

An interactive forest tourism map – a WebGIS application

M. Sc. Forest Information Technology

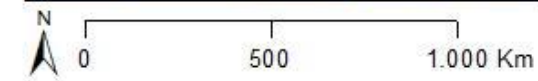
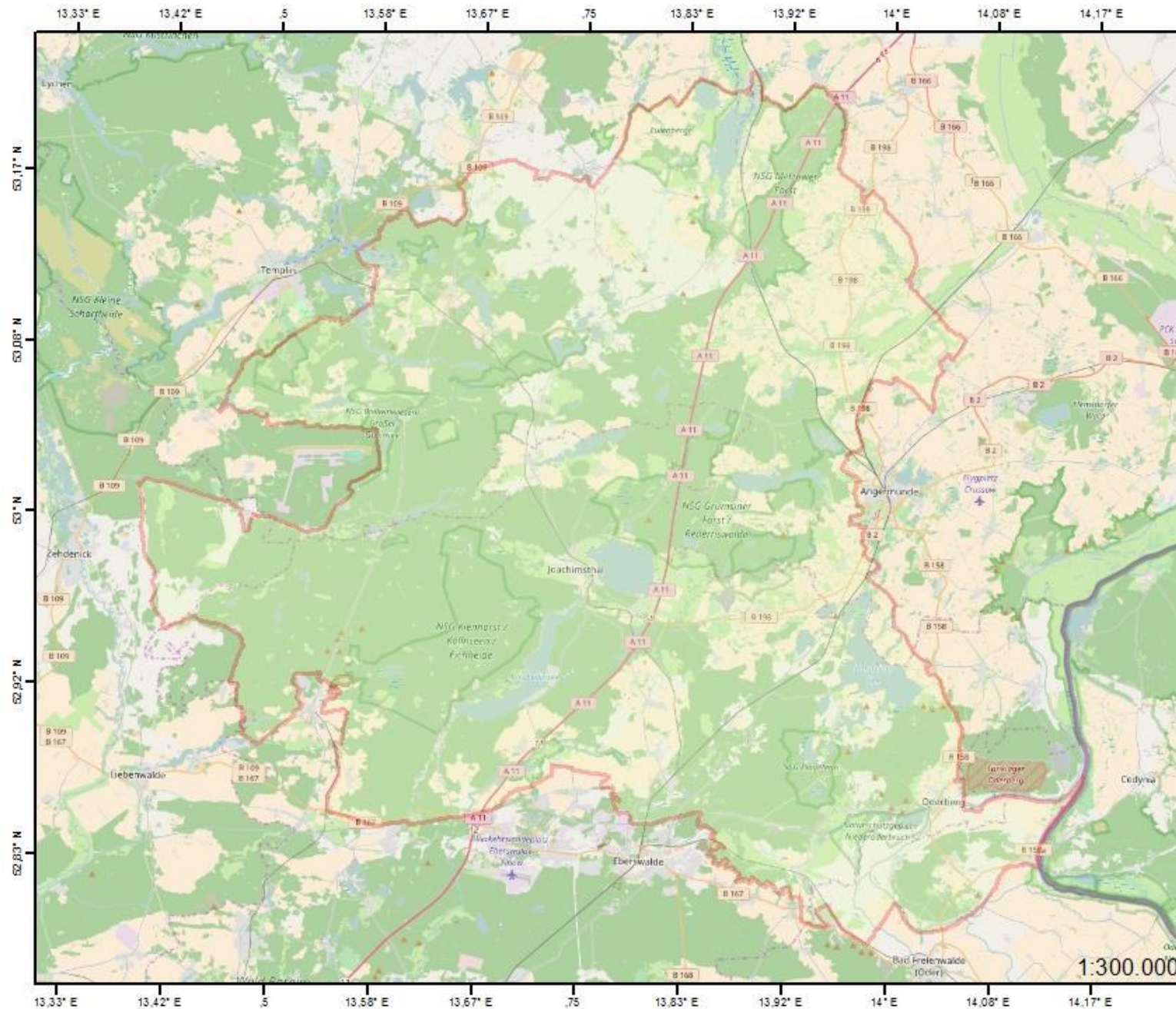
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FIT 2016/2017



Introduction. Study area and aim of the project.

- Schorfheide-Chorin (North-Eastern part of Brandenburg, Germany)
- Extension: 1.290,843 km²
- UNESCO declares this natural area as Biosphere Reserve in 1990.
- One of the largest protected areas in Germany.
- Tourism can contribute to conservation by providing political and financial support.
- Aim: Promotion of tourism generating public web maps showing places of interest.



Location of the study area

ETRS 1989 UTM Zone 33N
 Projection: Transverse Mercator
 Datum: ETRS 1989

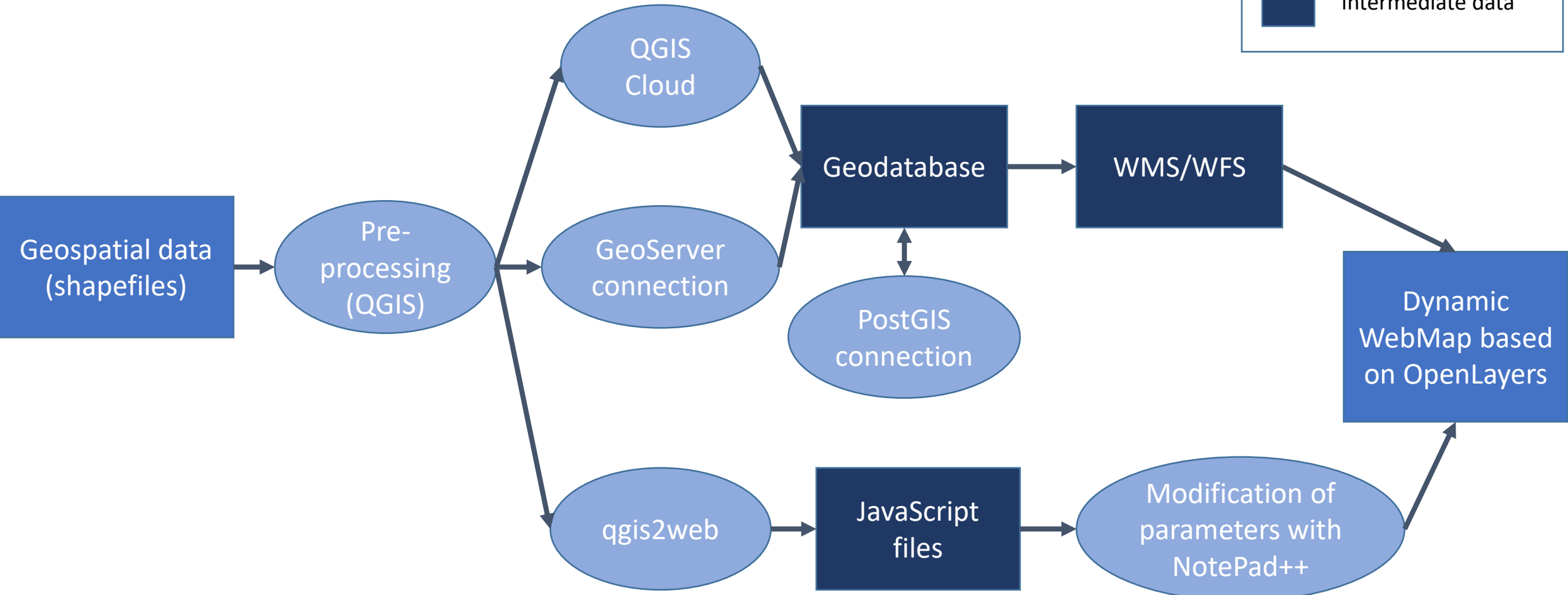
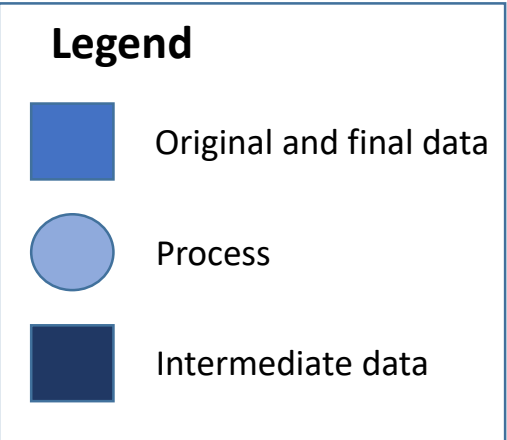
Author: Maria Dolores Perles Garcia
 Date: March 2017



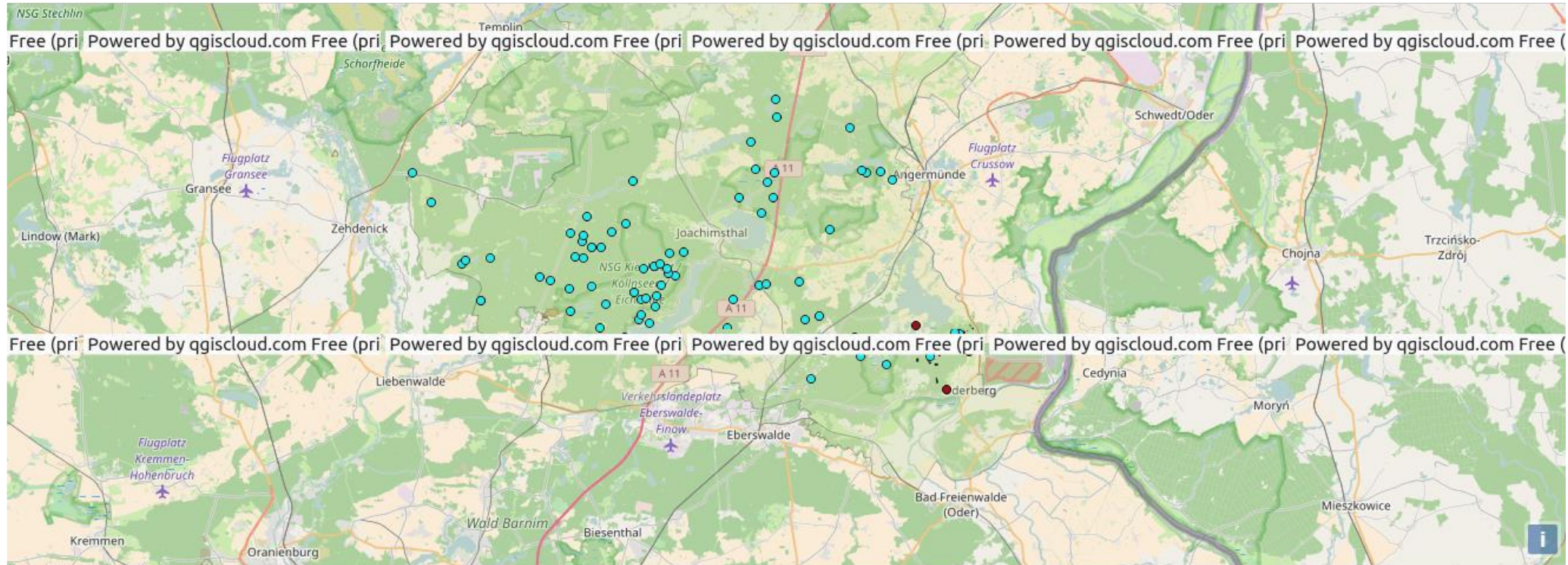
Materials

- Shapefile *FGK_Punkte*, points of the base map of Brandenburg forest, digitalized by LFE (Ahrndt & Haß, 2006).
- Shapefile *geotopebb*, geotopes and natural areas of Brandenburg, digitalized by Landesamt für Bergbau, Geologie und Rohstoffe (LBGR, 2017).
- Shapefile *Versuchsflächen_des_LFE_im_BR_mit_Status*, polygons of forest trial plots, digitalized by LFE orst Brandenburg, Lit (Degenhardt & Haß, 2014)

Methodology

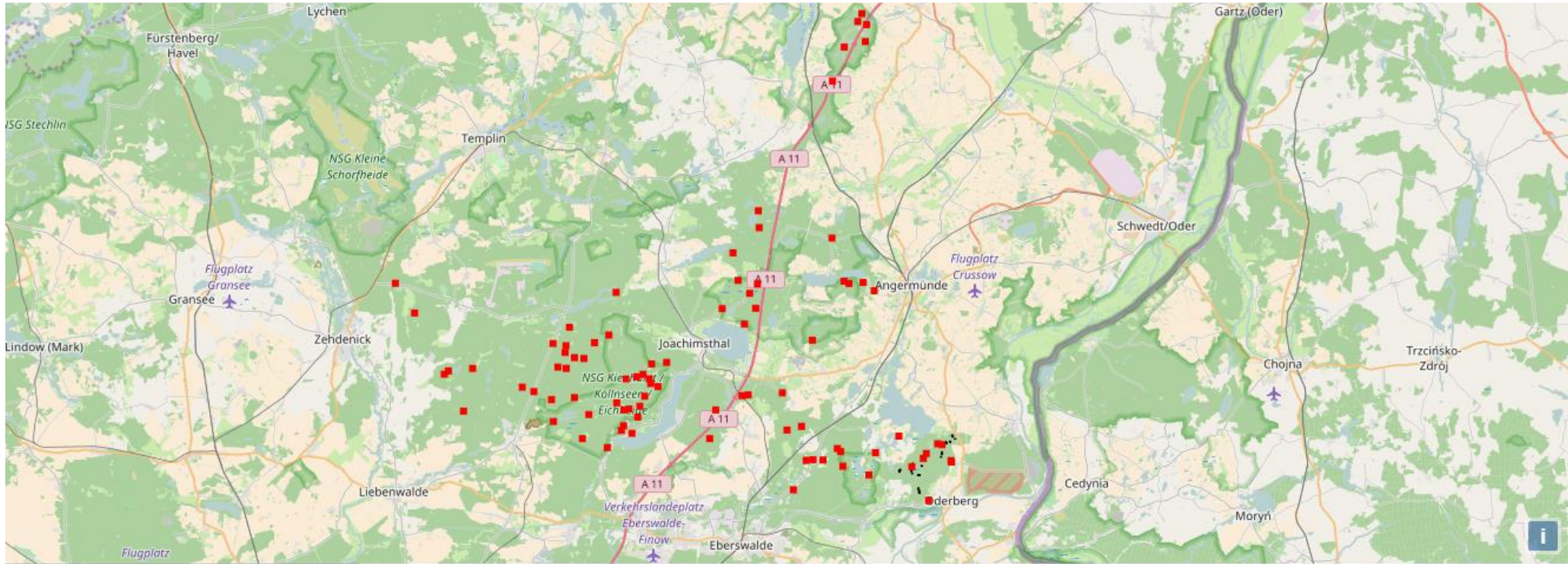


Results. QGIS Cloud



| | |
|-------------------|---|
| ORTSBEZEIC | Bstlich Brodowin |
| GRUPPE | glaziale und periglaziale |
| ART | Drumlin |
| NAME | Rummelsberg |
| LINK | https://de.wikipedia.org/ |

Results. Geoserver



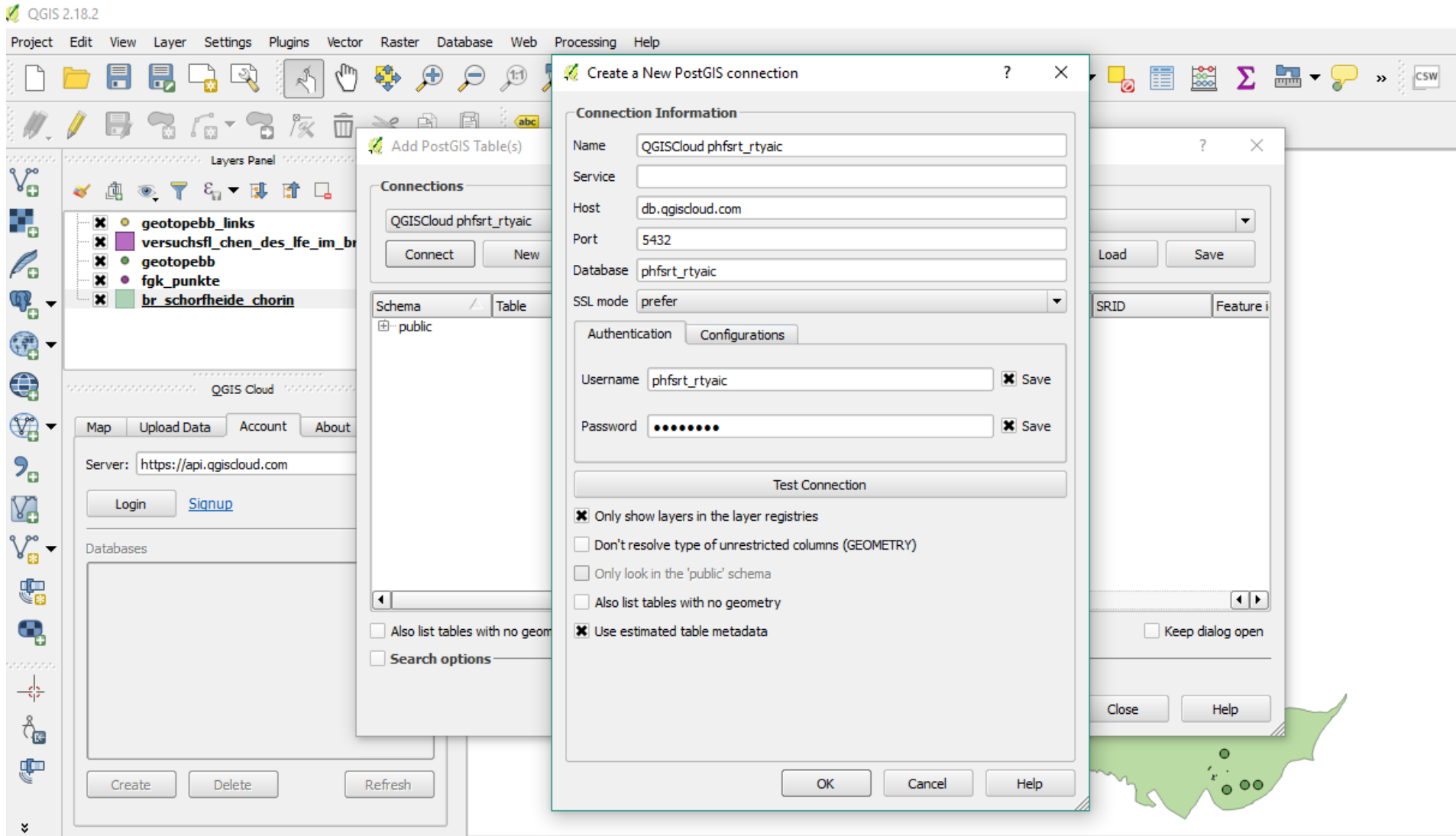
FGK_Punkte

| fid | Objektart |
|---------------|---|
| FGK_Punkte.37 | Historischer Grenzstein, Denkmal, Grabmal |

Results. OpenLayers

```
13 <script>
14     var osmLayer = new ol.layer.Tile({
15         source: new ol.source.OSM()
16     });
17     var wmsSource = new ol.source.TileWMS({
18         url: 'http://localhost:8080/geoserver/chorin/wms?version=1.1.0',
19         params: {'LAYERS': 'Tourismmap'},
20     });
21
22     var wmsLayer = new ol.layer.Tile({
23         source: wmsSource
24     });
25     var chorin = ol.proj.transform([13.83, 53], 'EPSG:4326', 'EPSG:3857');
26
27     var view = new ol.View({
28         center: chorin,
29         zoom: 10
30     });
31
32     var map = new ol.Map({
33         layers: [osmLayer, wmsLayer],
34         target: 'map',
35         view: view
36     });
37
38     map.on('singleclick', function(evt) {
39         document.getElementById('info').innerHTML = '';
40         var viewResolution = /** @type {number} */ (view.getResolution());
41         var url = wmsSource.getGetFeatureInfoUrl(
42             evt.coordinate, viewResolution, 'EPSG:3857',
43             {'INFO_FORMAT': 'text/html'});
44         if (url) {
45             document.getElementById('info').innerHTML =
46                 '<iframe seamless src="' + url + '"></iframe>';
47         }
48     });
```


Results. Connection with PostGIS



Results. qgis2web



Discussion and conclusions

- Qgis2web offers friendly framework and store the styles, however every modification needs to generate the entire webmap
- Modification of the styles with Geoserver is more complex than with the other options
- Advantages of WMS
- Importance of a possible modification with PostGIS

References

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