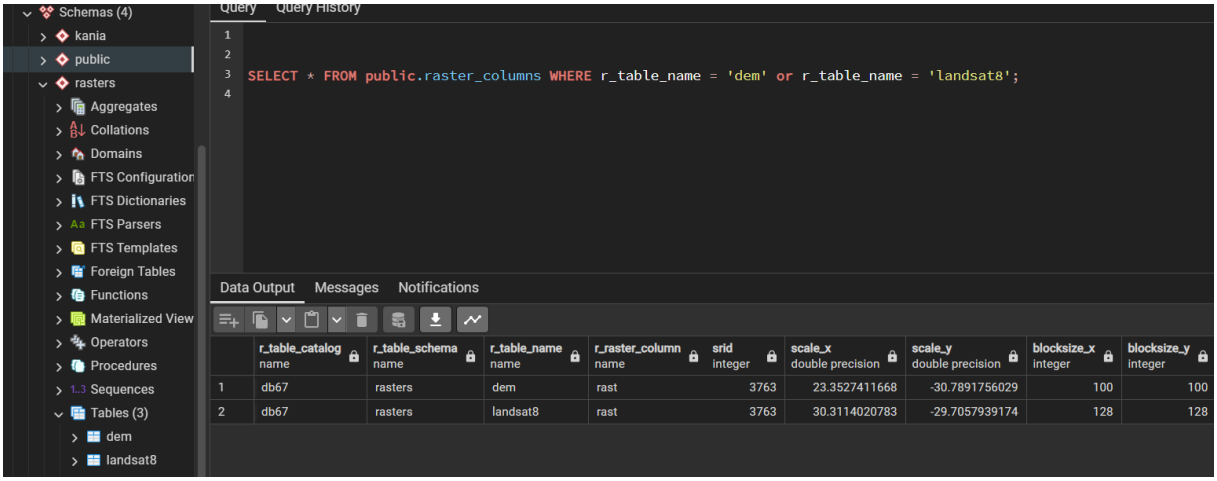
Ćwiczenia 6/7

PostGIS – raster (BDP)

Wiktoria Kania

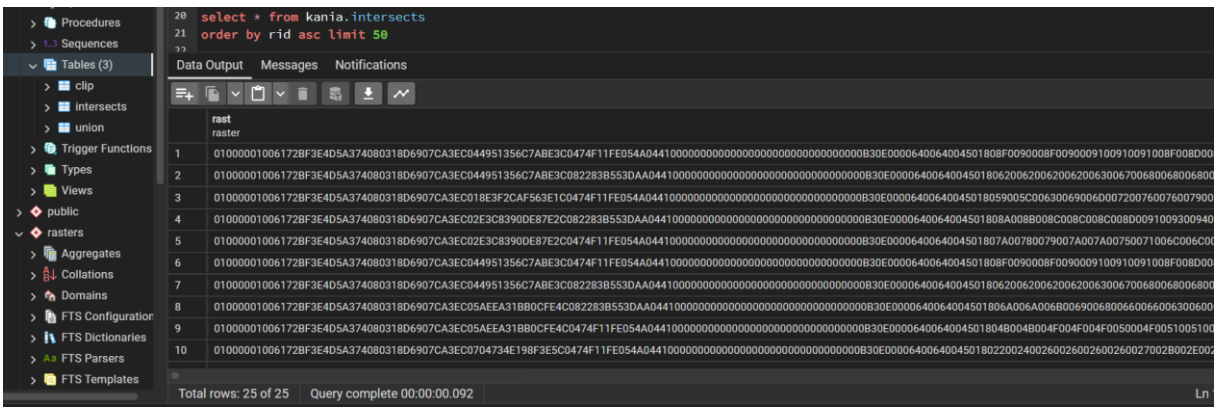
Wynik przygotowań

Pierwsza operacja w PGAdminie, w celu skontrolowania, czy dane otwierane poprzez Terminal mają odpowiednią strukturę i zawartość:

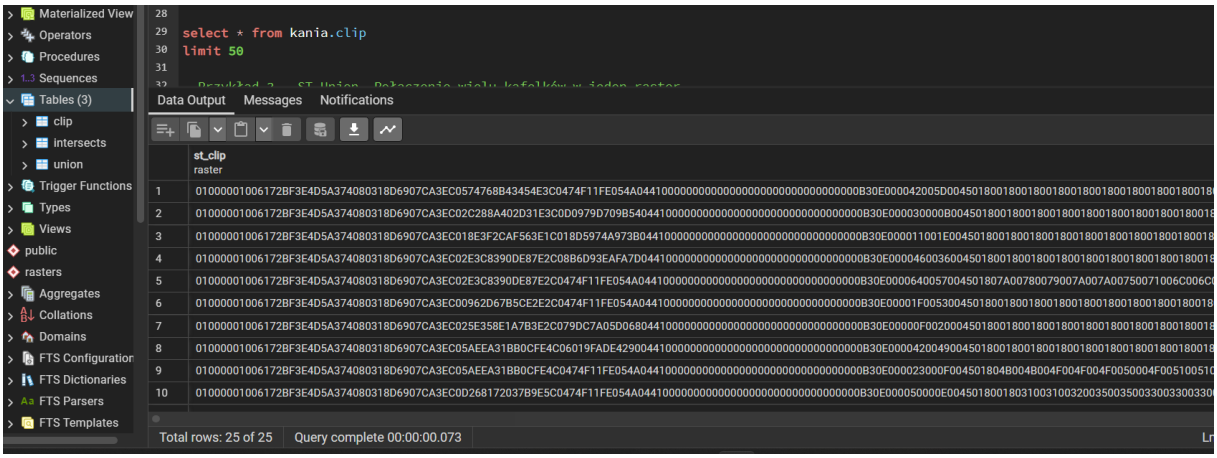


Tworzenie rastrów z istniejących rastrów i interakcja z wektorami

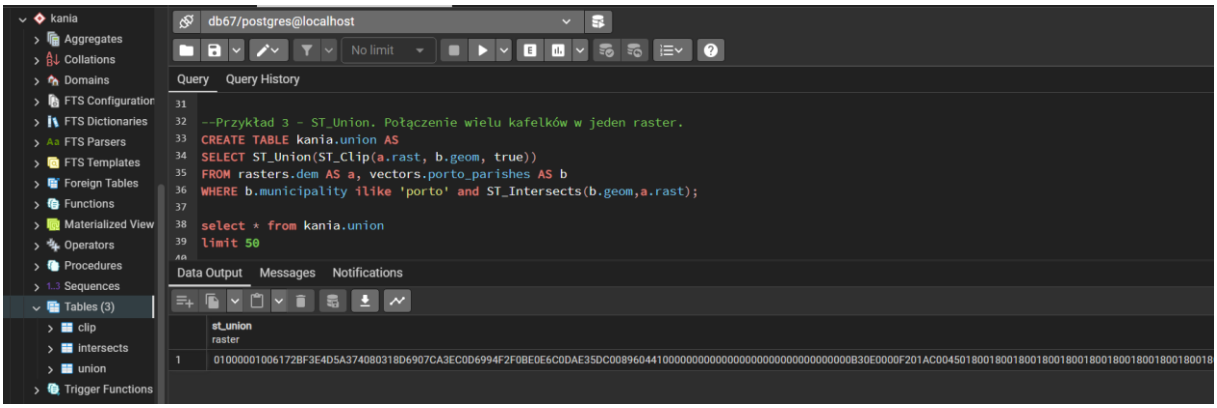
ST_Intersects



ST_Clip

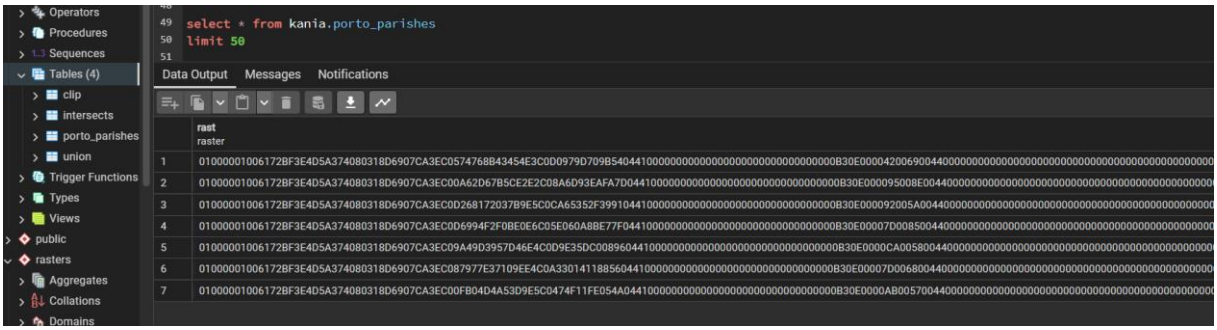


ST_Union

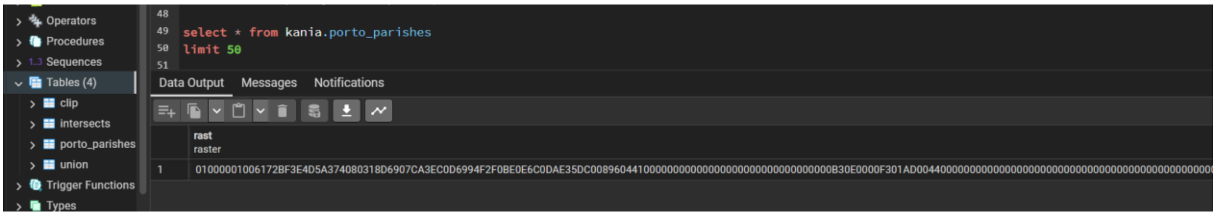


Tworzenie rastrów z wektorów (rastrowanie)

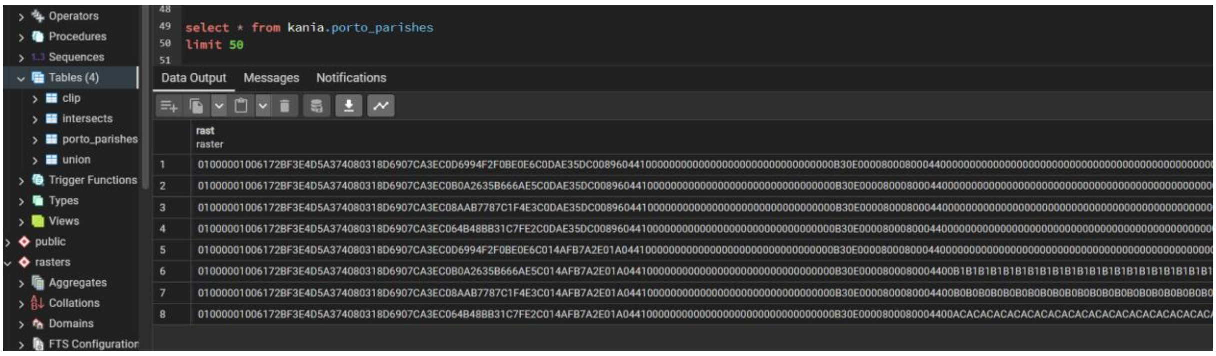
ST_AsRaster



ST_Union

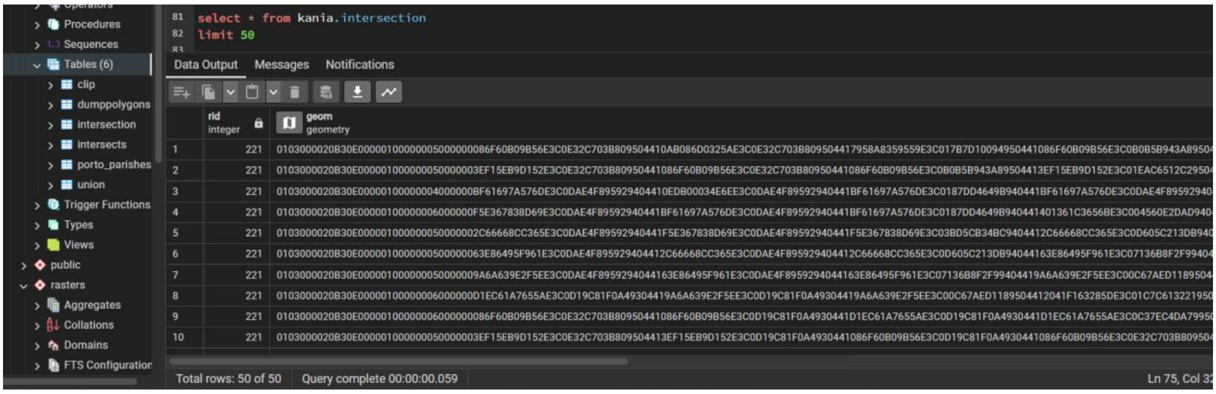


ST_Tile

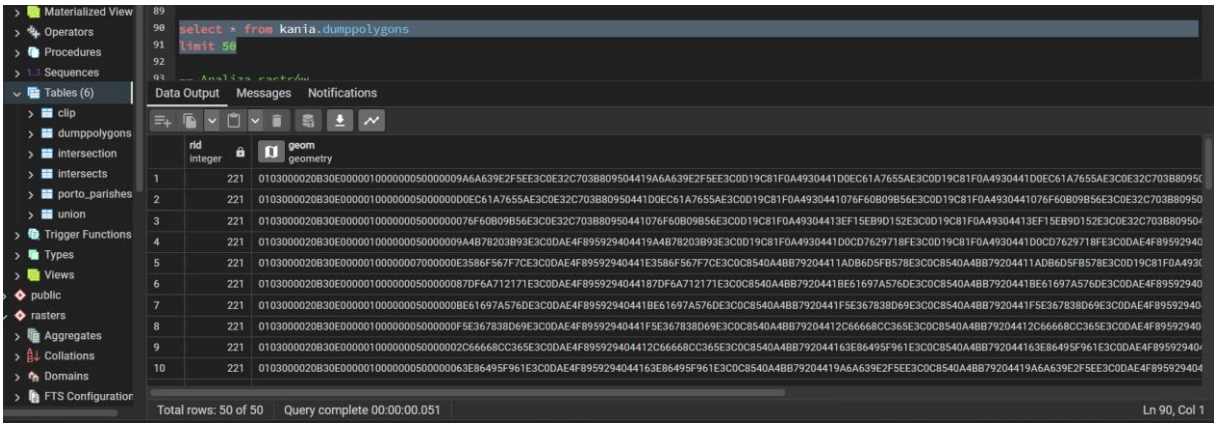


Konwertowanie rastrów na wektory (wektoryzowanie)

ST_Intersection

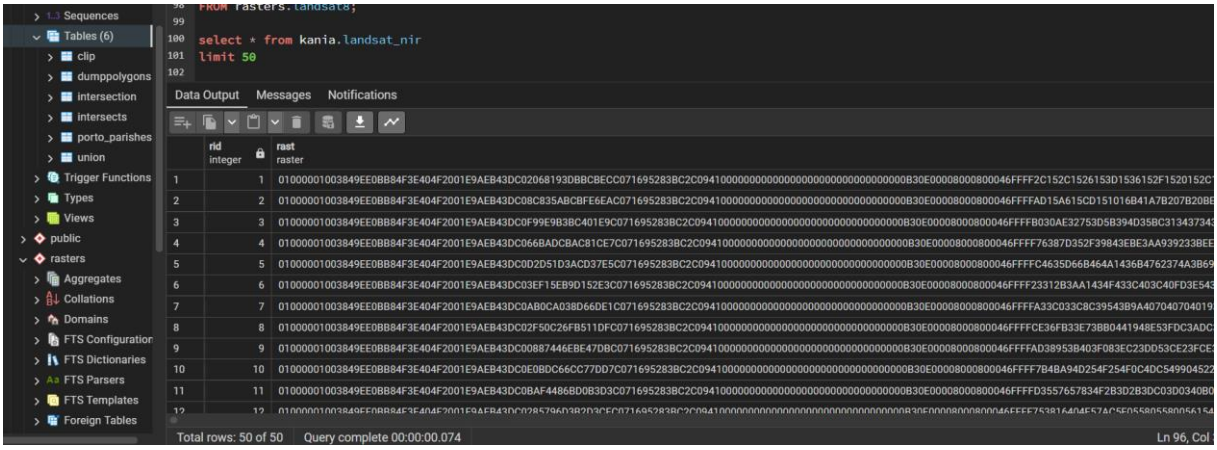


ST_DumpAsPolygons

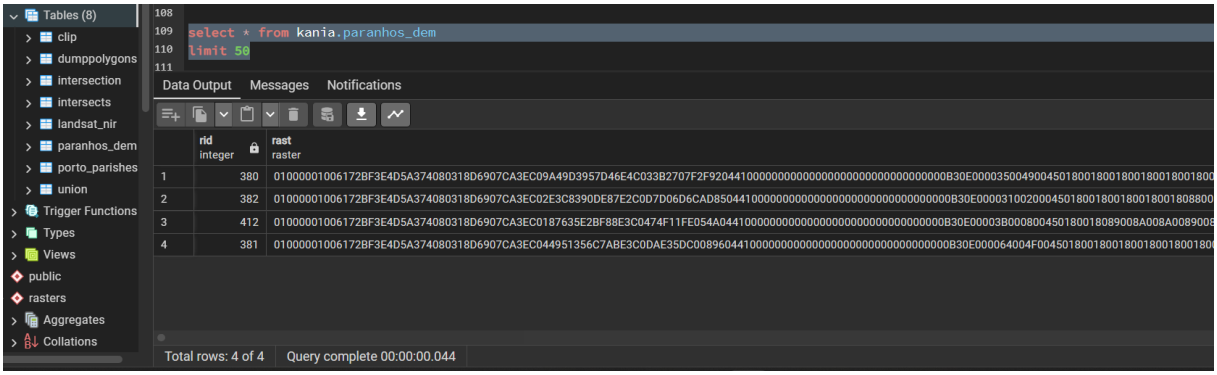


Analiza rastrów

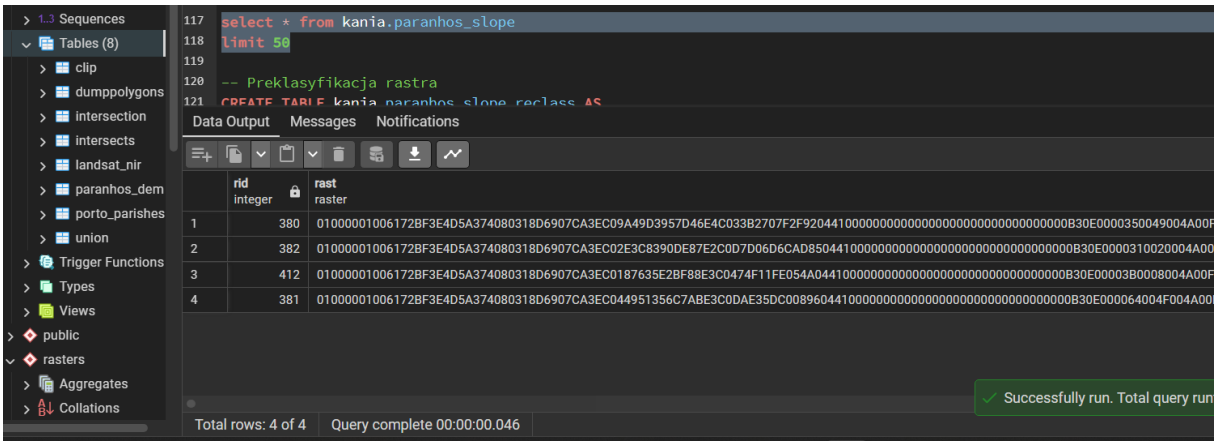
ST_Band



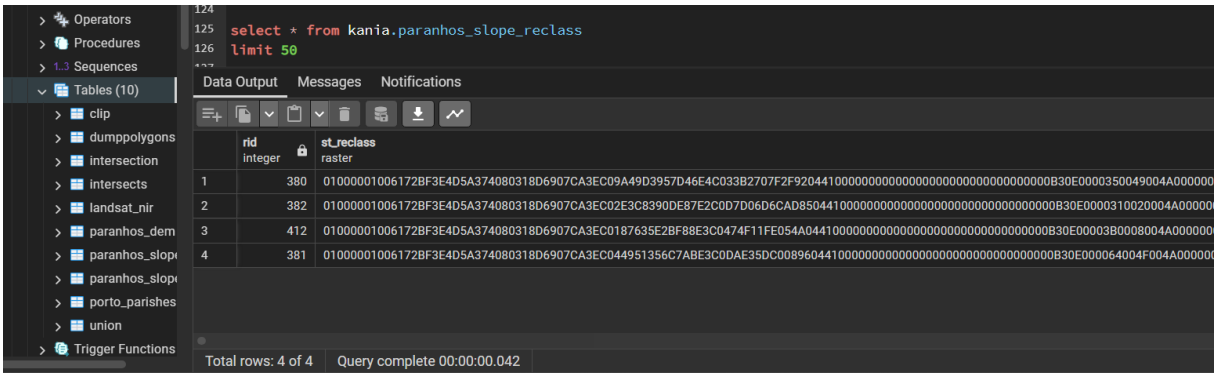
ST_Clip



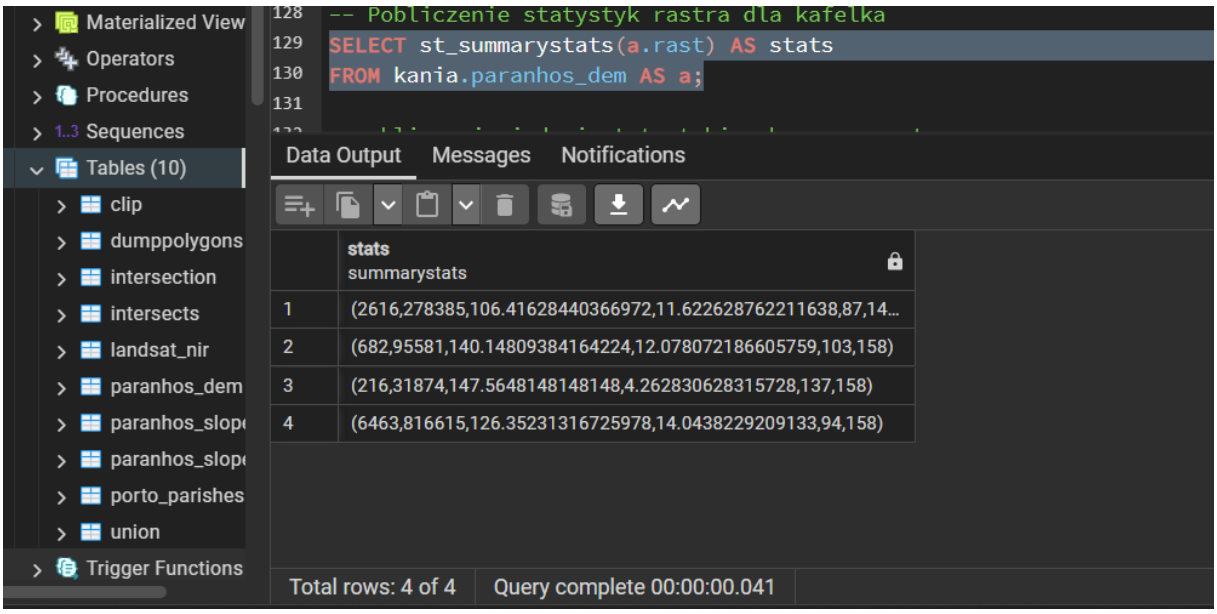
ST_Slope



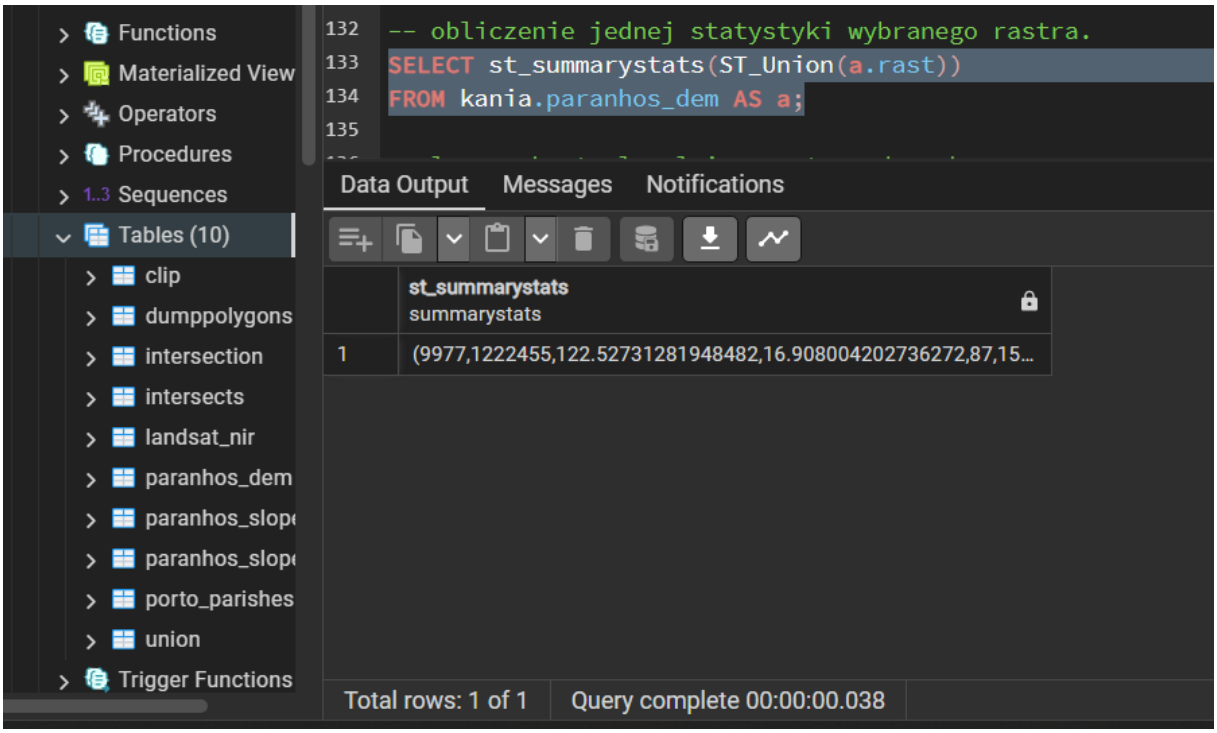
ST_Reclass



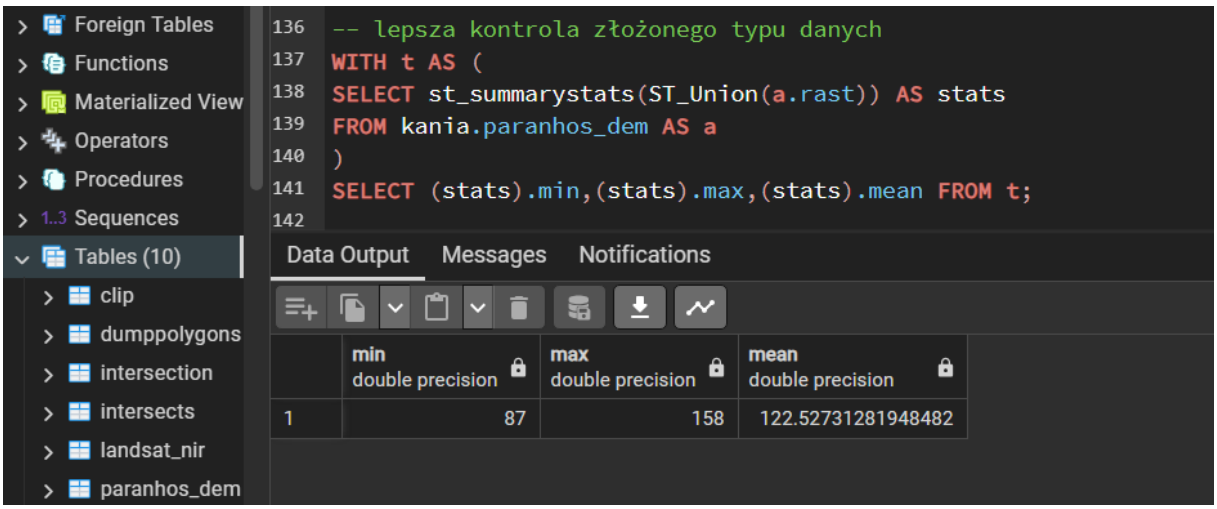
ST_SummaryStats



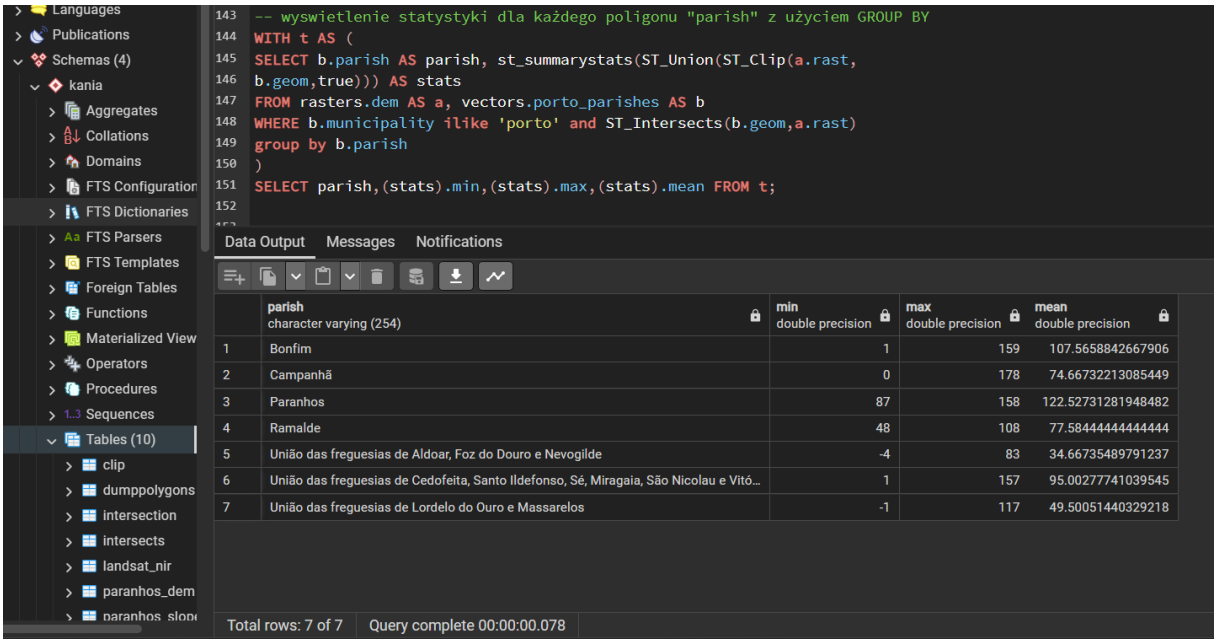
ST_SummaryStats oraz Union



ST_SummaryStats z lepszą kontrolą złożonego typu danych



ST_SummaryStats w połączeniu z GROUP BY



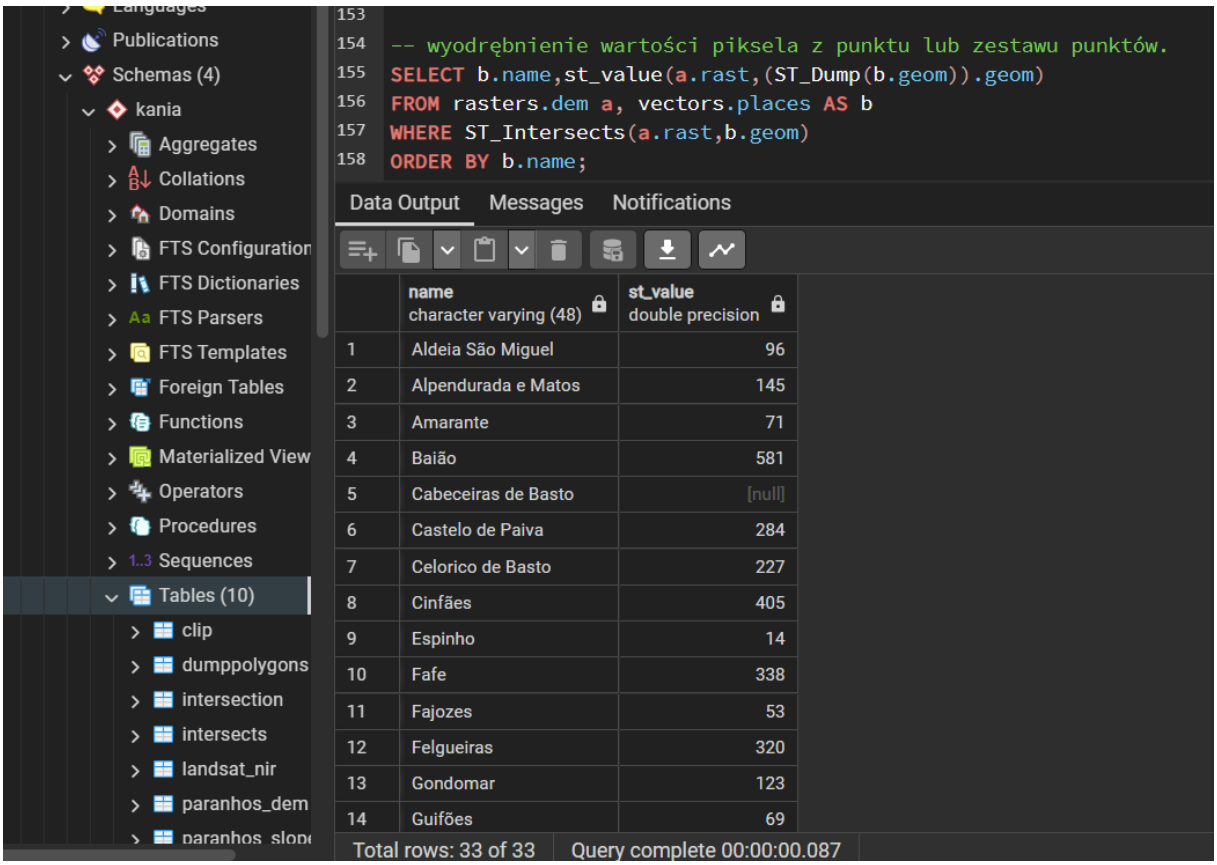
```
-- wyswietlenie statystyki dla każdego poligonu "parish" z użyciem GROUP BY
WITH t AS (
SELECT b.parish AS parish, st_summarystats(ST_Union(ST_Clip(a.rast,
b.geom,true))) AS stats
FROM rasters.dem AS a, vectors.porto_parishes AS b
WHERE b.municipality ilike 'porto' and ST_Intersects(b.geom,a.rast)
group by b.parish
)
SELECT parish,(stats).min,(stats).max,(stats).mean FROM t;
```

Data Output | Messages | Notifications

	parish character varying (254)	min double precision	max double precision	mean double precision
1	Bonfim	1	159	107.5658842667906
2	Campanhã	0	178	74.66732213085449
3	Paranhos	87	158	122.52731281948482
4	Ramalde	48	108	77.58444444444444
5	União das freguesias de Aldoar, Foz do Douro e Nevogilde	-4	83	34.66735489791237
6	União das freguesias de Cedofeita, Santo Ildefonso, Sé, Miragaia, São Nicolau e Vitó…	1	157	95.00277741039545
7	União das freguesias de Lordelo do Ouro e Massarelos	-1	117	49.50051440329218

Total rows: 7 of 7 | Query complete 00:00:00.078

ST_Value



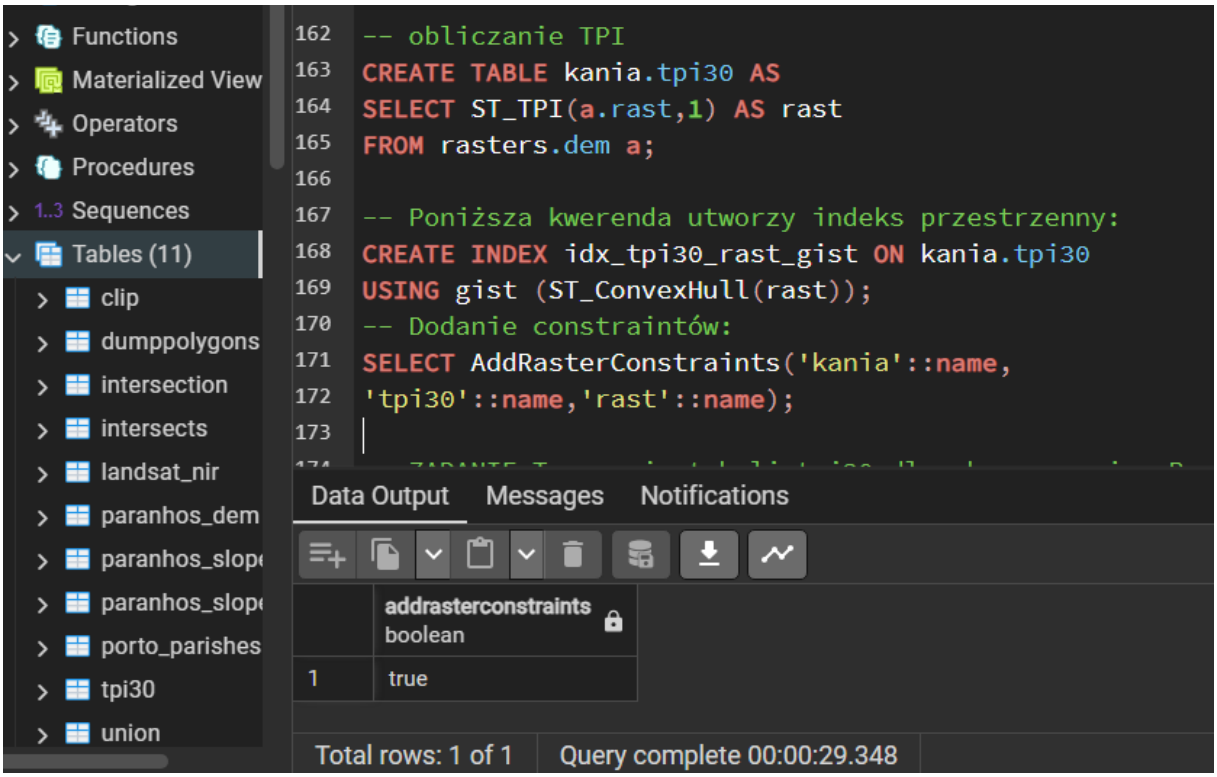
```
-- wyodrębnienie wartości piksela z punktu lub zestawu punktów.
SELECT b.name,st_value(a.rast,(ST_Dump(b.geom)).geom)
FROM rasters.dem a, vectors.places AS b
WHERE ST_Intersects(a.rast,b.geom)
ORDER BY b.name;
```

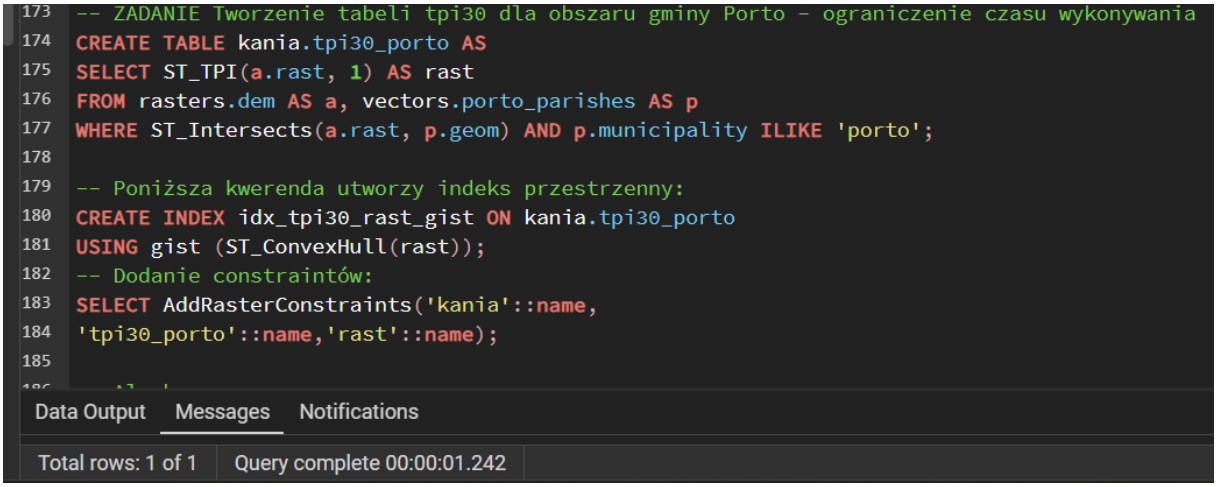
Data Output | Messages | Notifications

	name character varying (48)	st_value double precision
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
9	Espinho	14
10	Fafe	338
11	Fajozes	53
12	Felgueiras	320
13	Gondomar	123
14	Guifões	69

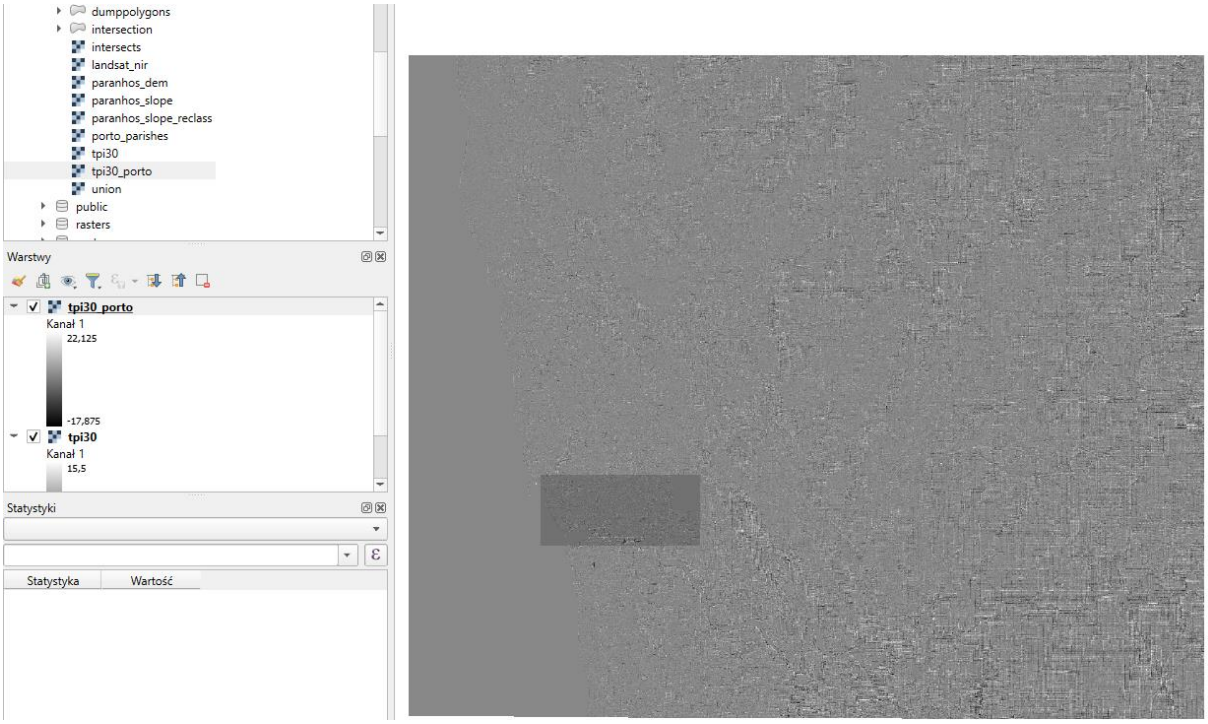
Total rows: 33 of 33 | Query complete 00:00:00.087

ST_TPI



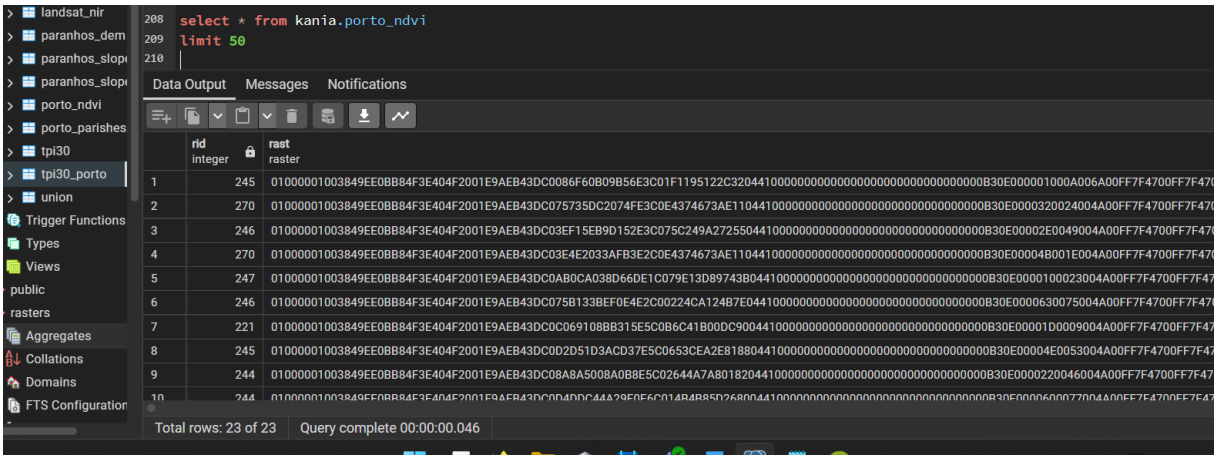


DLA OGRANICZONEGO OBSZARU, CZAS WYKONANIA ZAPYTANIA WYNOSI 1.242 S, A NIE 29.348, JAK W PRZYPADKU POCZĄTKOWYM.



Algebra map

Wyrażenie Algebry Map



Funkcja zwrotna