



Population Census and European Neonatal Health Statistics

“If you cannot describe it, you cannot manage it”



Overview of presentation

- About contributors - Who
- Background for presentation - Why
- Introduction to topic - What
- Use of map scales – a system of systems
- Some examples on use of population data
- Follow ups – Population census 2020



Contributors to work



Vilni Verner Holst Bloch

MSc in resource geography and landscape ecology
Member of EFCNI Parents Advisory Board
President of EFGS and founder of NEOGEO



Silke Mader

Teacher in linguistic support
Chairwoman of the Executive Board of EFCNI
Founded EFCNI together with experts and stakeholders



Magne Holst Bloch

MSc in Interdisciplinary Social Science
Literature studies for NEOGEO and iFokus
Author and founder of Hjemmegymnastikk



Diana Makarenko-Piirsalu

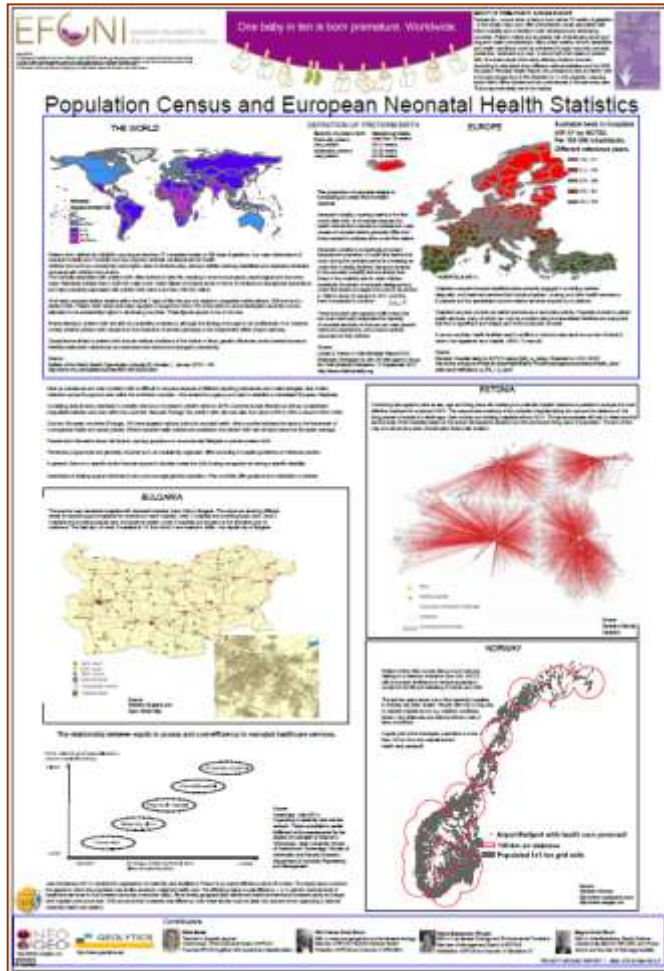
MSc in Landscape Ecology and Environmental Protection
Member of Management Board of ESTGIS
Webeditor of EFGS and founder of Geolytics OÜ

Participants at ESTP GIS course in March 2012

EFCNI and representatives of national parents organisation

Voluntary
and pro bono

Background for presentation



Poster
and
Report



EFCNI (2009-2011). EU benchmarking report 2009/2010. Too little, too late? Why EU should do more for preterm infants.

EFCNI (2011). Caring for Tomorrow - EFCNI White Paper on Maternal and Newborn Health and Aftercare Services

Better health care for
the most vulnerable
part of the population



Background for presentation

Thirteen key recommendations from EFCNI White paper

The thirteen key recommendations identified in this White Paper cover the following areas of activity on national and European level:

3. Address **health inequalities** in maternal and newborn care within all European Member States
10. Harmonize **cross-border** maternal and newborn healthcare
11. **Monitor outcomes** and implement audit procedures in maternal, newborn and aftercare
12. Implement European wide **standardized data-sets** for pregnancy and preterm birth outcome

Key findings from EFCNI (2009-2011) report on benchmarking European countries.

There is currently **no single source of up-to-date**, comparable European data on the prevalence, mortality and morbidity associated with preterm births.

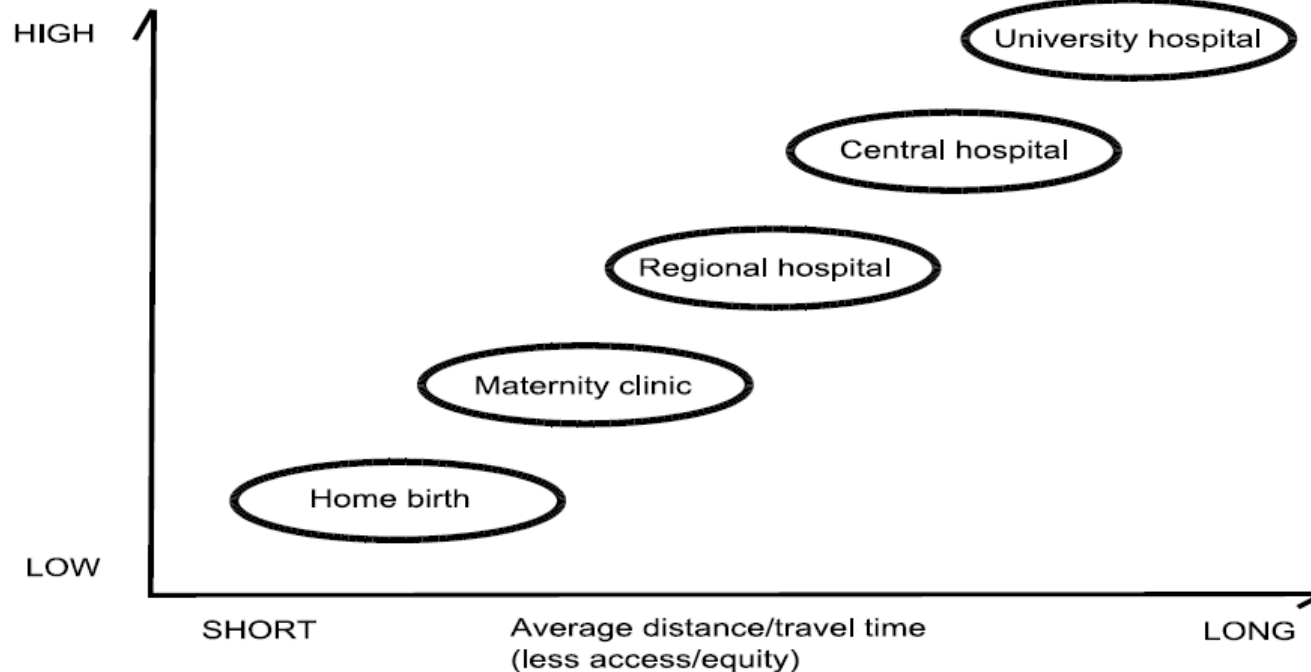
Official national sources of information about preterm birth do not appear to be available to decision-makers in a number of countries to support the development of neonatal policies

Georeferenced population census/statistics is part of the solution

Background for presentation

The relationship between equity in access and cost-efficiency in neonatal healthcare services.

Birth volume and specialization
(more cost-efficiency)



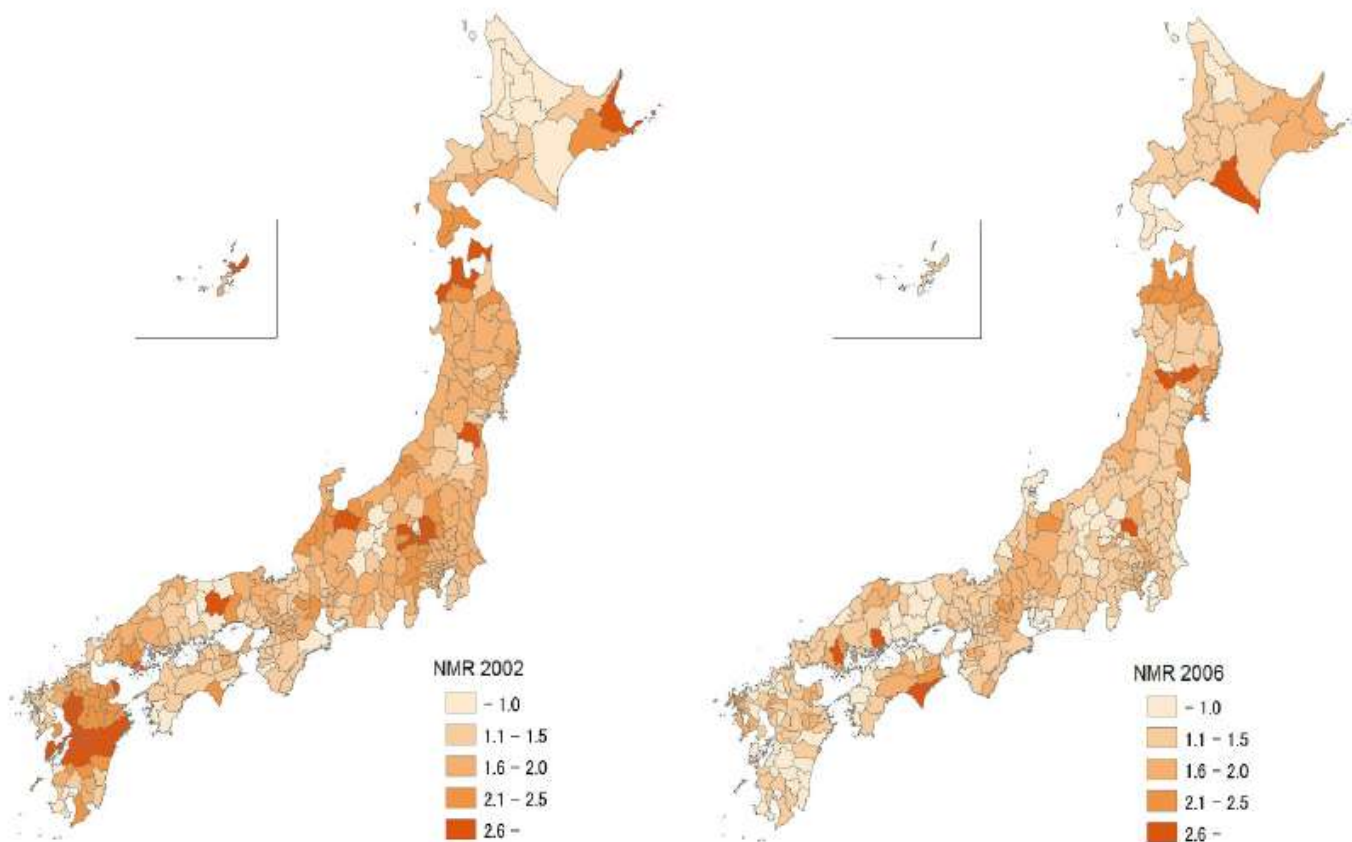
Source:
Venesmaa, Julia (2011).
Organising a maternity care service network. Thesis submitted in partial fulfillment of the requirements for the degree of Licentiate of Science in Technology. Aalto University School of Science and Technology. Faculty of Information and Natural Sciences. Department of Industrial Engineering and Management

Population distribution matters



Example from Japan

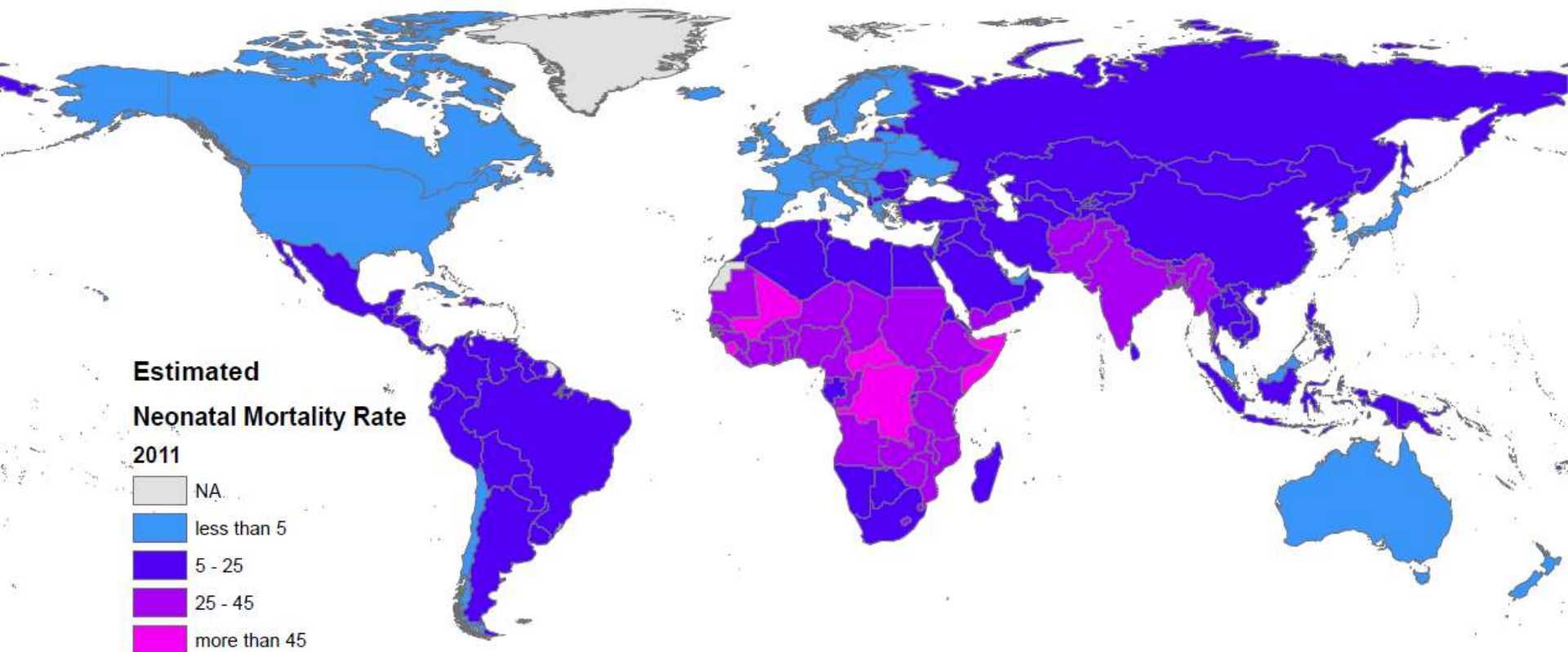
Figure 9: Reduction in NMR from 2002 to 2006. Japan.



Source: Aoshima et.al 2010.



Use of map scale - Global



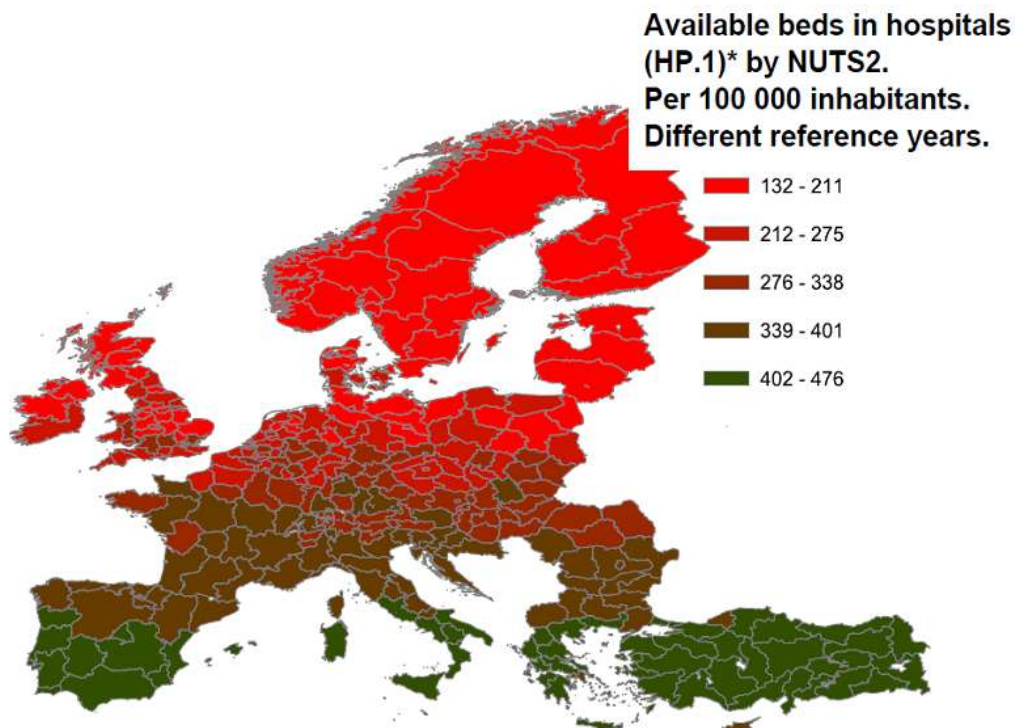
Population census used in combination with health statistics to estimate neonatal mortality rate

- Map focus on countries and proportional figures
- Map sufficient for global targets and monitoring
- However, an overlay with population density and distribution would give a better "picture"

Map scale matters



Use of map scale - Continent



Source: Eurostat 2012. (C) EuroGeographics for the administrative boundaries.

Map gives a picture of expenditure/capacity/efficiency/pressure on services (?)

- Would service areas and population grids give a better picture?
- Would population by age/sex and hospitals by services give better information
- What about countries not covered?

Map scale matters



Bulgaria



- NICU - level 1
- NICU - level 2
- NICU - Level 3
- Lakes and ponds
- Transportation network
- Inhabited places

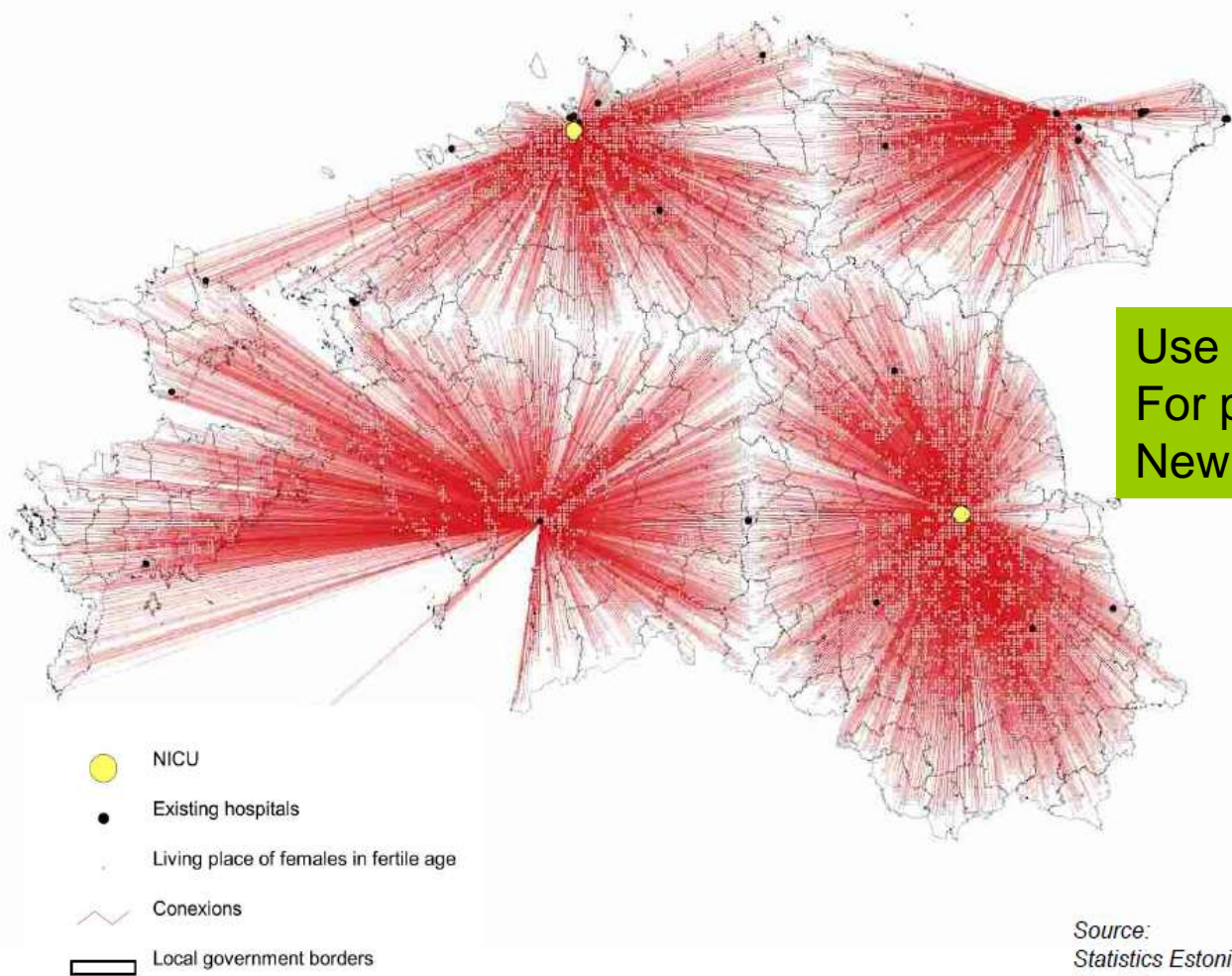
In search of available
population distributions

Source:
Statistics Bulgaria and
Open Street Map



Estonia

Combining demographic data as sex, age and living place with existing and potential hospital locations is possible to analyze the most effective locations for a planned NICU. The maps shows locations of two potential hospitals taking into account the distance of the living places of women's in fertile age, their number and existing hospitals without NICU. The same analyses will help to determine the service area of the hospitals based on the actual demographic situation and the permanent living place of population. The aim of this map is to show the power of information linked with location.



Use of sex, age and living place
For planning location of new
Newborn Intensive Care Units



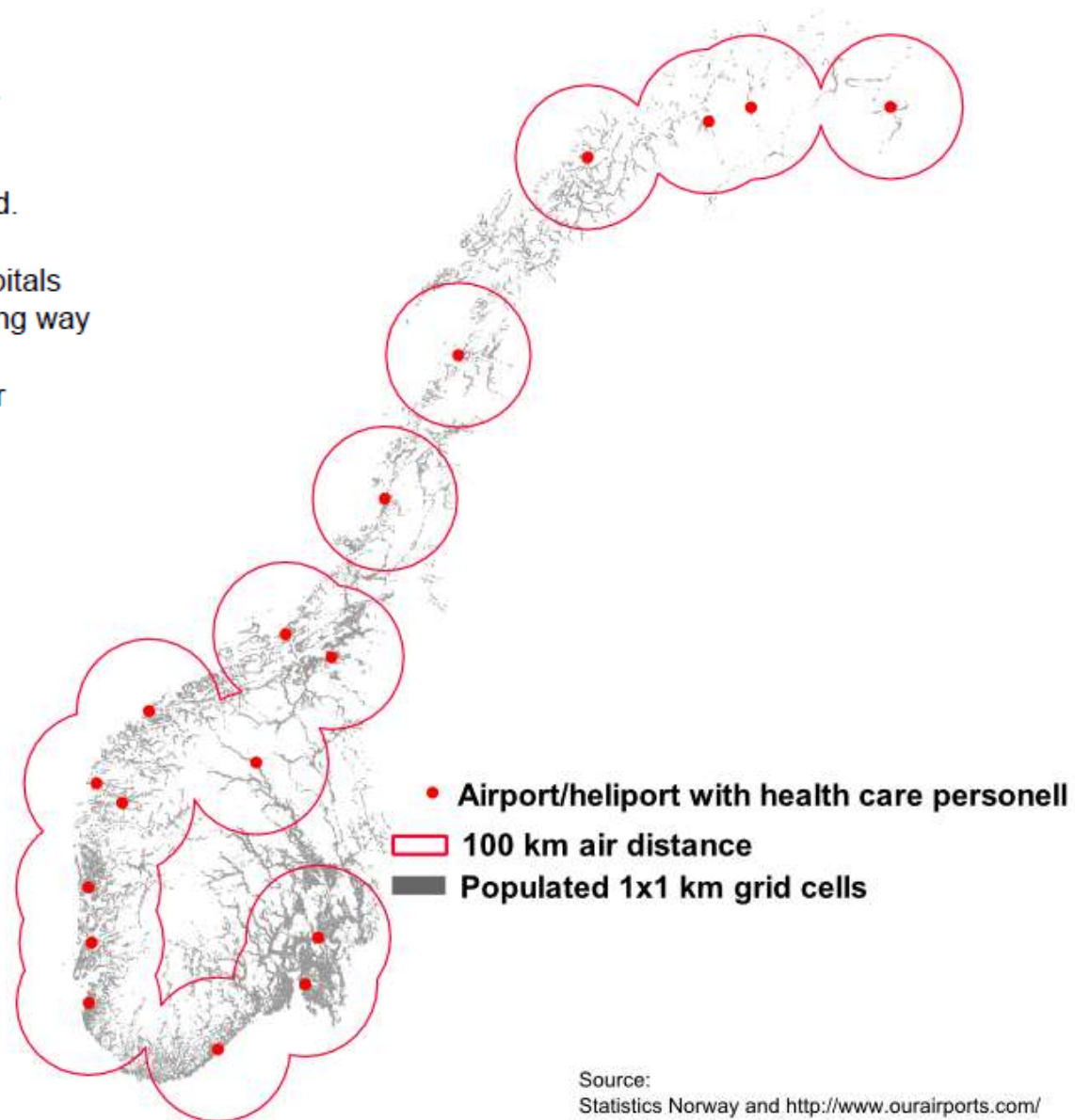
Norway

Preterm births often comes without much warning. Getting to a Newborn Intensive Care Unit (NICU), with the proper facilities and medical expertise is crucial for the life and wellbeing of mother and child.

The last ten years about one in five maternity hospitals in Norway has been closed. People often hav a long way to nearest hospital due to e.g. weather conditions, terrain, long distances and islands without rooad or ferry connection.

A great part of the Norwegian population is more than 100 km from the nearest airborn health care personell.

Population census and coverage of emergency services





Follow ups – Population census 2020

Challenge

- To cover all of Europe with harmonised and available georeferenced population data
- To establish a system of systems for monitoring policies independent of administrative levels
- To find a good example on cross border issues that appeals to people and politicians

Suggestion

- To make a true Pan European project (Eurostat, EEA, UNECE, WHO, NSIs...)
- To prepare better hospital information (location and services)
- To include gestational age in census

PROJECT
NEO
GEO



Thank you for your attention

One baby in ten is born premature. Worldwide.

