# Google Maps Coordinates

Region West (Bunsdorfer Forst): 50.222714, 10.465726

Region East (Forst Schwarzenbach am Wald): 50.310191, 11.589538

# Data structure

Example file name: region\_1\_west\_2023\_05\_31\_final\_data.pkl

| **Numpy raster band** | **Sentinel-2 band** |
| --- | --- |
| 0 | Band 2 |
| 1 | Band 3 |
| 2 | Band 4 |
| 3 | Band 5 |
| 4 | Band 6 |
| 5 | Band 7 |
| 6 | Band 8 |
| 7 | Band 8A |
| 8 | Band 11 |
| 9 | Band 12 |
| 10 | Mask (made by Denise) |

# Mask

1: valid values (forest)

0: invalid values

Invalid values include non-forest land covers like cropland, urban, and streets taken from the Open Street Map (OSM) layers for the regions Unterfranken and Oberfranken. Around the streets, a 10 m buffer was put, to account for mixed pixel effects.

Be careful, OSM is not perfect, so there will be streets in the forest that are not included in the mask. That could mean in the case of strange artifacts (or strange behavior) in the segmented data, the reason could be forest streets/paths.

Additionally, the scene classification layer from Sentinel-2 was used to exclude pixels corresponding to the classes:

* No Data (Missing data)
* Saturated or defective pixel
* Cloud shadows
* Cloud medium probability
* Cloud high probability
* Thin cirrus

# Forest areas

Attributes:

| **Attribute name** | **Attribute description** |
| --- | --- |
| id | unique id for each area |
| type | if the clearing was already established or newly added 1: already there 2: newly added |
| veg\_cover | 1: soil 2: grass (low)  3: grass (high)  4: trees (partly trees/ open) |
| timestamp | time (date) of recognition of the clearing  20230531 -> 31th of May 2023 |

# Forest raster

Example file name: areas\_without\_trees\_east\_raster\_final.pkl

| **Numpy raster band** | **Forest attribute** |
| --- | --- |
| 0 | id |
| 1 | timestamp |
| 2 | type |
| 3 | veg\_cover |