Tutorial IV

How to publish a spatial dataset on the Comunidad platform

Spatial datasets are the main data components we can work with on the Comunidad platform. The Comunidad platform offers several methods for publishing spatial datasets on the Web.

The tutorial covers three main workflows:

1. Publish by Layman
2. Publish by a Web application
3. Publish by the QGIS Layman plugin

Publish the dataset by the Layman API

The Layman (LAYer MANager) publishing service provides a RESTful API that allows you to upload spatial datasets to the platform, convert them into mapping services (OGC WMS, WFS), and compose maps of those datasets with other mapping sources.
Layman provides a TEST Client app that is accessible at https://comunidad-project.eu/client

Log in to the TEST Client by using your Comunidad platform user account.

Then you can use the TEST Client's UI to send requests to the Layman REST API.

For machine-to-machine communication, the main endpoint for the REST API is at
https://comunidad-project.eu/rest/

Layman provides three basic sets of endpoints for:
- Layer - single datasets (map layers);
- Map - maps composed of multiple layers;
- Publication - a combination of all the published layers and maps.

To publish a single dataset using the Layman TEST Client, log in to the client app and select
Layer > Workspace Layers > POST

Then a form with all the input parameters for this endpoint will appear at the bottom of the
page. Scroll to it, fill in all the required fields, and click **Submit**.

To use the underlying REST API, follow the documentation at
https://github.com/LayerManager/layman/blob/master/doc/rest.md

This same REST API is used by the Layman TEST Client, the QGIS Layman plugin and the Web mapping application that is available at https://comunidad-project.eu/map/maps-editor/

Publish the dataset using the Web application

Open the web mapping application located at https://comunidad-project.eu/map/maps-editor/
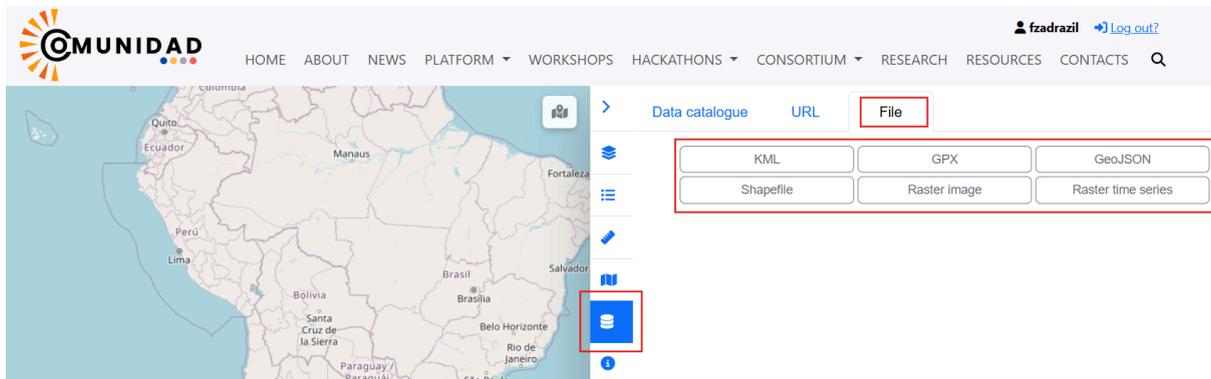
In the right panel, there is a set of tools. To publish a dataset, select the **Add external data** tool. Then switch to the **File** tab and select the data format of the dataset you want to publish.

Once you select a data file from your computer, you must fill in the name of the dataset, and optionally metadata description of the dataset in the Abstract field.

The **Save to catalogue** switch lets you decide whether to add the data to the current map without publishing, or to store it in the catalogue as a new layer, which means it is published via the Layman API and permanently available via mapping services.
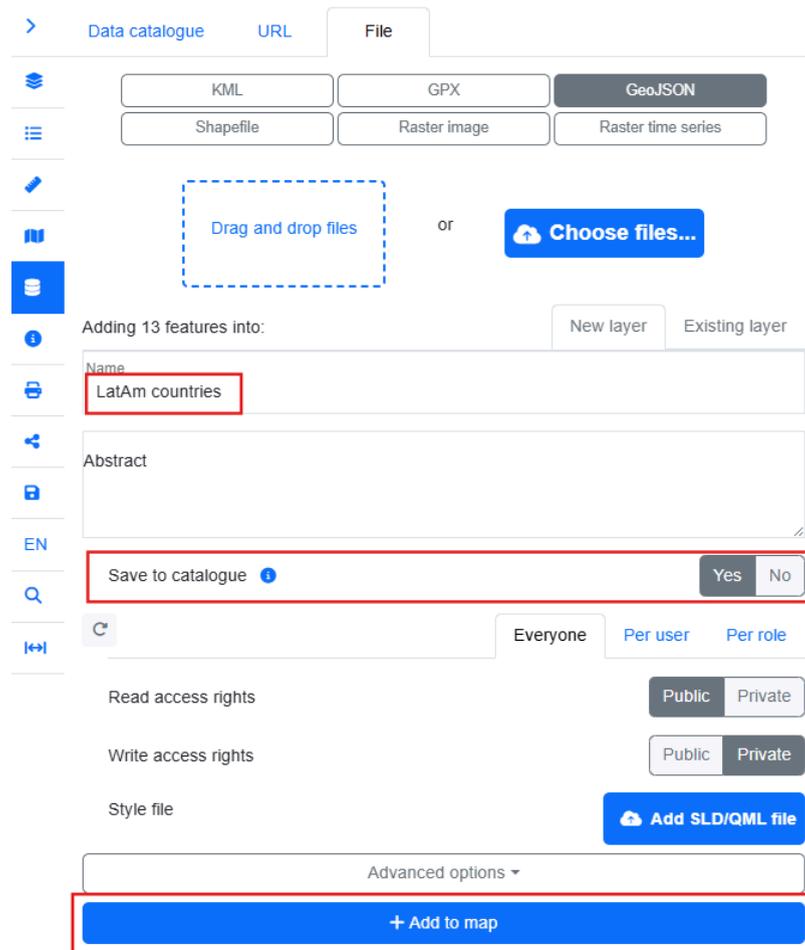
The rest of the inputs let you define the permissions for the published layer and select who will be able to view or edit the layer after publishing.

You can also provide a style file in the SLD (https://www.ogc.org/standards/sld/) of QML (https://docs.qgis.org/3.40/en/docs/user_manual/appendices/qgis_file_formats.html#qml-the-qgis-style-file-format) formats.

To finally publish the layer, click on the **Add to map** button. The dataset is then added to the current map, and if you selected to save it to the catalogue, there will be a cloud icon near the layer name indicating that publishing is in progress.
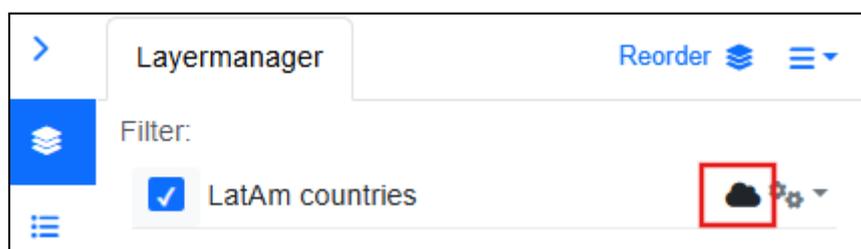
After the publication has successfully finished, the new layer becomes available from the data catalogue of the platform and can be accessed from it in the web mapping application or from the QGIS Layman plugin.
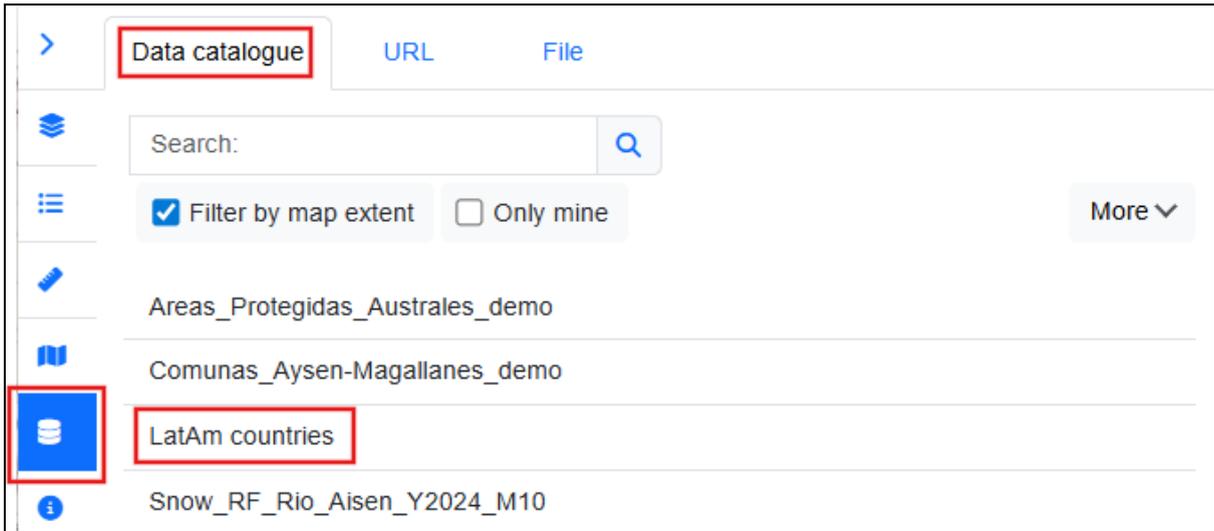
Publish the dataset using the QGIS Layman plugin

Publication by the QGIS Layman plugin is a method that provides a straightforward connection between the traditional desktop GIS environment and Web GIS. We suppose that the QGIS Layman plugin is already installed in the QGIS Desktop application.
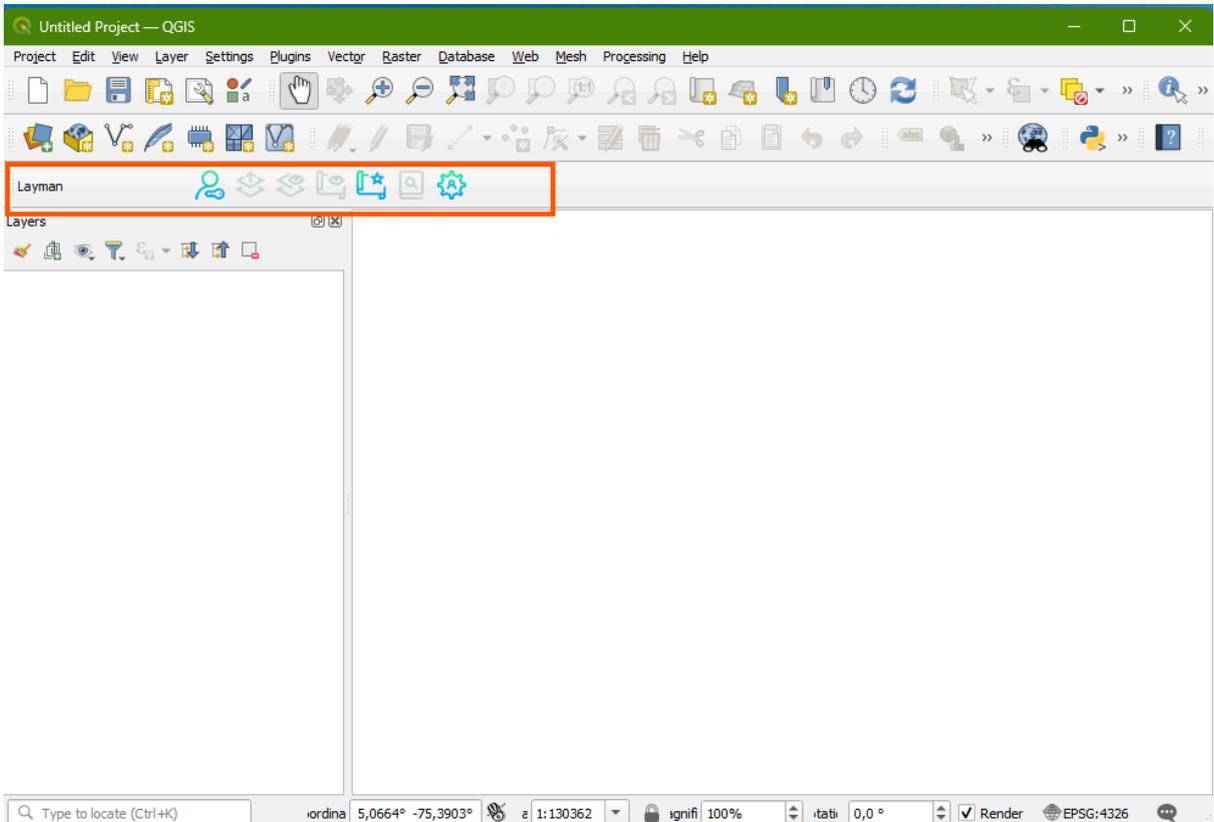

Figure 1 - QGIS Layman plugin icons in the QGIS menu (red rectangle)

The initial step is to log in to the Layman plugin using the same credentials as those from the Comunidad Platform. By clicking on the first icon, the Login dialogue will open.
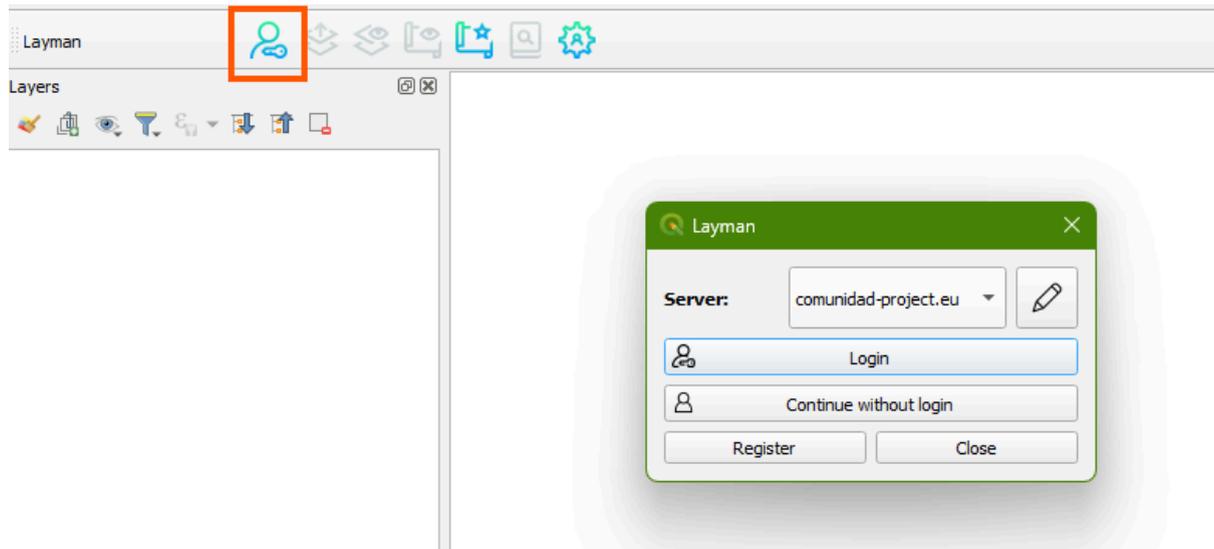

Figure 2 - Login dialogue of the Layman plugin

It is necessary to select the server of the Platform to log in and then just click on the Login icon. The Layman plugin will force the web browser to open with the login for the Platform. After a successful login to the Platform, the Layman plugin is logged in and activates additional icons, as well as the Platform's name, on the left side of the panel.
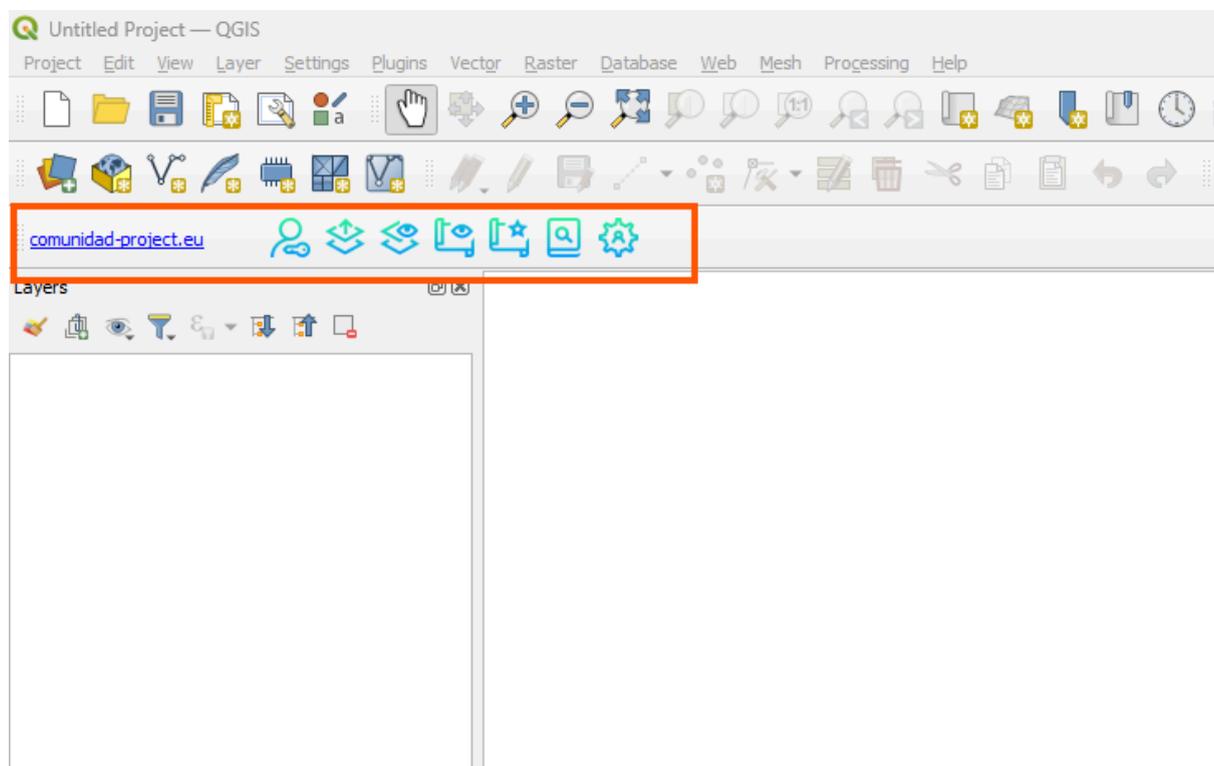

Figure 3 - Layman plugin icons activated after successful login.

At this moment, the Layman plugin is ready for publishing datasets on the Platform. Just open a spatial dataset in the QGIS project.