

# The importance of population censuses for Regional Statistics.

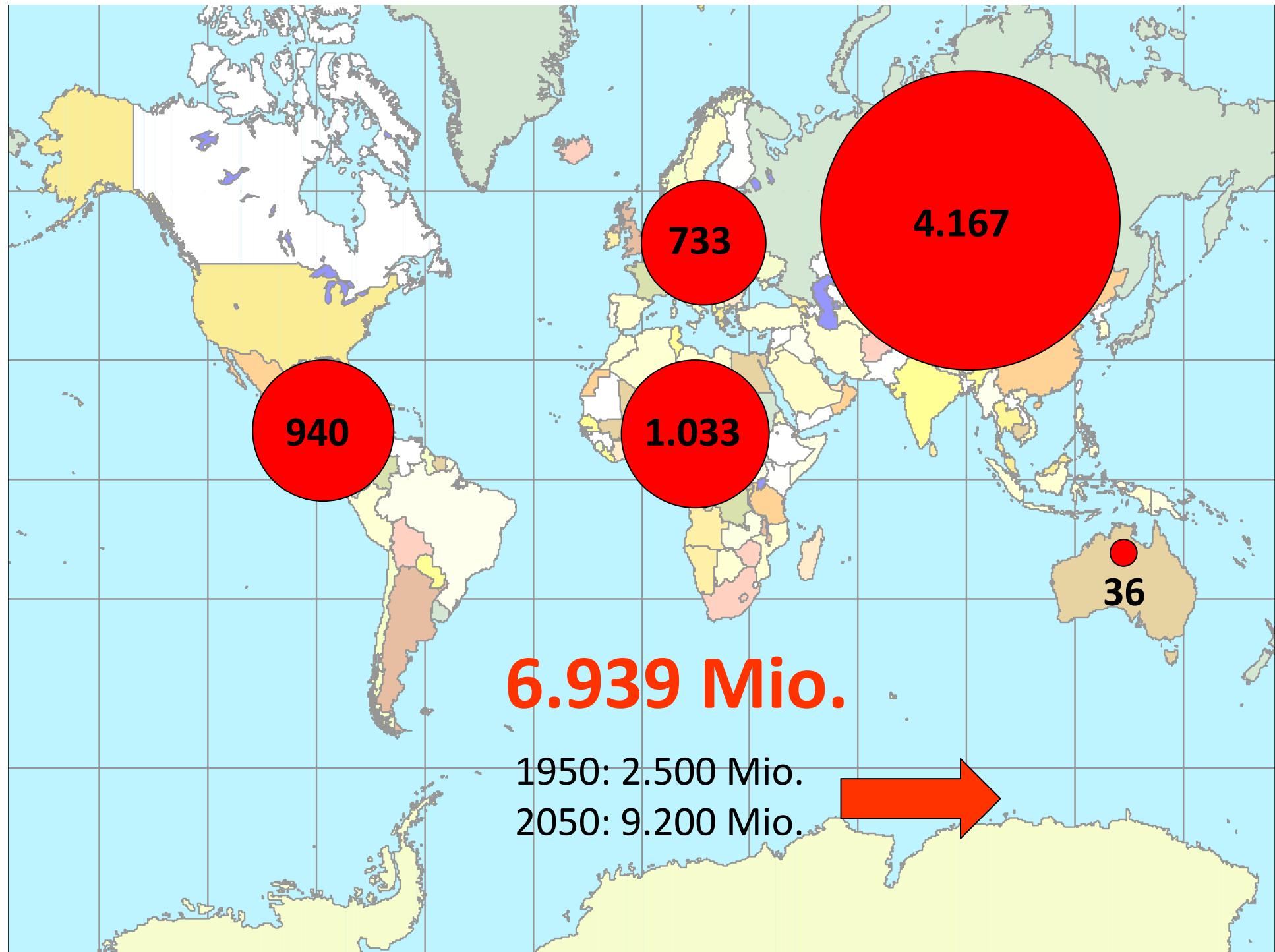
Mag. Manfred Dreiszker

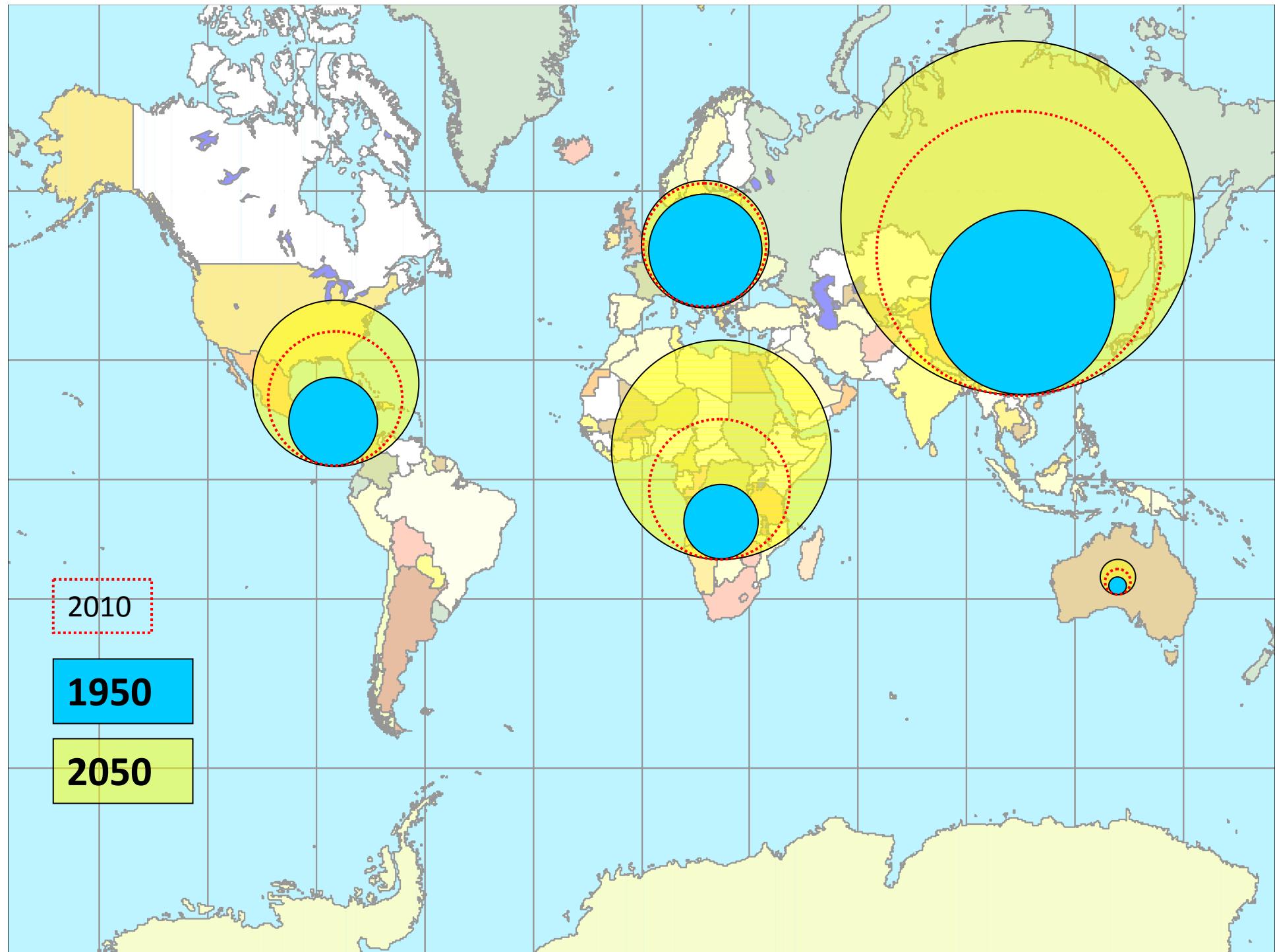
Amt der Burgenländischen Landesregierung,  
Landesamtsdirektion - Stabsstelle Europabüro und Statistik

Gödöllö, 22. September 2011

# Content.

- History of population census
- Population Census 2011
- Relevance of regional statistics
- Regional breakdown





# History of population census.



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# The beginning.

- 2700-1000: Egypt, China, Persia, Greece, ...
- 1000-0: Roman empire (census (lat.): „render, estimate“)
- Main reason: to collect data about income to quantify the amount of taxes
- Middle Age: mostly incomplete and unexact
- Further reason: to count all adult males fit for military service
- From 1800 nearly in all countries of Europe

# Sidestep.

- The best known population census
  - The gospel according to Luke

*In those days a decree went out from Emperor Augustus that all the world should be registered. This was the first registration and was taken while Quirinius was governor of Syria. All went to their own towns to be registered. Joseph also went from the town of Nazareth in Galilee to Judea, to the city of David called Bethlehem, because he was descended from the house and family of David. He went to be registered with Mary, to whom he was engaged and who was expecting a child. ([Luke 2,1-7](#))*



## The „modern“ population census.

- 1869 was the first census with
  - uniform procedure
  - involving the entire population
  - in all parts of the country
  - the same survey date
- Instead of income and military the main reasons were science, research, politics and administration

## The „modern“ population census.

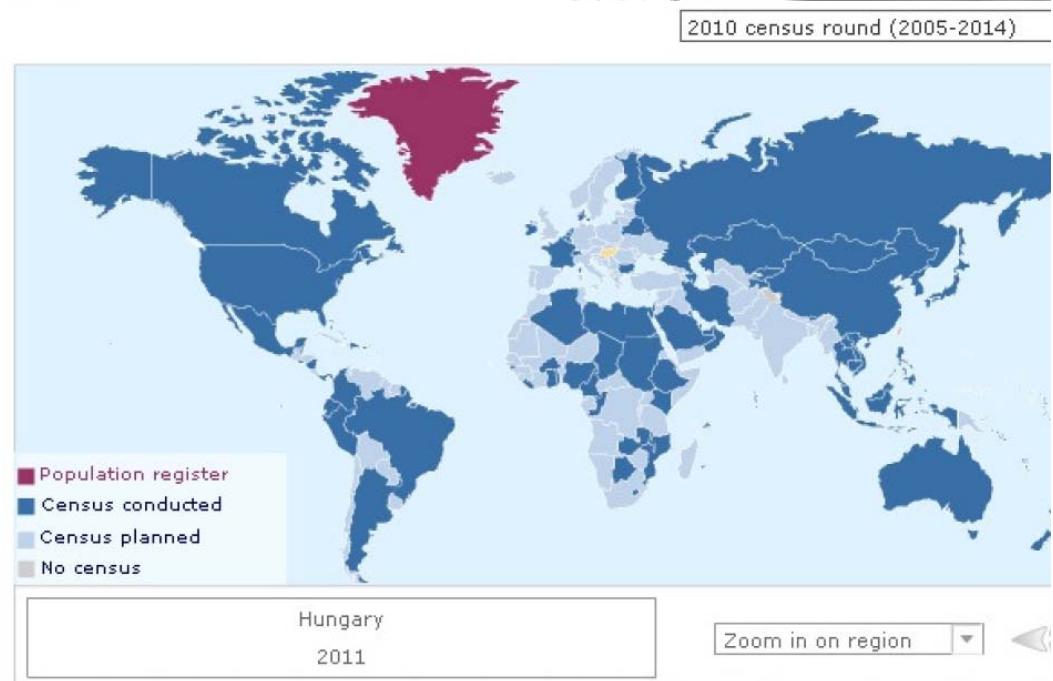
- 1890 - Punched cards and electric counting machines were used
- The technology was refined in 1900 and 1910
- During the war period, censuses were held in 1923, 1934 and 1939 (under foreign rule)
- 1951 and 1961 punched cards were still in use
- 1971, 1981 and 1991 electronic document reader was introduced
- 2001 more technical support (scanner, recognition software)

# Population Census 2011.



# UN – Principles and Recommendations for Population and Housing Census (Rev 2).

- [http://unstats.un.org/unsd/demographic/sources/census/docs/P&R\\_Rev2.pdf](http://unstats.un.org/unsd/demographic/sources/census/docs/P&R_Rev2.pdf)
- 442 pages



StatistikBüro Burgenland

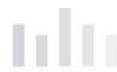
**Table 1**  
**List of population census topics**

**Legend:**  
 ◆ Core topic  
 □ Core topic, derived  
 ○ Additional topic

<b>1. Geographical and internal migration characteristics (paras. 2.44–2.88)</b>	
(a) Place of usual residence (paras. 2.46–2.51)	◆
(b) Place where present at time of census (paras. 2.52–2.56)	◆
(c) Place of birth (paras. 2.57–2.63)	◆
(d) Duration of residence (paras. 2.64–2.66)	◆
(e) Place of previous residence (paras. 2.67–2.68)	◆
(f) Place of residence at a specified date in the past (paras. 2.69–2.70)	◆
(g) Total population (paras. 2.71–2.77)	□
(h) Locality (paras. 2.78–2.80)	□
(i) Urban and rural (paras. 2.81–2.88)	□
<b>2. International migration characteristics (paras. 2.89–2.106)</b>	
(a) Country of birth (paras. 2.93–2.96)	◆
(b) Citizenship (paras. 2.97–2.102)	◆
(c) Year or period of arrival (paras. 2.103–2.106)	◆
<b>3. Household and family characteristics (paras. 2.107–2.132)</b>	
(a) Relationship to head or other reference member of household (paras. 2.114–2.123)	◆
(b) Household and family composition (paras. 2.124–2.131)	□
(c) Household and family status (para. 2.132)	○
<b>4. Demographic and social characteristics (paras. 2.133–2.167)</b>	
(a) Sex (para. 2.134)	◆
(b) Age (paras. 2.135–2.143)	◆
(c) Marital status (paras. 2.144–2.151)	◆
(d) Religion (paras. 2.152–2.155)	○
(e) Language (paras. 2.156–2.159)	○
(f) Ethnicity (paras. 2.160–2.162)	○
(g) Indigenous peoples (2.163–2.167)	○
<b>5. Fertility and mortality (paras. 2.168–2.201)</b>	
(a) Children ever born alive (paras. 2.180–2.185)	◆
(b) Children living (paras. 2.186–2.187)	◆
(c) Date of birth of last child born alive (paras. 2.188–2.191)	◆

**Topics to be investigated in population censuses**

(d) Births in the past 12 months (para. 2.189)	□
(e) Deaths among children born in the past 12 months (para. 2.191)	□
(f) Age, date or duration of first marriage (para. 2.192)	○
(g) Age of mother at birth of first child born alive (para. 2.193)	○
(h) Household deaths in the past 12 months (paras. 2.194–2.198)	◆
(i) Maternal or paternal orphanhood (paras. 2.199–2.201)	○
<b>6. Educational characteristics (paras. 2.202–2.230)</b>	
(a) Literacy (paras. 2.202–2.208)	◆
(b) School attendance (paras. 2.209–2.214)	◆
(c) Educational attainment (paras. 2.215–2.222)	◆
(d) Field of education and educational qualifications (paras. 2.223–2.230)	○
<b>7. Economic characteristics (paras. 2.231–2.349)</b>	
(c) Activity status (paras. 2.240–2.300)	◆
(e) Occupation (paras. 2.301–2.305)	◆
(f) Industry (paras. 2.306–2.309)	◆
(g) Status in employment (paras. 2.310–2.321)	◆
(h) Time worked (paras. 2.322–2.329)	○
(j) Income (paras. 2.330–2.334)	○
(k) Institutional sector of employment (paras. 2.335–2.336)	○
(l) Employment in the informal sector (paras. 2.337–2.341)	○
(m) Informal employment (paras. 2.342–2.345)	○
(n) Place of work (paras. 2.346–2.349)	○
<b>8. Disability characteristics (paras. 2.350–2.380)</b>	
Disability status (paras. 2.351–2.352)	◆
<b>9. Agriculture (paras. 2.381–2.390)</b>	



# Register-based census.

- Initial point
  - 2000 the government has decided, that 2001 is the last census with questionnaires and response burden
  - Statistics Austria had 10 years for prepare the registers
  - Register-based Census Act of 16th March 2006 represents a turning point in the history of the Population Census
  - Test census in 2006 has already been conducted (successful)

## Register-based censuses ...

- ... are being conducted instead of conventional censuses, because
  - they are less expensive
  - the data is available sooner
  - there is no response burden anymore
  - a lot of the information needed is available in the different registers
  - can be conducted every 5 years

## Base Register.

- Central Population Register
- Housing Register of Buildings and Dwellings
- Business Register of Enterprises and their Local Units
- Central Social Security Register
- Tax Register
- Unemployment Register
- Register of Educational Attainment and Enrolled Pupils

# Comparision Register

- Child Allowance Register
- Register of public servants (federation an federal states)
- Central Foreigner Register
- Register of Social Welfare Recipients
- Register of Alternative Civilian Service
- Conscription Register
- Register of car owners

# Protection of Data Privacy.

- E-Government Law
  - "branch-specific personal identification number for official statistics" (bPIN OS)
  - own branch-specific PIN for every record (bPIN ...)
  - both are generated by the Austrian Data Protection Commission
  - Statistics Austria gets a completely anonymised data set
  - The data can be linked with the help of the bPIN OS to the data sets from other registers, which are anonymised in the same way

# Relevance of Regional Statistics.



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## Relevance.

- Information for the Regional Government
- Data for science, students, media, ...
- Statistics act 2000 – Statistics Austria had to provide all data, Eurostat orders
- therefore many survey are compiled only as a Sample
- and so we have less information on regional level

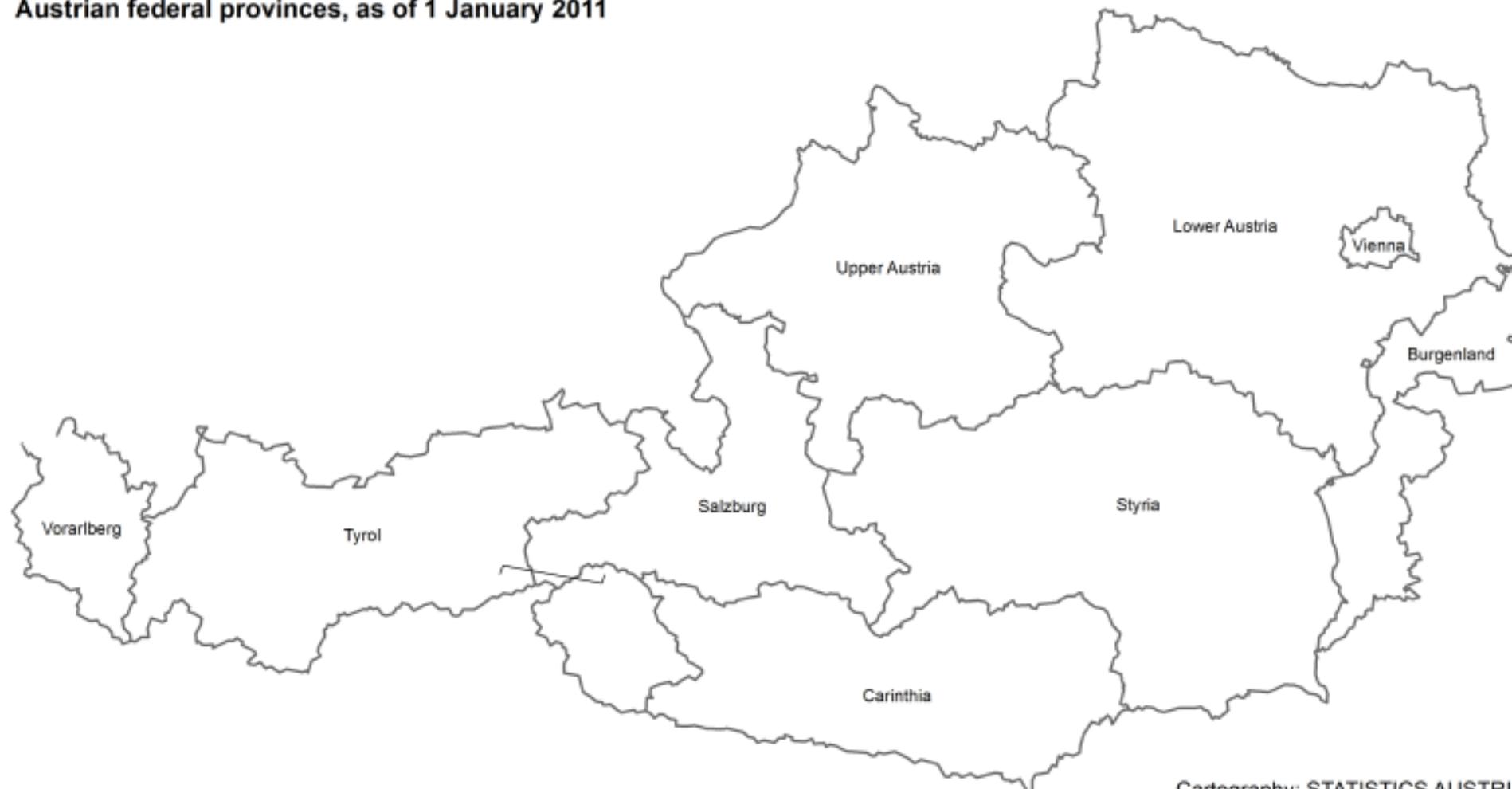
# Regional Breakdown.



## Regional Breakdown

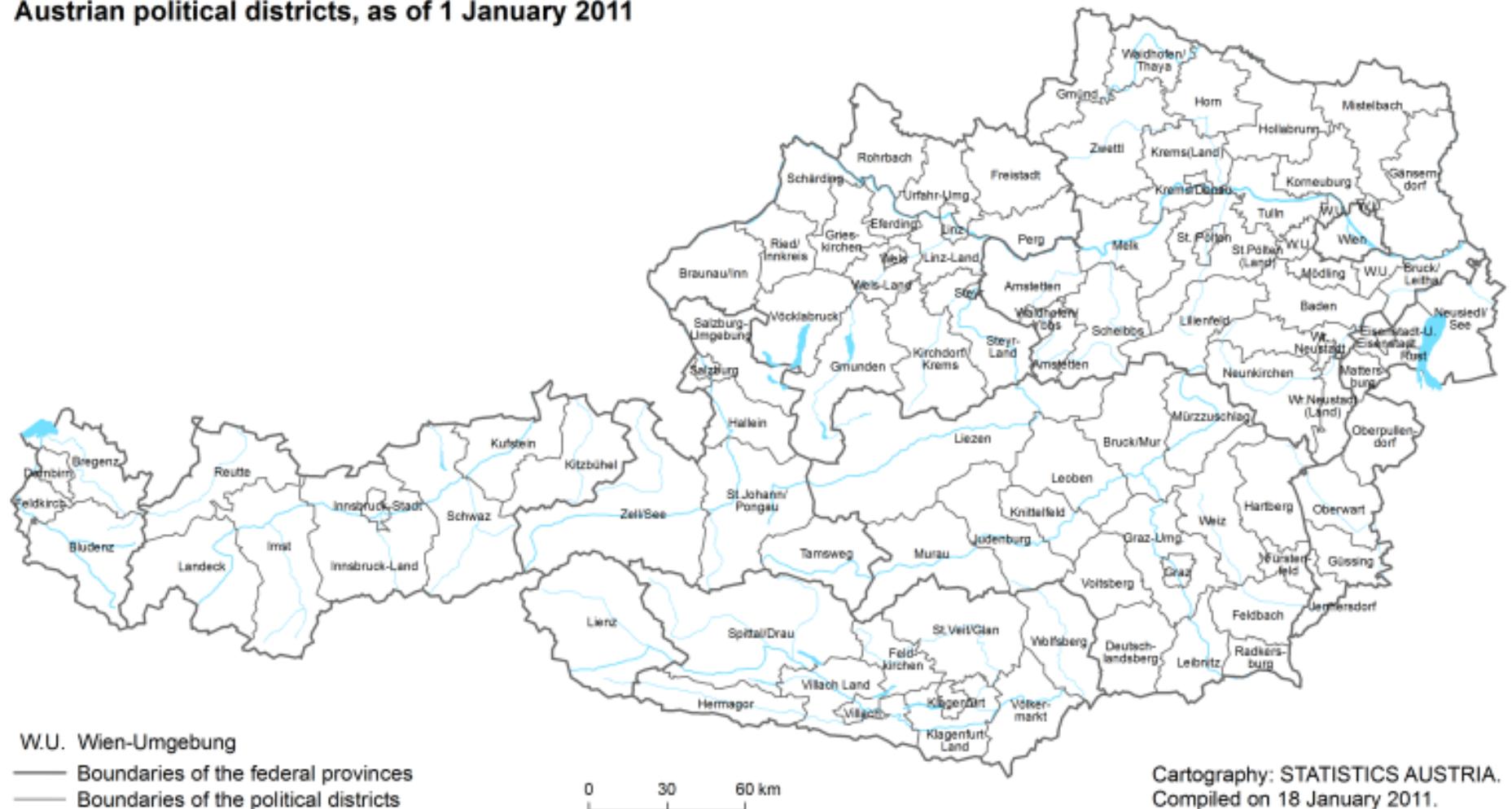
- The most important are:
  - NUTS - Unit
  - Federal States, Districts
  - Municipalities, Localities
  - Statistical Grids

## Austrian federal provinces, as of 1 January 2011



Cartography: STATISTICS AUSTRIA  
Compiled on 18 January 2011.

Austrian political districts, as of 1 January 2011



W.U. Wien-Umgebung

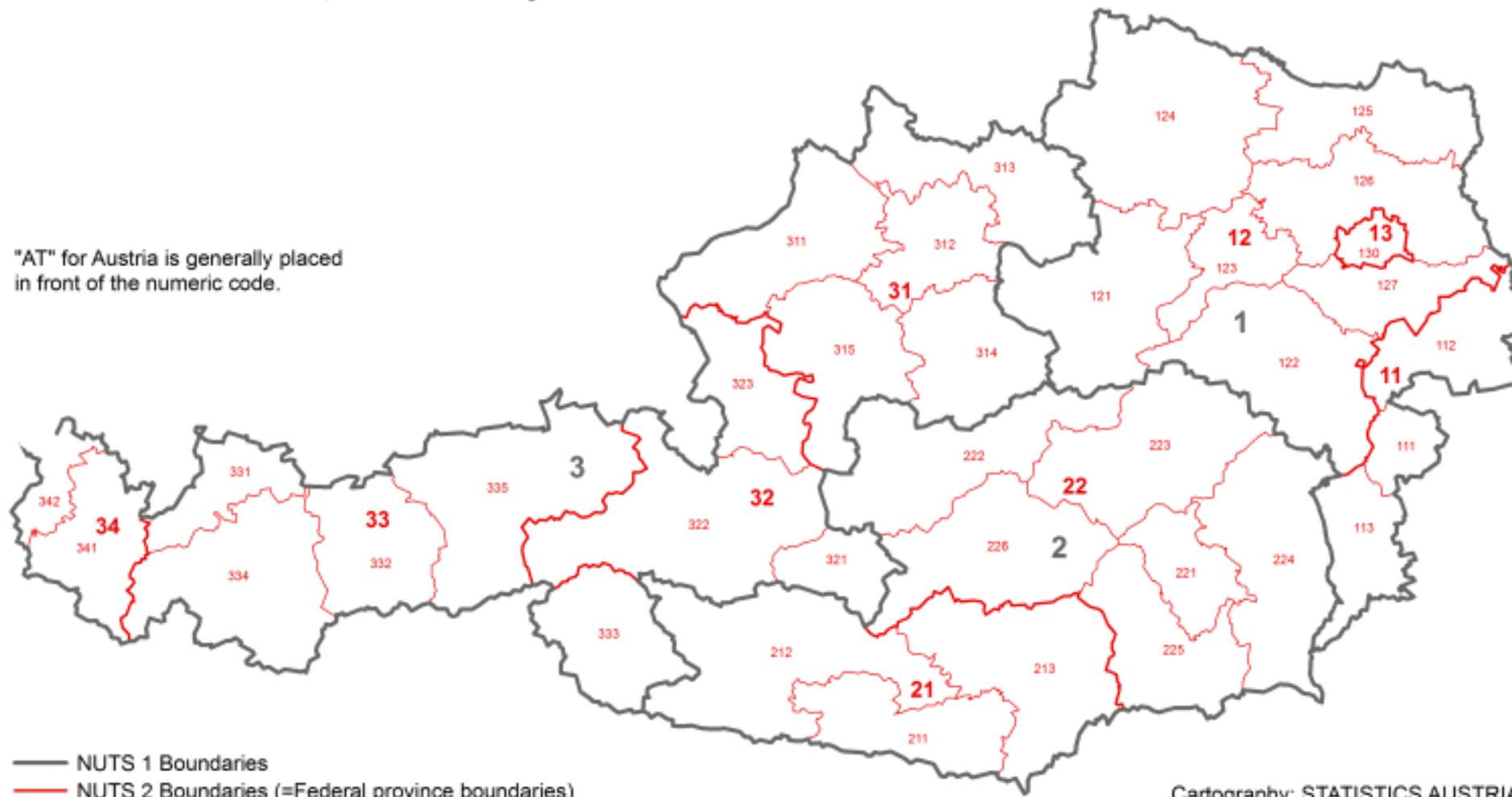
- Boundaries of the federal provinces  
— Boundaries of the political districts

Cartography: STATISTICS AUSTRIA.  
Compiled on 18 January 2011.



## NUTS 3 units in Austria, as of 1 January 2011

"AT" for Austria is generally placed in front of the numeric code.



0 30 60 km

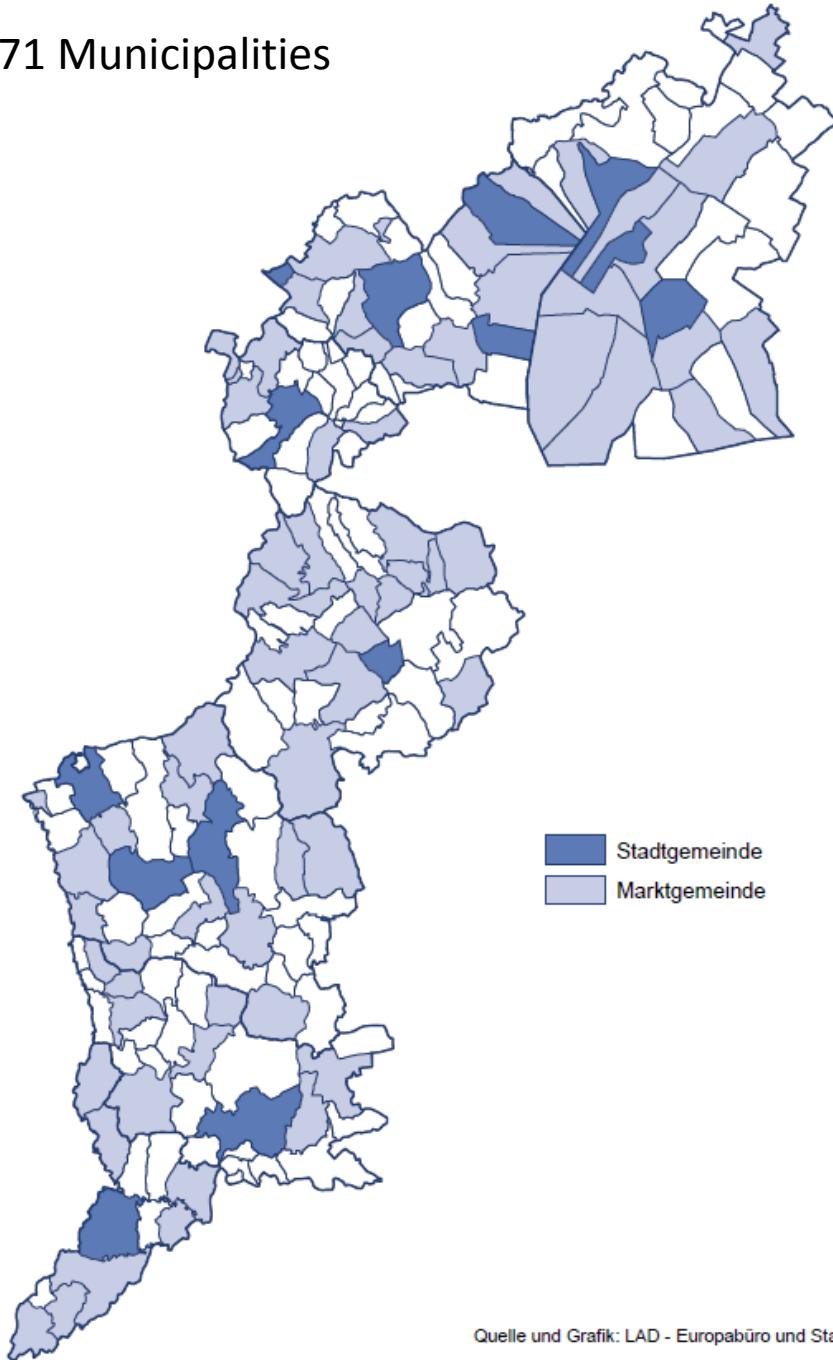
Cartography: STATISTICS AUSTRIA  
Compiled on 18 January 2011.

Smart	18.17
Smart	1.95
Smart	8.20 +
Snowball	14.25 +
Snobieski	10.10 +

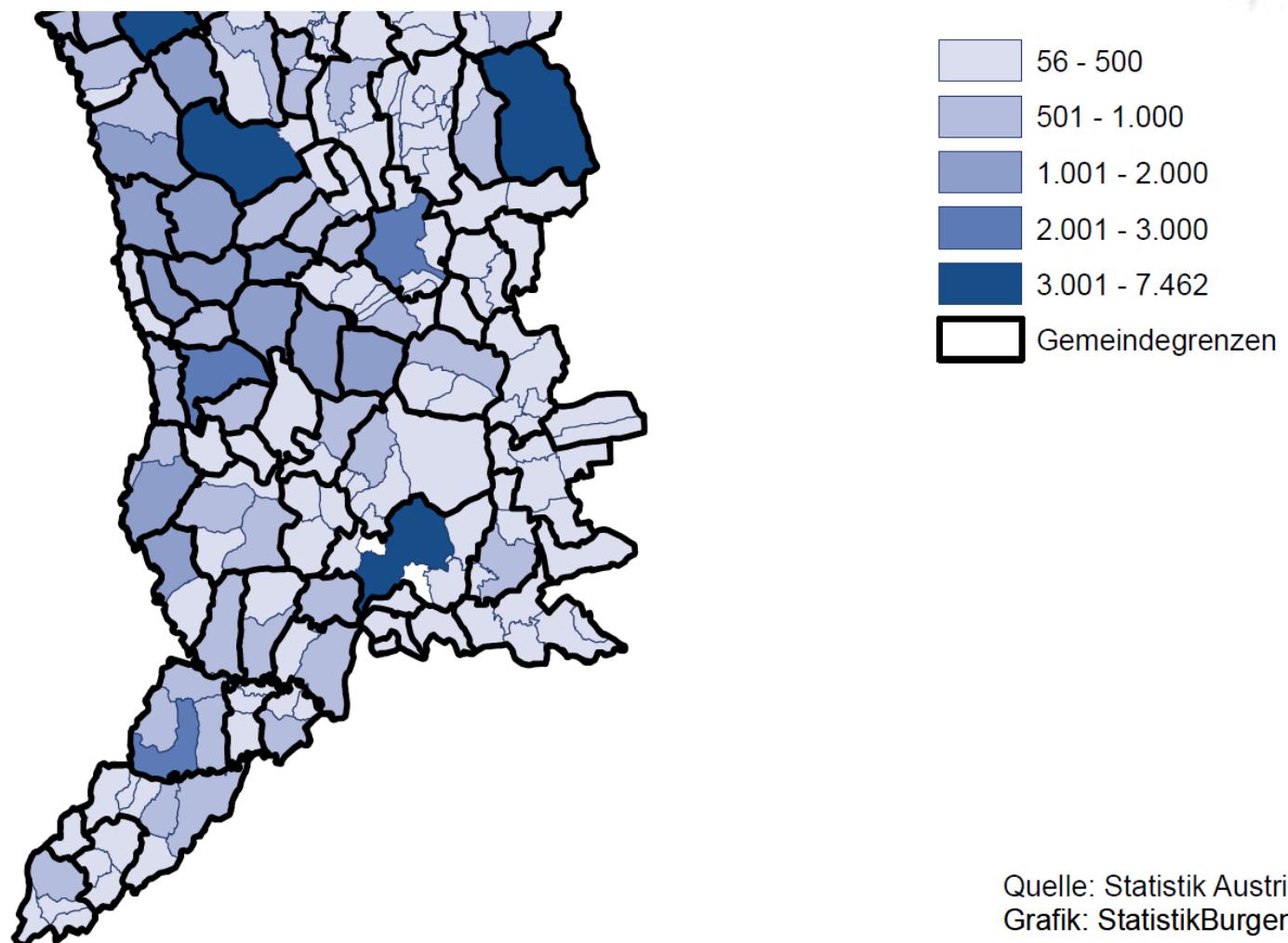
## NUTS-Definition

	Upper Limit	Lower Limit
•NUTS 1	7.000.000	3.000.000
•NUTS 2	3.000.000	800.000
•NUTS 3	800.000	150.000

171 Municipalities



318 Localities

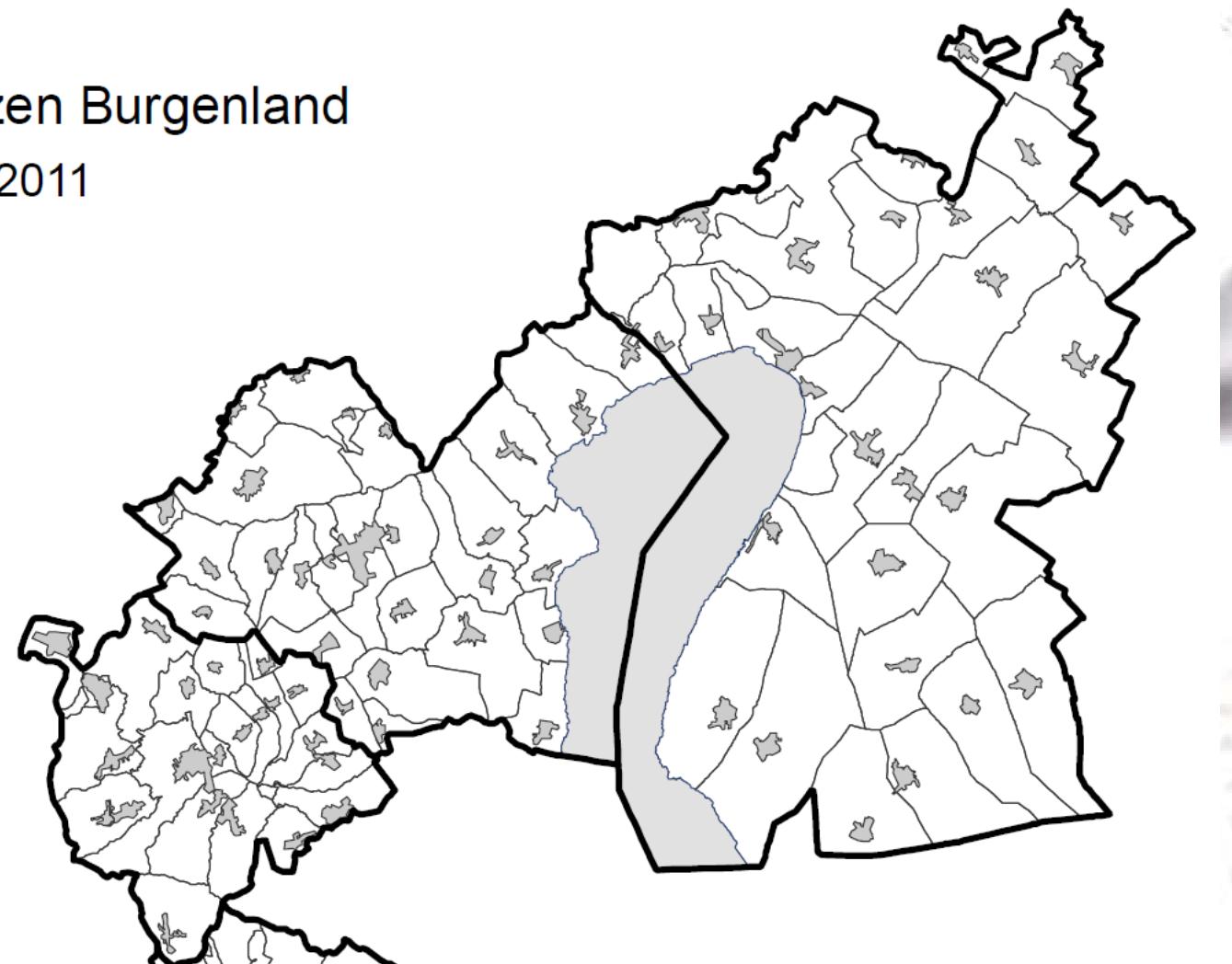


Quelle: Statistik Austria  
Grafik: StatistikBurgenland

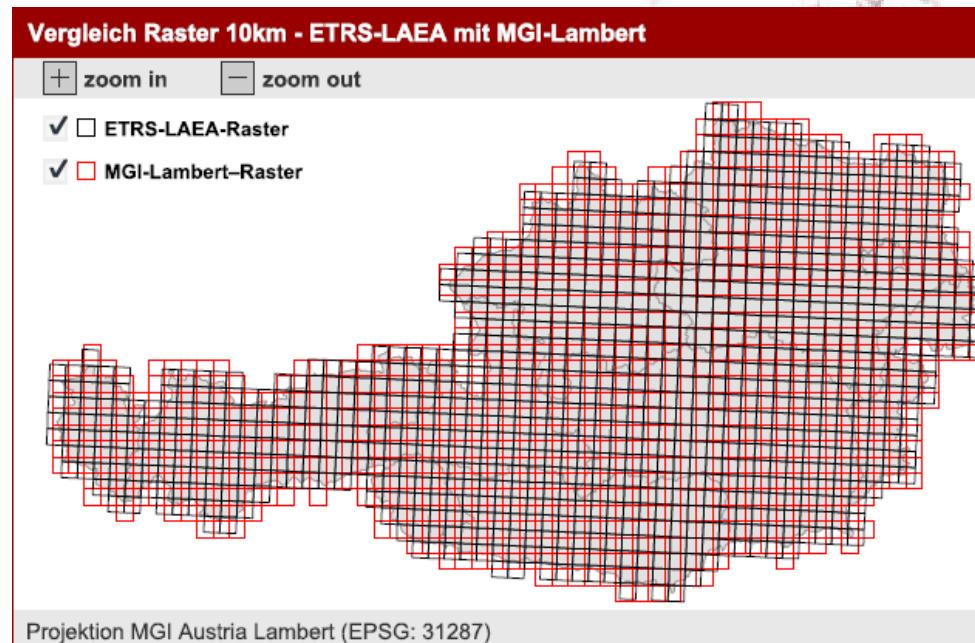
Localities and Residential Areas

## Ortschaftsgrenzen Burgenland

Gebietsstand 1.1.2011



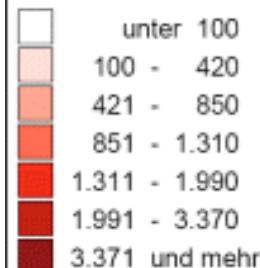
- Statistical Grids
  - 10.000m, 5.000m
  - 1.000m, 2.000m
  - 500m, 250m, 100m



## Wohnbevölkerung 2001

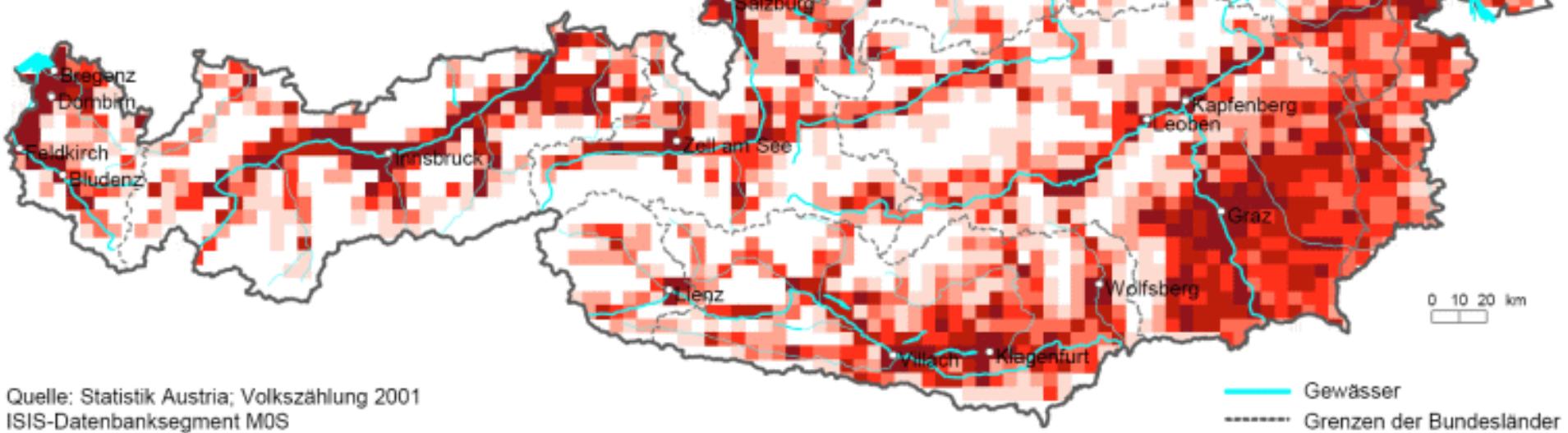
Gesamtzahl in Österreich: 8.032.926

### Zahl der Einwohner je 5 x 5 km Rasterzelle\*



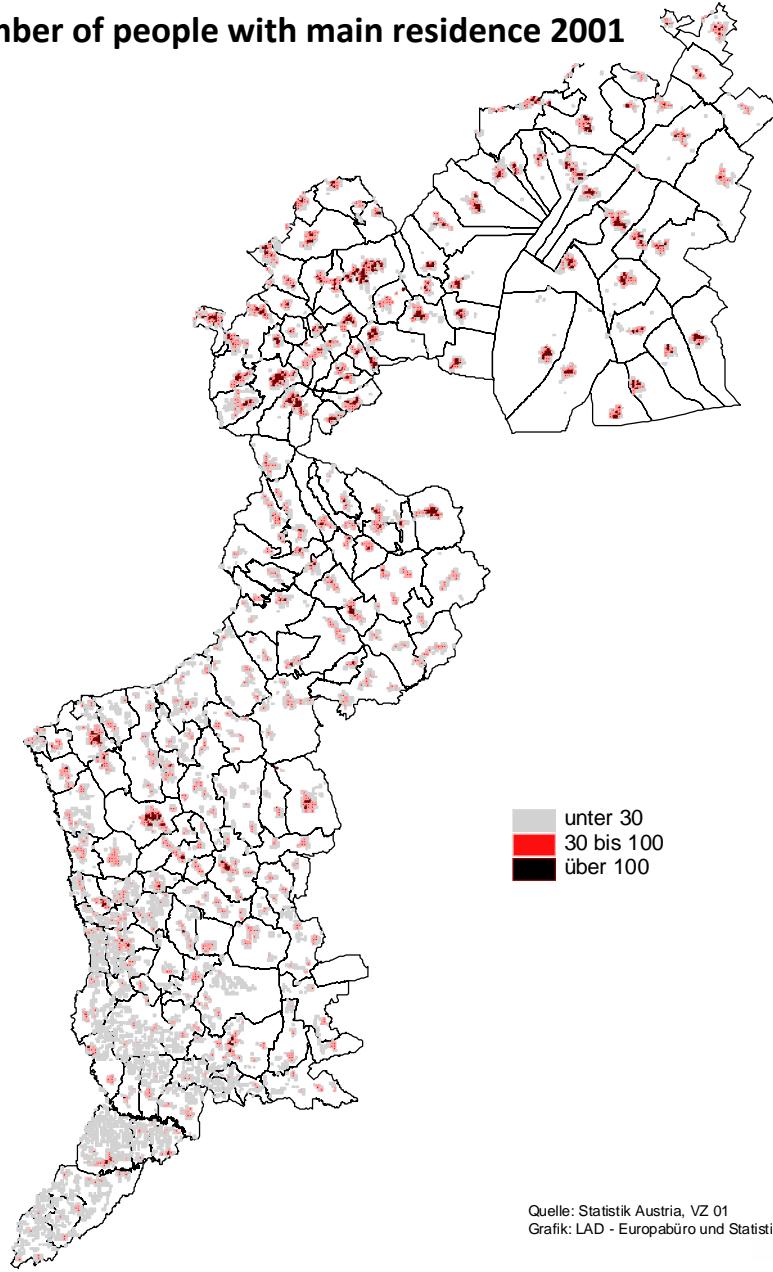
Klassenbildung: gleiche Anzahl von Rasterzellen je Klasse

\* Dividiert man die Zahl der Einwohner je Rasterzelle durch 25, erhält man die Zahl der Einwohner je  $\text{km}^2$ . Dies gilt nur für Rasterzellen, die zur Gänze im österreichischen Staatsgebiet liegen.



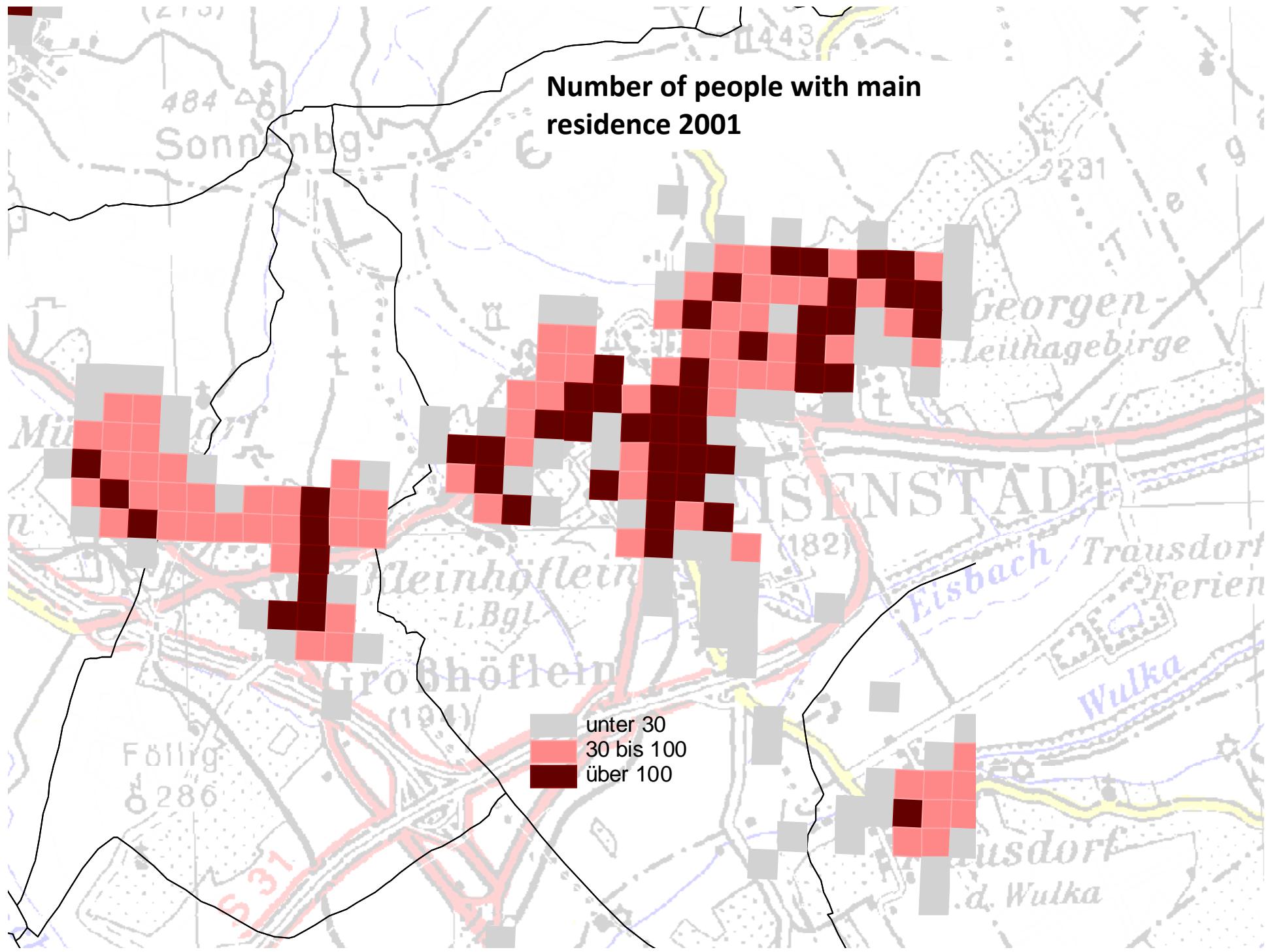
Quelle: Statistik Austria; Volkszählung 2001  
ISIS-Datenbanksegment MOS

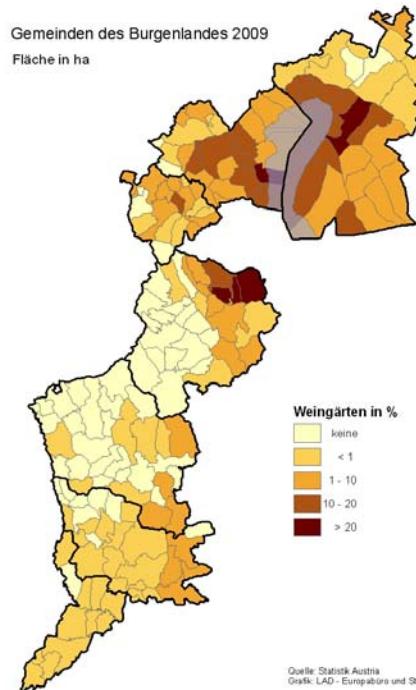
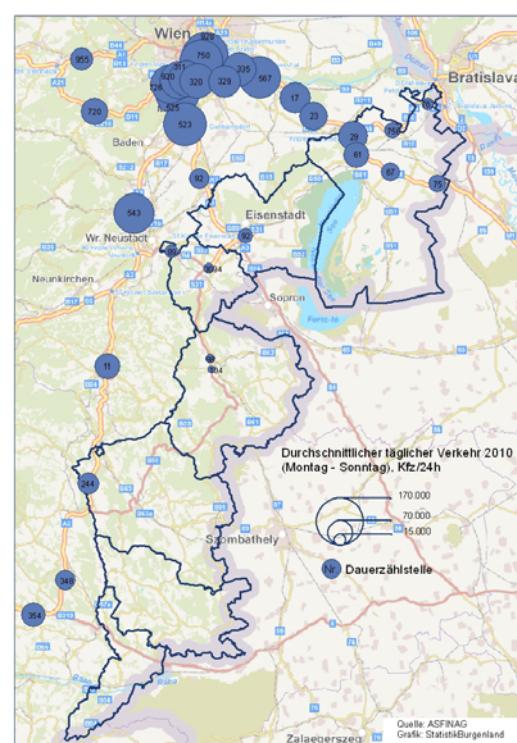
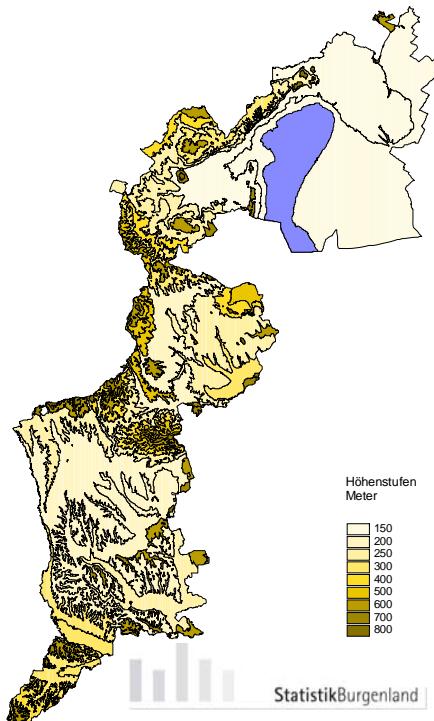
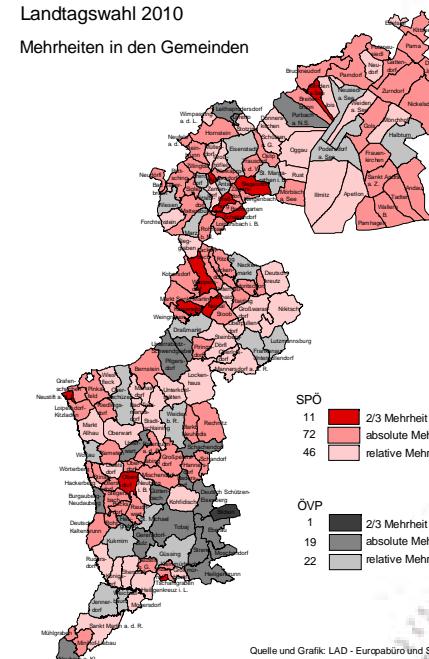
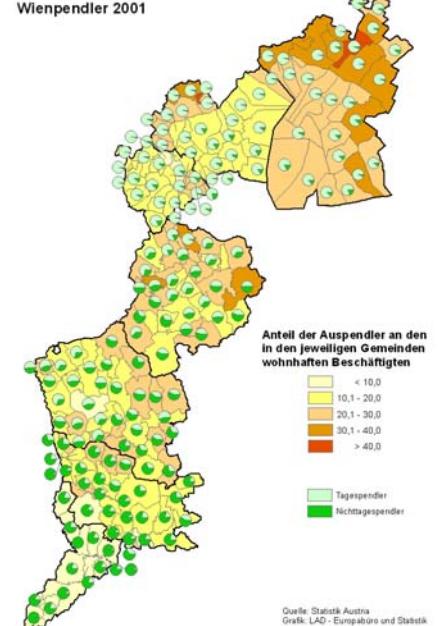
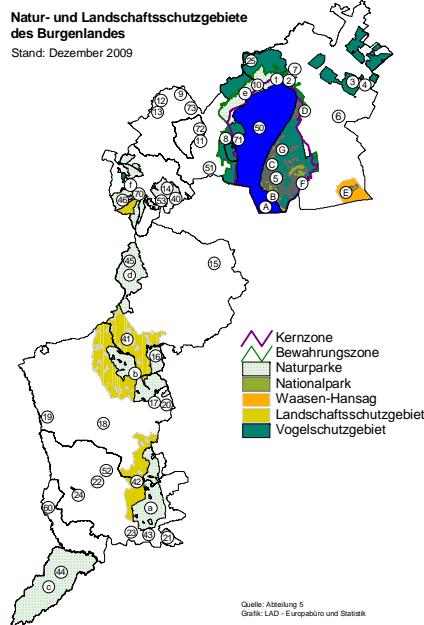
## Number of people with main residence 2001



Quelle: Statistik Austria, VZ 01  
Grafik: LAD - Europabüro und Statistik







# Thank you!

Movie (5 min.)

[http://www.statistik.at/web\\_en/surveys/register\\_based\\_census/index.html](http://www.statistik.at/web_en/surveys/register_based_census/index.html)