

1

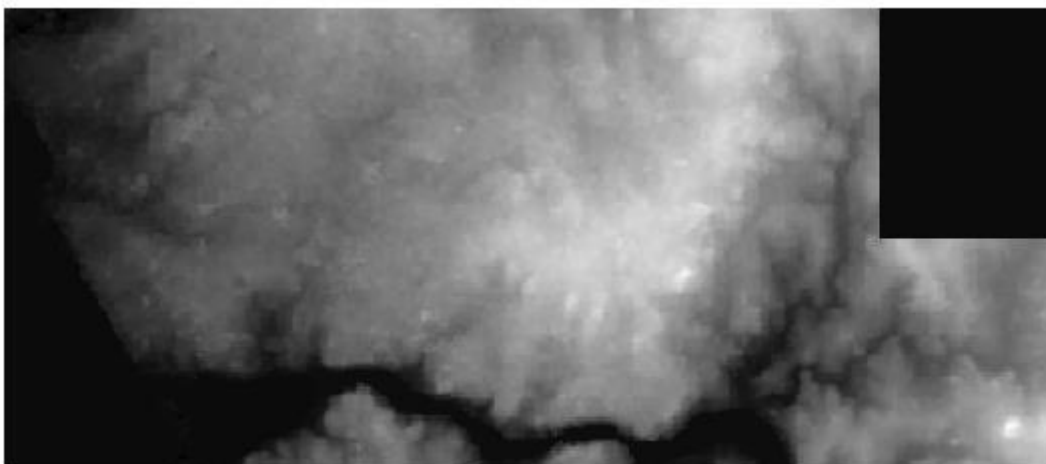
```

- alter table kurcaba.intersects
  add column rid SERIAL PRIMARY KEY;

- CREATE INDEX idx_intersects_rast_gist ON kurcaba.intersects
  USING gist (ST_ConvexHull(rast));

- -- schema::name table_name::name raster_column::name
  SELECT AddRasterConstraints('kurcaba'::name,
    'intersects'::name, 'rast'::name);

```



[illegible][illegible]

Tworzenie rastrów z wektorów (rastrowanie)

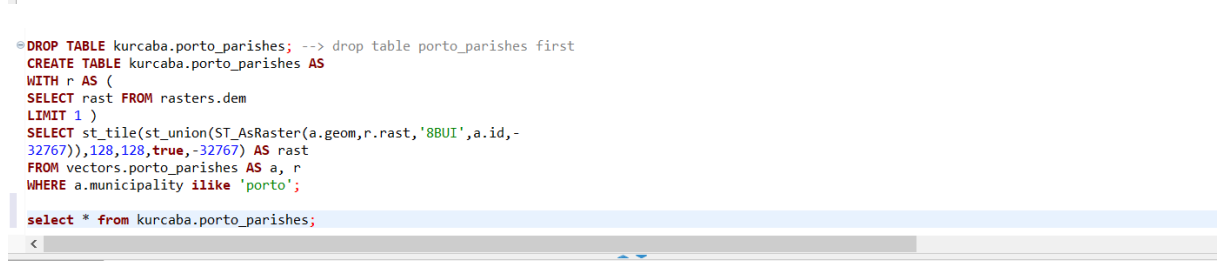
1.

```
CREATE TABLE kurcaba.porto_parishes AS
WITH r AS (
SELECT rast FROM rasters.dem
LIMIT 1
)
SELECT ST_AsRaster(a.geom,r.rast,'8BUI',a.id,-32767) AS rast
FROM vectors.porto_parishes AS a, r
WHERE a.municipality ilike 'porto';

select * from kurcaba.porto_parishes;
```

2.

[illegible]

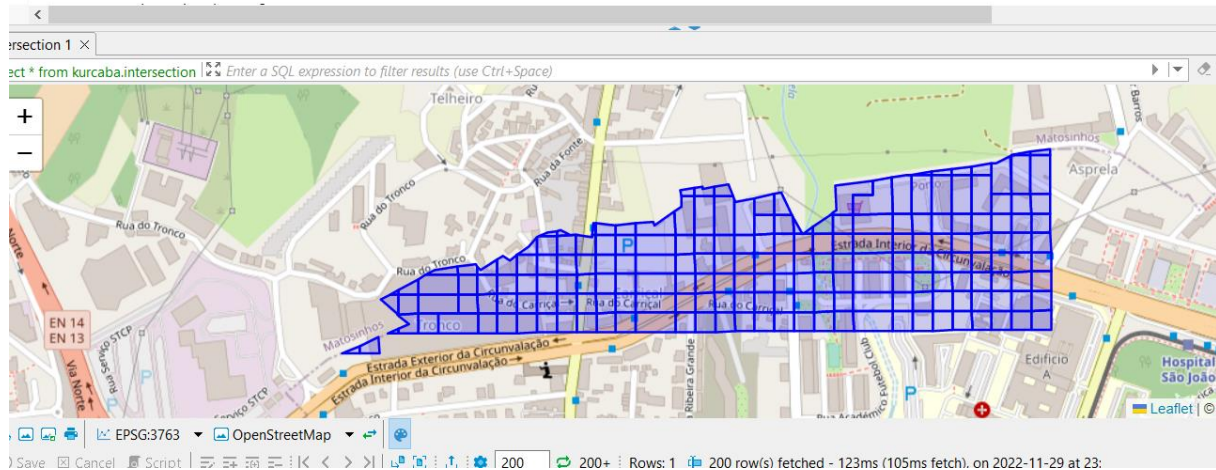
[illegible]

Konwertowanie rastrow na wektory (wektoryzowanie)

1.

```
create table kurcaba.intersection as
SELECT
  a.rid,(ST_Intersection(b.geom,a.rast)).geom,(ST_Intersection(b.geom,a.rast)
).val
FROM rasters.landsat8 AS a, vectors.porto_parishes AS b
WHERE b.parish ilike 'paranhos' and ST_Intersects(b.geom,a.rast);

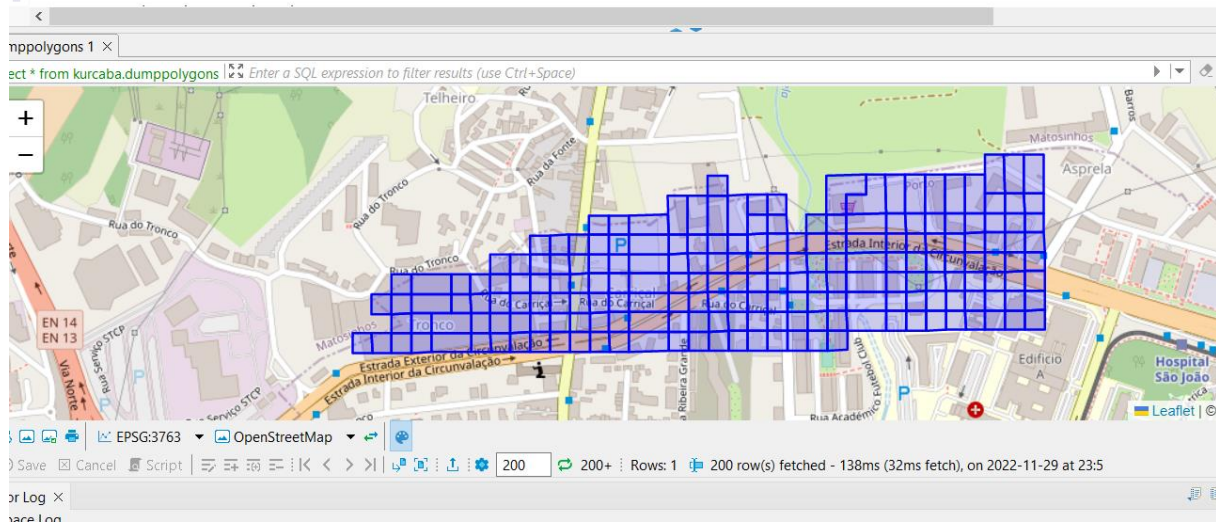
select * from kurcaba.intersection;
```



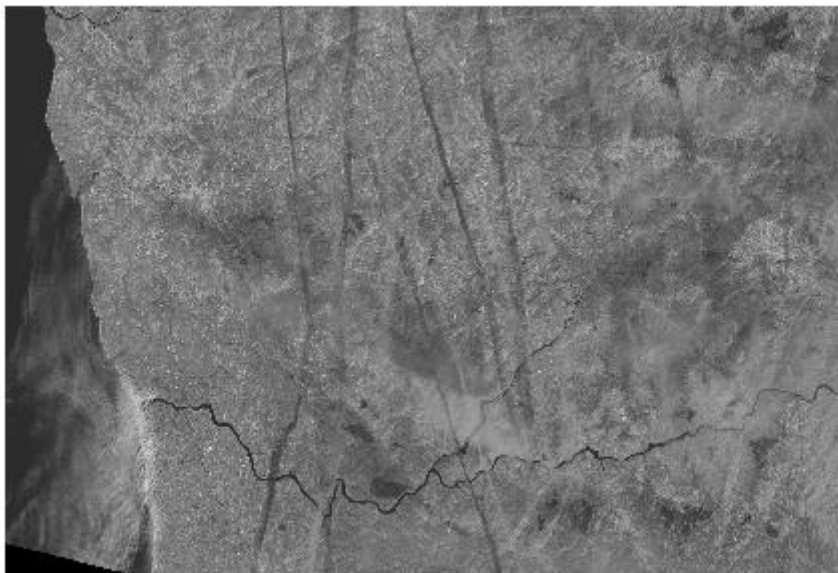
2.

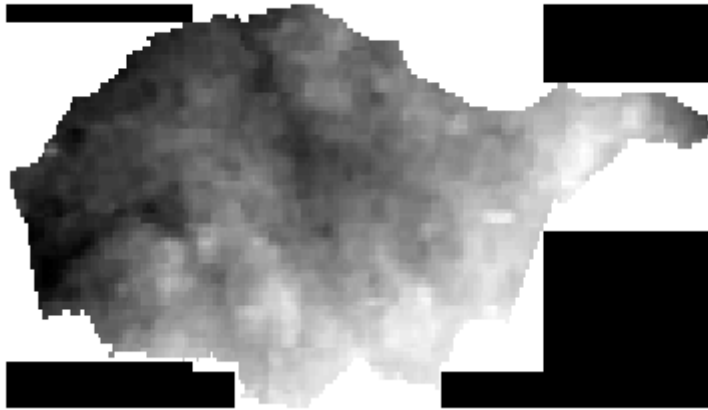
```
CREATE TABLE kurcaba.dumppolygons AS
SELECT
  a.rid,(ST_DumpAsPolygons(ST_Clip(a.rast,b.geom))).geom,(ST_DumpAsPolygons(
ST_Clip(a.rast,b.geom))).val
FROM rasters.landsat8 AS a, vectors.porto_parishes AS b
WHERE b.parish ilike 'paranhos' and ST_Intersects(b.geom,a.rast);

select * from kurcaba.dumppolygons
```



1.

[illegible]

[illegible][illegible]

5.

SQL: `SELECT st_summarystats(a.rast) AS stats FROM kurcab` Enter a SQL expression to filter results (use Ctrl+Space)

	stats
	count sum mean stddev min max
1	2,616 278,385 106.4162844037 11.6226287622 87 143
2	682 95,581 140.1480938416 12.0780721866 103 158
3	216 31,874 147.5648148148 4.2628306283 137 158
4	6,463 816,615 126.3523131673 14.0438229209 94 158

6

SQL: `SELECT st_summarystats(ST_Union(a.rast)) FROM kurc` Enter a SQL expression to filter results (use Ctrl+Space)

	st_summarystats
	count sum mean stddev min max
1	9,977 1,222,455 122.5273128195 16.9080042027 87 158

7

Results 1

SQL: `WITH t AS (SELECT st_summarystats(ST_Union(a.rast))` Enter a SQL expression to filter results (use Ctrl+Space)

	min max mean
1	87 158 122.5273128195

8

SQL: `WITH t AS (SELECT b.parish AS parish, st_summarystats(ST_Union(a.rast)) AS stats FROM kurc b JOIN kurc a ON b.parish = a.parish` Enter a SQL expression to filter results (use Ctrl+Space)

parish	min	max	mean
Bonfim	1	159	107.5658842668
Campanhã	0	178	74.6673221309
Paranhos	87	158	122.5273128195
Ramalde	48	108	77.5844444444
União das freguesias de Aldoar, Foz do Douro e Nevogilde	-4	83	34.6673548979
União das freguesias de Cedofeita, Santo Ildefonso, Sé, Miragaia, São Nicolau e Vitória	1	157	95.0027774104
União das freguesias de Lordelo do Ouro e Massarelos	-1	117	49.5005144033

Save Cancel Script 200 7 Rows: 1 7 row(s) fetched - 56ms. on 2022-11-28

9

places 1 ×

`SELECT b.name,st_value(a.rast,(ST_Dump(b.geom)).ge`

	name	st_value
1	Aldeia São Miguel	96
2	Alpendurada e Matos	145
3	Amarante	71
4	Baião	581
5	Cabeceiras de Basto	[NULL]
6	Castelo de Paiva	284
7	Celorico de Basto	227
8	Cinfães	405

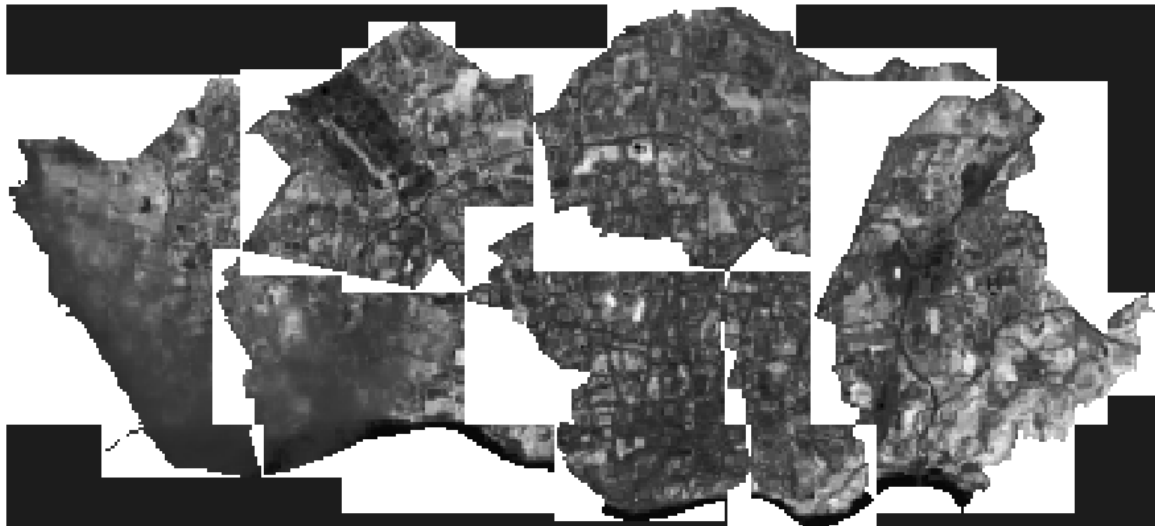
Save Cancel Script

10.



Algebra map

1.

[illegible]

2.


```

--1
SELECT ST_AsTiff(ST_Union(rast))
FROM kurcaba.porto_ndvi;

--2
SELECT ST_AsGDALRaster(ST_Union(rast), 'GTiff', ARRAY['COMPRESS=DEFLATE',
'PREDICTOR=2', 'PZLEVEL=9'])
FROM kurcaba.porto_ndvi;

SELECT ST_GDALDrivers();

--3

CREATE TABLE tmp_out AS
SELECT lo_from_bytea(0,
ST_AsGDALRaster(ST_Union(rast), 'GTiff', ARRAY['COMPRESS=DEFLATE',
'PREDICTOR=2', 'PZLEVEL=9']))
) AS loid
FROM kurcaba.porto_ndvi;

-----
SELECT lo_export(loid, 'D:\myraster.tiff') --> Save the file in a place where the user postgres have acc
FROM tmp_out;

-----
SELECT lo_unlink(loid)
FROM tmp_out; --> Delete the large object.

--4
-- gdal_translate -co COMPRESS=DEFLATE -co PREDICTOR=2 -co ZLEVEL=9
--PG:"host=localhost port=5432 dbname=postgis_raster user=postgres
--password=postgis schema=schema_name table=porto_ndvi mode=2"
--porto_ndvi.tiff

```