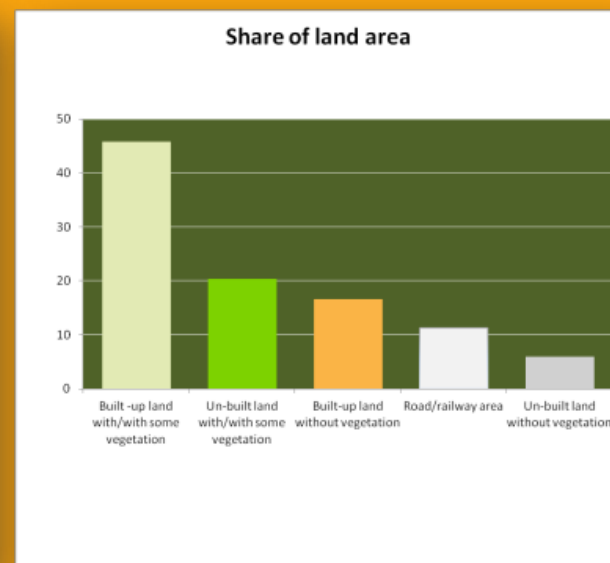
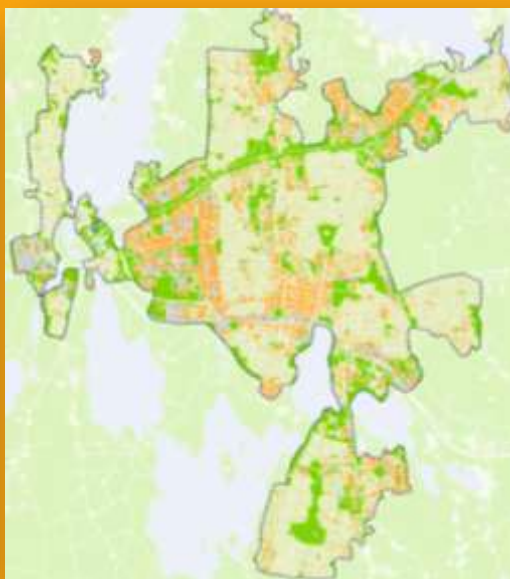


Green areas in large localities – Methodology and results



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Background



Environmental Objective

NATUR VÄRDS VERKET

16 Environmental Quality Objectives

- 1 Reduced Climate Impact
- 2 Clean Air
- 3 Natural Acidification Only
- 4 A Non-Toxic Environment
- 5 A Protective Ozone Layer
- 6 A Safe Radiation Environment
- 7 Zero Eutrophication
- 8 Flourishing Lakes and Streams
- 9 Good-Quality Groundwater
- 10 A Balanced Marine Environment, Flourishing Coastal Areas and Archipelagos
- 11 Thriving Wetlands
- 12 Sustainable Forests
- 13 A Varied Agricultural Landscape
- 14 A Magnificent Mountain Landscape
- 15 A Good Built Environment
- 16 A Rich Diversity of Plant and Animal Life

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Interim target: Programmes and strategies for planning

By 2010 land use and community planning will be based on programmes and strategies for:

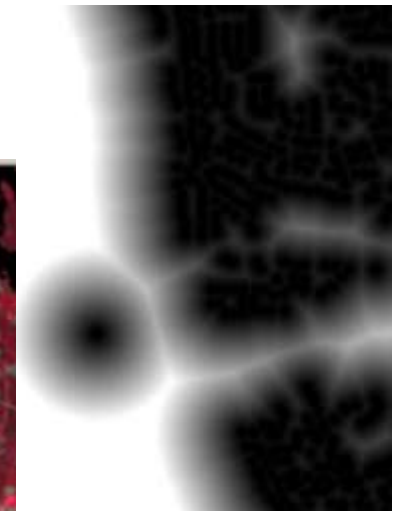
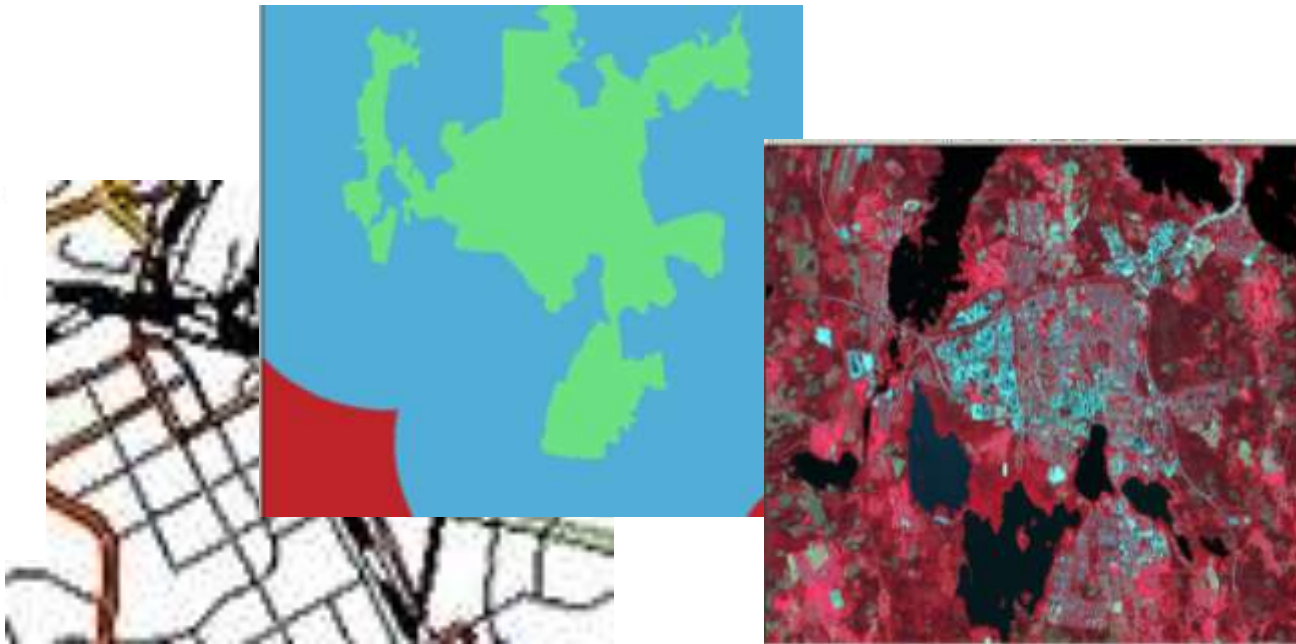
preserving, maintaining and enhancing green spaces and water bodies in urban and suburban areas for nature conservation, cultural and recreational purposes, and ensuring that the proportion of **hard-surface** areas in these environments does not increase;



Method

Differentiate landuse with vegetation

Combine point data, vector data and satellite data to grids 10*10m and build a classification that describes the landuse of each grid and how green it is.



Data

Classification

- Satellitdata, SPOT (Mapping agency)
- Road network (Road administration)
- Locality boundaries (Statistics Sweden)
- Agricultural boundaries (Board of Agriculture)
- Building registry (Mapping agency)
- Water mask (1:10 000) (Mapping agency)

Analysis

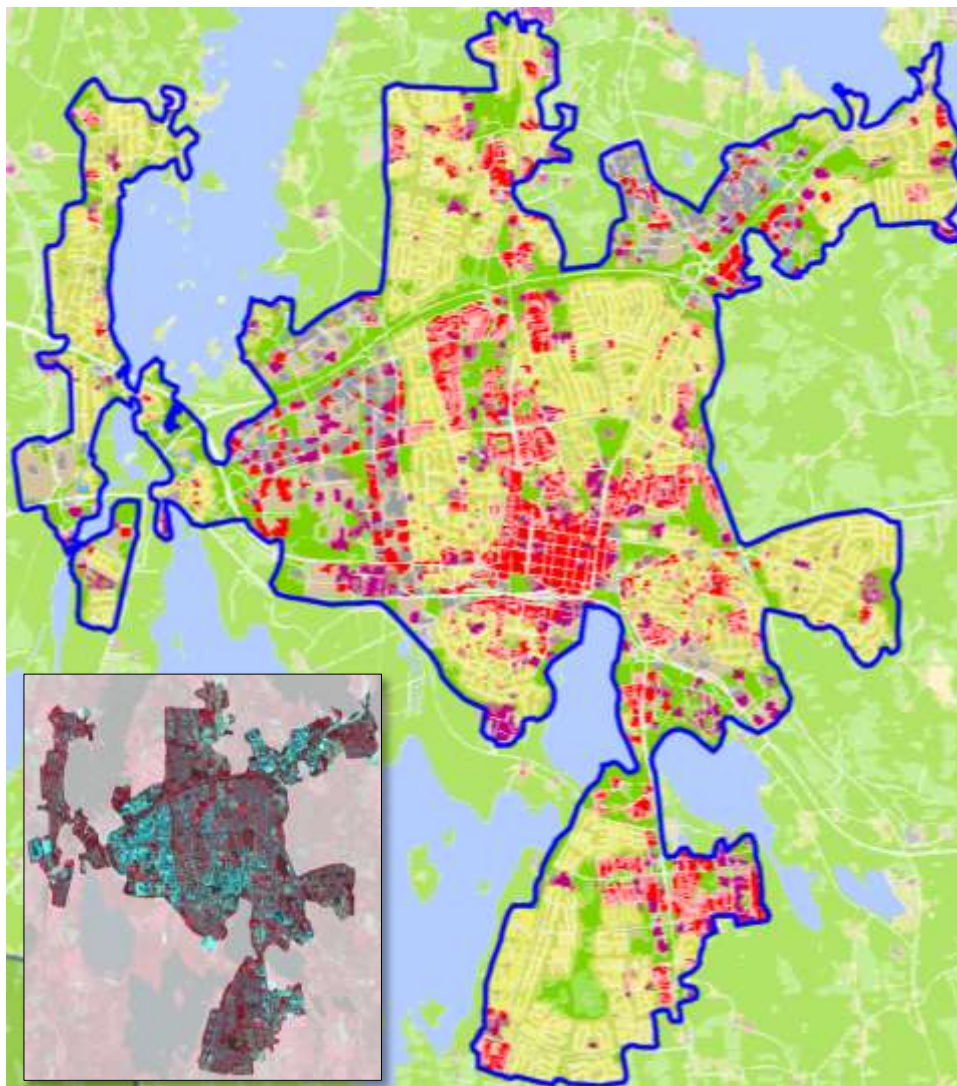
- Population by adress



Classification

SCB

Statistiska centralbyrån Statistics Sweden



Klassificering av marken i 17 klass

- Vatten
- Vägar/järnvägar
- Villaområde med vegetation
- Villaområde med något vegetation
- Villaområde vegetation saknas
- Hyreshus med vegetation
- Hyreshus med något vegetation
- Hyreshus vegetation saknas
- Industri med vegetation
- Industri med något vegetation
- Industri vegetation saknas
- Övriga byggnader med vegetation
- Övriga byggnader med något vegetation
- Övriga byggnader vegetation saknas
- Ej byggnader med vegetation
- Ej byggnader med något vegetation
- Ej byggnader vegetation saknas

Results: Green spaces Green areas Changes



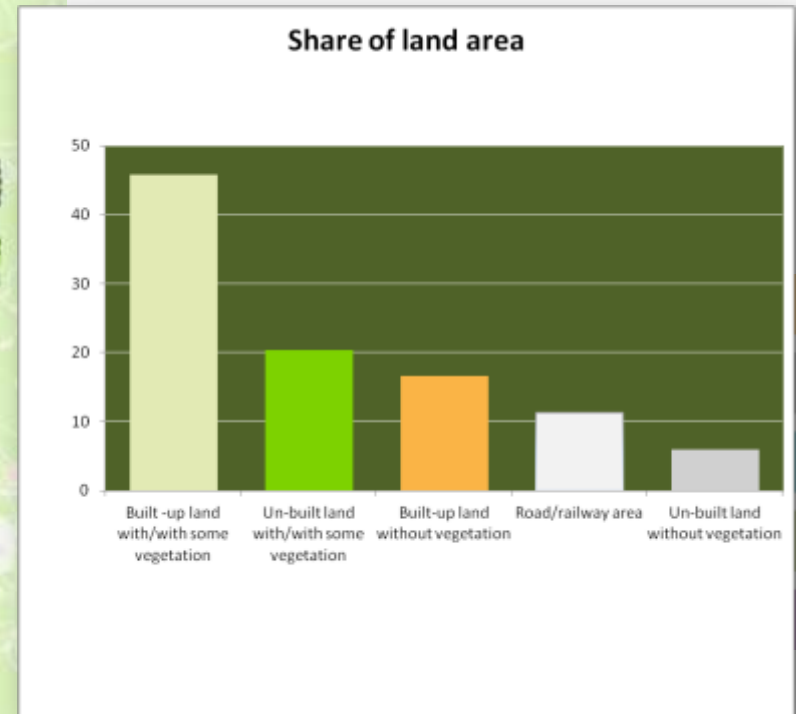
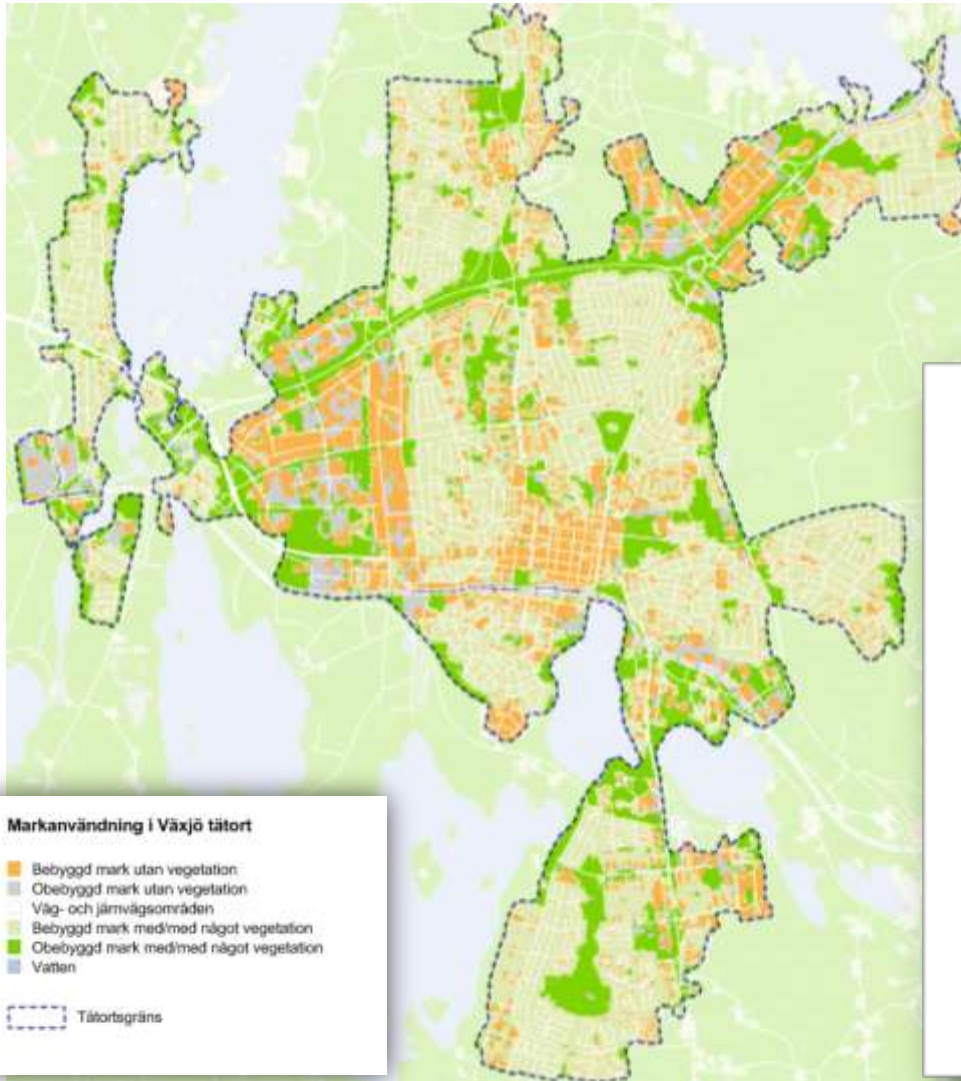
113 localities in the studie



Urban areas/localities with more than
10 000 inhabitants



Land use categories



Green space and sealed soil



Green space

All areas within the locality border that are green

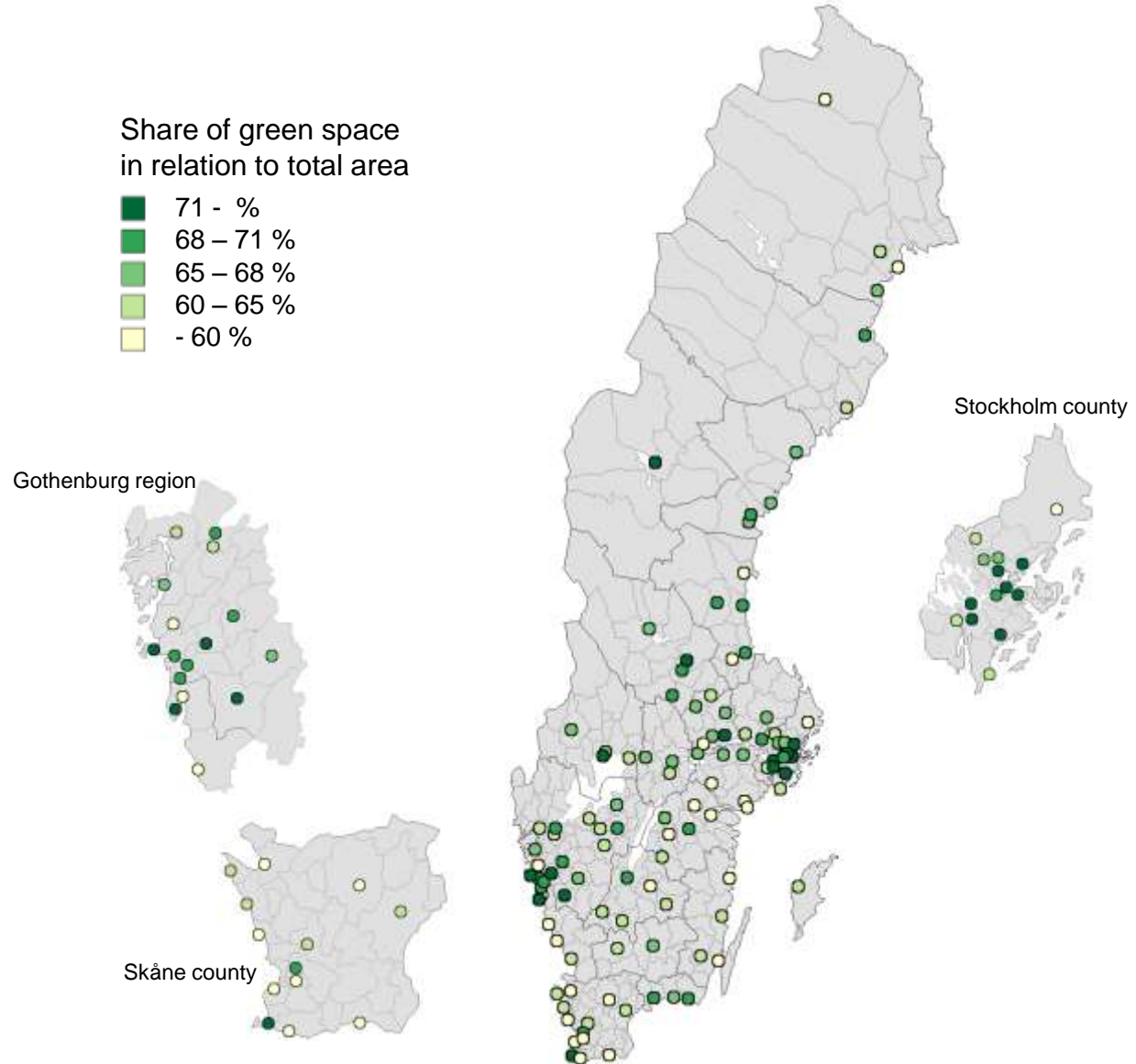
Sealed soil

All areas within the locality that are not green space or water

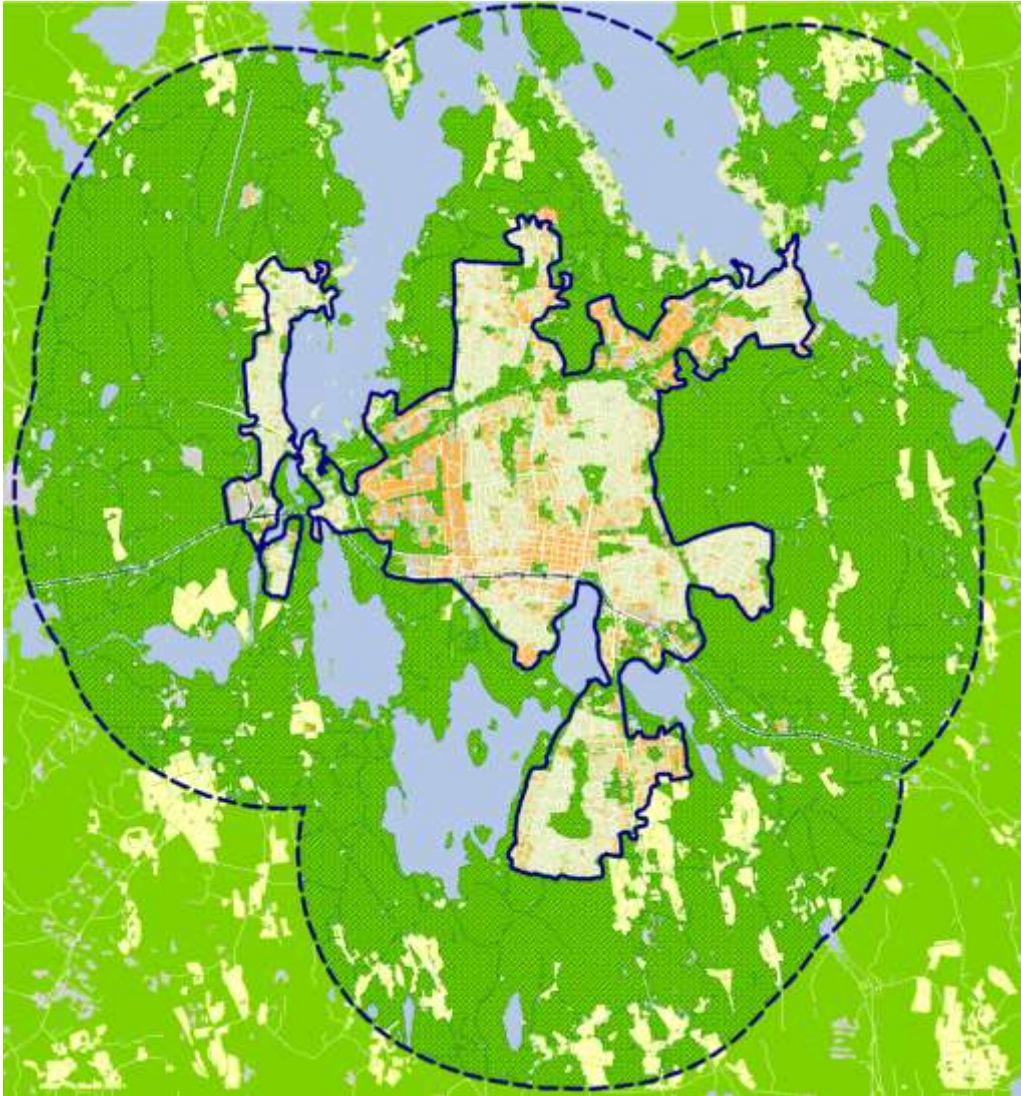
Smallest areas 10x10 metres



Share of green space areas



Green areas

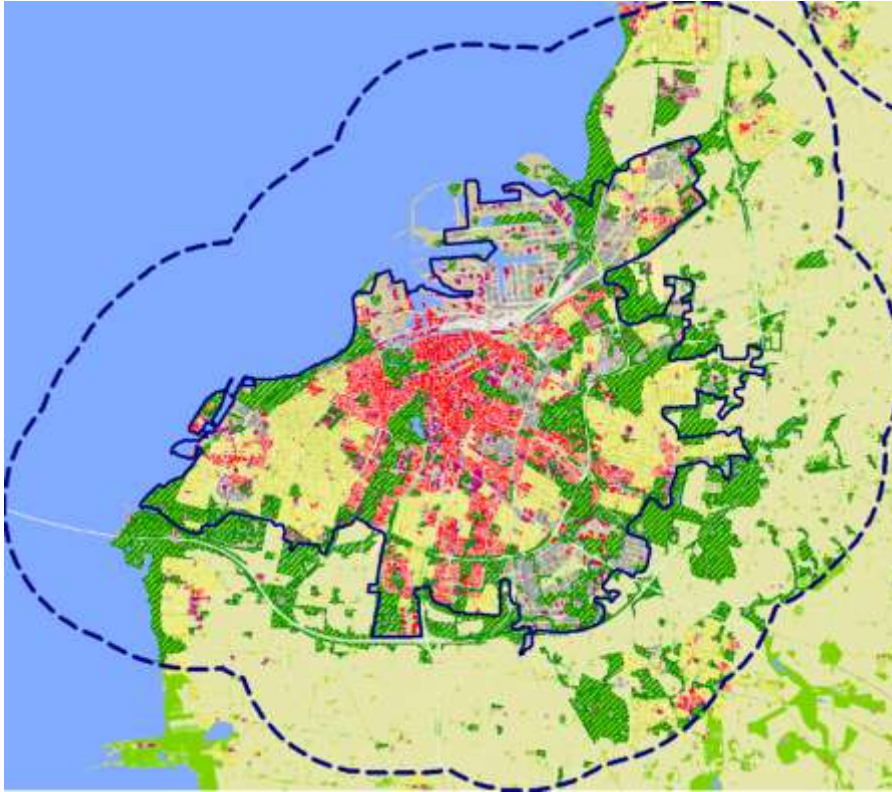


- Green spaces
- At least 1 hectare
- No buildings
- Within 3 km from the locality border

Excluding agricultural land



Green areas i Malmö



16 % of land area



Green areas in Stockholm



47 % of land area



Share of green areas



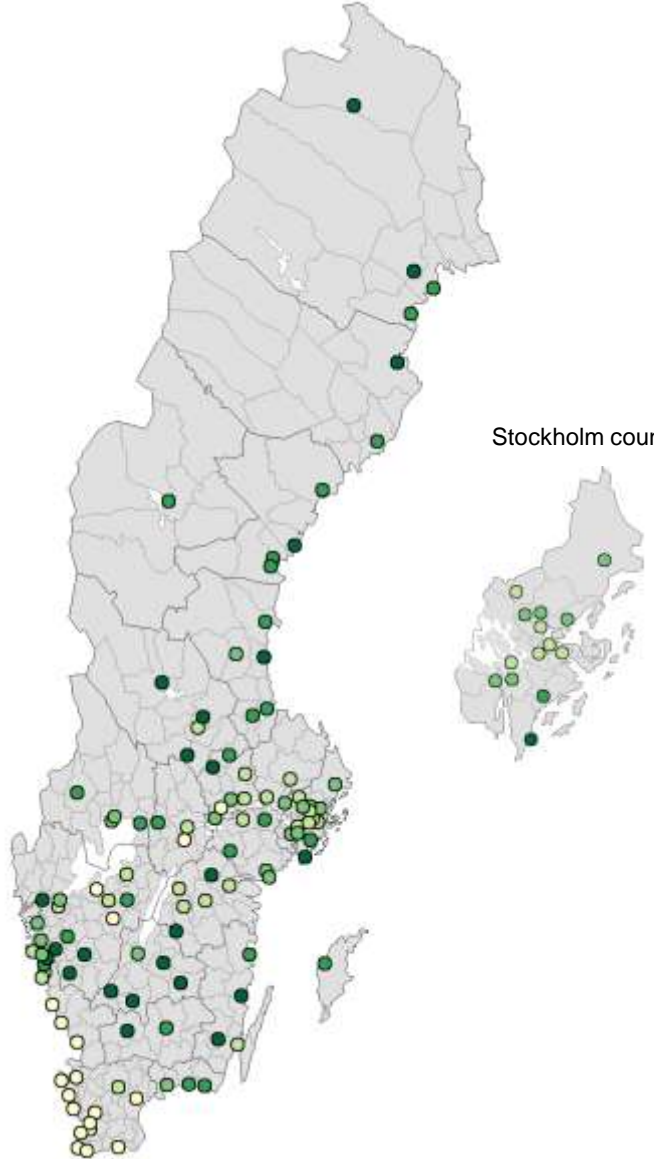
Share of green areas
in relation to land area

- 70 - %
- 63 - 70 %
- 55 - 63 %
- 35 - 55 %
- 35 %

Gothenburg region

Stockholm county

Skåne county

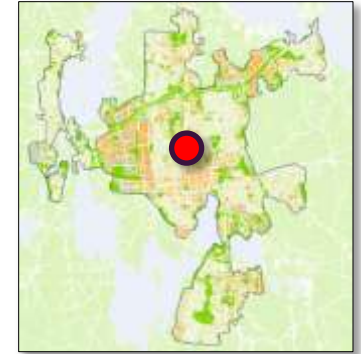
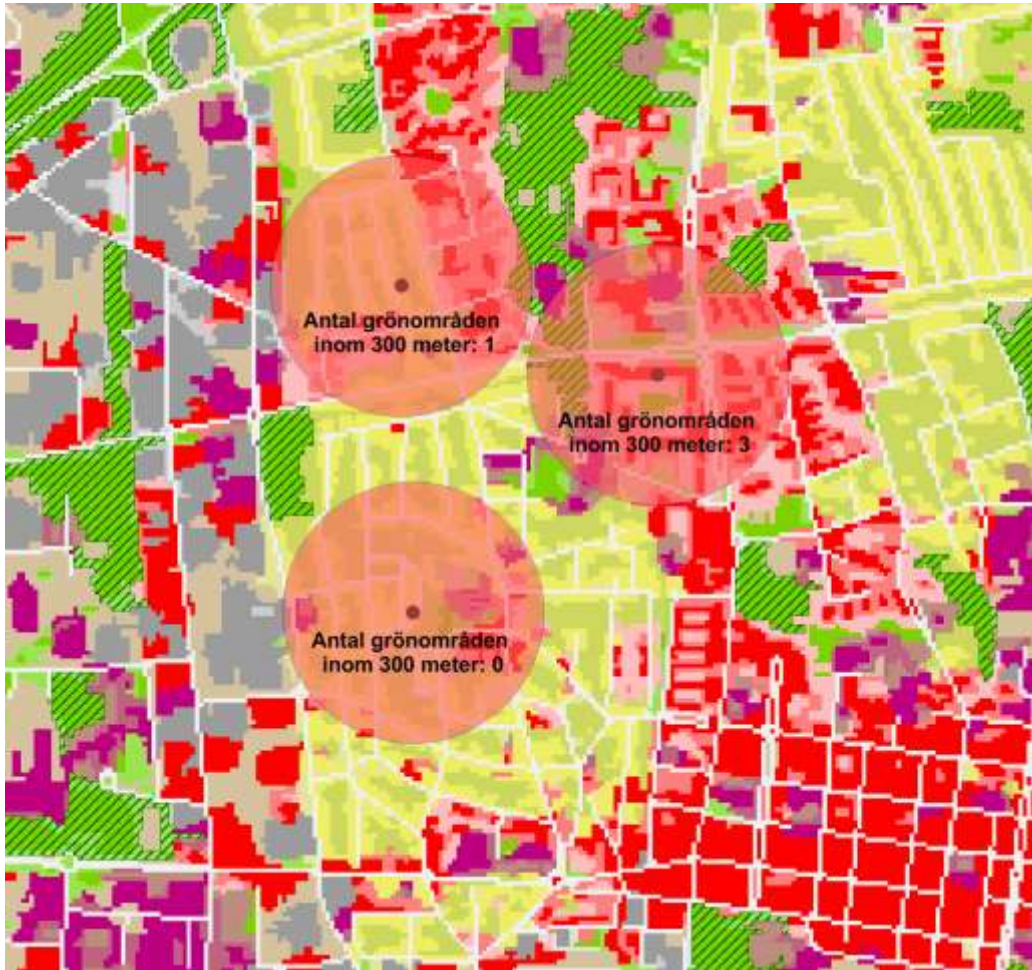


Distance to green areas



Statistics Sweden

Statistiska centralbyrån



Distance 300 meters



Changes in green spaces

2000 - 2005

The 10 largest localities





More buildings



Wider road



Statistics Sweden

Statistiska centralbyrån



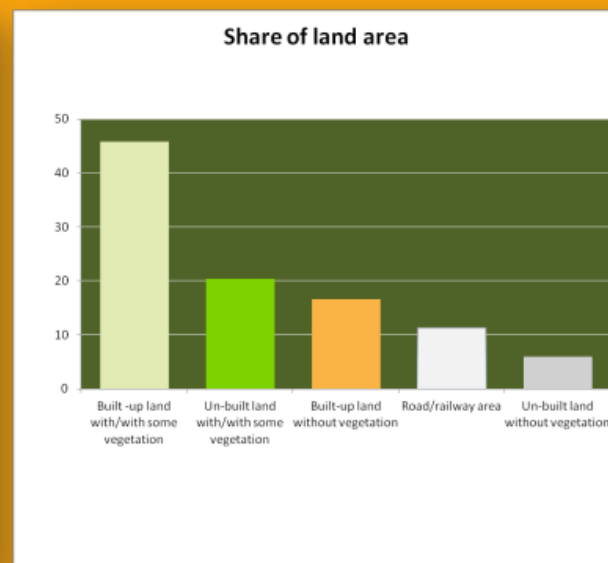
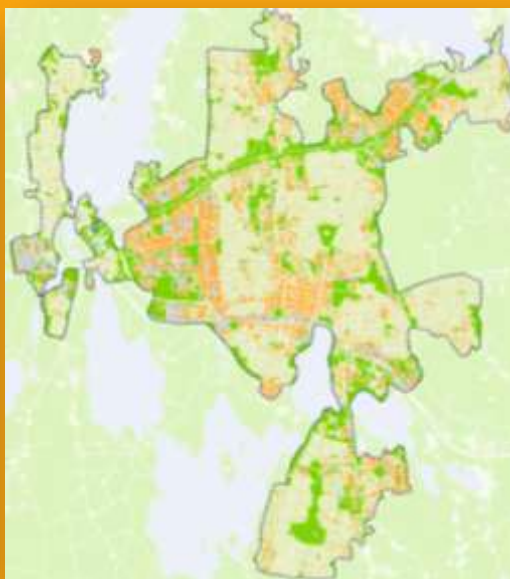
Development of methodology

Reference year 2010

- Include smaller parks as green areas (pocket parks)
- Type of ownership (Real Estate Register)
- Other distances to green areas, barriers



Thank you!



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