



# GEOSTATISTICS PORTAL

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*new developments and future plans*

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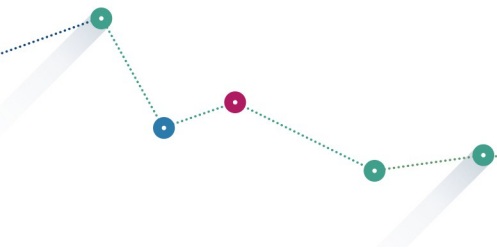
*European Forum for Geography and Statistics 2016  
Paris, November 17th*

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# Geostatistics Portal – what's it for?

GEO.STAT.GOV.PL

- **statistical data**  
geovisualization
- **spatial data**  
publishing
- **network services**  
(INSPIRE)



# Timeline

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## GEOSTATISTICS PORTAL

**2011**

- start of development

**2013**

- launch (census results)

**2014**

- new data (Local Data Bank)

**2015**

- new project (phase II)

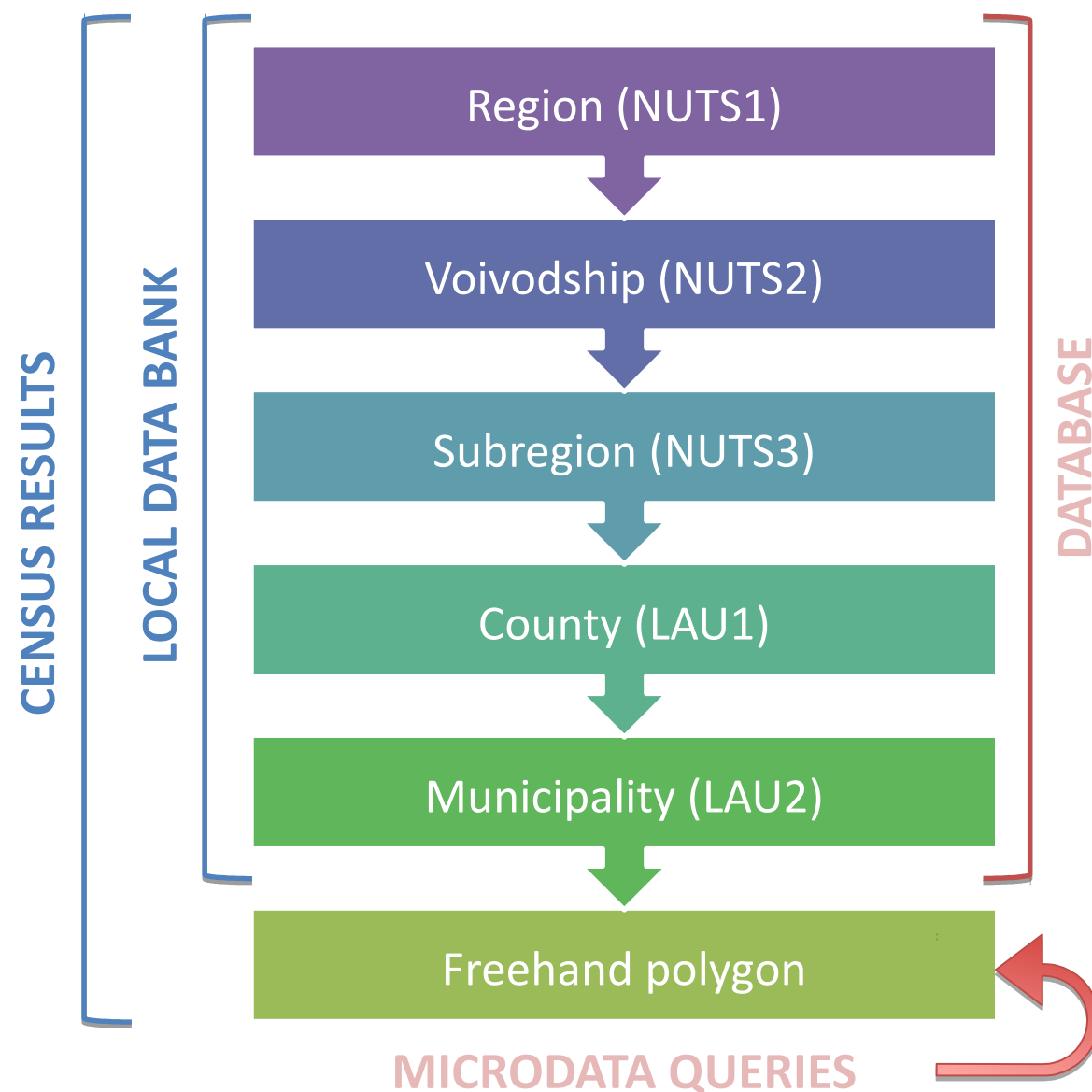
**2016**

- future development plans

# Data scope – user customized content

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- **Point referenced data:**
  - Agricultural Census 2010
  - Population and Housing Census 2011
- **Aggregated data:**
  - Local Data Bank (2002-2016)



# Data scope – static content

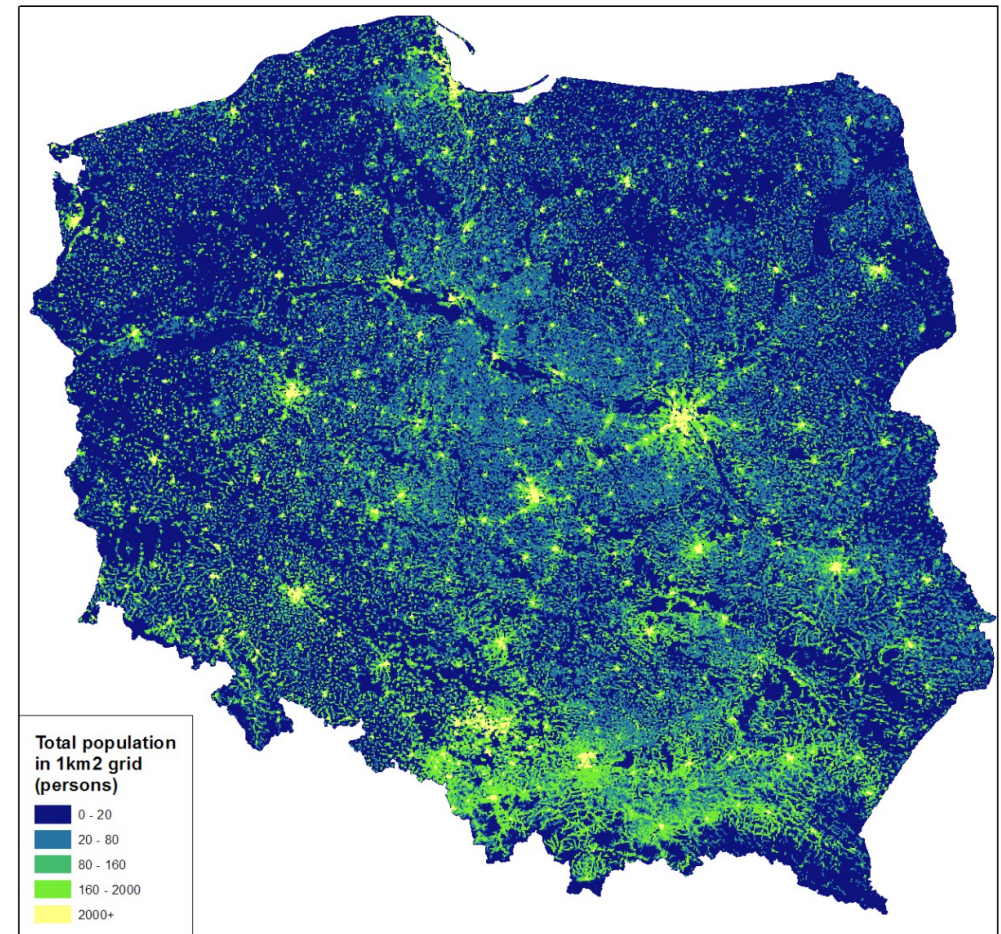
GEO.STAT.GOV.PL

**Grids** (census data, GEOSTAT projects):

- total population,
- classifications by:
  - sex,
  - age groups (0-14, 15-64, 65+),
- femininity ratio.

**Soon: Statistical regions and census enumeration areas:**

- total population,
- classifications by:
  - sex,
  - age groups (0-14, 15-64, 65+),





# Thematic map tools

GEO.STAT.GOV.PL

**GEOSTATISTICS PORTAL**

MENU TOOLS

Dynamic map c... ? ? ?

Thematic phen... ? ? ?

**Thematic Map** ? ? ?

Data Bank

Local Data Bank

Themes filter

Enter at least 3 characters Apply

- Afforestation of non-forest land
- Area of non-forest land, already wooded and designed for afforestation
- Forest area
- Forest land**
- Removals
- Removals (timber) per 100 ha of forest area
- Renewals and afforestations by type

+ CULTURE AND ART

+ ENTITIES OF THE ECONOMY ENTERED

+ ENVIRONMENTAL PROTECTION

+ EUROPEAN FUNDS

+ FINANCES OF ENTERPRISES

+ FUEL, ENERGY AND MATERIALS MARKET

+ HEALTH CARE AND SOCIAL WELFARE

+ HIGHER EDUCATION

+ HOUSING ECONOMY AND MUNICIPAL INFRASTRUCTURE

+ INDUSTRY AND CONSTRUCTION

+ INVESTMENTS AND FIXED ASSETS

+ LABOUR MARKET

+ LOCAL GOVERNMENT

+ NATIONAL CENSUS

+ NON-PROFIT SECTOR

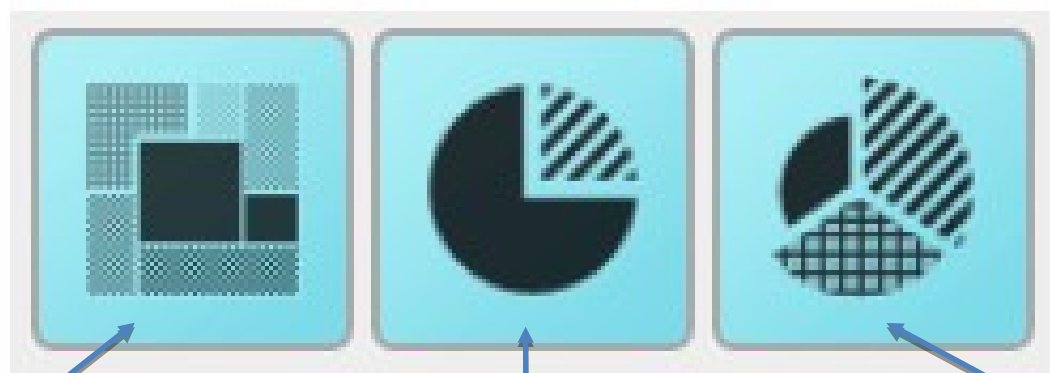
Queries Creation ? ? ?

Queries list ? ? ?



# Thematic map tools

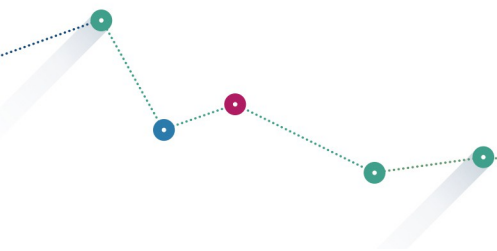
GEO.STAT.GOV.PL



CHOROPLETH MAP

DIAGRAM MAP

COMPLEX  
DIAGRAM MAP

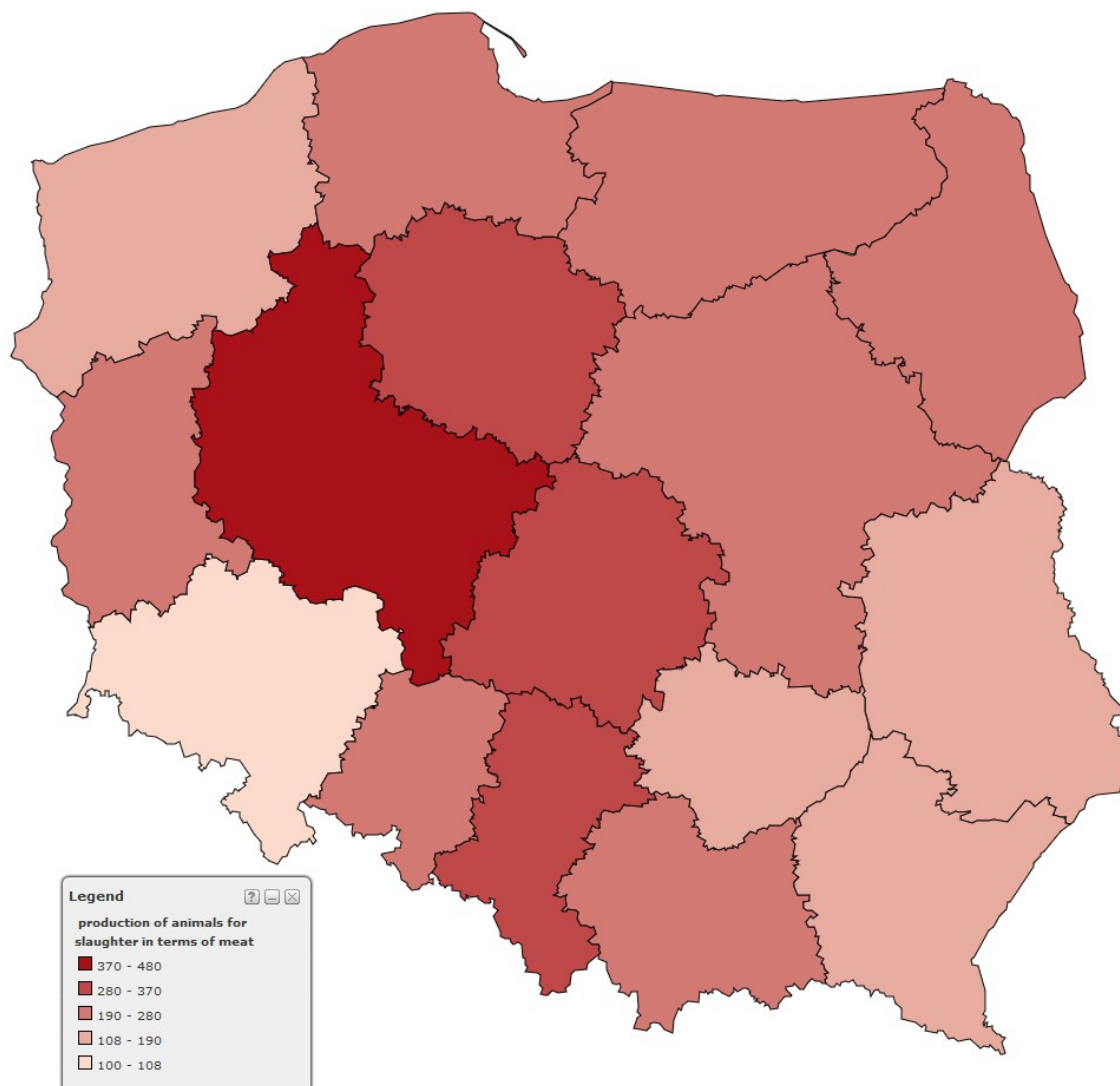


# Choropleth map

GEO.STAT.GOV.PL

Production of animals  
for slaughter per 1 ha  
of agricultural holdings

unit: voivodship  
(NUTS2)



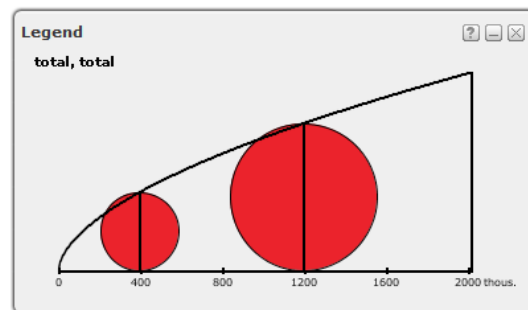
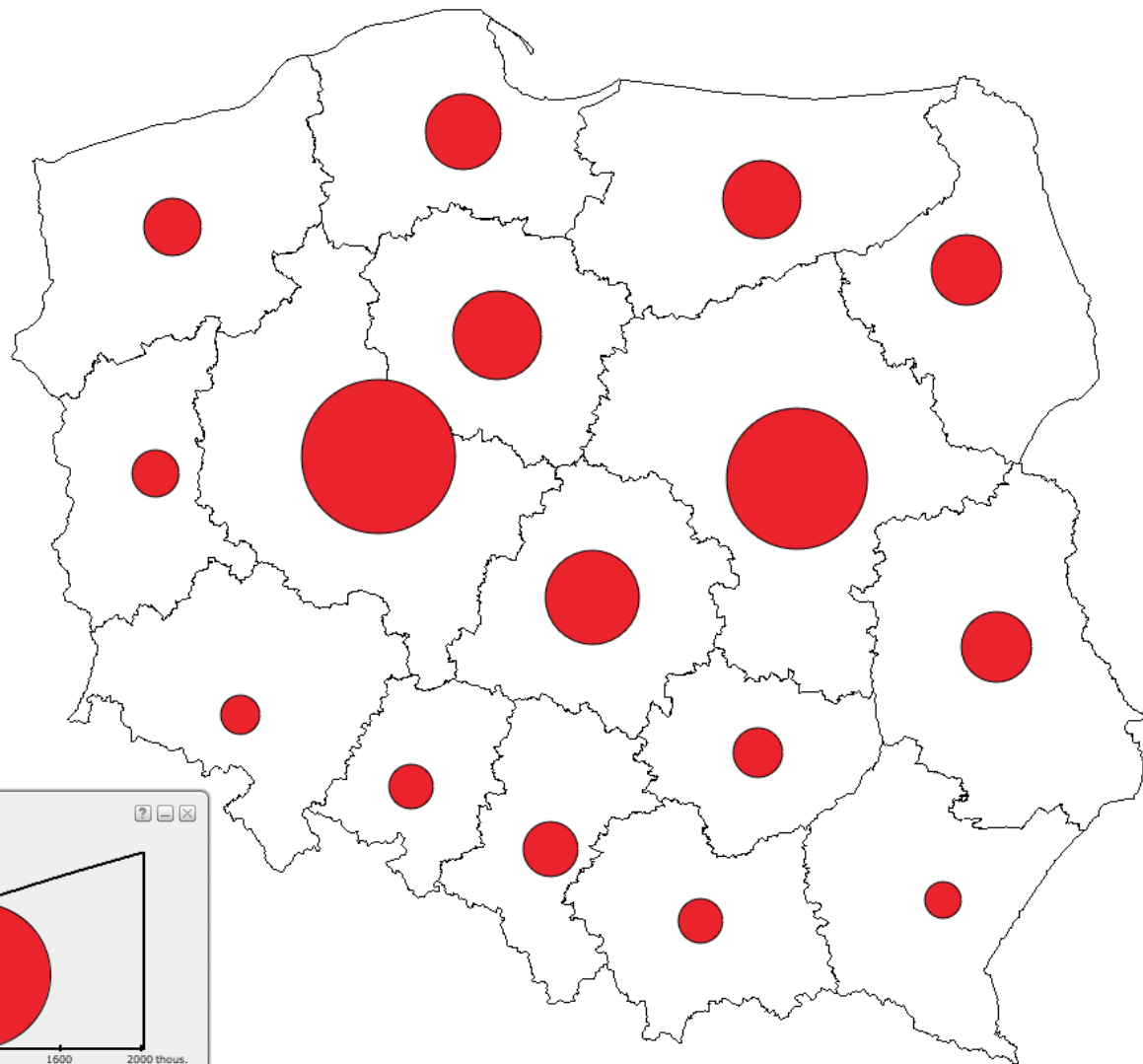


# Diagram map: simple (circle)

GEO.STAT.GOV.PL

Production of animals  
for slaughter

unit: voivodship  
(NUTS2)

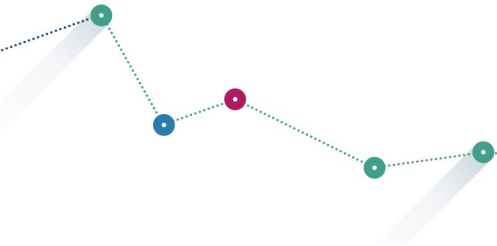
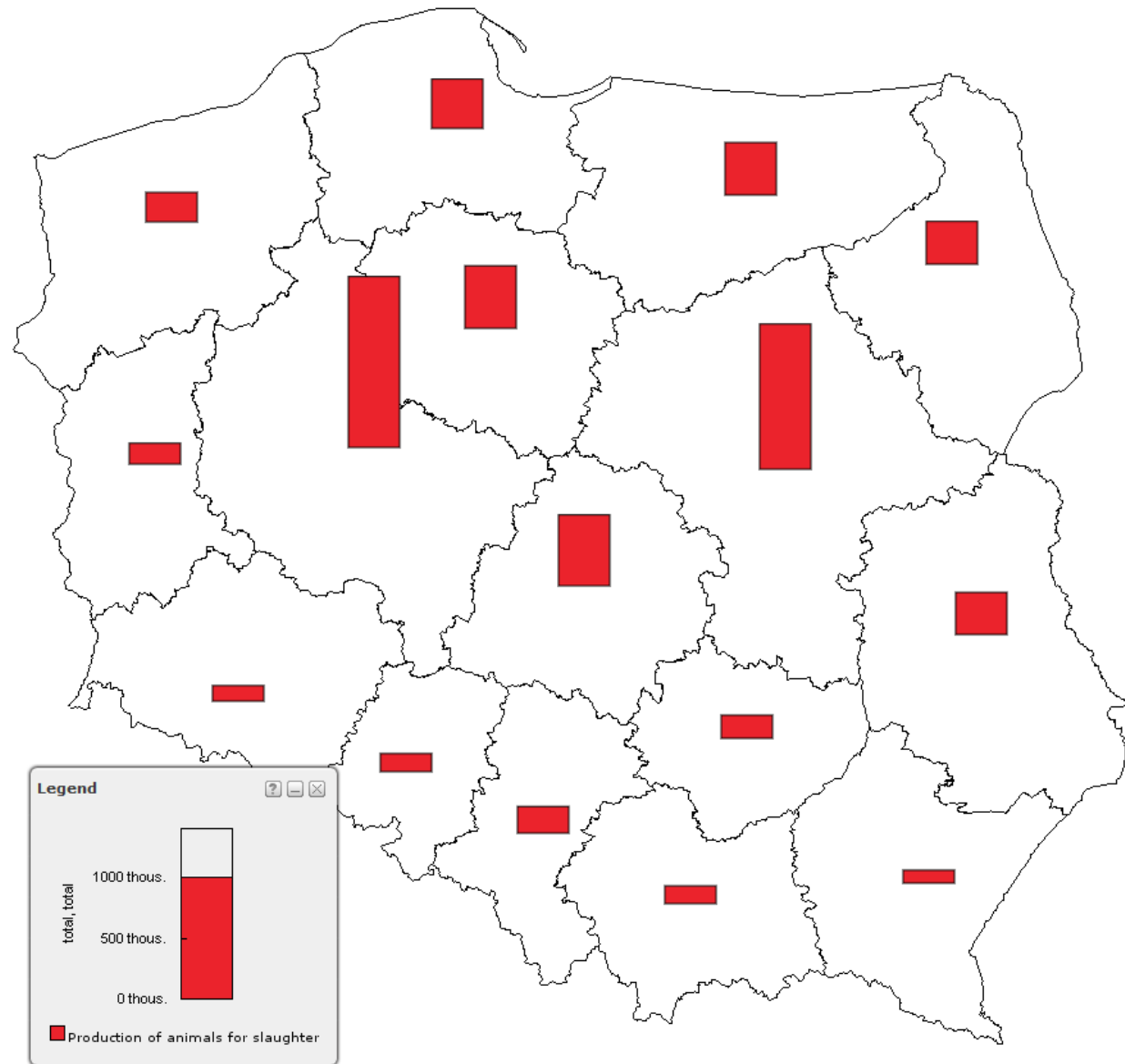


## Diagram map: simple (bar)

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## Production of animals for slaughter

unit: voivodship  
(NUTS2)



# Diagram map: structural (circle)

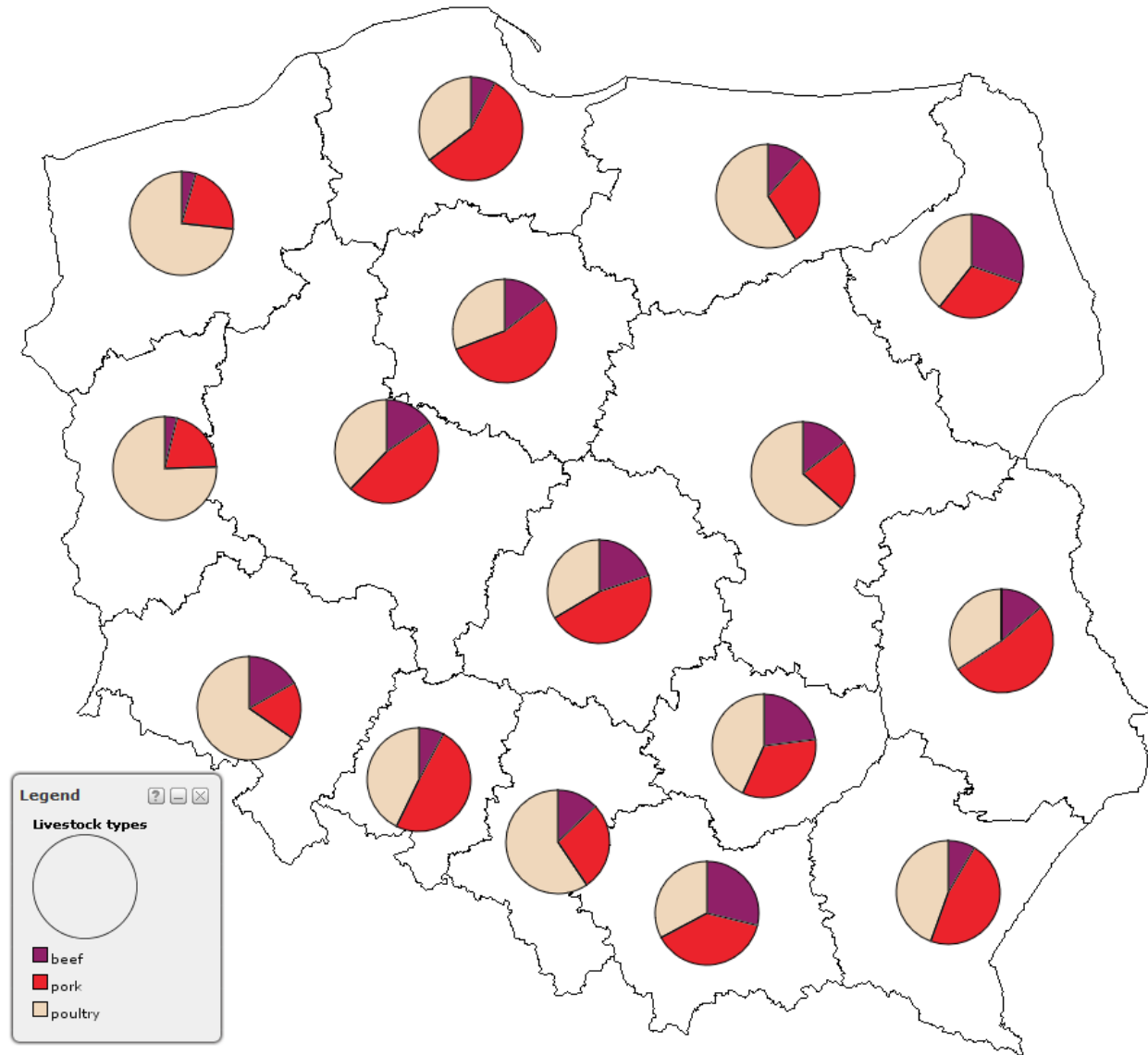
GEO.STAT.GOV.PL

Production of animals  
for slaughter:

- beef
- pork
- poultry

**structure**

unit: voivodship  
(NUTS2)



# Diagram map: summaric (circle)

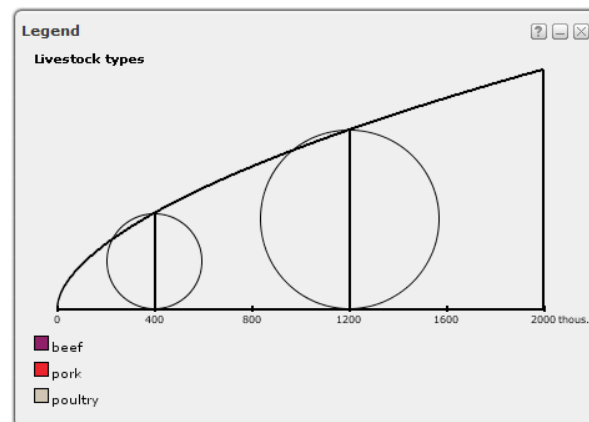
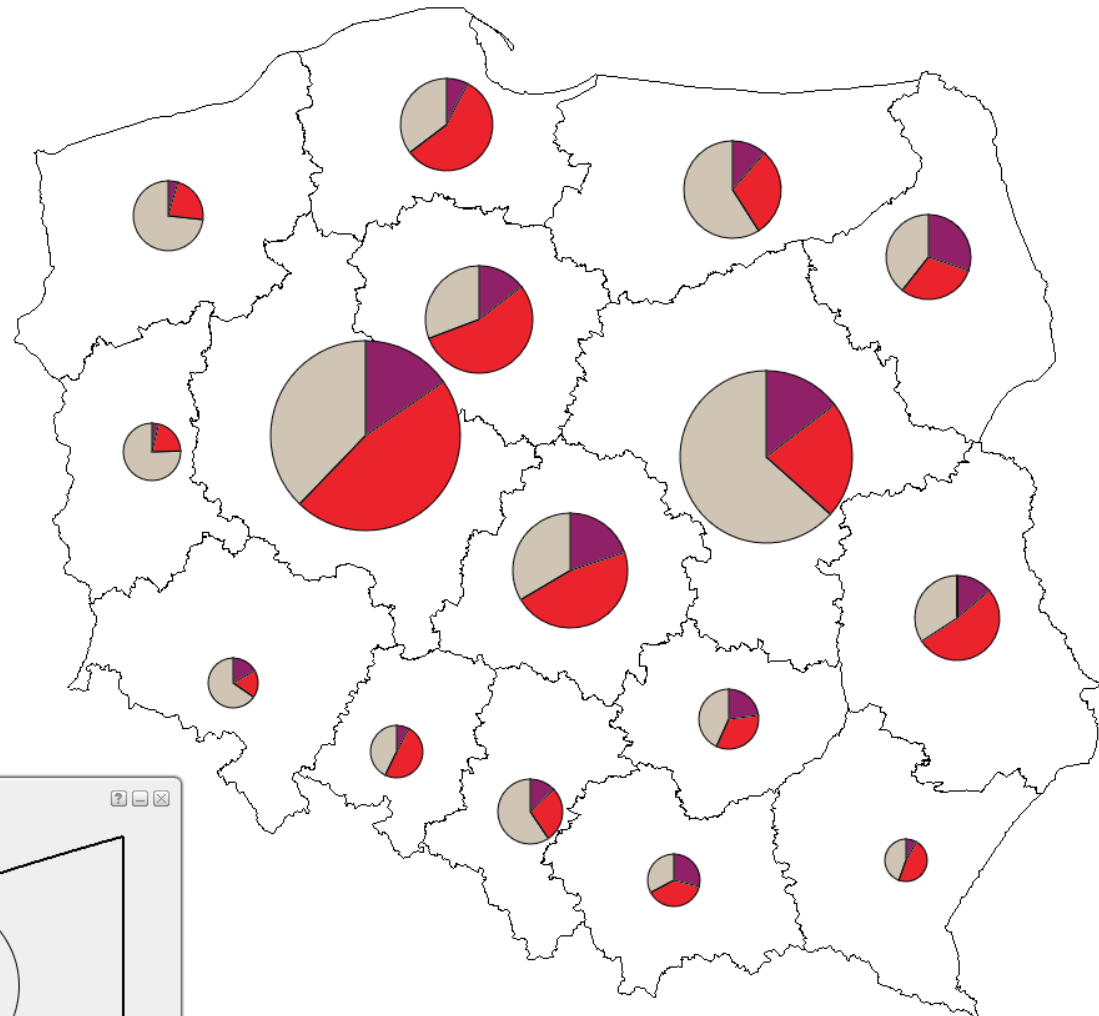
GEO.STAT.GOV.PL

Production of animals  
for slaughter:

- beef
- pork
- poultry

**total + structure**

unit: voivodship  
(NUTS2)



# Diagram map: structural (bar)

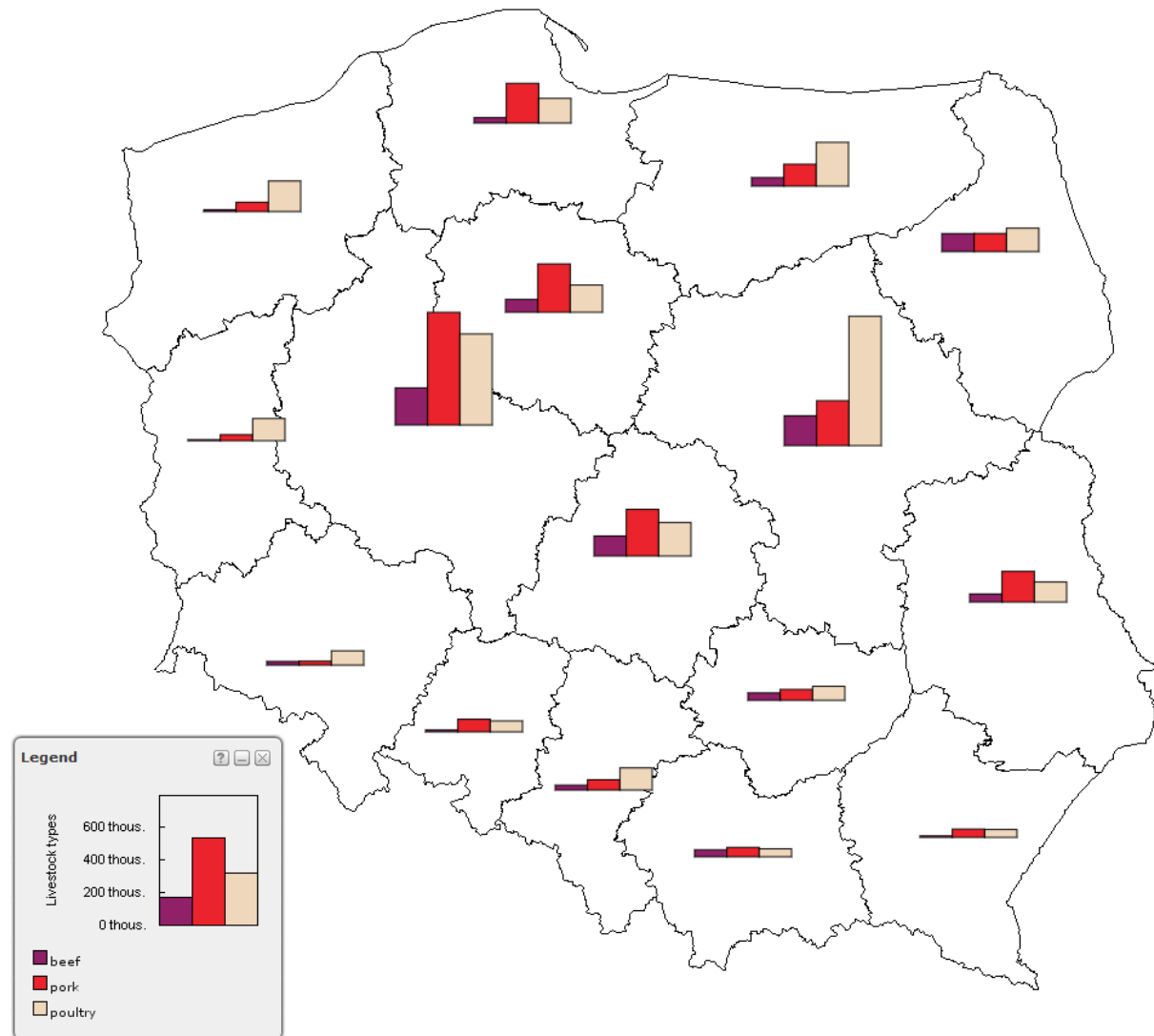
GEO.STAT.GOV.PL

Production of animals  
for slaughter:

- beef
- pork
- poultry

**structure + individual  
values**

unit: voivodship  
(NUTS2)



# Diagram map: summaric (bar)

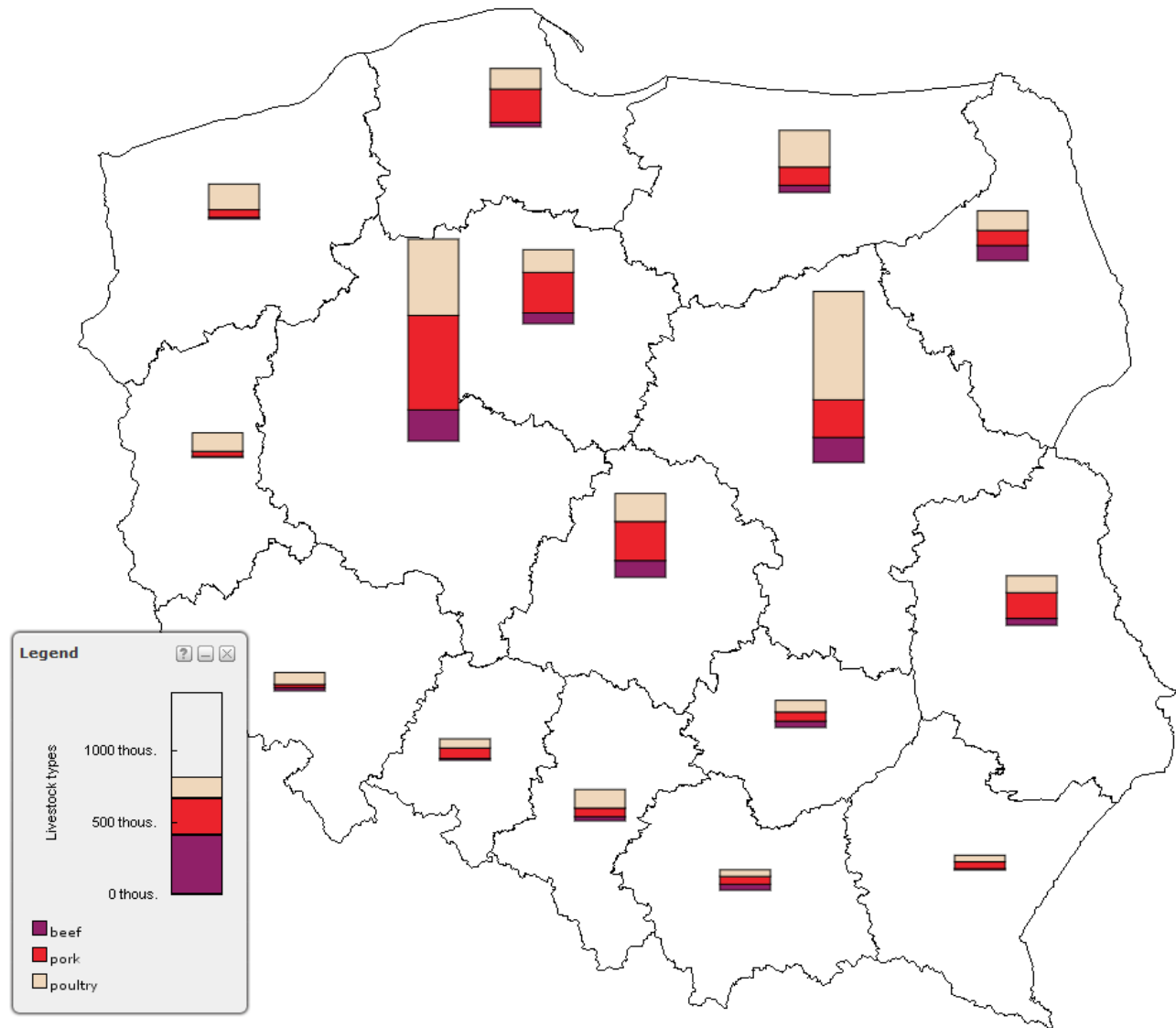
GEO.STAT.GOV.PL

Production of animals  
for slaughter:

- beef
- pork
- poultry

**structure + total**

unit: voivodship  
(NUTS2)





# Diagram map: summaric complex

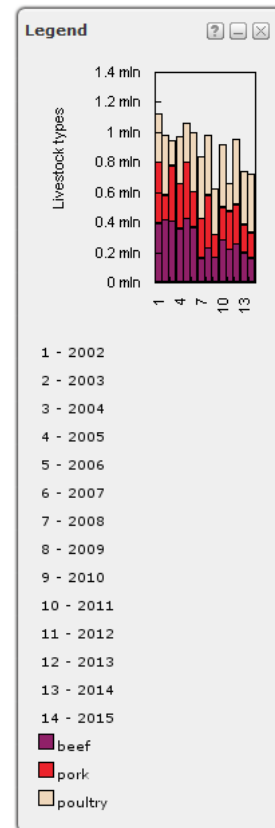
GEO.STAT.GOV.PL

Production  
of animals  
for slaughter:

- beef
- pork
- poultry

**structure + total  
by year (2002-  
2015)**

unit: voivodship  
(NUTS2)

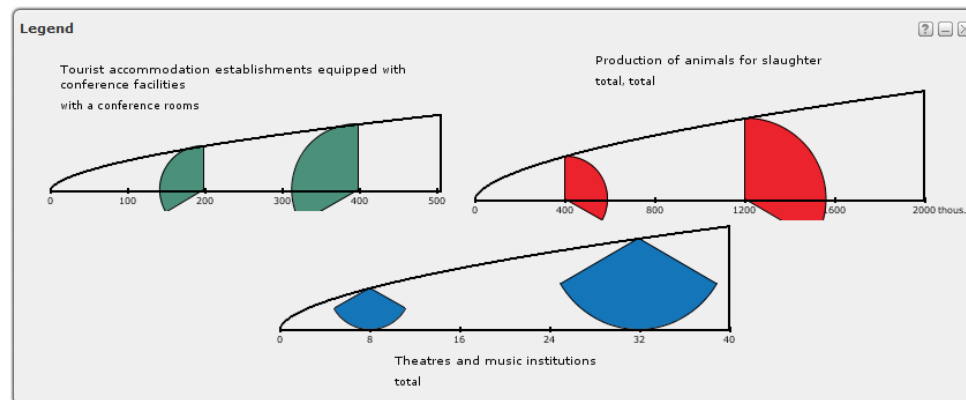
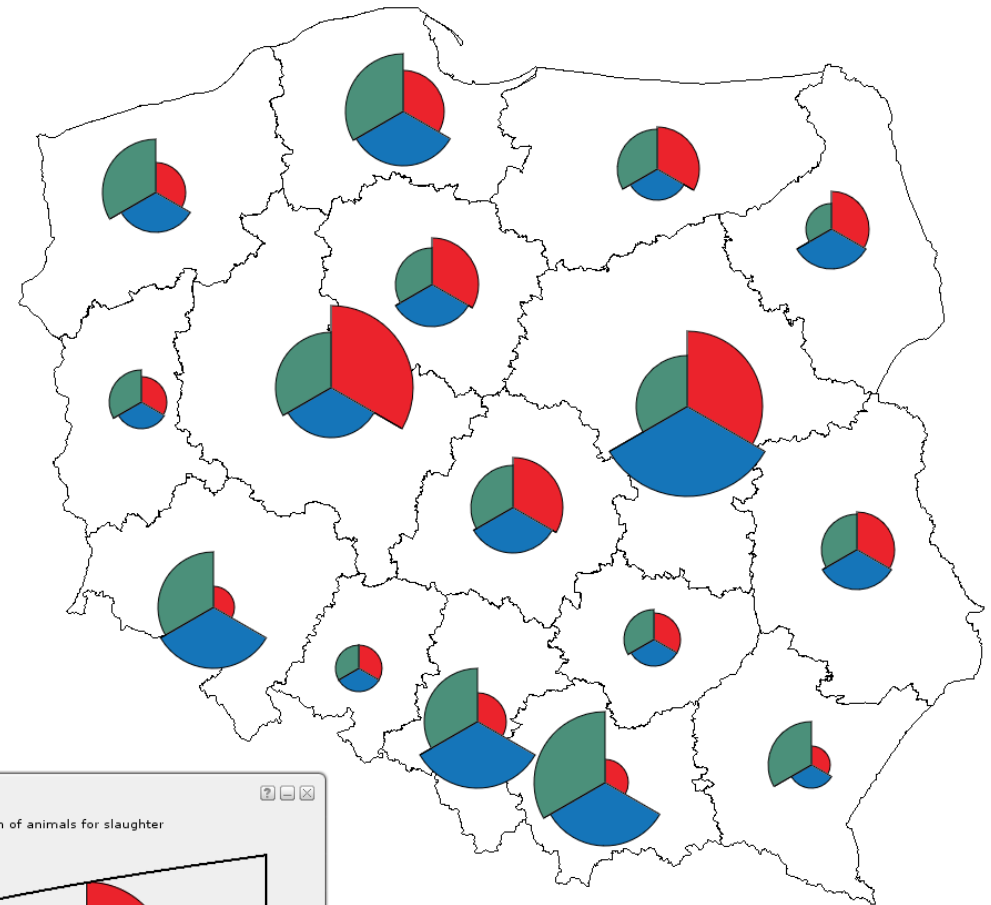


# Diagram map: complex

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- production of animals for slaughter
- theatres and music institutions
- tourist accommodation establishments w/ conference facilities

unit: voivodship (NUTS2)



# Microdata queries

GEO.STAT.GOV.PL

The screenshot displays the GEOSTATISTICS PORTAL interface. On the left is a vertical toolbar with navigation and analysis icons. The main area shows an aerial map of a residential neighborhood with a red polygon highlighting a specific area labeled '9.705 ha'. The map includes street names: Strazacka, Żeromskiego, Kaszubska, Żeglarska, Wieleśka, and adm. Stejera. A sidebar on the left contains the 'Queries creation' form.

**GEOSTATISTICS PORTAL**

MENU TOOLS

Dynamic map C... ? □ ×

Thematic phen... ? □ ×

Thematic Map ? □ ×

**Queries creation** ? □ ×

Query name  
Population\_HEL

Mode  
online

Query groups  
Population and Housing Census 2011

Data on/by  
Population

Queries  
Number of people

**Filtering**

Sex -----

Age Level 1  
5 years -----

Marital Status -----

Country - level 1 -----

Country of birth - level 1 -----

**Grouping**  
Sex

**Statistic**  
Sum

**Geometry provided.**  
Area Clean geometry

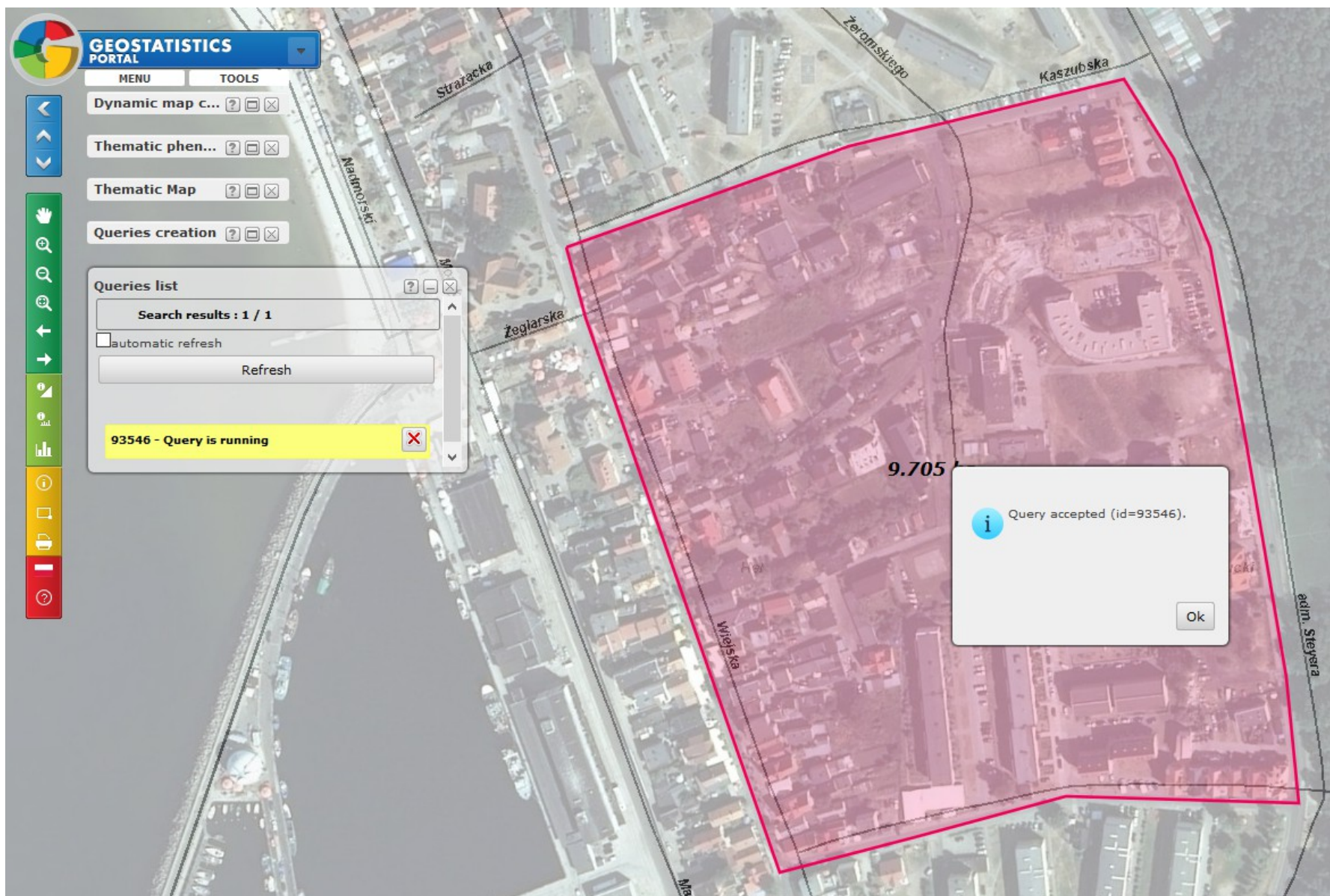
**Send**

**Queries list** ? □ ×



# Microdata queries

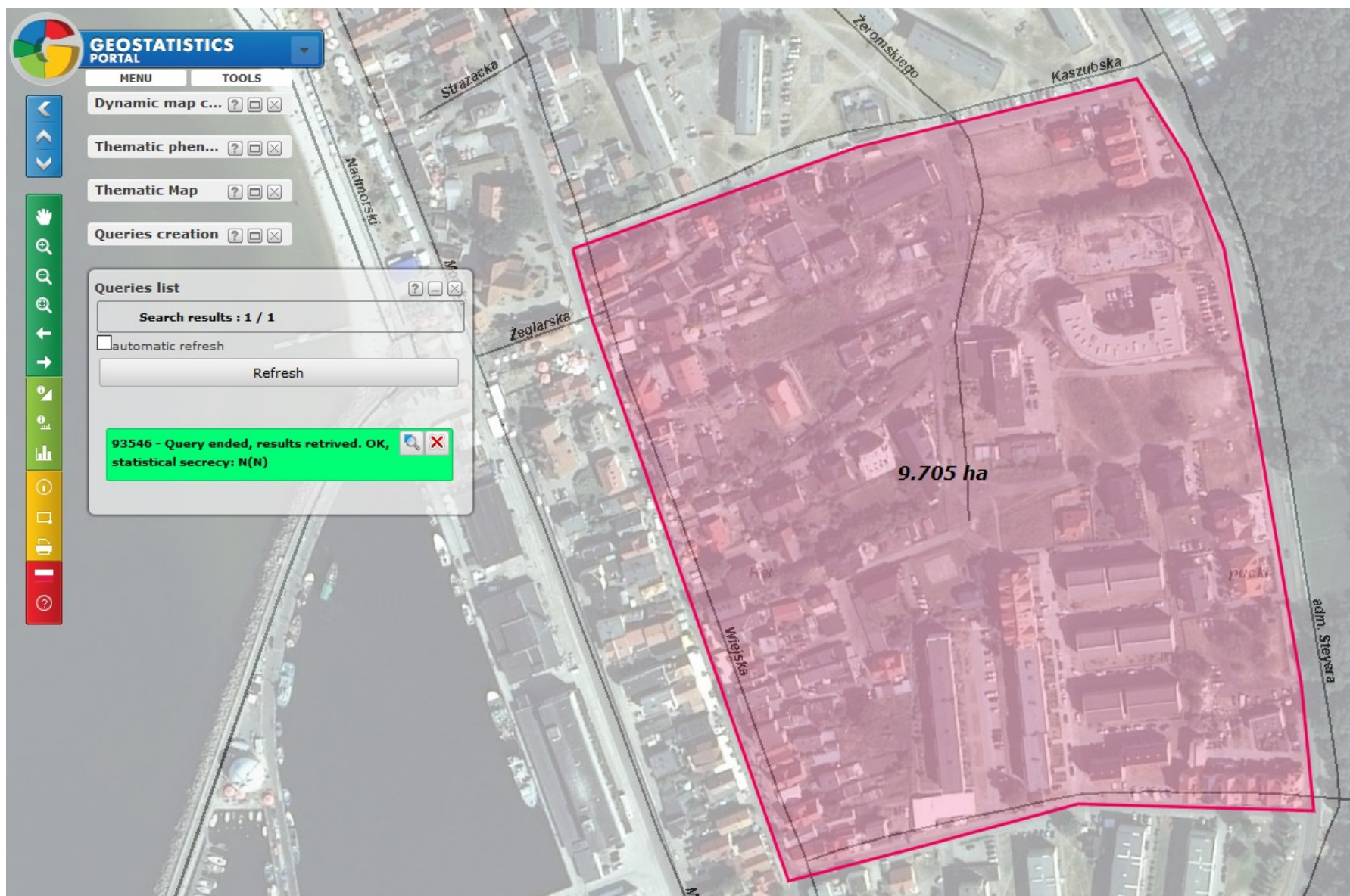
GEO.STAT.GOV.PL





# Microdata queries

GEO.STAT.GOV.PL



# Microdata queries

GEO.STAT.GOV.PL

The screenshot displays the GEOSTATISTICS PORTAL interface. On the left is a sidebar with navigation icons. The main area shows an aerial map of Hel with a purple polygon. Two windows are open: 'Queries list' and 'Cartodiagrams'.

**Queries list window:**

- Search results : 1 / 1
- ☐ automatic refresh
- Refresh
- 93546 - Query ended, results retrived. OK, statistical secrecy: N(N)

**Cartodiagrams window:**

- Type of diagram: quantitative
- The maximum height: 30 pkt
- Bar width: 10 pkt
- ☐ Values division
- Standard deviation times: 3
- Limit value height: 30
- Place intersection of bar: 10
- Colours diagram:
  - Women: [Blue dropdown]
  - Men: [Green dropdown]
- ☐ Sum-structural diagram
- ☐ Logarithmic scale
- Buttons: Apply, View, Cancel, Histogram, Location

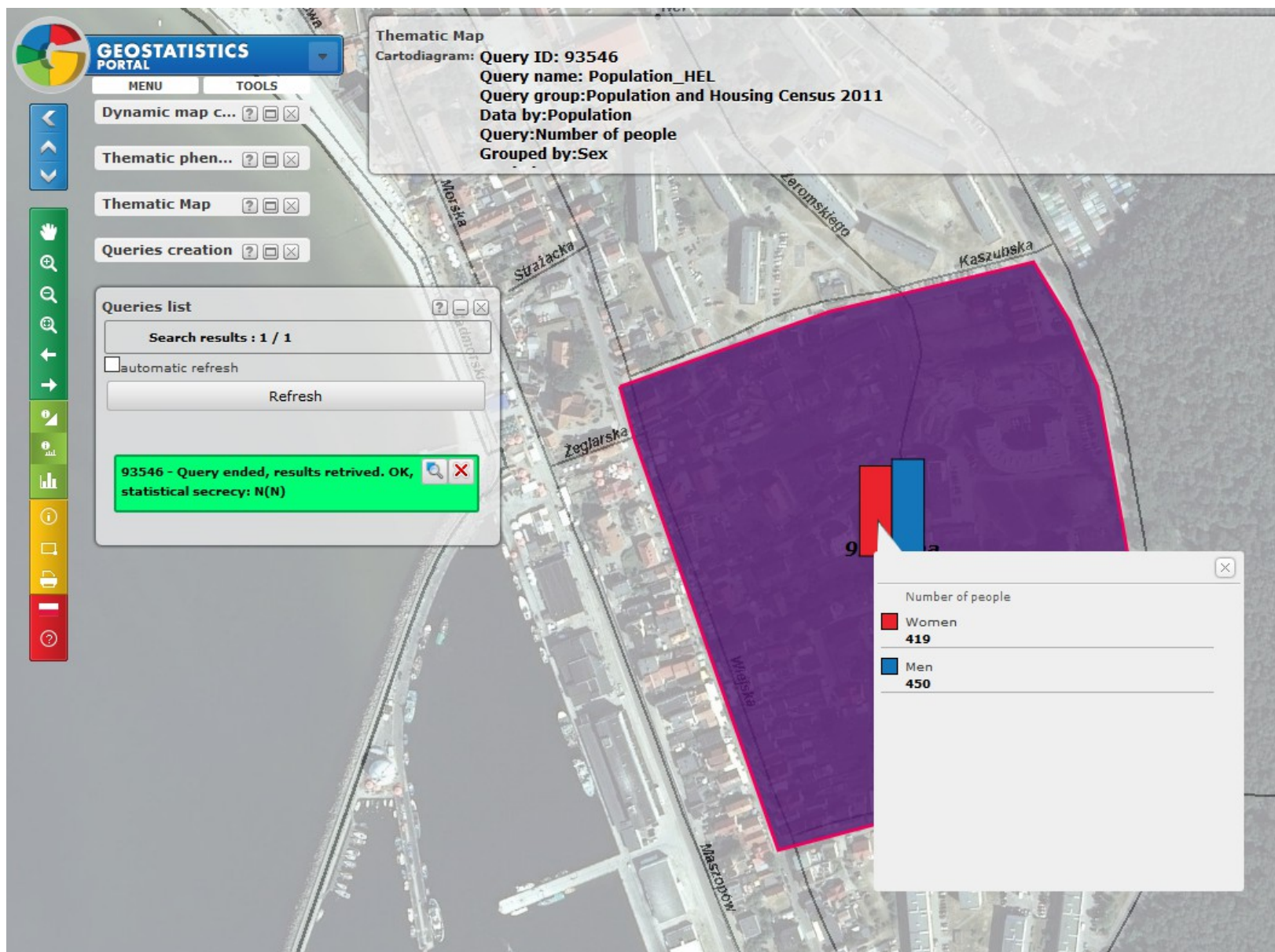
**Information window (bottom right):**

- Query ID: 93546
- Query name: Population\_HEL
- Query group: Population and Housing Census 2011
- Data by: Population
- Overv: Number of people
- Ok



# Microdata queries

GEO.STAT.GOV.PL



# Microdata queries

Diagram map report

Level of aggregation:	Freehand polygon
Diagram map type:	structural (bar)

Diagram map presents the following thematic phenomenon:

Characteristic	measure / indicator	grouping	data source
Population	Number of people	Sex	Population and Housing Census 2011

Statistics

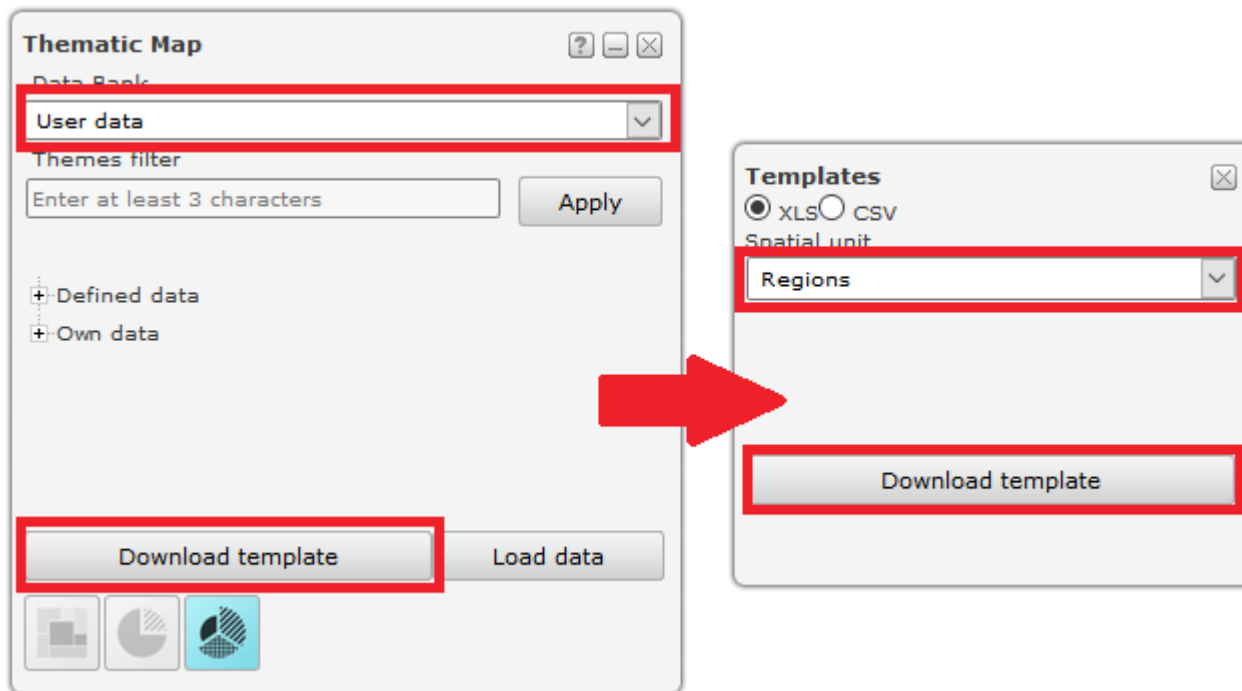
Indicator	Characteristic	
	Women	Men
Average	419,00	450,00
Standard deviation	0,00	0,00
Minimum	419,00	450,00
Maximum	419,00	450,00
Median	419,00	450,00
Number of records	1	1

Value table for the thematic phenomenon:

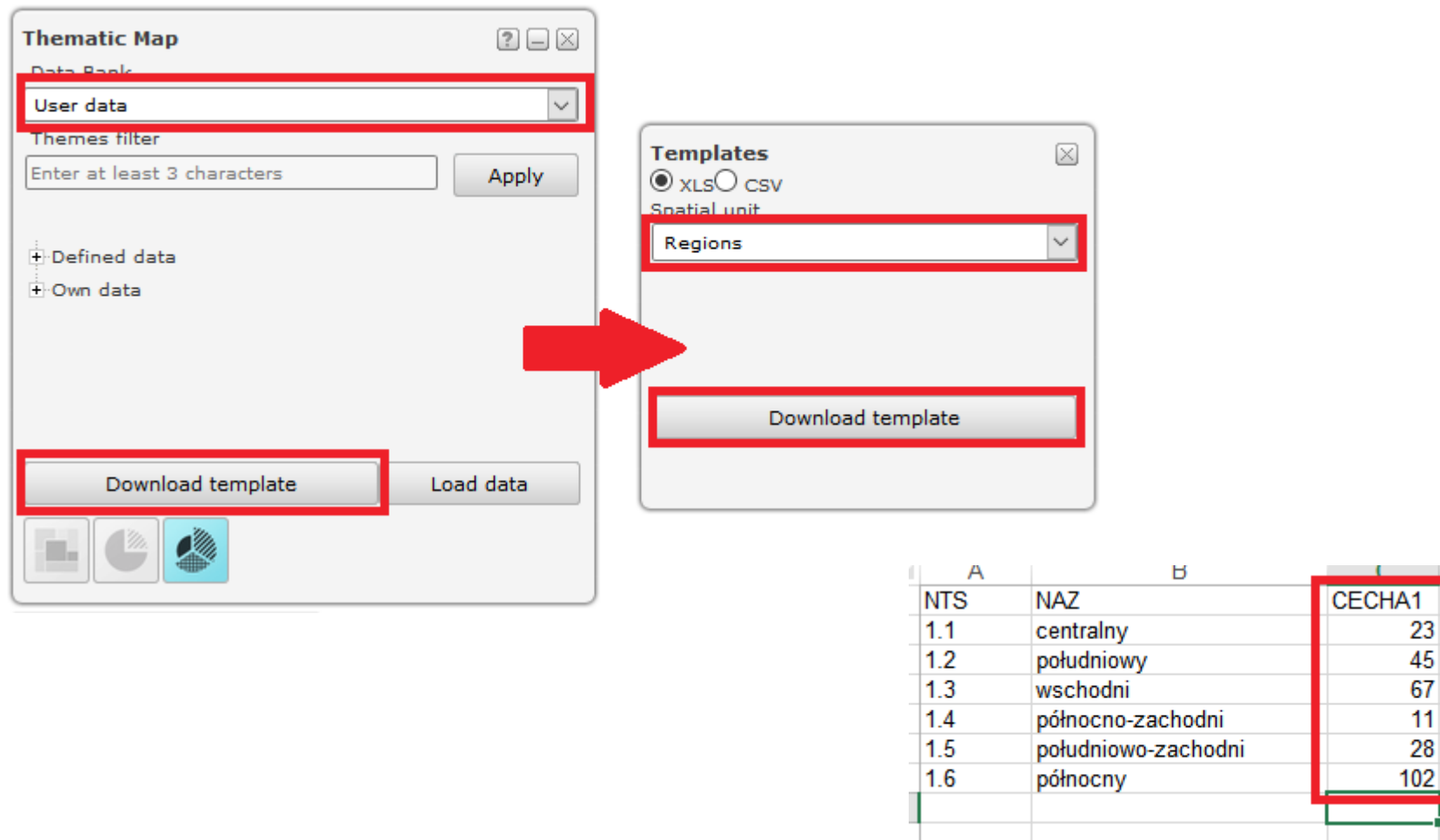
Unit		Measure / indicator values		
Name	ID	Women	Men	SUMA
	1	419	450	869
	TOTAL:	419	450	869

# Visualization of user supplied data

GEO.STAT.GOV.PL



# Visualization of user supplied data



The image shows the 'Thematic Map' interface with the 'User data' dropdown menu highlighted. A red arrow points to the 'Templates' dialog box, which has 'Regions' selected as the spatial unit and the 'Download template' button highlighted. Below the dialog is a spreadsheet template with columns A, B, and C, and rows for NTS, NAZ, and CECHA1.

A	B	C
NTS	NAZ	CECHA1
1.1	centralny	23
1.2	południowy	45
1.3	wschodni	67
1.4	północno-zachodni	11
1.5	południowo-zachodni	28
1.6	północny	102

Fill the spreadsheet and save it to disk

# Visualization of user supplied data

GEO.STAT.GOV.PL

Thematic Map

Data Bank

User data

Themes filter

Enter at least 3 characters




Apply

+ Defined data

+ Own data

Download template

Load data



Queries creation

Queries list

Loading data

Loaded file: Wybierz plik ... 698.xlsx

Thematic category: User data

Theme: User data 1

Select the imported column:

☒ NTS

☐ NAZ

☒ CECHA1

☐ CECHA2

☐ CECHA3

☐ CECHA4

☐ CECHA5

Identifier field: NTS

Reference layer: Regions

Load

Cancel

# Visualization of user supplied data

GEO.STAT.GOV.PL

**Statistics data** ✕

**Thematic category:** User data

**Theme:** User data 1 - Regions

**Reference layer:**

TERYT	CECHA1
1.1	23
1.2	45
1.3	67
1.4	11
1.5	28
1.6	102

Save Cancel



# Visualization of user supplied data

GEO.STAT.GOV.PL

**Thematic Map** ? - □ ×

Data Bank  
User data

Themes filter  
Enter at least 3 characters

Apply

Defined data  
Own data  
User data  
User data 1 - Regions

Download template Load data

Queries creation ? - □ ×

Queries list ? - □ ×

**Choropleth map** ? - □ ×

Features: CECHA1

Unit of territorial division: Regions

Number of classes: 3

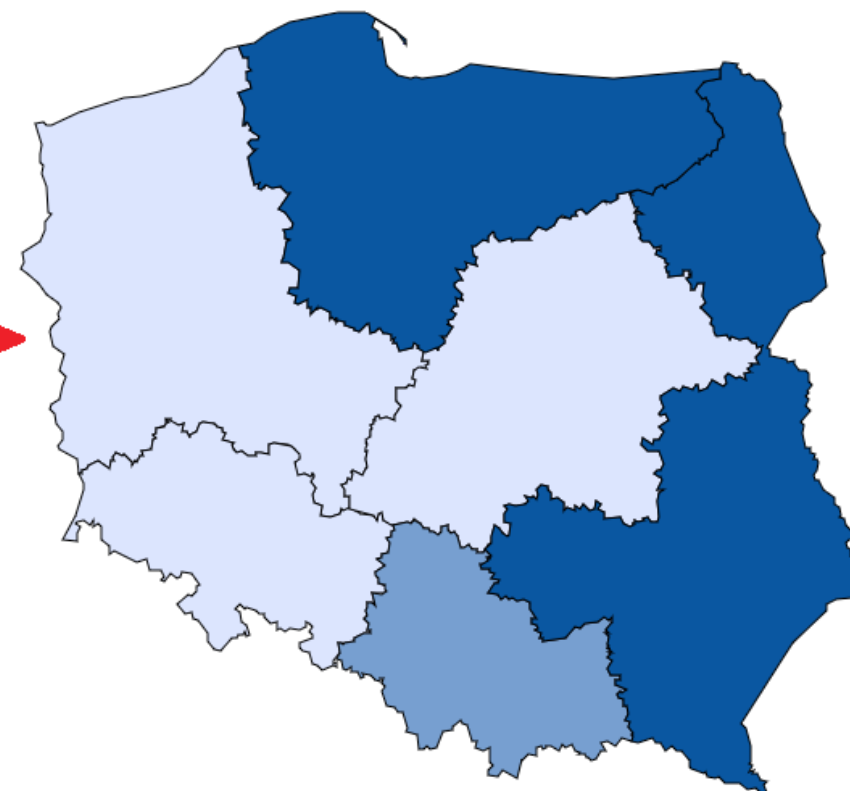
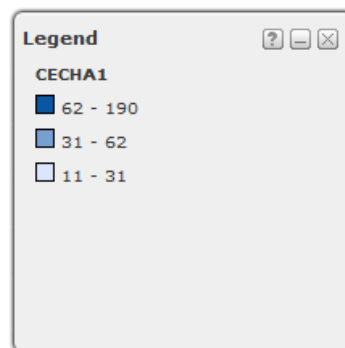
Classification method: Standard deviation

Color scale: blue

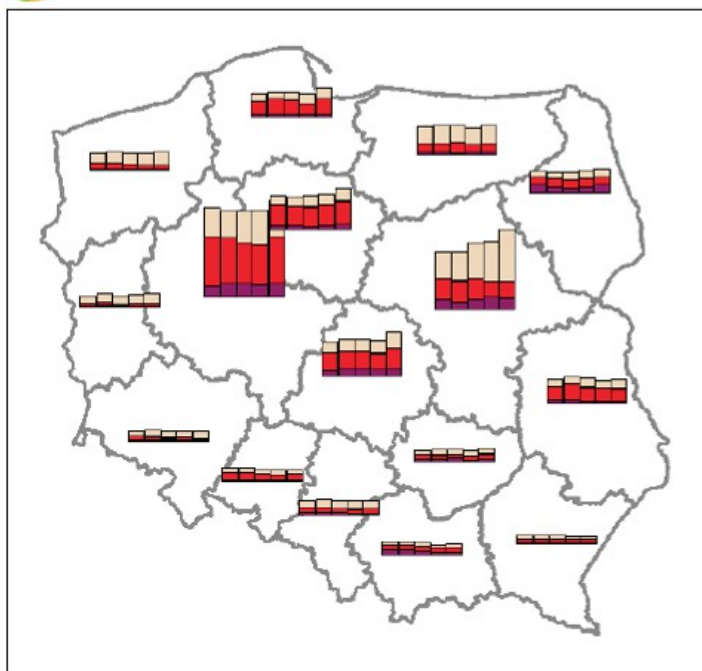
Visible layers: ☒ labels ☐ boundaries

☐ Choropleth map for selected objects only

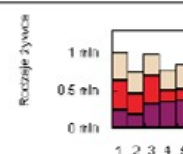
Statistics Graph Apply



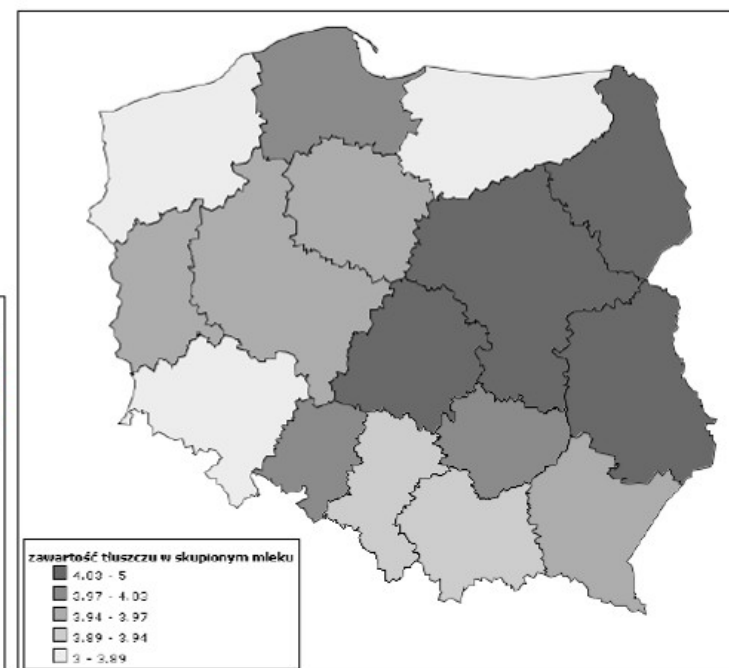
## ANIMAL PRODUCTION



Produkcja żywca rzeźnego w latach



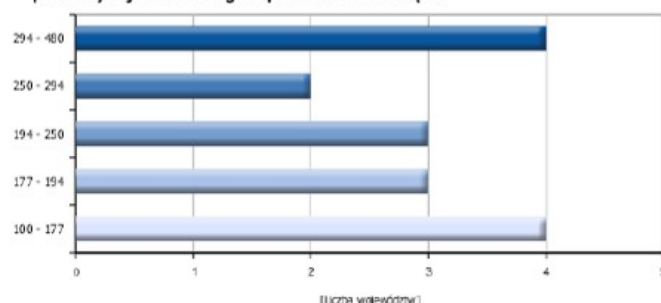
1 - 2010  
2 - 2011  
3 - 2012  
4 - 2013  
5 - 2014  
■ wół  
■ wieprzowina  
■ drobiowina



zawartość tłuszczu w skupionym mleku

4,00 - 5
3,97 - 4,00
3,94 - 3,97
3,89 - 3,94
3 - 3,89

produkcja żywca rzeźnego w przeliczeniu na mięso



\* ROLNICTWO, LEŚNICTWO I ŁOWIECTWO - PRODUKCJA ZWIERZĘCA - Produkcja zwierzęca na 1 ha użytków rolnych. Poziom agregacji - Województwa, Cechu - produkcja żywca rzeźnego w przeliczeniu na mięso. Rok - 2010

W 2014 r. uzyskano następujący poziom produkcji podstawowych produktów zwierzęcych:

- żywiec rzeźny ogółem – 5844,9 tys. ton, tj. o 12,3% więcej niż w 2013 r.,

- mleko – 12607,3 mln litrów, tj. o 2,1% więcej niż w 2013 r.,

- jaja kurze – 10255,3 mln sztuk, tj. o 2,1% więcej niż rok wcześniej.

Produkcja żywca rzeźnego ogółem w przeliczeniu na 1 ha użytków rolnych wyniosła 401,5 kg, a mleka 866 litrów wobec odpowiednio 356,3 kg oraz 845 l w 2013 r.

W 2014 r. przeciętna roczna wydajność mleka od 1 krowy wyniosła 5164 litrów i w stosunku do 2013 r. wzrosła o 3,7% (o 186 litry), nieśność kur zwiększyła się w skali roku o 9,1 %, a wydajność wełny od 1 owcy zwiększyła się o 6,7% do poziomu 3,2 kg.



# Geostatistics Portal mobile

GEO.STAT.GOV.PL

## Functionalities:

- determine location
- popular statistics for selected locations
- phenomena selection from Local Data Bank
- customizable choropleth map
- thematic map legend
- map composition selection
- basemap data (administrative units)
- population grids
- external WMS services

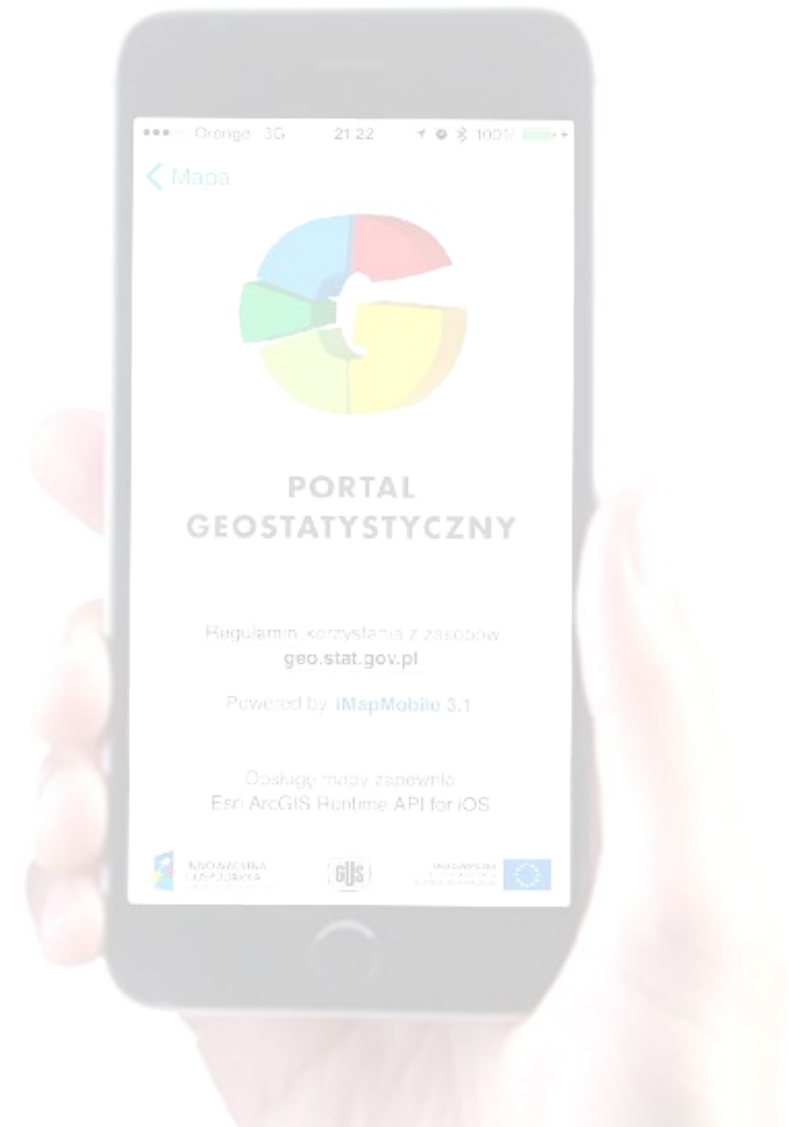


# Geostatistics Portal mobile

GEO.STAT.GOV.PL

Geostatistics Portal mobile is available free of charge for:

- iOS
- Android
- Windows Phone (soon)





# INSPIRE services – statistical units (SU)

GEO.STAT.GOV.PL

type	description	years (now)	years (soon)
NTS	NUTS 1-3 LAU 1-2	2010-2014	2002-2016
BREC	statistical regions, census areas	2010-2015	2010-2016
GRID	ETRS LAEA 1km x 1km	-	-

Data available in both GML and SHP for download free of charge



# INSPIRE services – demography (PD)

GEO.STAT.GOV.PL

SU	description	total	classifications*	years (now)	years (soon)
NTS	NUTS 1-3 LAU 1-2	V	V	2010-2014	2010-2016
BREC	statistical regions, census areas	V	soon	2011 (census)	-
GRID	ETRS LAEA 1km x 1km	V	soon	2011 (census)	-

\* classifications:

- sex
- age groups (0-14, 15-64, 65+)

Data available in both GML and SHP for download free of charge





# INSPIRE Thematic Clusters

GEO.STAT.GOV.PL

<https://themes.jrc.ec.europa.eu> – collaboration platform

## Statistical Cluster:



statistical units



population distribution (demography)



human health and safety

## Struggling with INSPIRE implementation?

join the platform / share your practices /  
voice your concerns / participate in discussions



# Future plans

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GEO.STAT.GOV.PL

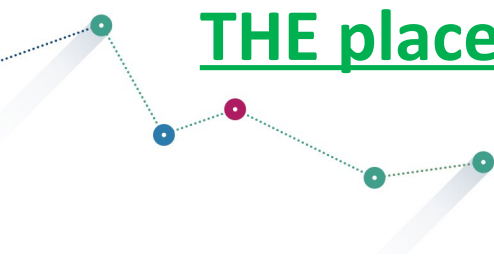
August 2016 – completed **feasibility study** for another project

Plans:

- further development of web and mobile applications
- creation of a linked open data endpoint
- exploratory spatial analyses
- geostatistical modeling
- semi-automated enrichment of user supplied data

**Geostatistics Portal:**

**THE place for georeferenced statistical data in Poland**





# GEOSTATISTICS PORTAL

*new developments and future plans*

**Miroław Migacz**

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*Central Statistical Office of Poland*



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