

Iedzīvotāju sastāva novecošanas ģeogrāfija: reģionālās atšķirības un kontrasti

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81. Latvijas Universitātes
starptautiskā zinātniskā
konference 2023



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Topicality

- Population ageing is one of the most important demographic phenomena of the 21st Century and worldwide phenomena transforming societies and having profound economic and social effects.
- Driven by fertility decline and the continuing increase in the life expectancy, the process of population ageing has not been even across time and space.
- Previous studies provide evidence that in many developed countries ageing growth rates are more pronounced in peripheral areas than in the core regions while development of metropolitan areas is associated with gentrification and suburbanisation predominantly driven by young in-migrants (Steinführer & Haase 2007; Kurek et al. 2017; Kurek & Wojtowicz 2018; Kazimierczak & Szafraska 2019, Wolff & Wiechmann 2018, Kashnitsky et al. 2021).
- Since the early 1990s, Latvia and other countries of Central and Eastern Europe have experienced sudden and simultaneous turnabouts in all the main demographic processes: fertility, mortality, and migration (Fihel & Okolski, 2020).



Aim of the study

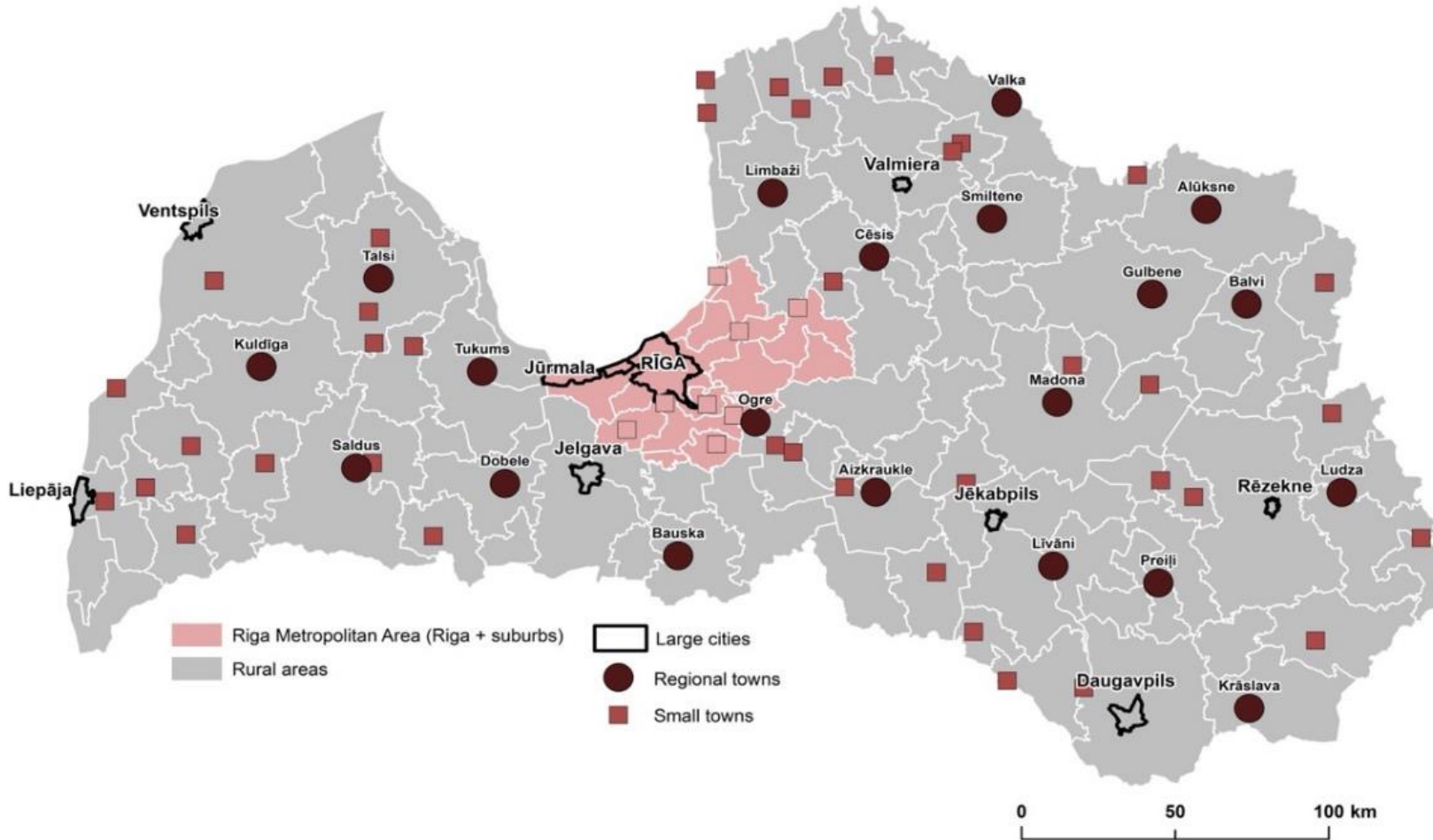
**This study aims to analyse
the geographical patterns of population ageing
in Latvia in terms of the changes in the number
and distribution of elderly across different
geographical areas within Latvia**

Data and Methods

- **Georeferenced individual-level data** (census 2000; population register 2020) on the population's age encompassing the entire territory of Latvia for the spatial analysis of the data;
- **Hexagon grid and translated accessible data sets to 16 ha cells of this grid** across Latvia's administrative and territorial divisions;
- Data on **internal migration** as the main driver of population change in Latvia (annual data, 2011-2021);
- **Statistical tools for local spatial analysis** to examine spatial distributions and local geographical patterns of elderly (75+);
- **Hot Spot Analysis (Getis-Ord G_i^*)** as a mapping cluster tool to identify the **locations of statistically significant Hot Spots and Cold Spots**;
- The Getis-Ord G_i^* is an inferential statistic for the conceptualisation of spatial relationships, used when looking for unexpected spatial spikes of high values (Getis & Ord, 2010). The calculation was carried out using ESRI ArcGIS Spatial Analysis;

Urban system of Latvia

geographical, administrative, functional divisions



Riga Metropolitan Area /
(capital city Riga + suburbs)
Non-metropolitan Areas
(regions)

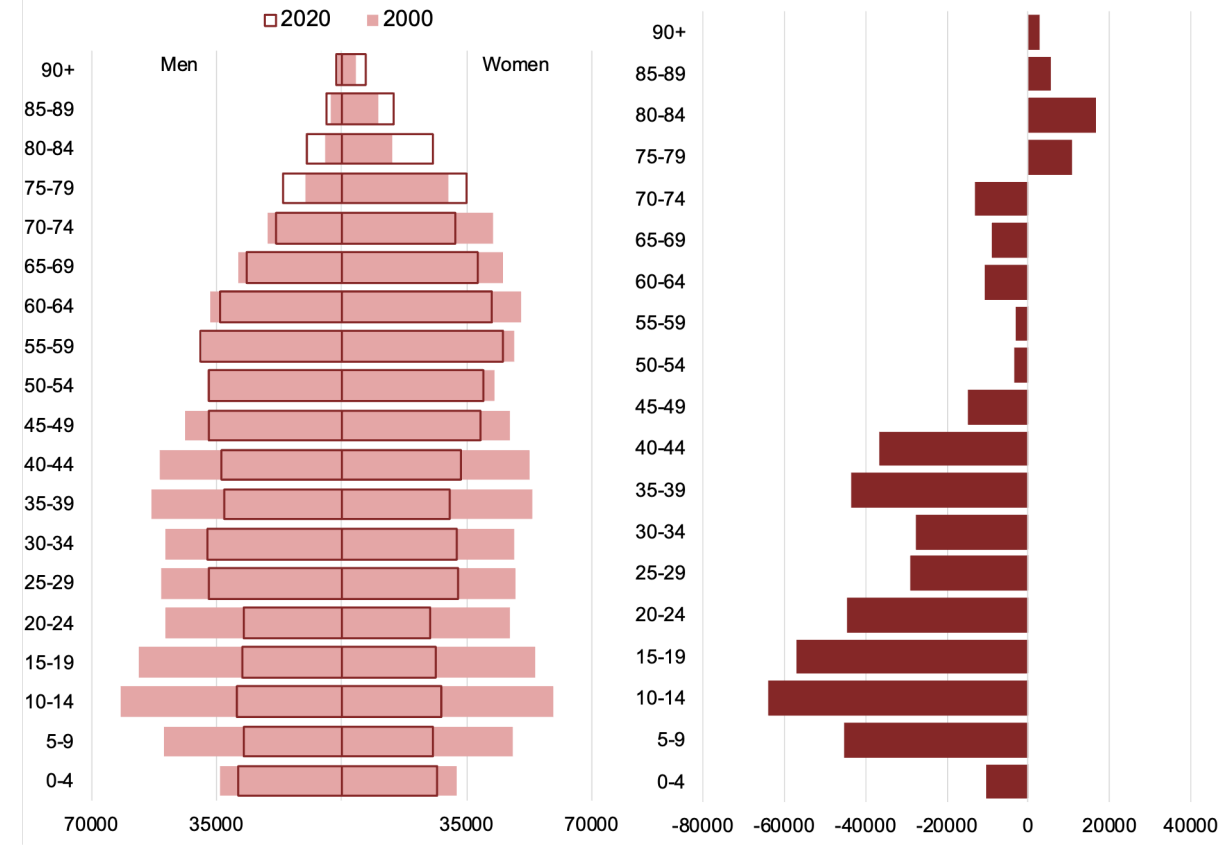
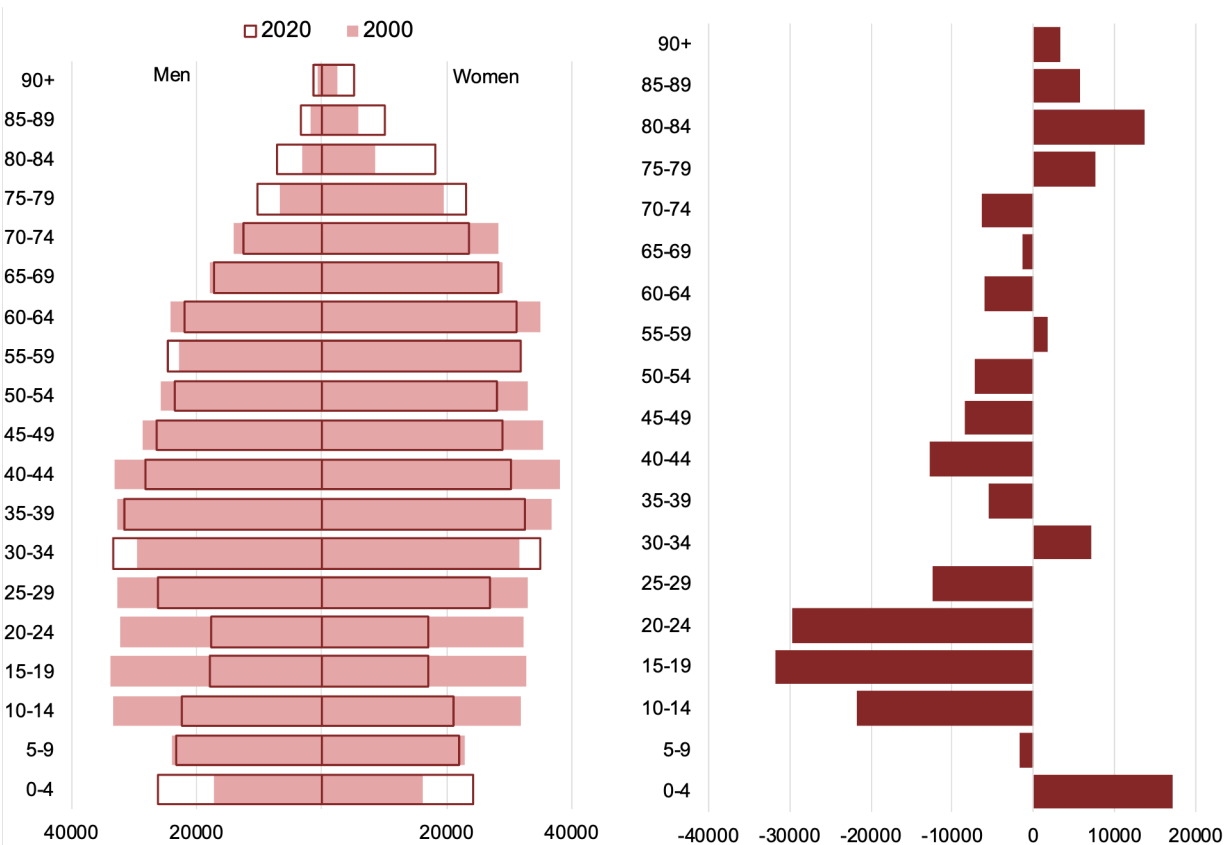
	population
Riga Metropolitan Area	43.4%
Large cities (8)	20.2%
Regional towns (20)	8.3%
Small towns (39)	3.7%
Rural areas	24.4%

Geographical patterns of ageing

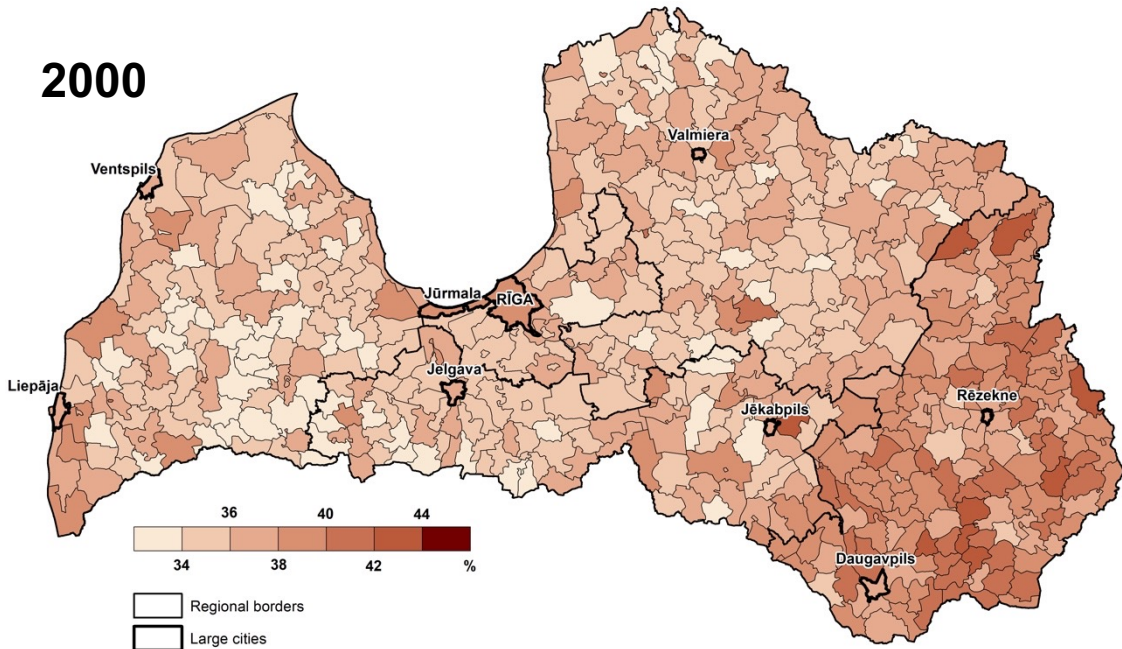
Metropolitan / Non-metropolitan division

Riga Metropolitan Area

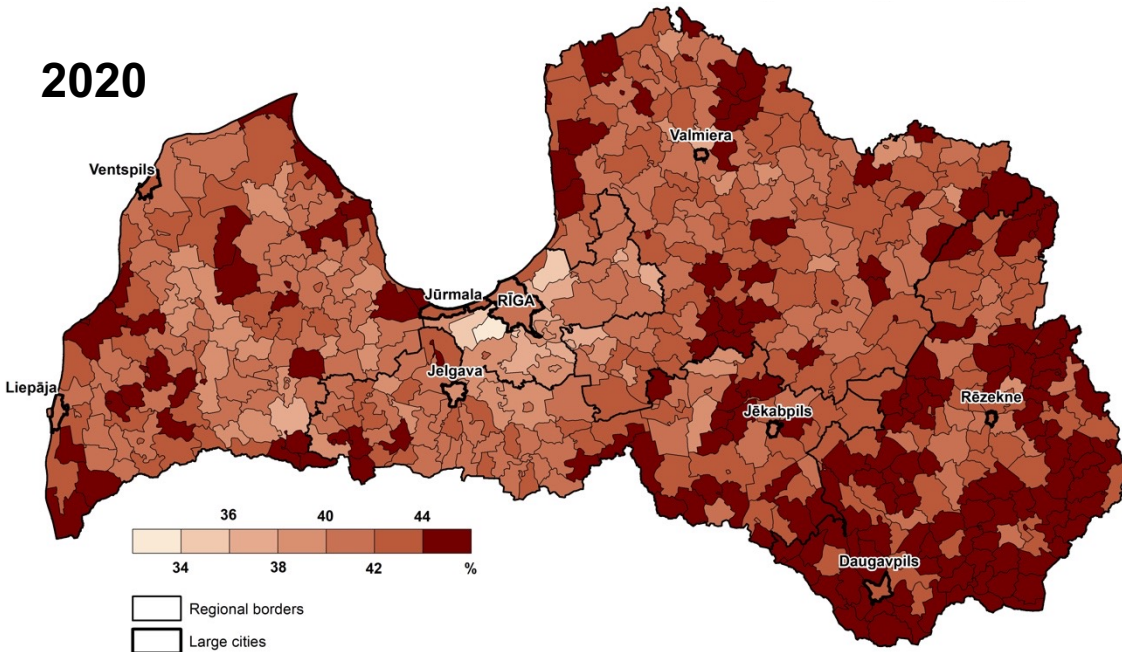
Non-Metropolitan Areas



2000

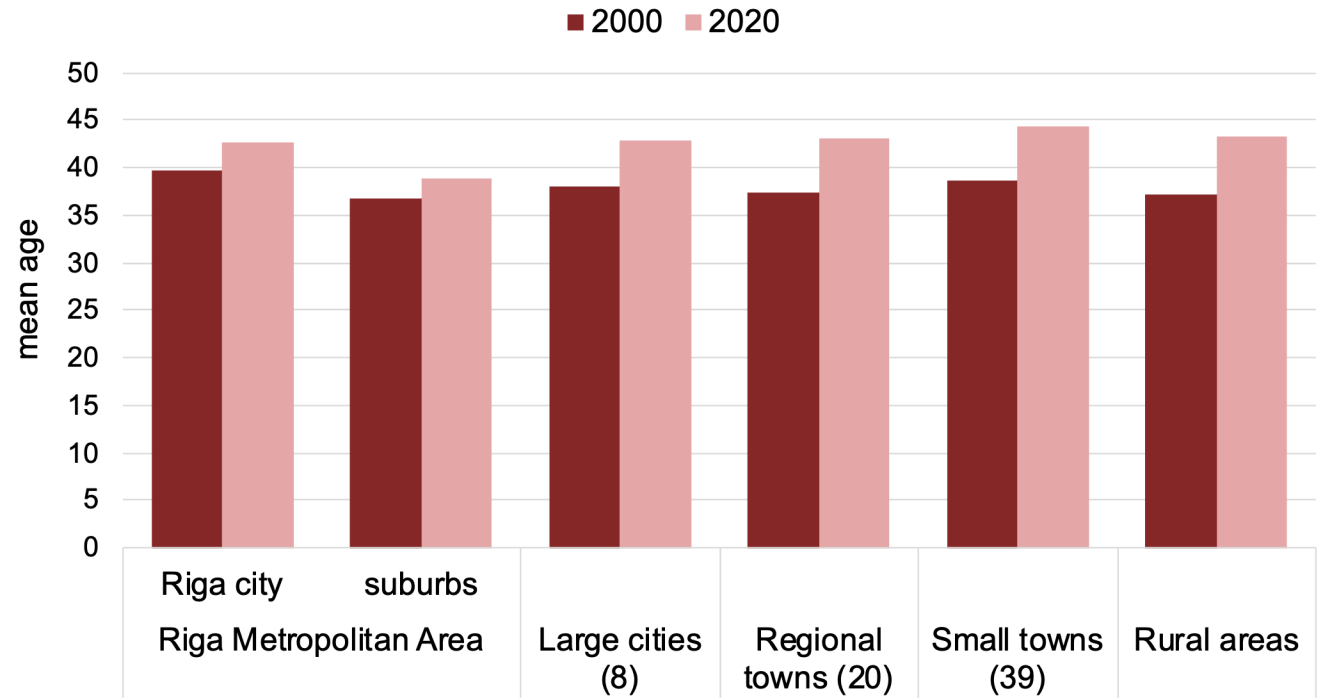


2020



0 50 100 km

Geographical patterns of ageing Mean Age



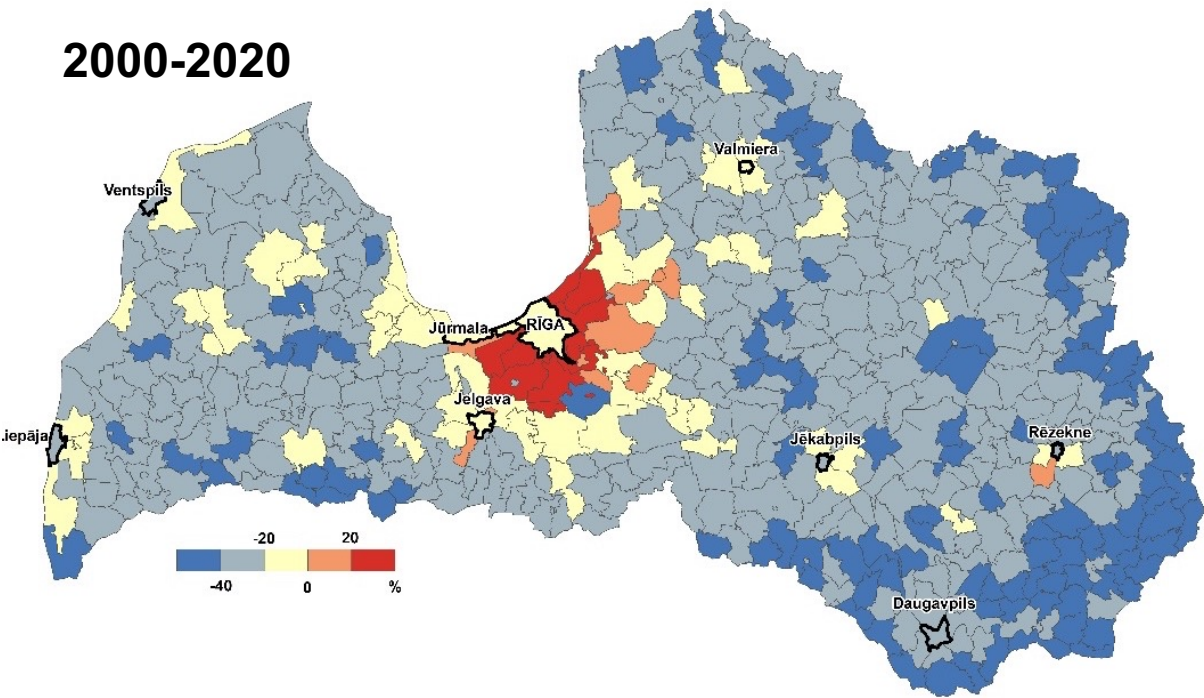
Latvia

2000: **38.2**

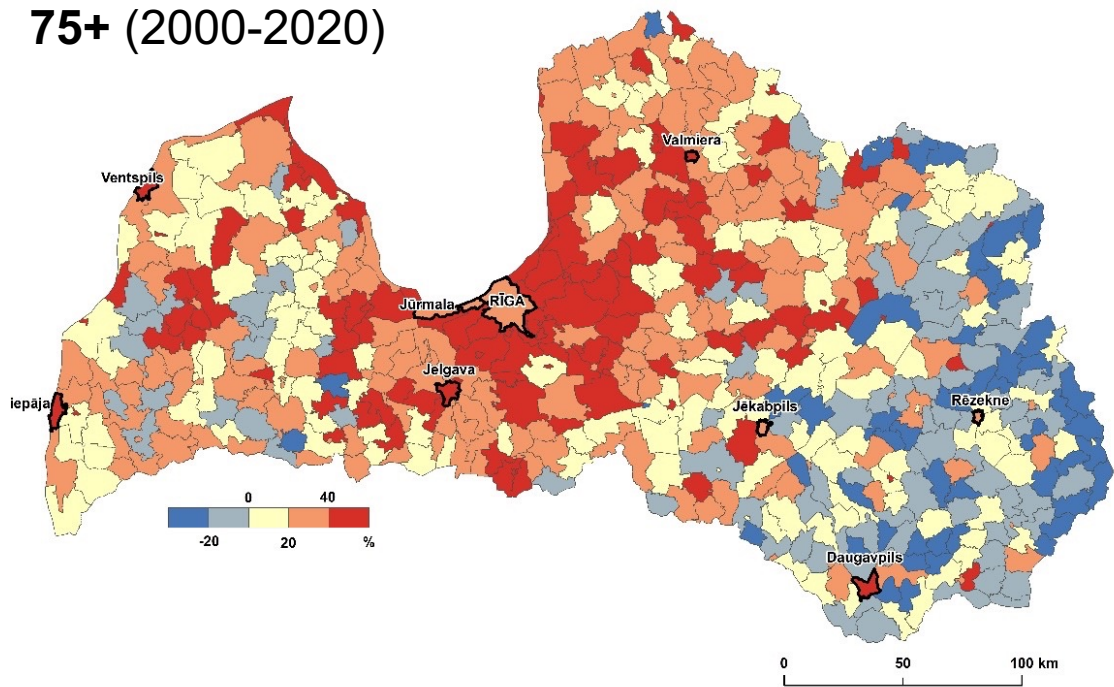
2020: **42.5**

source: elaborated based on data of the Central Statistical Bureau of Latvia

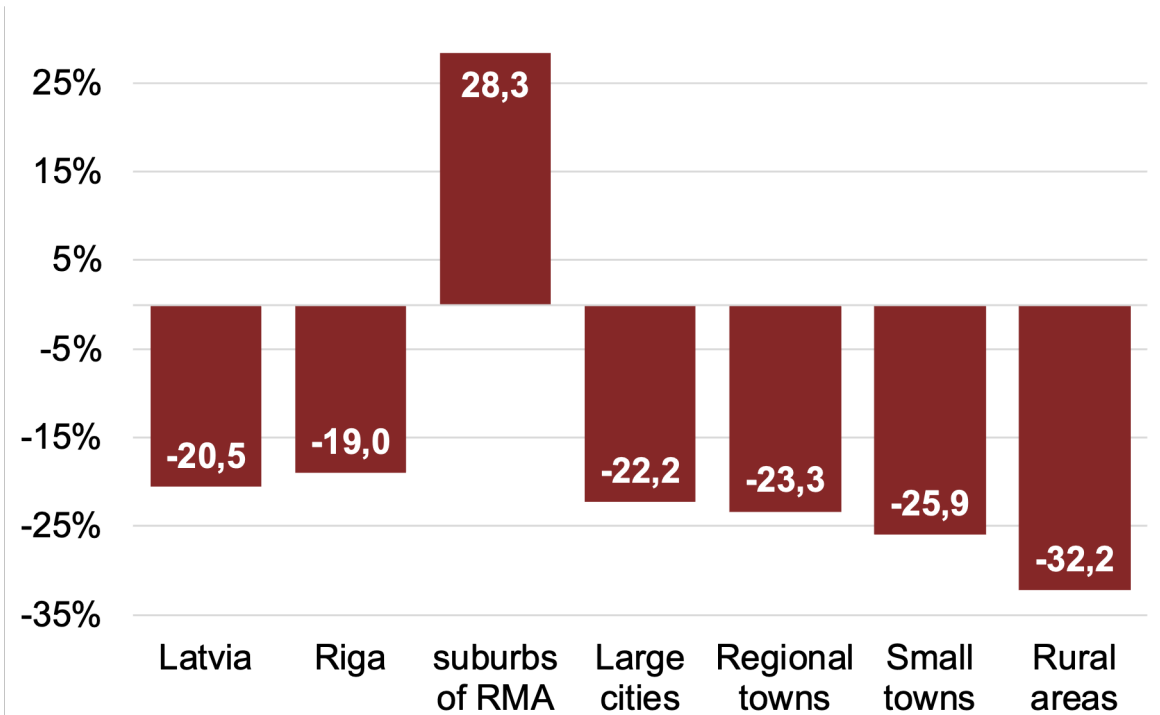
2000-2020



75+ (2000-2020)



Geographical patterns of ageing Population change



source: elaborated based on data of the Central Statistical Bureau of Latvia

Geographical patterns of ageing

Population change (75+)

		Total (%)	75+ (%)
Riga Metropolitan Area	Riga	-19.0	+34.1
	Suburbs	+28.3	+57.2
Non-metropolitan Areas	Large cities	-22.2	+42.2
	Regional towns	-23.3	+37.6
	Small towns	-25.9	+30.6
	Rural areas	-32.2	+21.2
Total		-20.5	+34.5

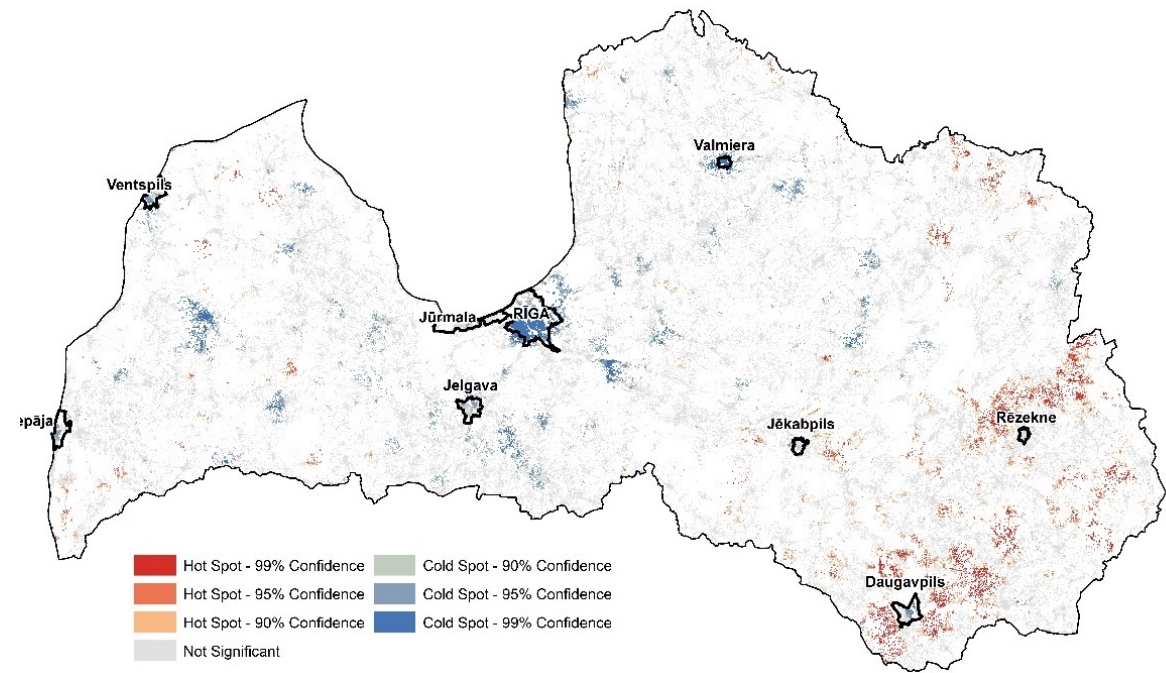
- The changes in the **number of elderly** show an **increase in the whole urban system.**
- The most obvious increase was in the **suburbs of the RMA** and the **largest cities.**
- **Rural areas have the lowest growth in the number of older people.**

Geographical patterns

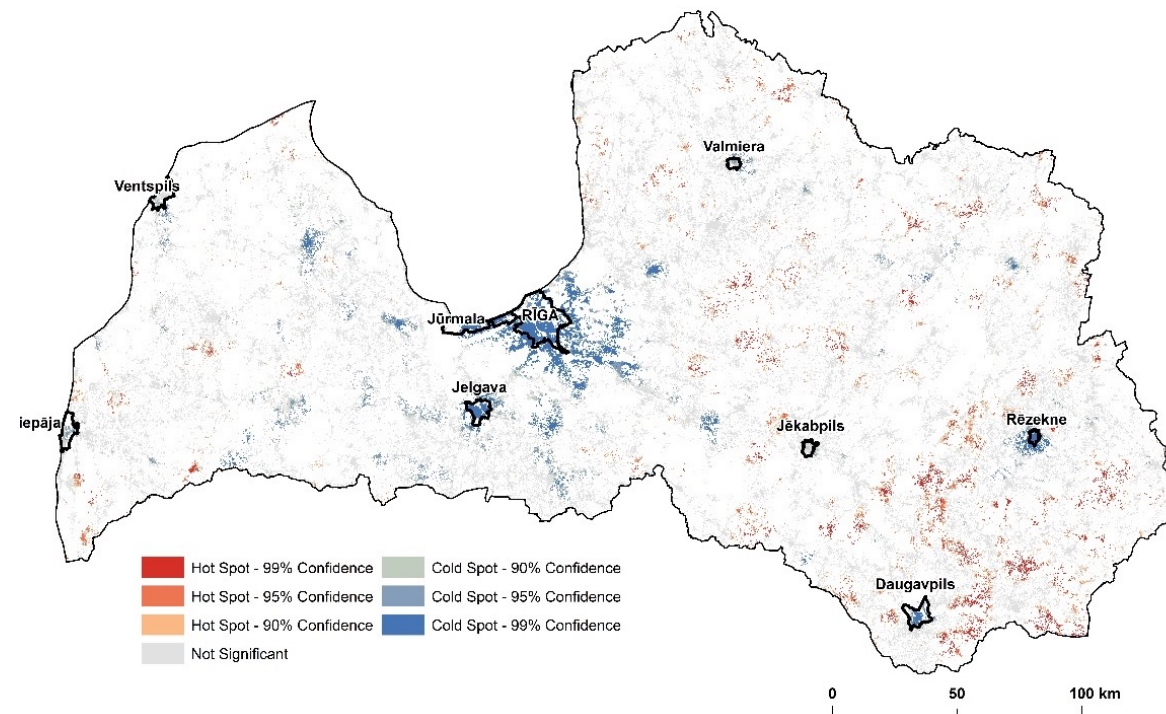


HotSpot analysis

elderly (75+)
2000



elderly (75+)
2020



Concluding remarks

- **Gradual ageing** of Latvia's population has been increasing since the **first decades of the twenty-first century**.
- **Demographic processes in the urban system of Latvia**, i.e. changes in the total population and changes in the elderly groups, **show geographical differences**.
- Results indicate that **patterns of population ageing vary according to spatial location**.
- Less pronounced population ageing in areas with positive demographic dynamics, **driven by in-migration and relatively healthier fertility rates have been observed in the Riga metropolitan area**.
- **The results indicate that the residential patterns of the young and elderly tend to converge in the Riga metropolitan area**.

Paldies par uzmanību!

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