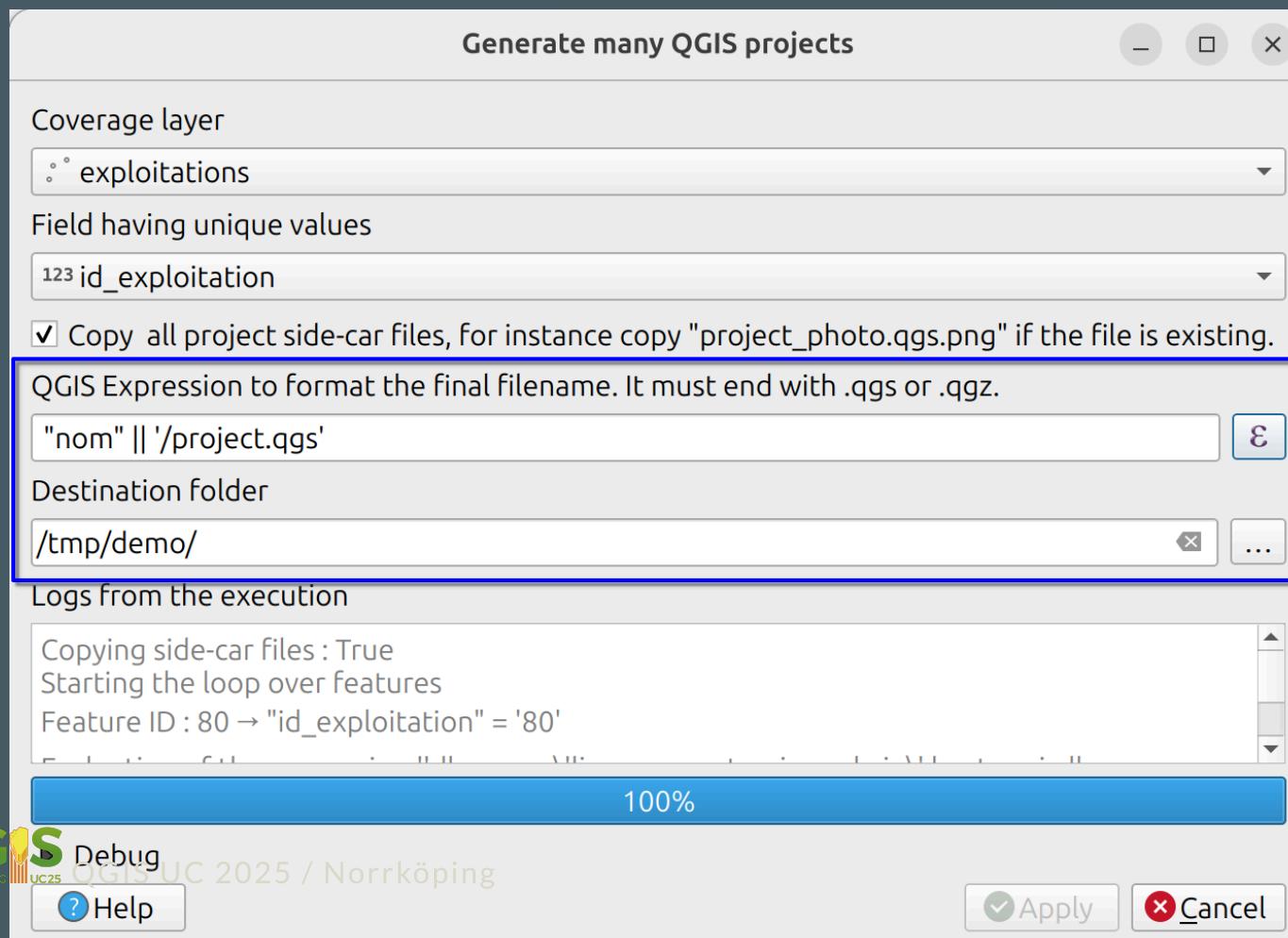
And run ✨

- The original layer properties/expressions are saved in the background (*in the custom layer properties for PyQGIS geeks here*)
- It means that we can **always** navigate to a different feature (and therefore, re-evaluate all QGIS expressions)
- It changes layer datasources, with **your current opened project** (similar to atlas preview in a QGIS layout)



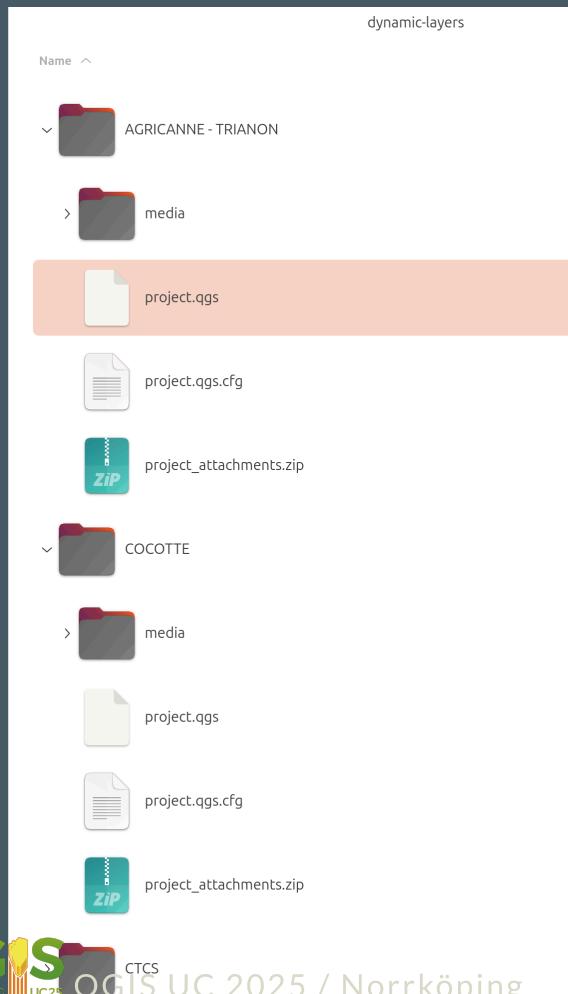
Bulk generations of projects

- A dynamic output path for the project can be written
- Sub folder is supported



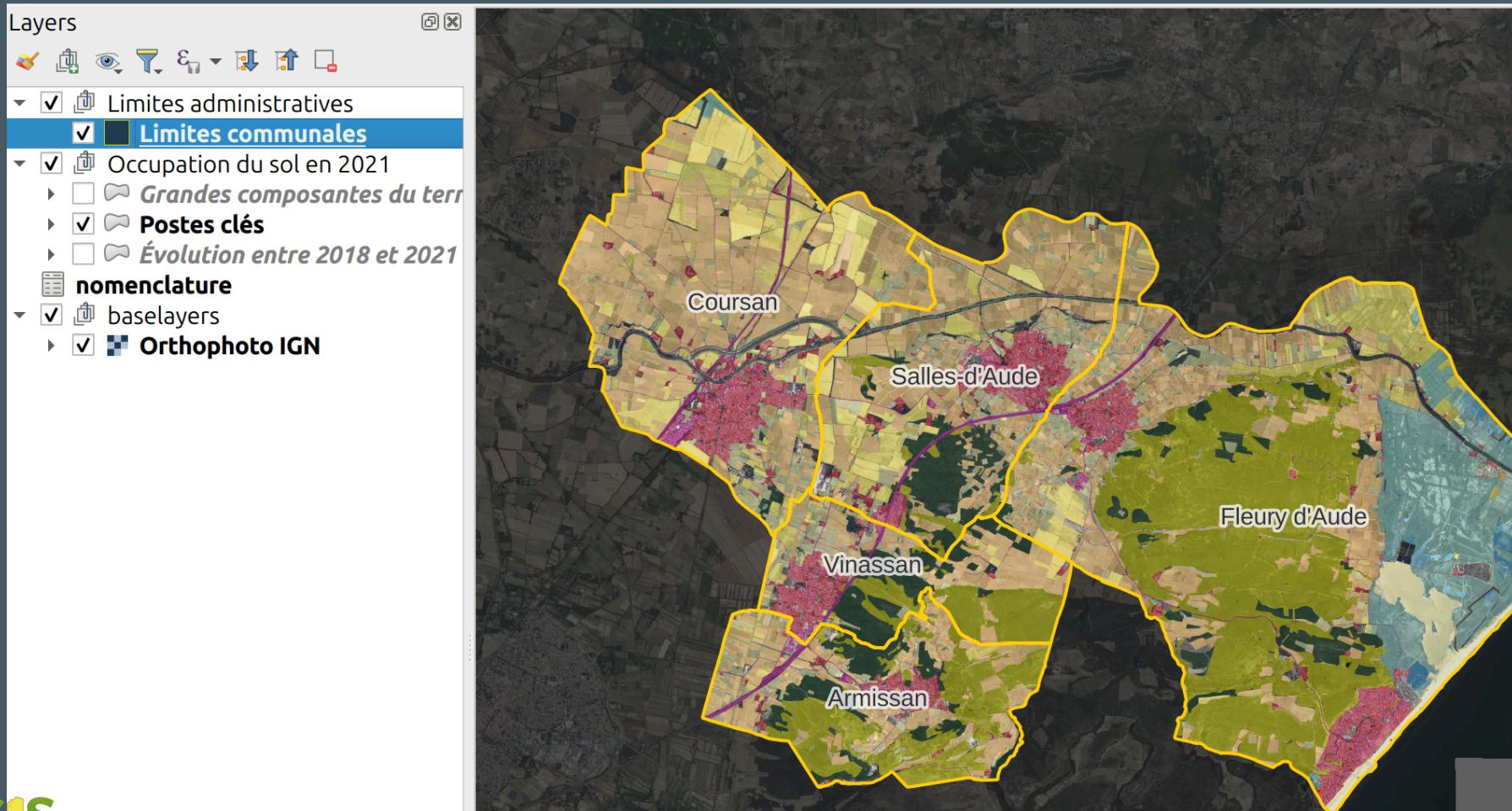
Bulk generations of projects

After a few cups of coffee ☕☕



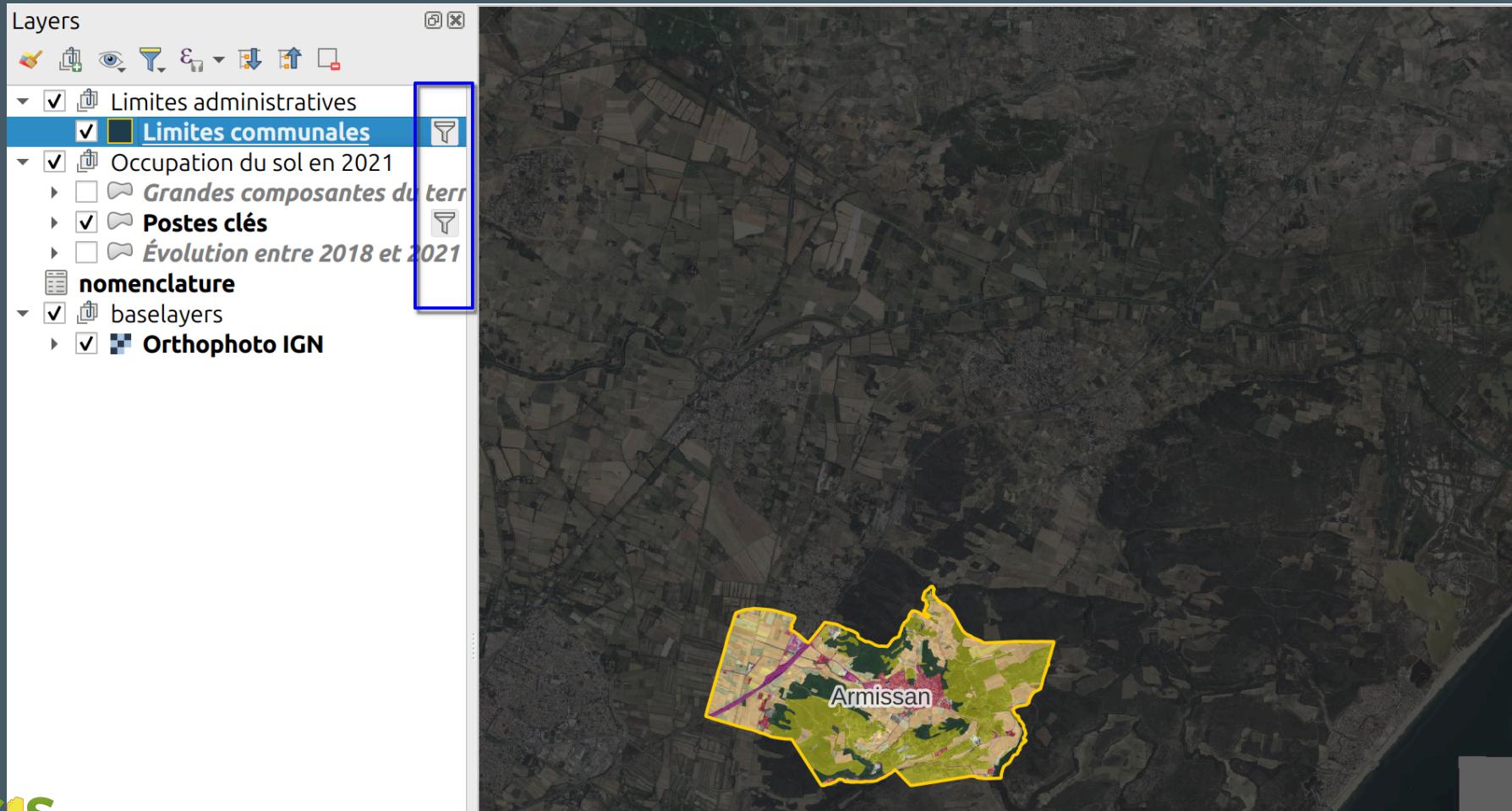
Another example

- Use a QGIS expression for the provider filter



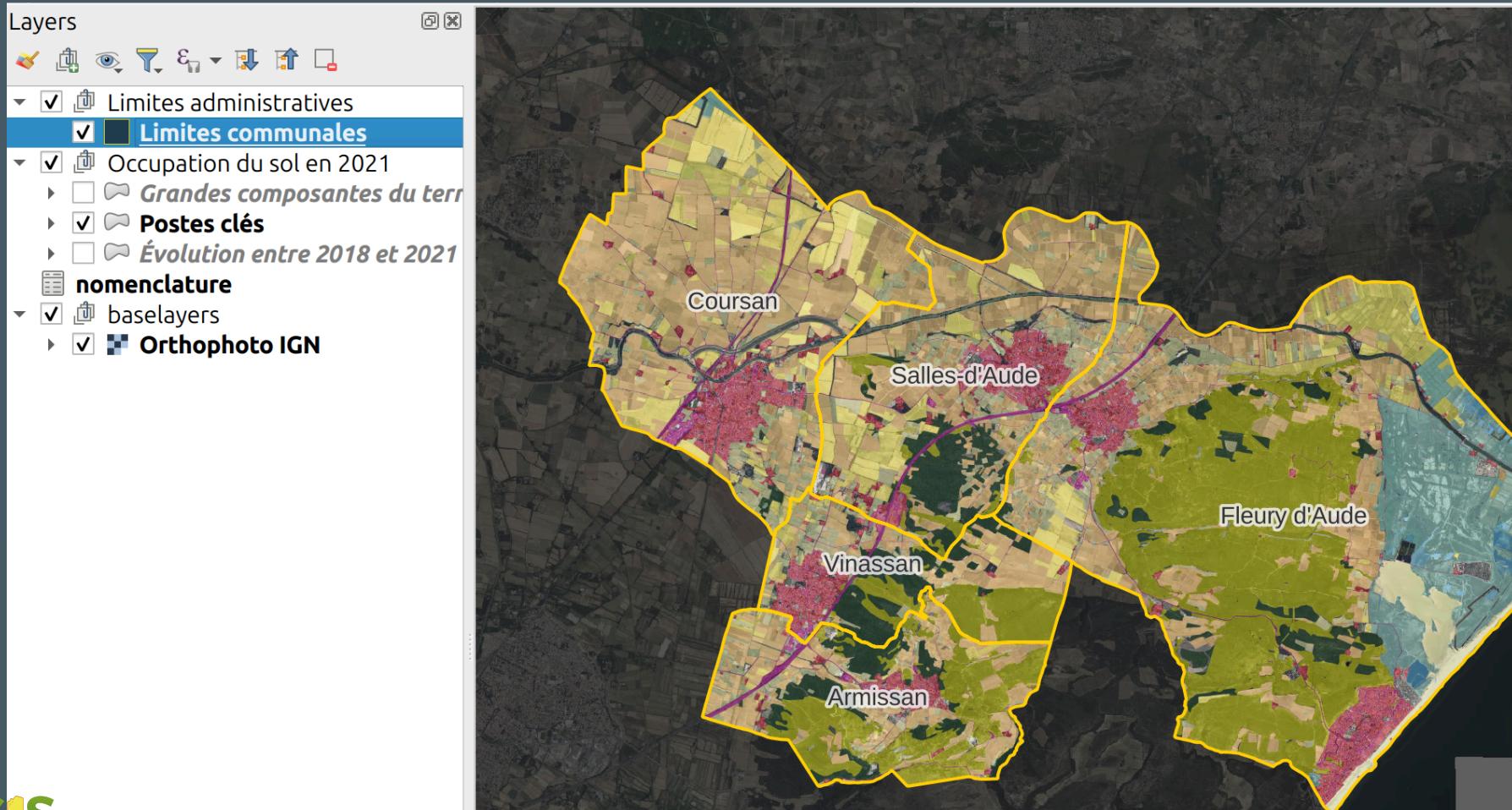
Another example

- Use a QGIS expression for the provider filter



Another example

- Use a QGIS expression for the provider filter



Actual version

- Published on <https://plugins.qgis.org>
- New version is coming soon with some small improvements
- QGIS Processing limitations
- Some "new" project properties and/or layer properties can be added
- Keen to have your feedbacks
- Open to new ideas, like maybe temporal data ?

Lizmap Web Client

- Tight integration, with the Lizmap configuration file
- If the Lizmap configuration file is found on the "main" project, the file is copied and adapted

Thank you for your attention !

- Source code : <https://github.com/3liz/QgisDynamicLayersPlugin/>
- Thanks Cartophyl and Presta'SCIC for this work
- Demos: <https://demo.3liz.com>
- Email: info@3liz.com / Mastodon: @LizmapForQgis - Coming soon
- Lizmap source code: <https://github.com/3liz/lizmap-web-client/>
- Watch the replay of the conference yesterday about **Lizmap**