

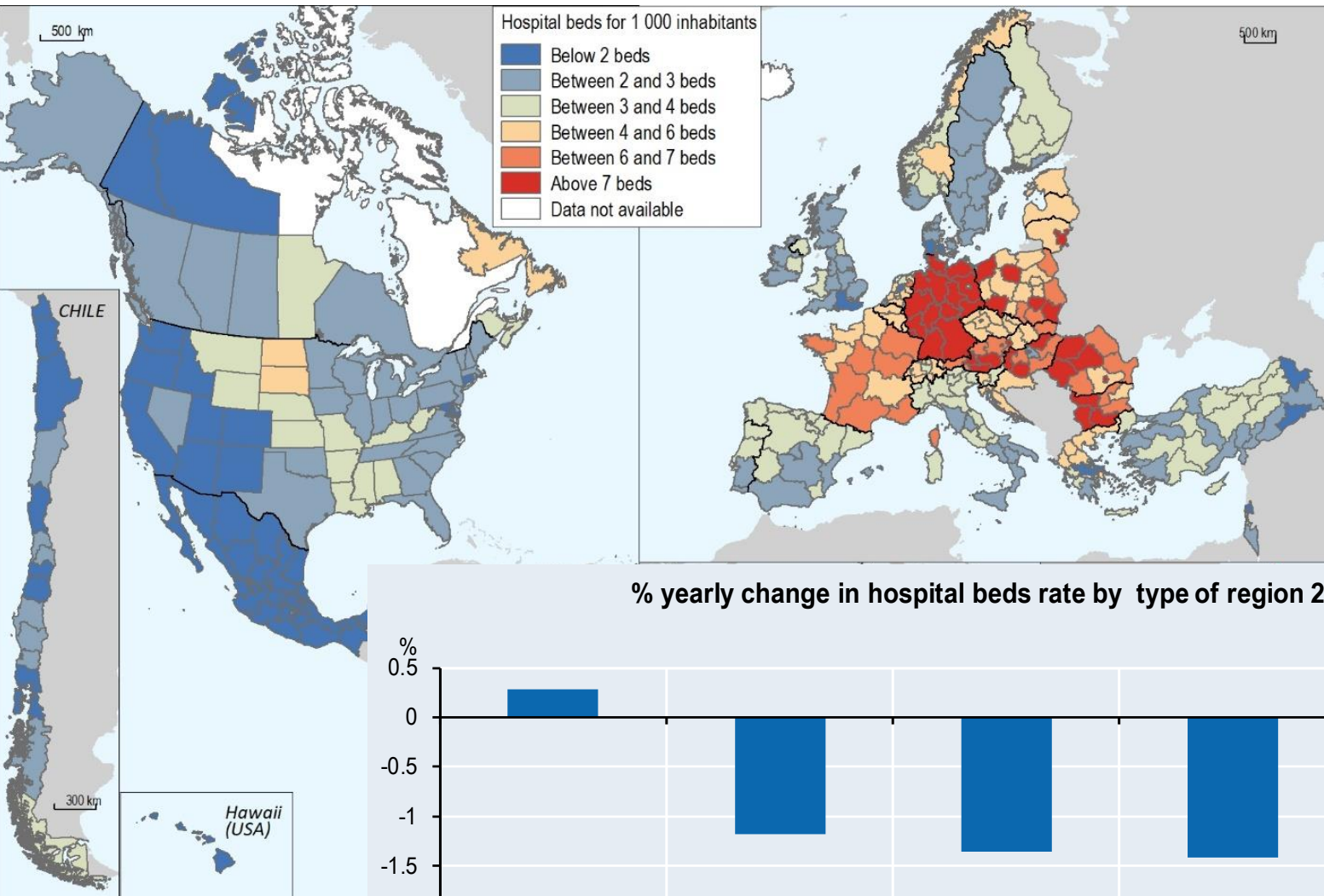
Present and future public service delivery costs

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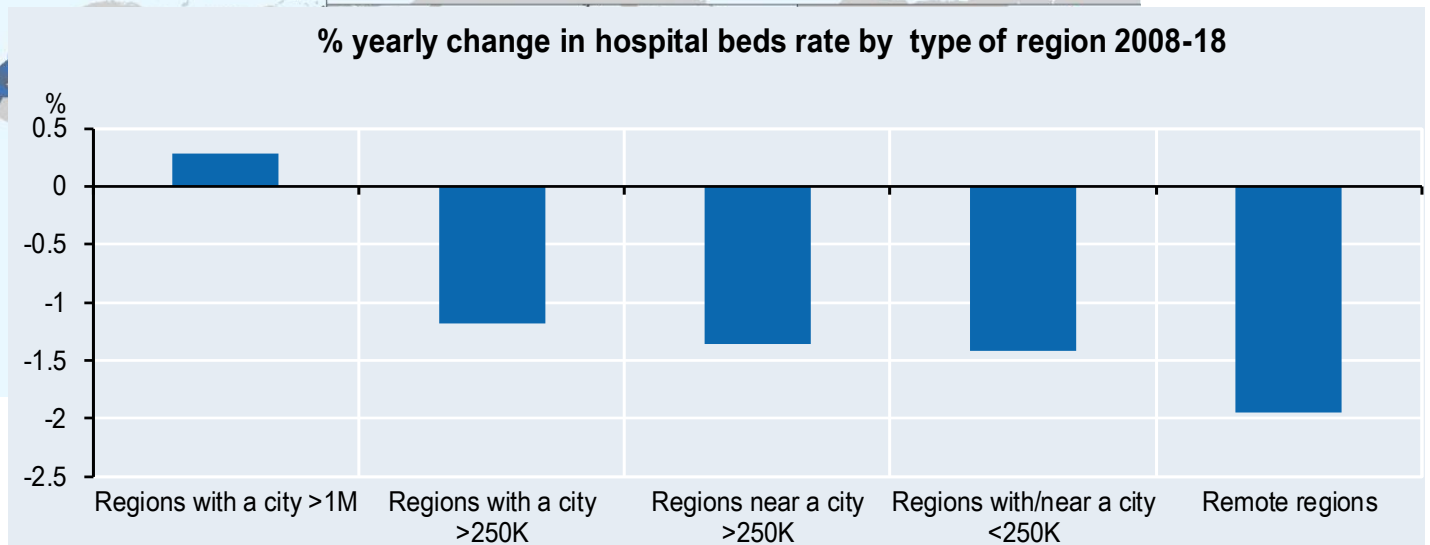
ENRD Workshop on Vibrant Rural Areas: Access to
Services

30 June, 2020

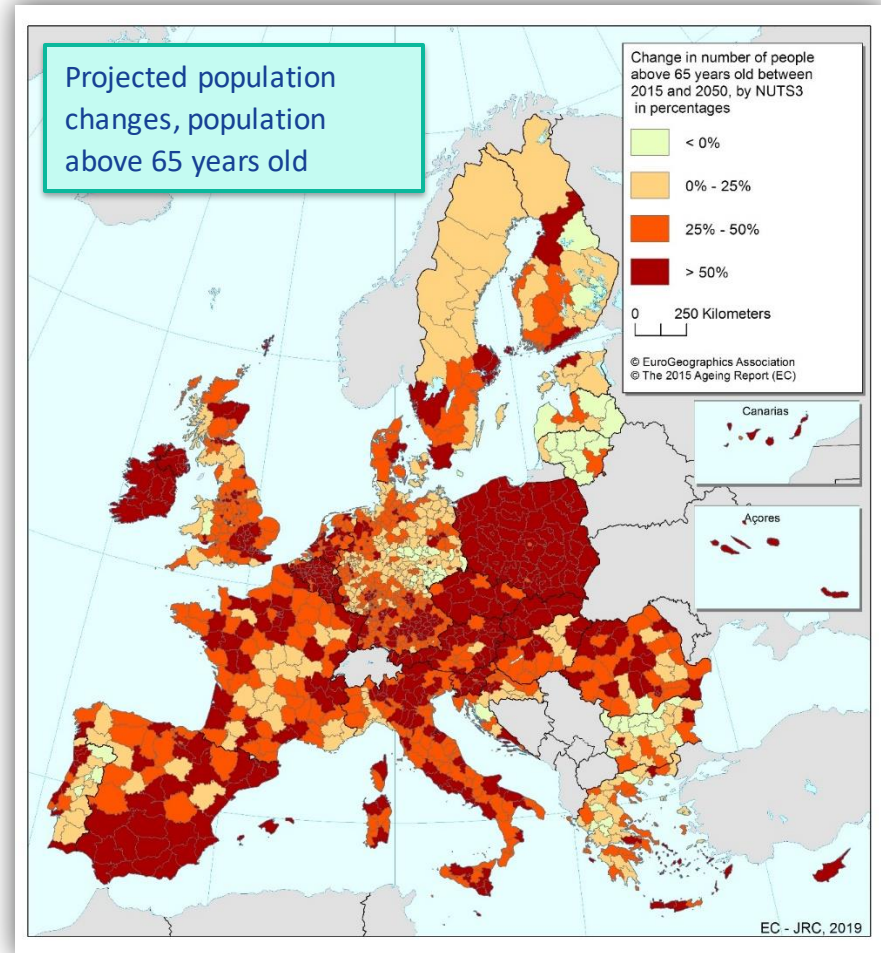
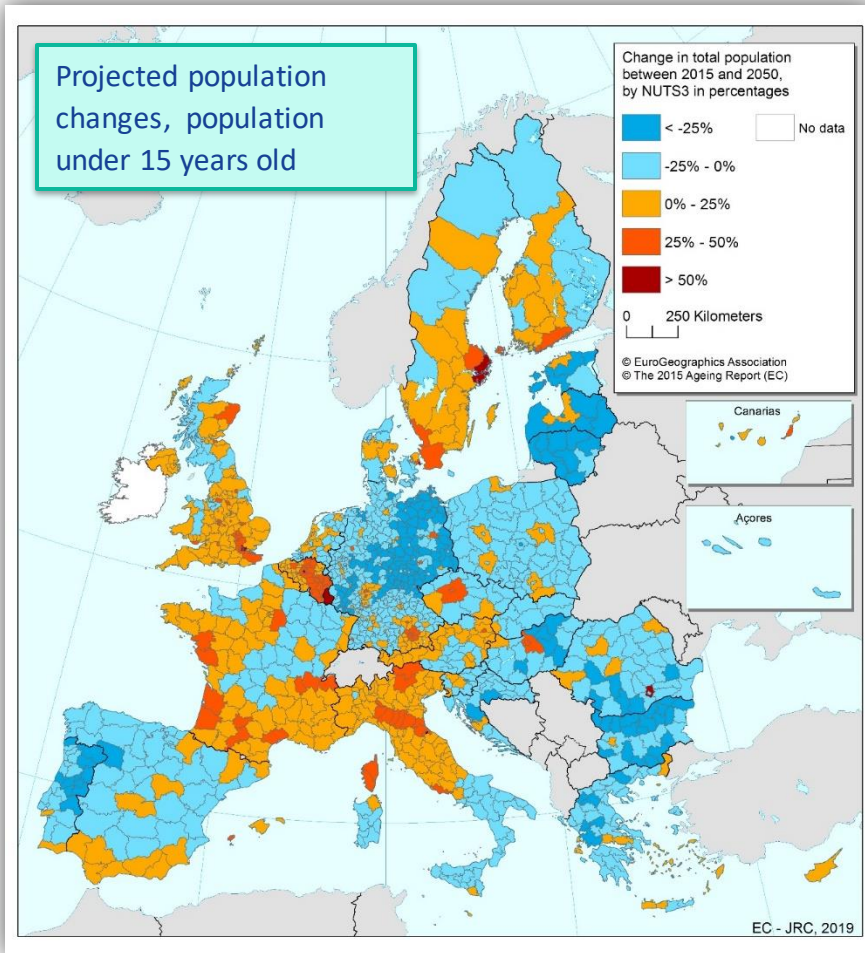
Service provision is unequal in space



Source: *Regions and Cities at a Glance 2020* (forthcoming)



EU population dynamics 2015-2050 – under 15 and above 65



How much more expensive is it to provide services in rural areas?

Public service provision is challenging for rural areas due to:

- ✓ high transportation costs
- ✓ low economies of scale and scope
- ✓ difficulty in attracting and retaining professionals

Little consideration for additional costs of provision in rural areas

- ✓ Transfers to smaller municipalities to compensate for unavoidable costs of rurality (Sweden)
- ✓ Inclusion of remoteness/smallness consideration in education and health funding formulas (UK)
- ✓ Grants for small hospitals providing critical care (USA)

What is missing?

Currently **no available monetary estimates** and **projections** of cost of public service delivery by type of human settlement

These allow:

- ✓ **Mapping** and **anticipating** social and economic trends and suggest strategies to adapt needs and leverage opportunities (e.g. digital solutions)
- ✓ Identifying **vulnerable populations**, areas at risk of **under-provision** and managing environmental risks
- ✓ Proposing feasible service delivery alternatives to **manage demographic transition**

Preparing for future needs

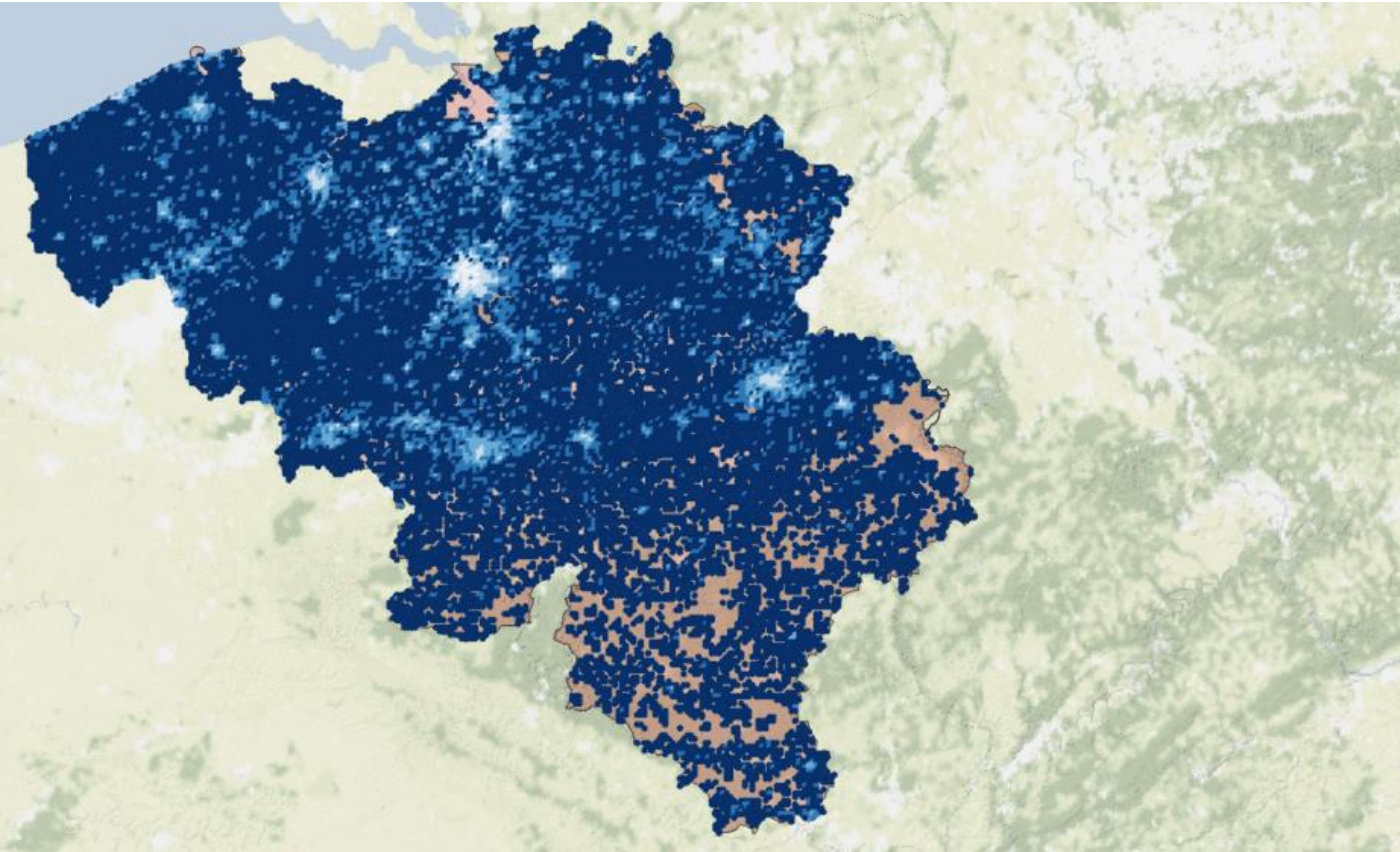
Estimation of future service delivery using population projections at grid-cell (1-km²) level

- ✓ **Demand:** Present and future population by age group
- ✓ **Supply:** Simulated facilities based on optimal access placement

Model costs at facility level considering:

- ✓ Costs arise in the facilities (e.g. schools), not in the areas (e.g. school districts)
- ✓ Public services are local, and are provided close to places of residency
- ✓ Additional costs arise as a result of smallness
- ✓ Transport costs are not necessarily born by the government

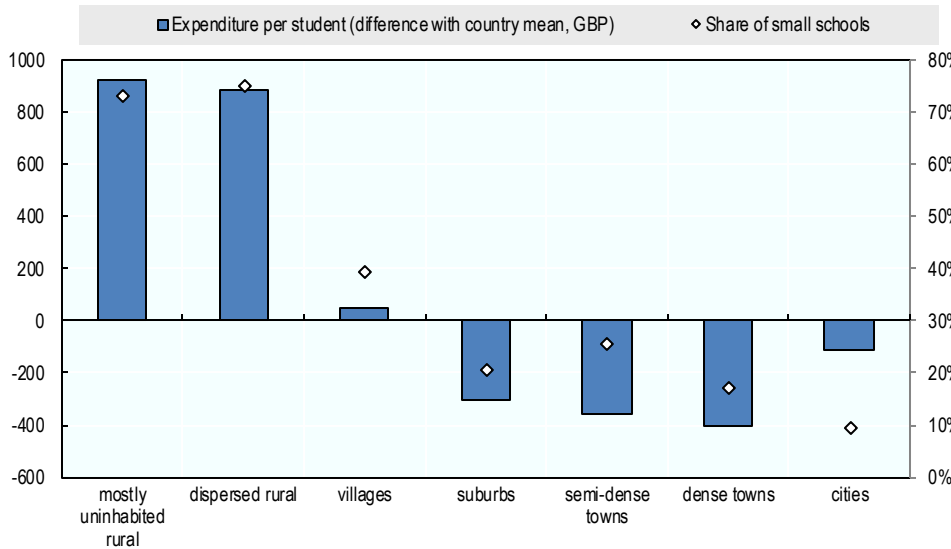
Modelling facility distribution based on population distribution



1. Observe spatial distribution of relevant service users (e.g. children in primary school age)
2. Step by step, distribute facilities based on bounding conditions
3. Allocate users to facilities (e.g. children to schools), measure travel times and estimate school expenditure per user

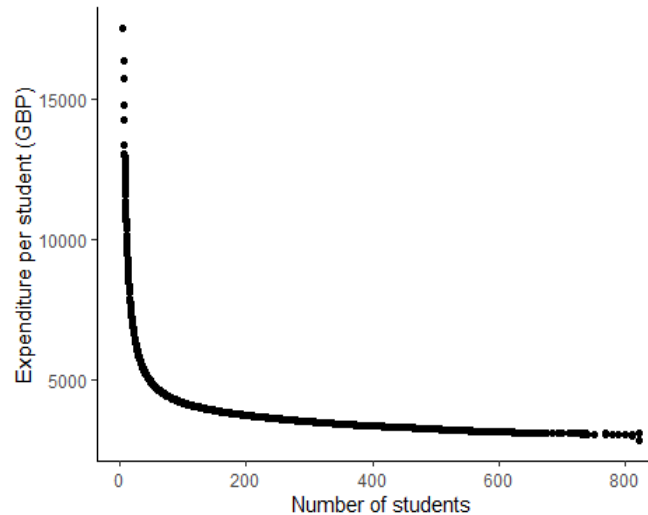
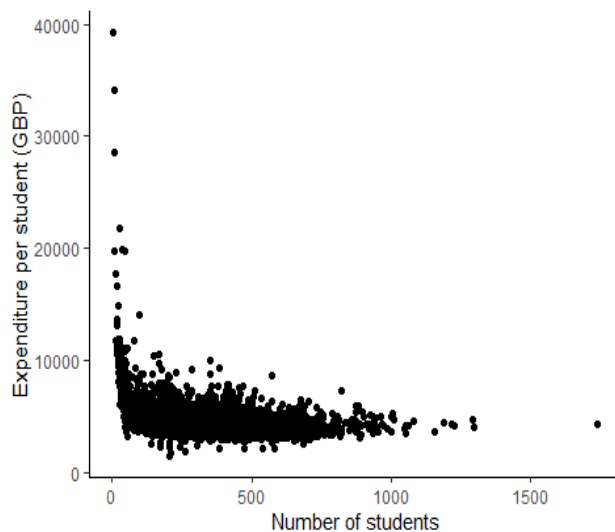
Education expenditure in England

Expenditure per student (mean-centred), England 2019



School size influences cost per student, e.g. because small schools tend to underuse capacities

Expenditure per student vs school size, Actual and simulated



Source: UK Department of education and OECD-JRC preliminary estimations

Next steps

Estimates for present and future costs for education (primary & secondary) and hospitals for EU countries at settlement level

Policies with a lens on rural public service provision that combines:

- ✓ Spatial considerations (medium and long term planning)
- ✓ Public finance/assessing costs
- ✓ Emerging service delivery strategies—new approaches and technologies
- ✓ Multi level governance and multi sectoral perspectives



Thank you

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