



”Challenges in Using GIS Data And Methods to Yield Information for Recreational Supply Assessments”

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Recreational supply assessments

Some basic questions:

- "are there enough recreational areas for people to refresh themselves in?"
- "how do these areas fall into various classifications?"
- "are current locations of these areas the most suitable in the regional structure?"

Need for data on:

- recreation opportunities (supply)
- demand and it's location (demand)

Geographical information systems and data (GIS)

Data

The most valuable data:

- a) (GIS) databases on recreation opportunities
(direct: areas, trails, services, or indirect: data on forests, land use etc.),
- b) (GIS) databases that can be used to estimate demand and it's location
(population and it's distribution etc.)
- c) surveys or existing research material

Why use GIS methods and data?

- To create a reliable image on the state of recreational opportunities on any larger region, e.g. a specific country or whole Europe, one is dependent on basic (GIS) databases
- Note: characteristics and quality of the data are variable (e.g. spatial differences in demand, or practices such as everyman's right...)

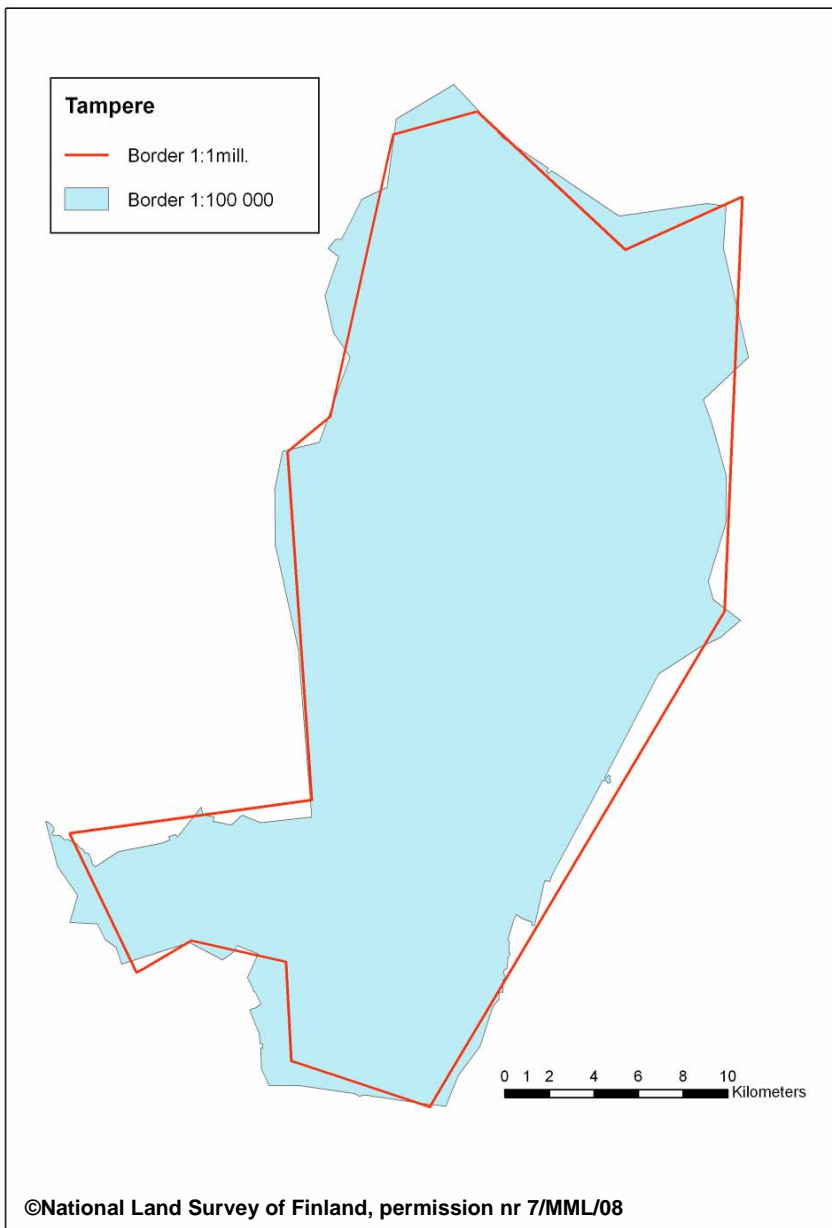
Data quality

Scale or quality issues:

- accuracy
- precision
- reliability
- scope
- comparability

→ Problems in integrating various GIS databases in recreational assessments

Before using GIS, one must carefully assess the nature of the phenomena in question and particularly how correctly the database projects it

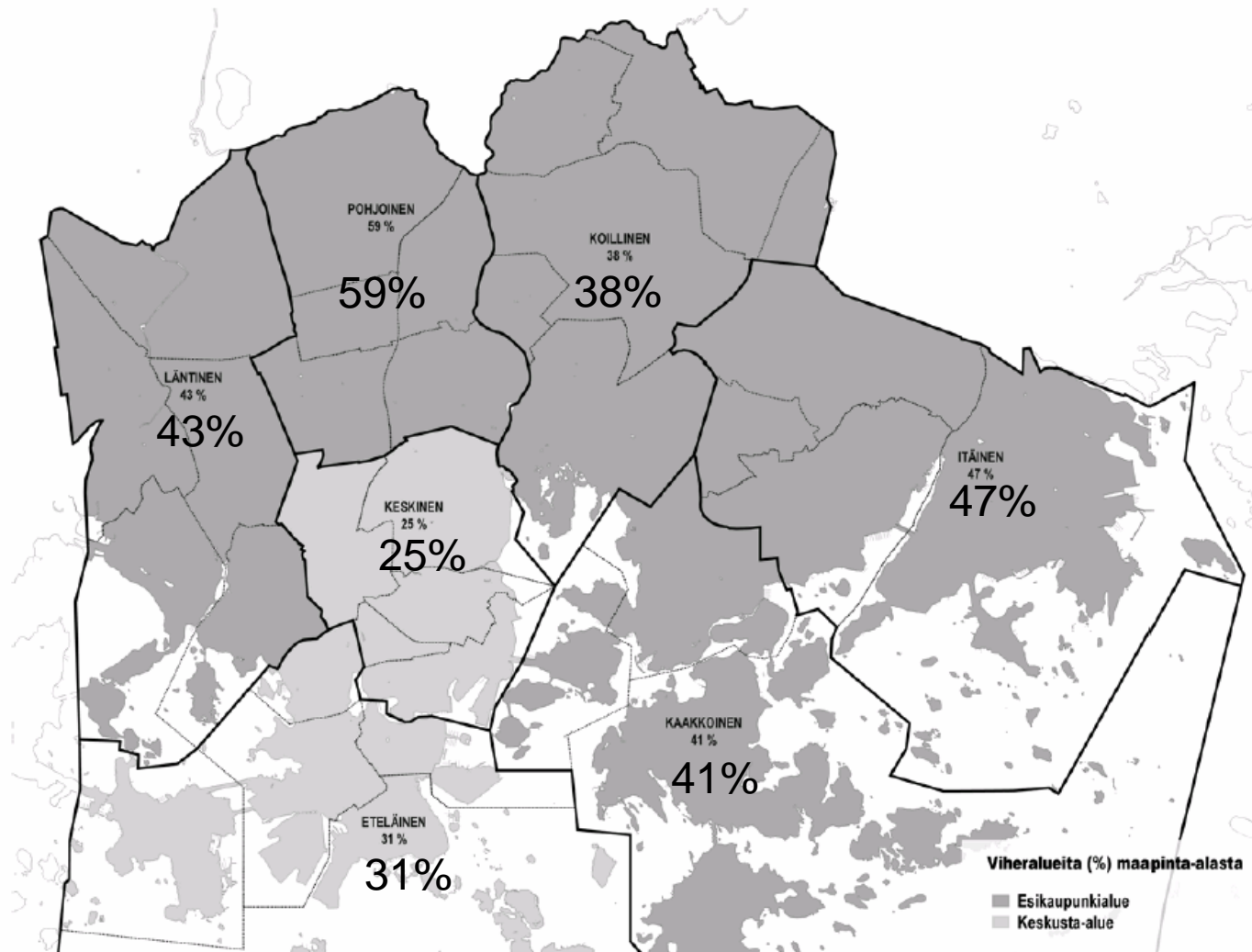


Example: scale

- Scale affects the way the lines are drawn (digitized)
- Degree of generalization
- The actual borderline is constant
- The amount of generalization varies with scale
- Both images represent the municipality of Tampere
- The situation gets even more complicated if we try to use data built for different purposes

Learn to know your data before using it!

Amount of green environment in Helsinki



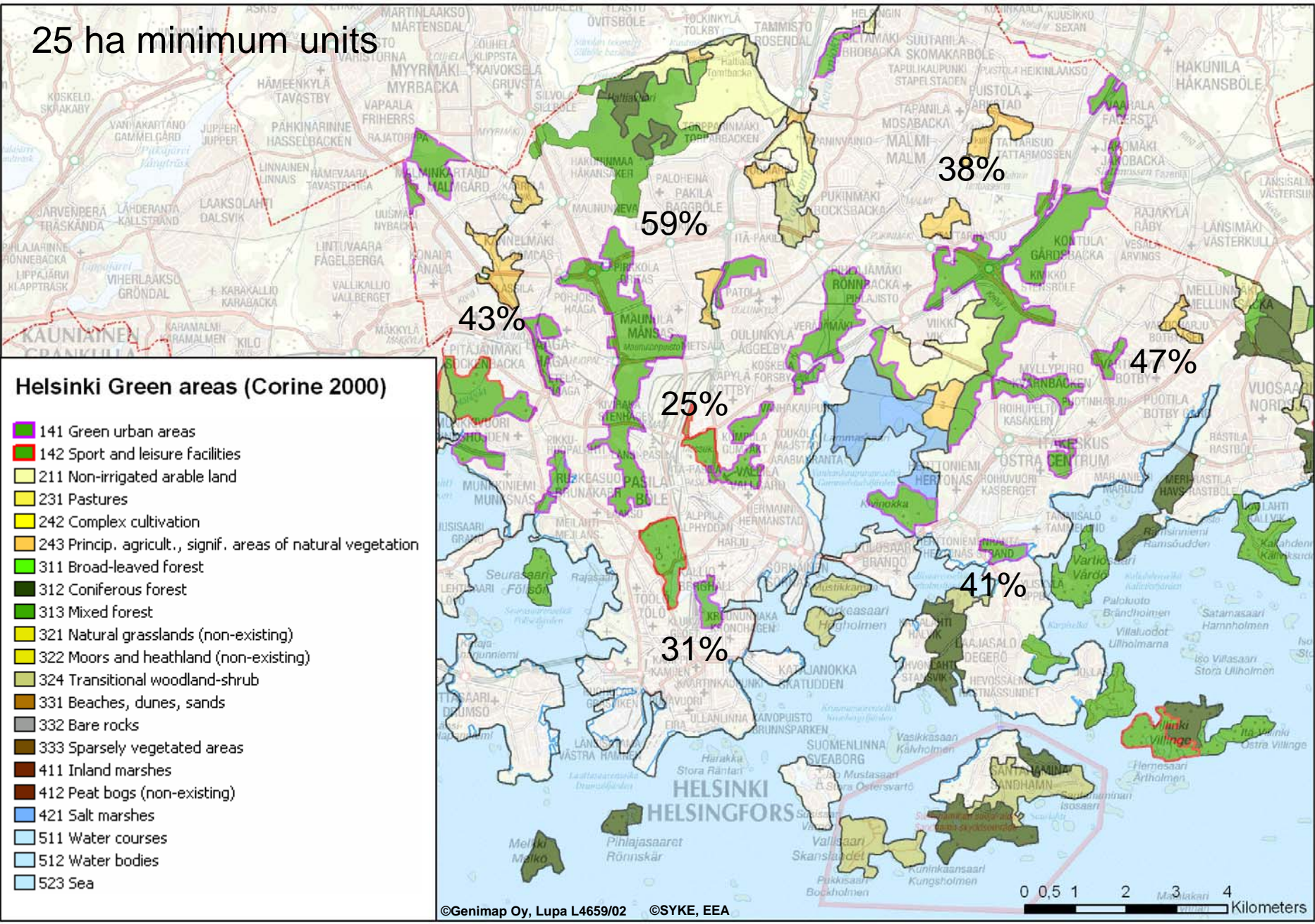
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METLA

Source: Neuvonen et al.: "Access to green areas and the frequency of visits – a case study in Helsinki"

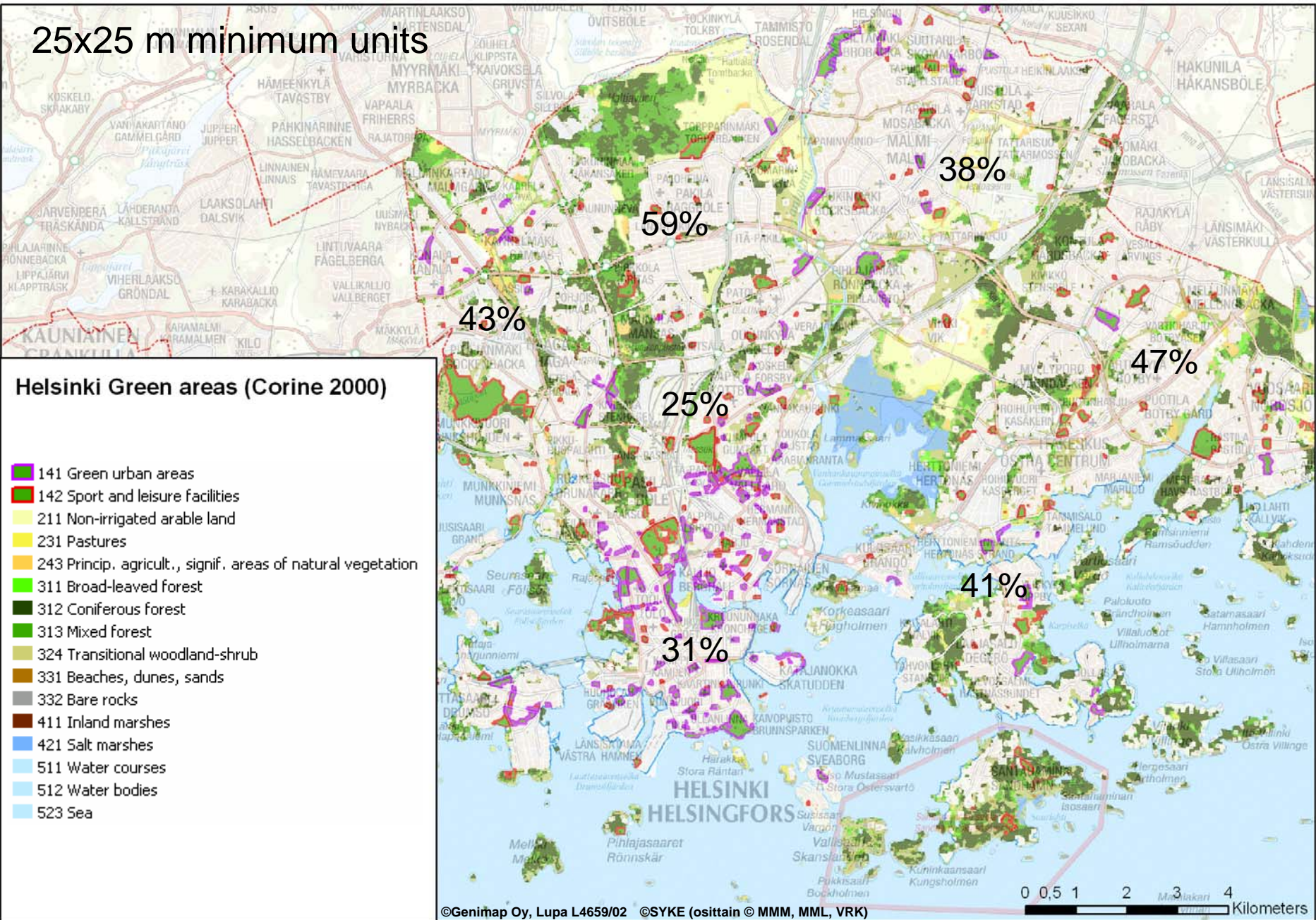
25 ha minimum units



Helsinki Green areas (Corine 2000)

- 141 Green urban areas
- 142 Sport and leisure facilities
- 211 Non-irrigated arable land
- 231 Pastures
- 242 Complex cultivation
- 243 Princip. agricult., signif. areas of natural vegetation
- 311 Broad-leaved forest
- 312 Coniferous forest
- 313 Mixed forest
- 321 Natural grasslands (non-existing)
- 322 Moors and heathland (non-existing)
- 324 Transitional woodland-shrub
- 331 Beaches, dunes, sands
- 332 Bare rocks
- 333 Sparsely vegetated areas
- 411 Inland marshes
- 412 Peat bogs (non-existing)
- 421 Salt marshes
- 511 Water courses
- 512 Water bodies
- 523 Sea

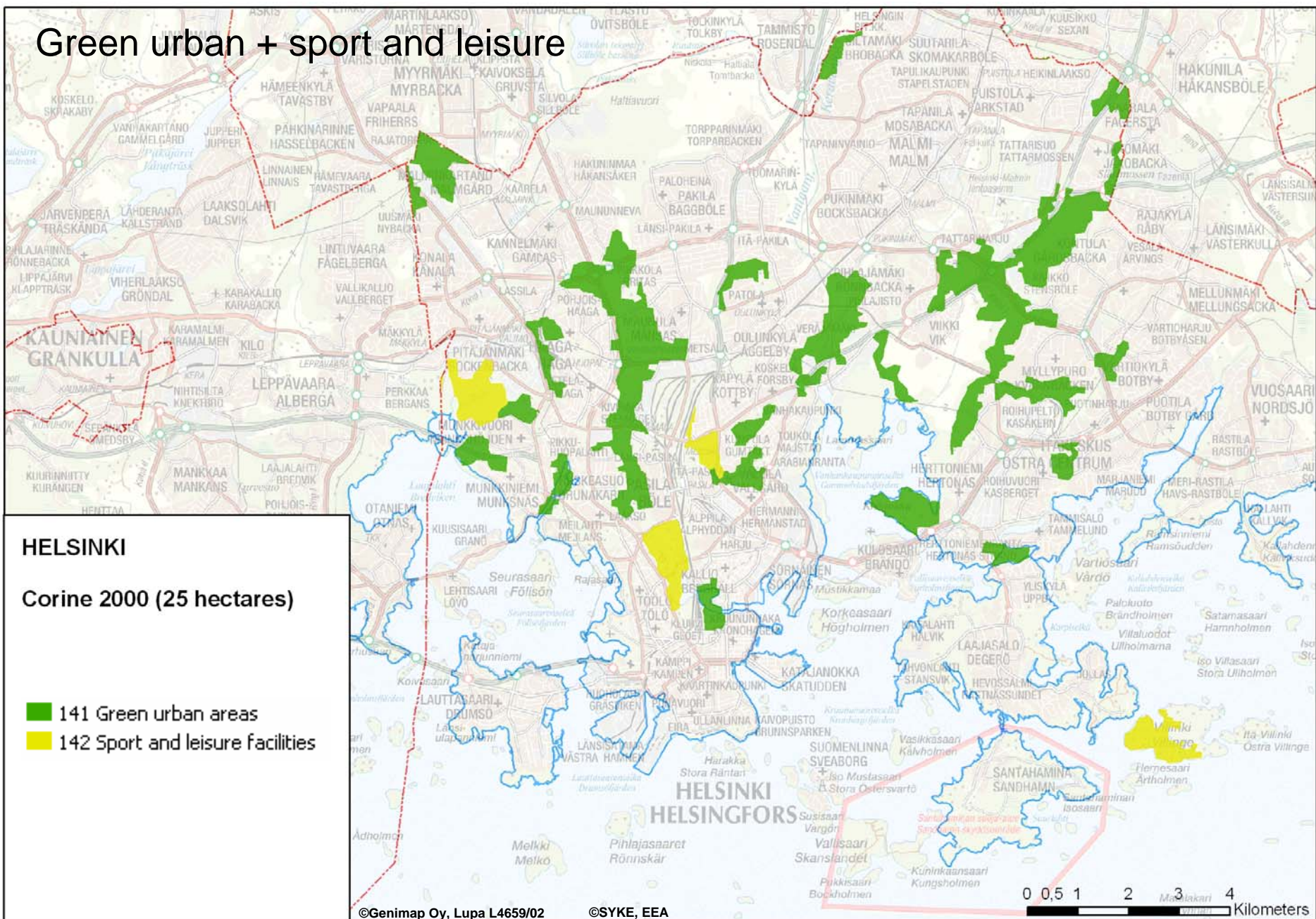
25x25 m minimum units



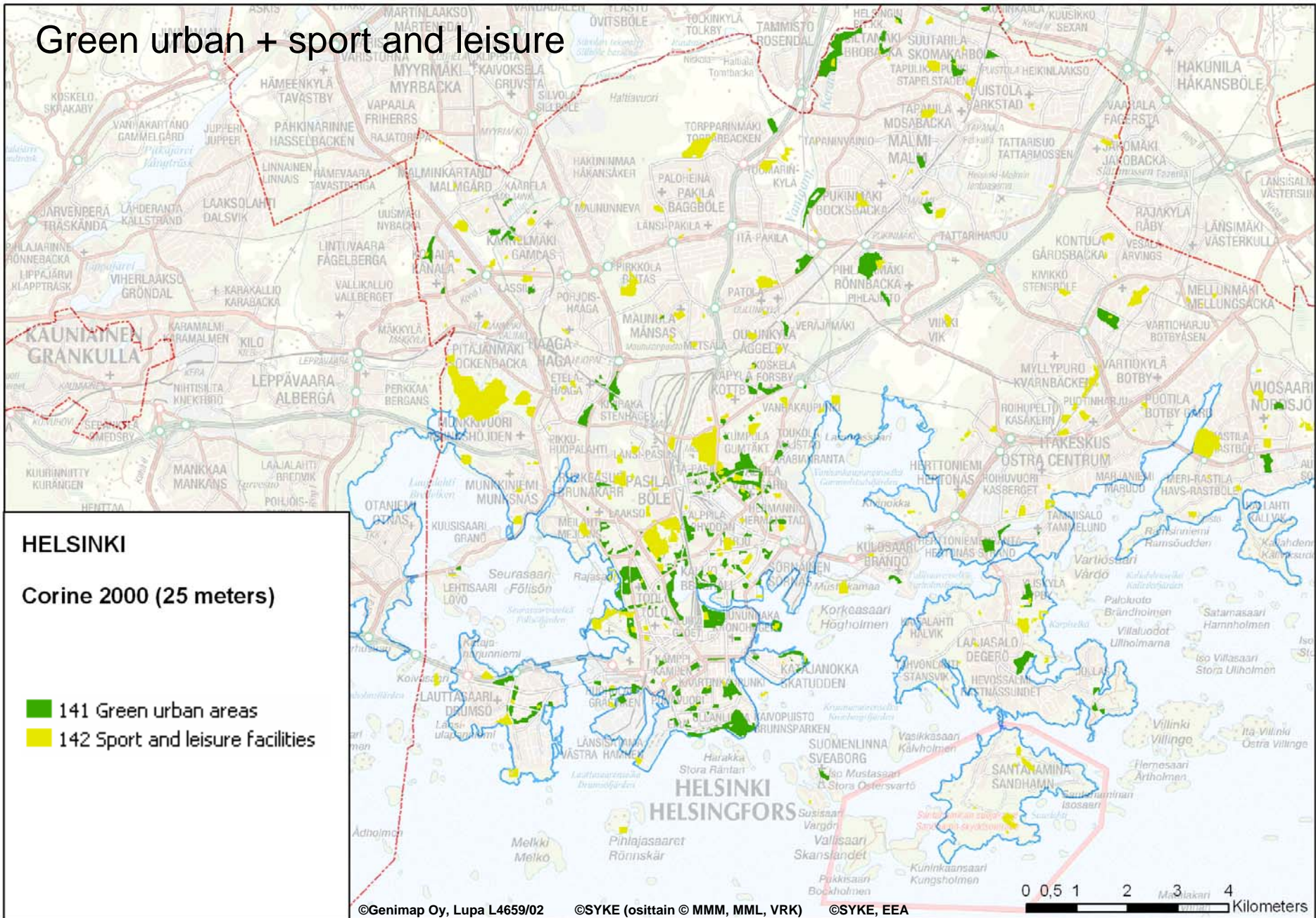
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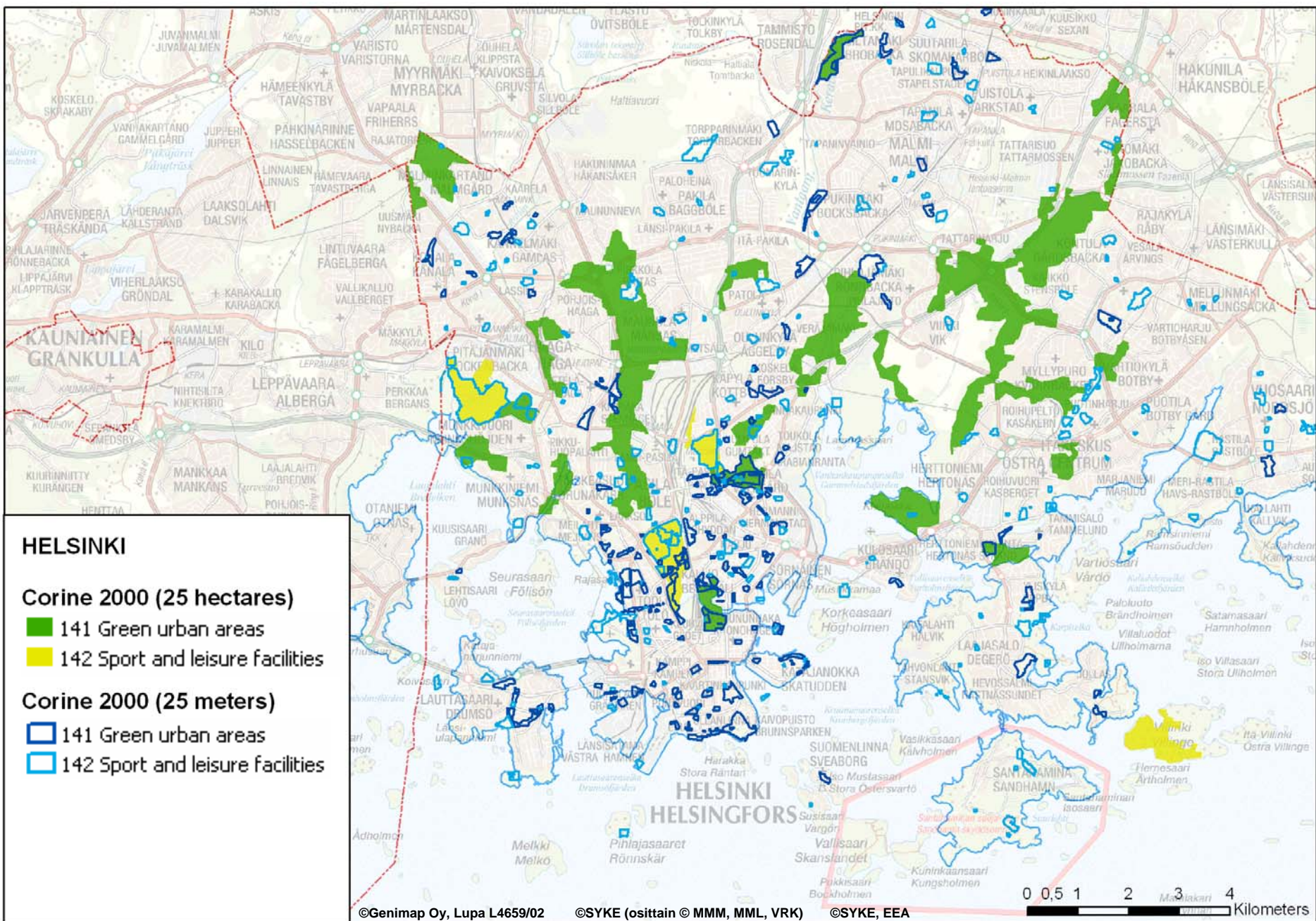
Type	Name	CLC2000 25 m ha		CLC2000 25 ha ha
141	Green urban areas	370,4	← -	1684,7
142	Sport and leisure facilities	521,7		355,6
211	Non-irrigated arable land	675,8		543,1
231	Pastures	118,4	←	0,0
243	Principally agricultural, significant areas of natural vegetation	107,9		358,5
311	Broad-leaved forest	138,2	←	0,0
312	Coniferous forest	1796,4	← +	792,6
313	Mixed forest	1133,5		1024,0
324	Transitional woodland-shrub	1955,3	← +	592,6
331	Beaches, dunes, sands	6,9	←	0,0
332	Bare rocks	162,9	←	0,0
411	Inland marshes	21,3	←	0,0
421	Salt marshes	277,1		268,9
551	Water courses	75,4	←	0,0
512	Water bodies	14,3	←	0,0
513	Sea	49777,9		50030,5
Total area:		57153,5		55650,4

Green urban + sport and leisure



Green urban + sport and leisure





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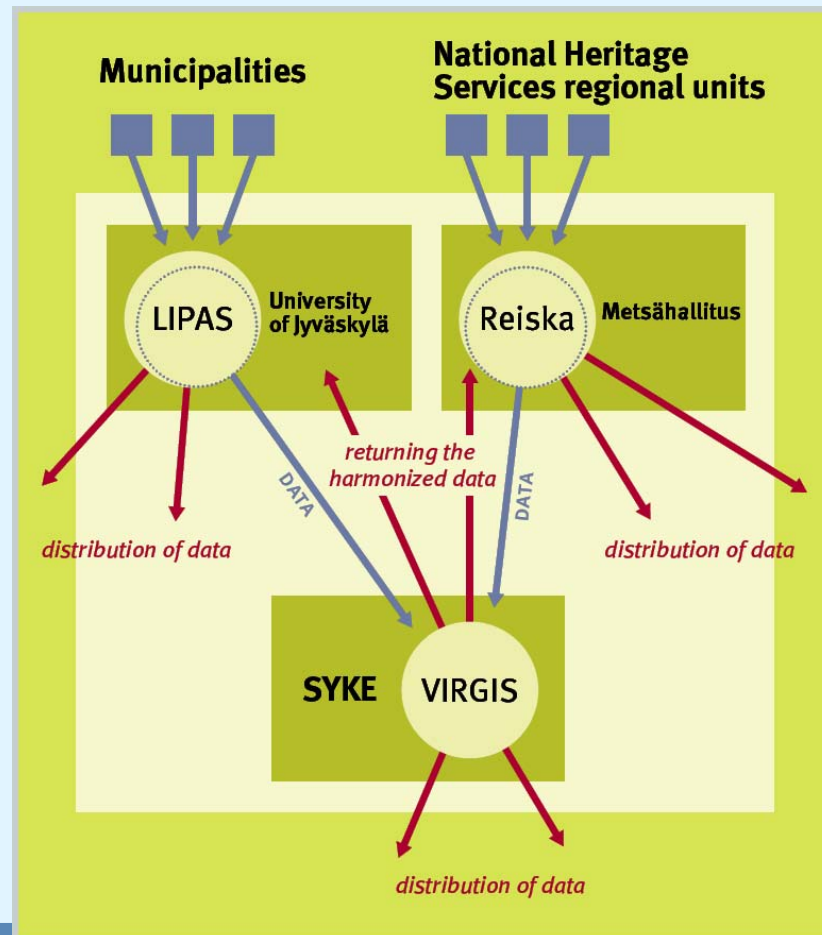
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Conclusion

Precise databases on **recreational areas, trails and services** are needed to ensure that all available areas and opportunities are included in large-scale assessments

SYKE has teamed up with the University of Jyväskylä and Metsähallitus to build a nationwide database on recreation opportunities (VIRGIS)

- Starting point: three different actors, different needs: three different databases with different architecture and content
- Result: a nationwide, reliable, comparable GIS-database on recreation opportunities



Thank you!



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