



Spatial challenges for the New World

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The future of shrinking cities in the EU: pathways 1991-2050

Flavio Besana & Kai Böhme

Spatial Foresight Luxembourg & Adam Mickiewicz University, Poznan, Poland

PS07- Regional Development
Young Scientists Session 2
Chair: Prof. Eveline van Leeuwen

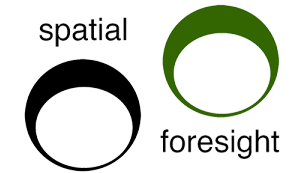


Tuesday, Aug 25, 2020
2:00 PM - 3:30 PM

RE-city ITN: reviving shrinking cities

Supervision: Dr Kai Böhme, director at Spatial Foresight Luxembourg.

Spatial Foresight is a private consultancy and independent think tank in the area of European territorial policies and research



Co-supervision: Professor Tadeusz Strykiewicz from the Institute of Socio-Economic Geography and Spatial Management at the University of Poznan



Collaboration: Annegret Haase and the Helmholtz Centre for Environmental Research in Leipzig



Contact details

flavio.besana@spatialforesight.eu

kai.boehme@spatialforesight.eu

Linkedin: [Flavio Besana](#) / [Kai Böhme](#)



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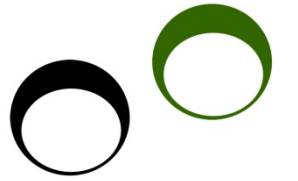
Re-City ITN project

Twitter: [RE-city ITN](#)

Linkedin: [Reviving shrinking cities](#)

Blogpost: [Reviving Shrinking Cities](#)

Shrinking cities in Europe



*Typical
“symptomatology” of
shrinking cities*

Empty housing stock



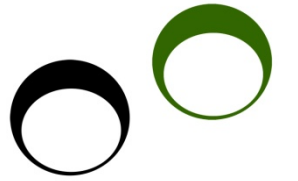
Empty shop windows



- **Operational definition:** Shrinking City international Research Network (SCiRN): urbanized area with a minimum population of 5,000 residents that has faced a remarkable population loss of more than 0.15 % annually for 5 years.
- **Descriptive definition:** shrinkage events typically involve more than just the demographic trend of population loss; causes and effects are intertwined around social, economic and environmental factors which can signal symptoms of a structural crisis.
- **Dimension of the phenomenon:** in Europe (EU28) almost 25% of European municipalities are shrinking - period of observation 1991-2018.

The EU has not yet answered the growing challenge of local population decline with a structured approach

Data & Methodology



The methodology combines I) **historical data 1991-2017** (sources: Eurostat, National Statistical Offices and BBSR) and II) already **made projections** (Eurostat NUTS 3 level) to extrapolate a (*good enough) proxy of the municipality population at 2050. The projection is the result of two components:

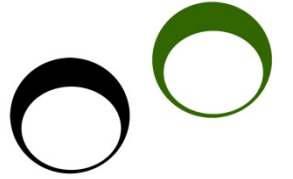
- Linear projection based on municipal historical data
- Share of growth model combining both historical and ready made projected data

The two components are calibrated with a weighting system of two coefficients that answers these questions:

- How did the municipality change compared to its NUTS 3 area in the past? Similar or discordant trajectories?
- How big (influential) is the municipality for its NUTS 3 provincial area?

$$\text{Plau}(2050) = \text{Plau}(2018) + \left[1 - \text{Norm} \left(\frac{\text{City}}{\text{Region}} \right) \right] * \left\{ \left[\frac{\text{Plau}(2018) - \text{Plau}(1991)}{[2018 - 1991]} \right] * [2050 - 2018] \right\} + \left[\text{Norm} \left(\frac{\text{City}}{\text{Region}} \right) \right] * \left\{ \left(\left[\frac{\text{Lau}}{\text{Nuts}} \right] \right) * [Pnuts(2050) - Pnuts(2018)] \right\}$$

Main findings



Currently shrinking municipalities: a negative future outlook

Shrinkage and its threatening dynamics will expand their relevance further until 2050, after establishing as a solid trend in the past 30 years in 25% of Europe's municipalities. It is no cyclic, nor episodic event.

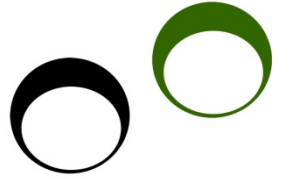
- 77% of currently shrinking municipalities will continue on the shrinking path at equal or greater intensity of population loss (85% of them will experience between x2 and x8 the baseline value of the definition);
- 10 % are predicted to initiate a stabilization process, only 3% are predicted to start a regrowth path.

Blind spots of future shrinkage

New areas in Europe where shrinkage is now completely absent but will become a new reality to face.

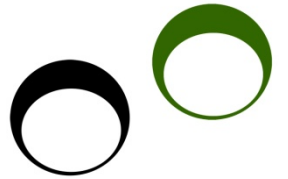
- 15% of all European NUTS 3 units that did not shrink in the past, will face significant population decline in the period 2018-2050.
- 267 additional municipalities that did not qualify as shrinking (yet) but showed an initial path of decline (>0,15% per annum) in the period 2011-2018, are expected to continue shrinking

Conclusions



- There is a strong **territorial dimension** in episodes of shrinkage. The geography of incidence displays very different patterns across European countries and regions.
- The increasing volume and extension of shrinking processes shall elevate the challenge to **European levels of policy making** in order to orchestrate a unified approach. The EU has the firepower and the opportunity to steer a crucially needed response strategy.
- **Cross national typologies** of shrinking cities, embedding their territorial and **contextual features** are able to enrich the design of solutions and craft more effective policy responses.
- **Territorial Impact Assessments** (Camagni, 2006; Eduardo Medeiros, 2014) and **Territorial Foresights** (Böhme et al., Forthcoming) are essential tools to favour ex-ante, inclusive and place-sensitive approaches that can help to curb shrinkage trajectories.

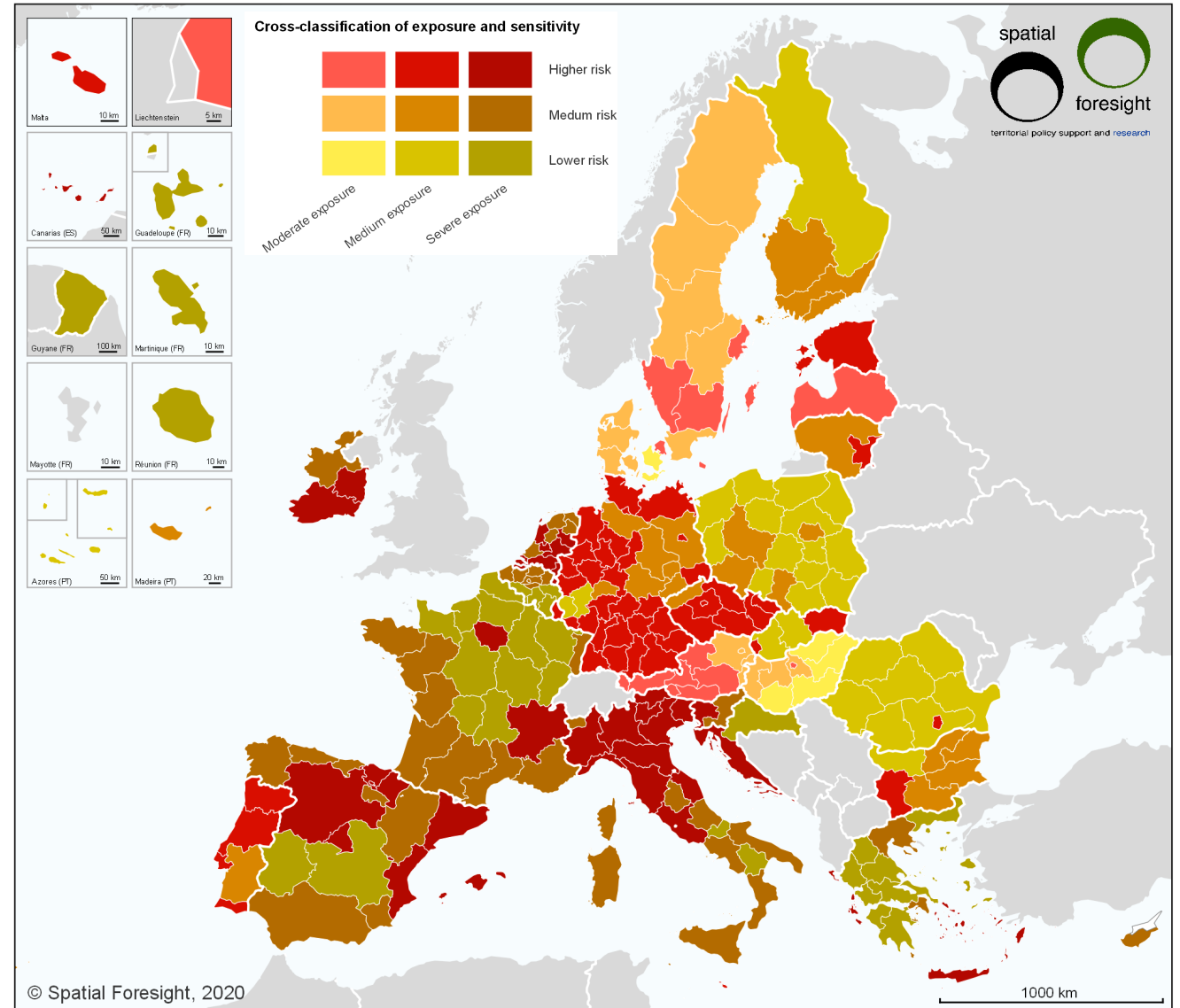
Shrinking cities and covid-19



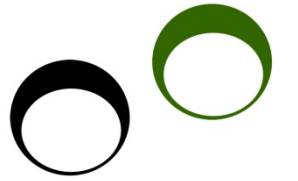
The analysis aims at giving the economic and social sensitivity of each European region to the risks of Covid-19 crisis and the exposure to lockdown measures.

Link to the paper: [Spatial Foresight Brief](#)

- Updated and expanded analysis will be published soon with an increased number of indicators and dimensions to assess regional sensitivities
- I am currently overlaying this information with the the geographies of shrinkage to find out the preliminary impacts of Covid-19 on these delicate places



Thank you for your attention !



Spatial Foresight

**Flavio Besana
Dr Kai Böhme**

flavio.besana@spatialforesight.eu
kai.boehme@spatialforesight.eu

www.spatialforesight.eu
[@Spatial4sight](https://twitter.com/Spatial4sight)

