SELMA – results

SCATTER workshop

8 June Brussels 2004

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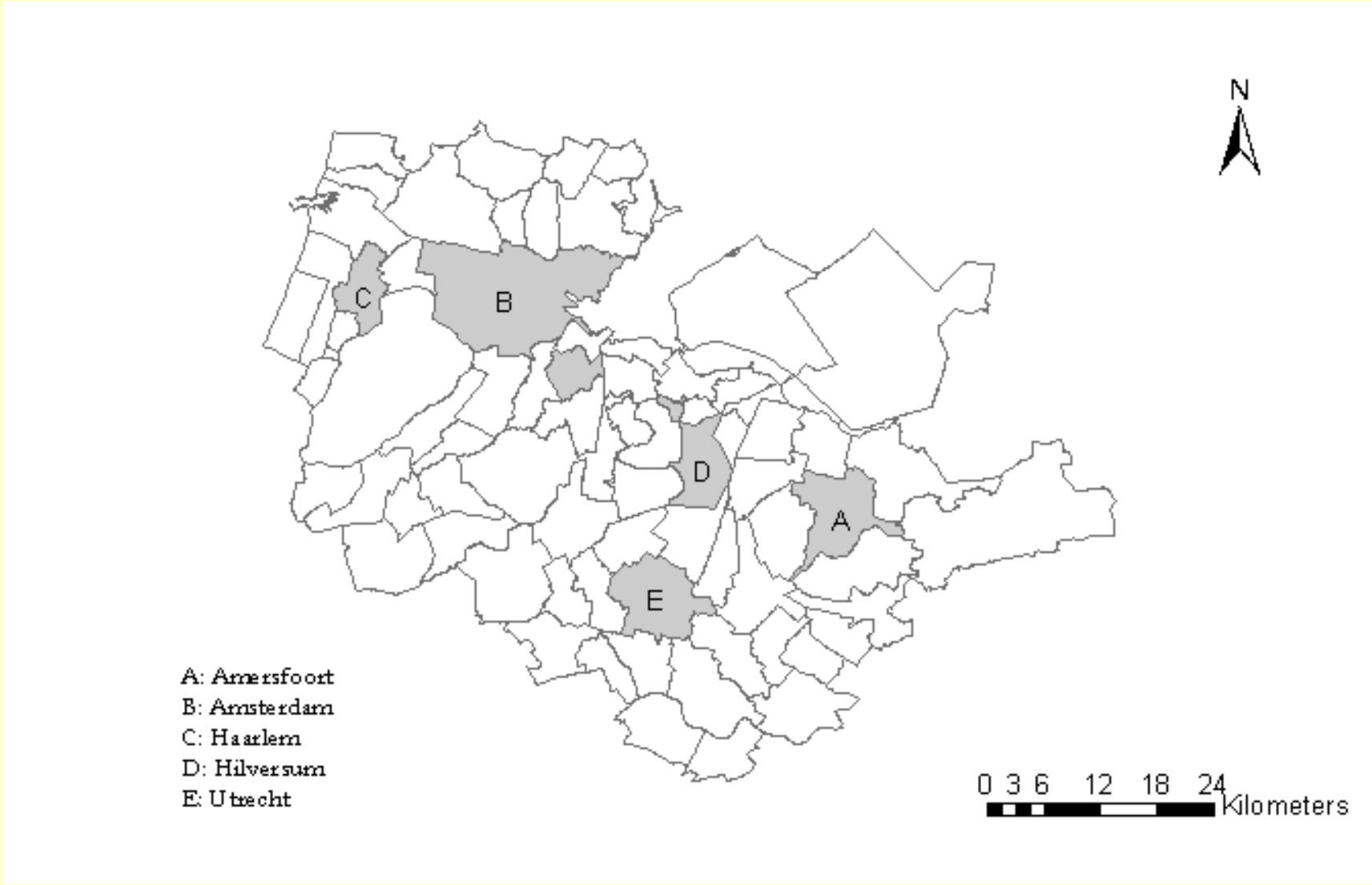
Spatial deconcentration of employment in the North wing of Randstad Holland, 1990-2000

North wing of the Randstad



Contents (1)

- Objectives WP1
- Economic deconcentration
- Research methods
  - Qualitative
  - Quantitative

Contents (2)

- Results North wing of the Randstad
- Conclusions
  - National contexts
  - Research methods

Objectives WP1 (1)

- Data collection on employment deconcentration

- Chart developments and trends over a 10-year period relating to the form and magnitude of employment dispersal

Objectives WP1 (2)

- Provide the infrastructural knowledge base relating to European urban trends and to provide comparative case study evidence

Employment deconcentration (1)

- Employment deconcentration
  - Movement from the centre to the urban fringe
  - Relative decline of employment in the centre versus the periphery
    - In-situ growth in the urban perimeter
    - In-movement to the fringe from outside the region

Employment deconcentration (2)

- Focus on three economic sectors
  - Retail and personal services
  - Producer services
  - Manufacturing and building

Research methods

- Qualitative
- Quantitative

- Both methods based on Galster et al. (2001)

  'Wrestling sprawl to the ground: defining and measuring an elusive concept'

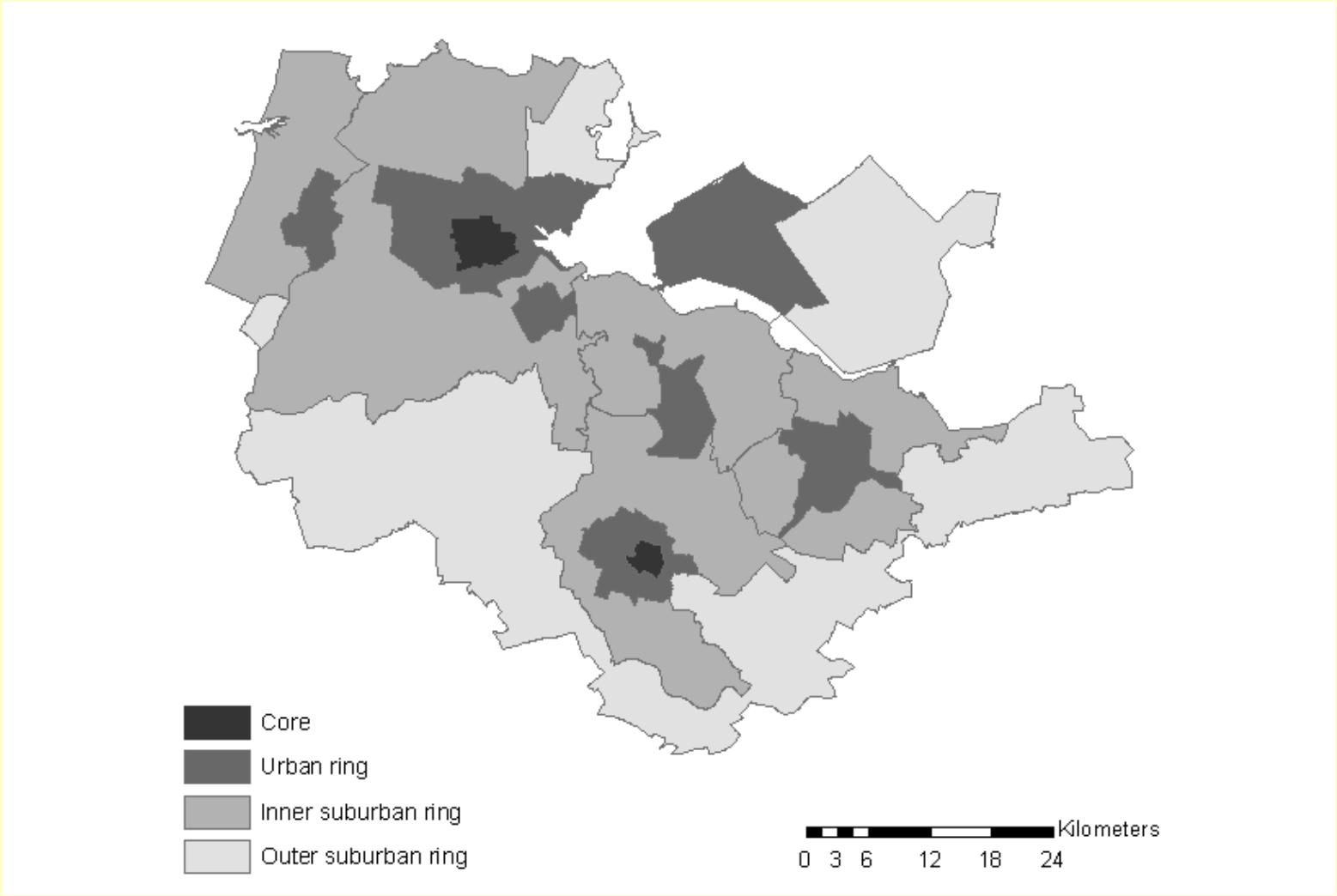
- Two methods because
  - Problems with availability detailed data for a 10-year period

Qualitative method (1)

- Galster's methods
  - Approached in a 'qualitative manner'

- Study areas divided in 'rings'
  - Core
  - Urban ring
  - Inner suburban ring
  - Outer suburban ring

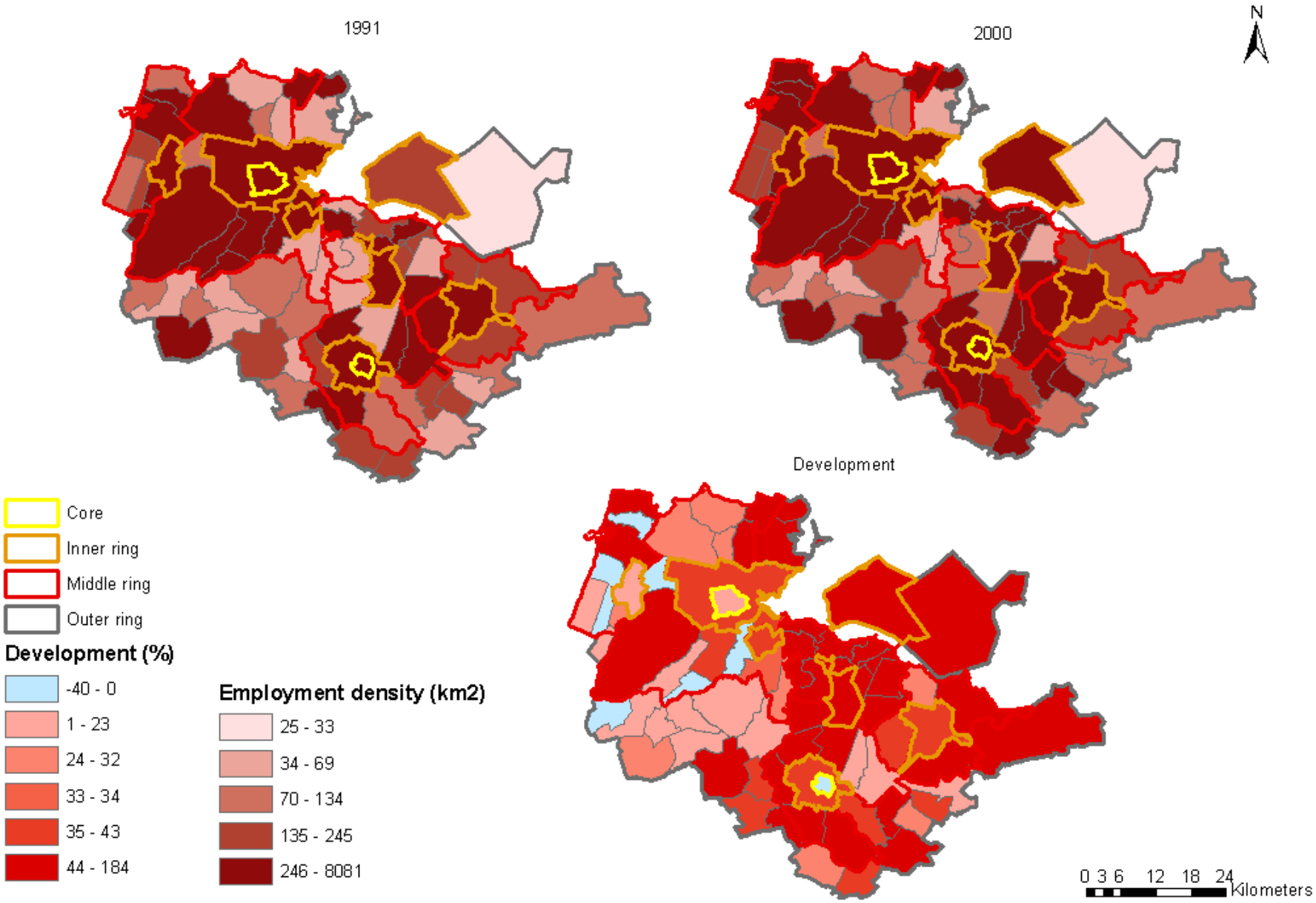
Qualitative method (2)



Qualitative method (3)

- Core
  - Inner city neighbourhoods
- Urban ring
  - Municipality
- Inner suburban ring
  - Daily urban system
- Outer suburban ring
  - Other municipalities the ‘main city’ has functional relations with

Employment density in the North wing of the Randstad, 1991 - 2000
Total employment



Quantitative method (1)

- Galster's approach
  - Density based
  - Grid based
    - 250m x 250m
    - Developable land per grid

Quantitative method (2)

- 8 measures of sprawl
- 4 measures selected
  - Centrality
  - Density
  - Concentration
  - Mixed uses

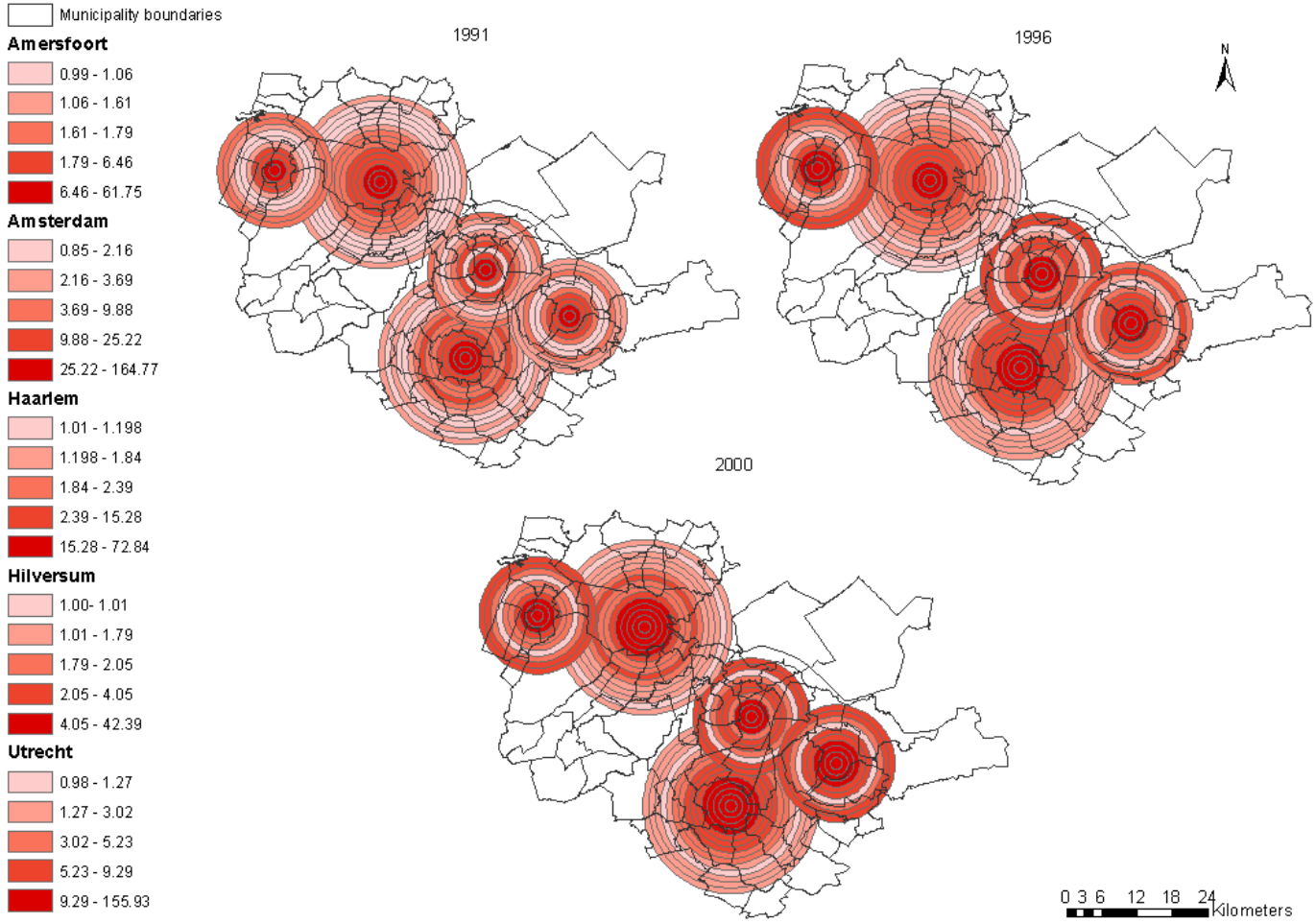
Quantitative method (3)

- Used data:
  - Employment data (1991, 1996, 2000)
  - Demographic data (1991, 1997, 2001)
  - Land use data (1989, 2000)

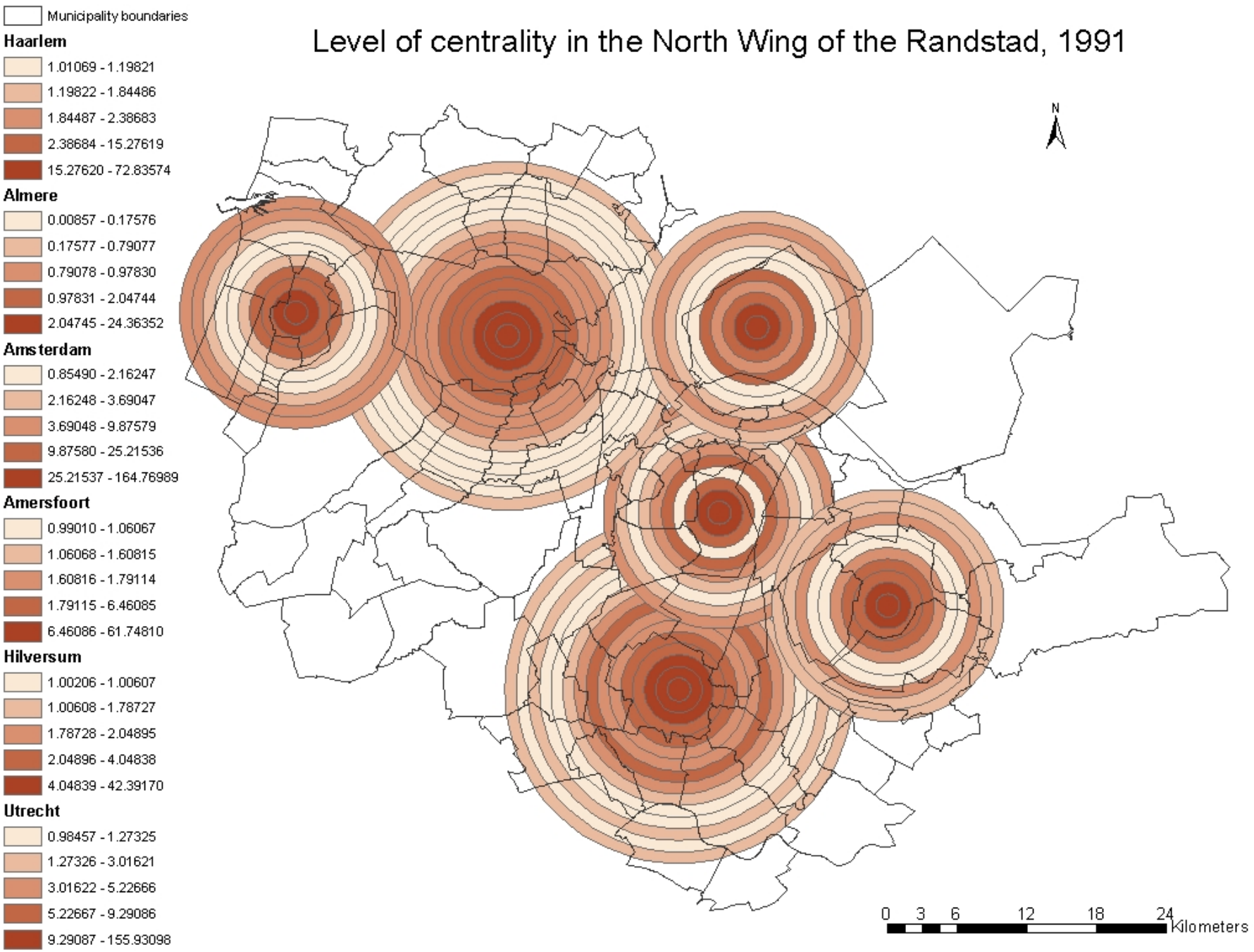
Quantitative method (4)

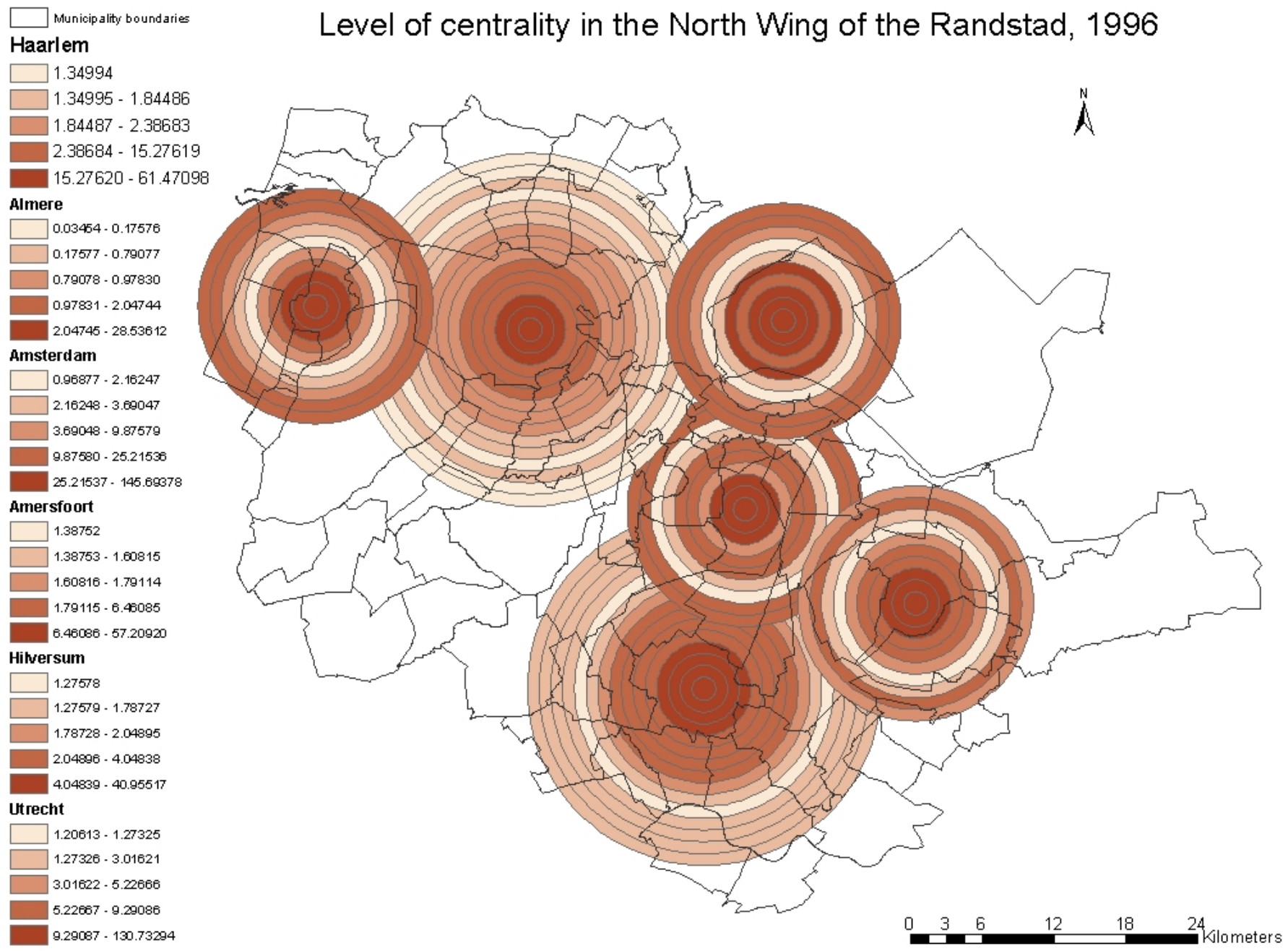
- Centrality
- Description
  - Degree to which employment is located close to the CBD

Centrality

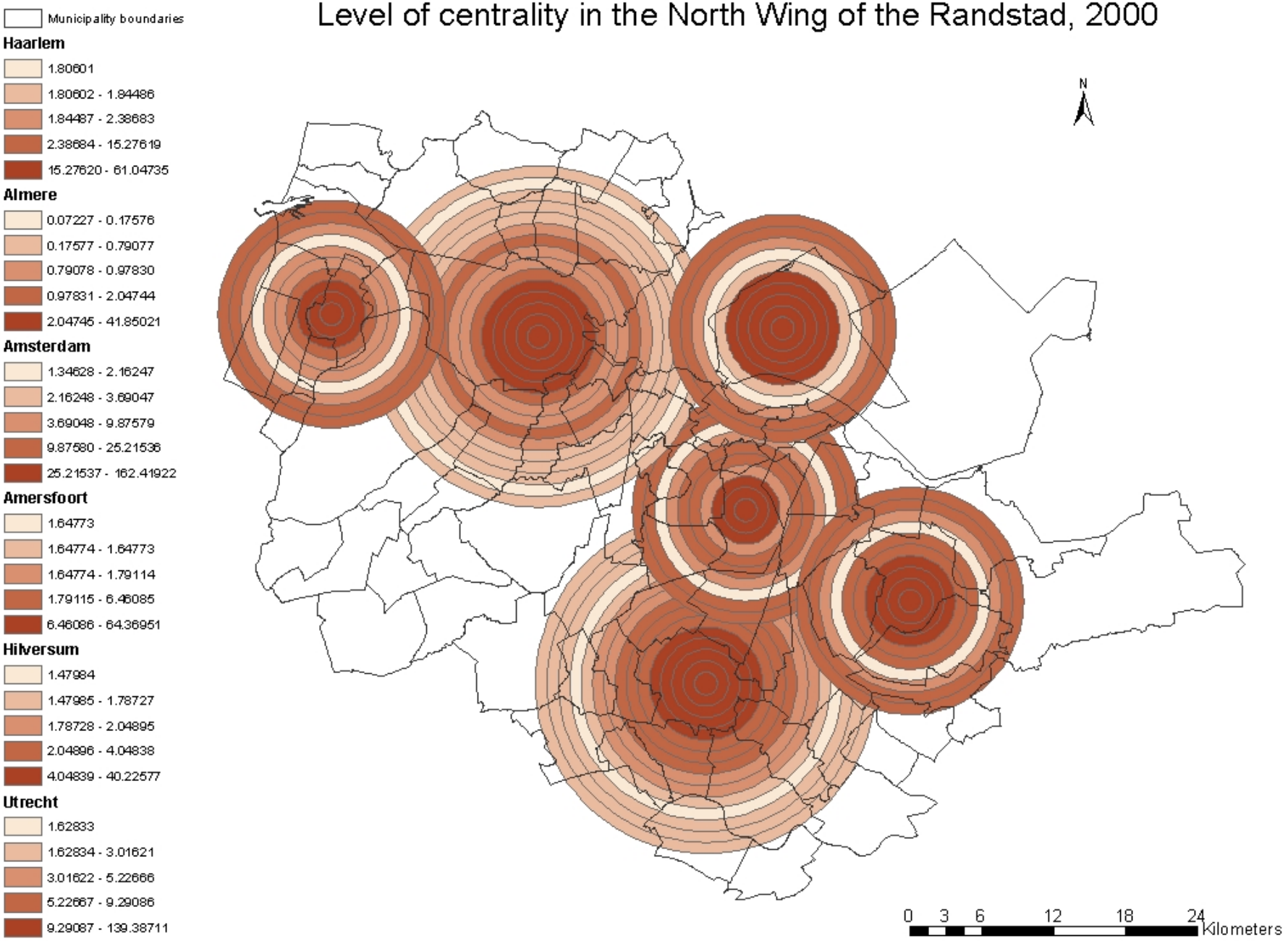

Municipality boundaries
Amersfoort
0.99 - 1.06
1.06 - 1.61
1.61 - 1.79
1.79 - 6.46
6.46 - 61.75
Amsterdam
0.85 - 2.16
2.16 - 3.69
3.69 - 9.88
9.88 - 25.22
25.22 - 164.77
Haarlem
1.01 - 1.198
1.198 - 1.84
1.84 - 2.39
2.39 - 15.28
15.28 - 72.84
Hilversum
1.00- 1.01
1.01 - 1.79
1.79 - 2.05
2.05 - 4.05
4.05 - 42.39
Utrecht
0.98 - 1.27
1.27 - 3.02
3.02 - 5.23
5.23 - 9.29
9.29 - 155.93
1991
1996
2000
N
0 3 6 12 18 24
Kilometers

Level of centrality in the North Wing of the Randstad, 1991




Level of centrality in the North Wing of the Randstad, 1996
Municipality boundaries
Haarlem
1.34994
1.34995 - 1.84486
1.84487 - 2.38683
2.38684 - 15.27619
15.27620 - 61.47098
Almere
0.03454 - 0.17576
0.17577 - 0.79077
0.79078 - 0.97830
0.97831 - 2.04744
2.04745 - 28.53612
Amsterdam
0.96877 - 2.16247
2.16248 - 3.69047
3.69048 - 9.87579
9.87580 - 25.21536
25.21537 - 145.69378
Amersfoort
1.38752
1.38753 - 1.60815
1.60816 - 1.79114
1.79115 - 6.46085
6.46086 - 57.20920
Hilversum
1.27578
1.27579 - 1.78727
1.78728 - 2.04895
2.04896 - 4.04838
4.04839 - 40.95517
Utrecht
1.20613 - 1.27325
1.27326 - 3.01621
3.01622 - 5.22666
5.22667 - 9.29086
9.29087 - 130.73294
N
0 3 6 12 18 24
Kilometers

Level of centrality in the North Wing of the Randstad, 2000



Results of centrality

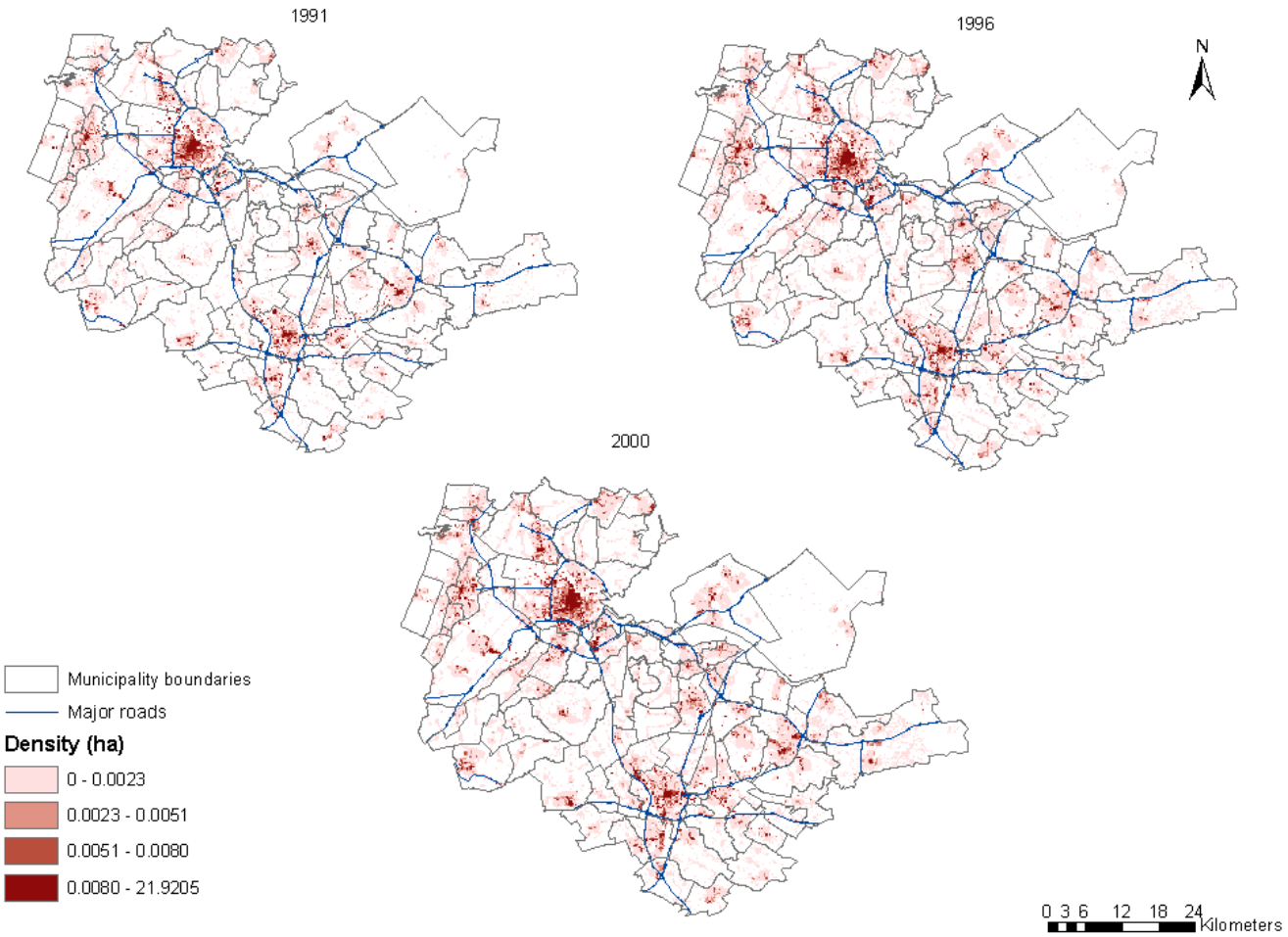
- Employment growth in the central city is combined with employment growth in outer rings
- Amsterdam and Utrecht still are strong centres
- Level of employment sprawl is relative large in Haarlem, Amersfoort and Hilversum

Quantitative method (5)

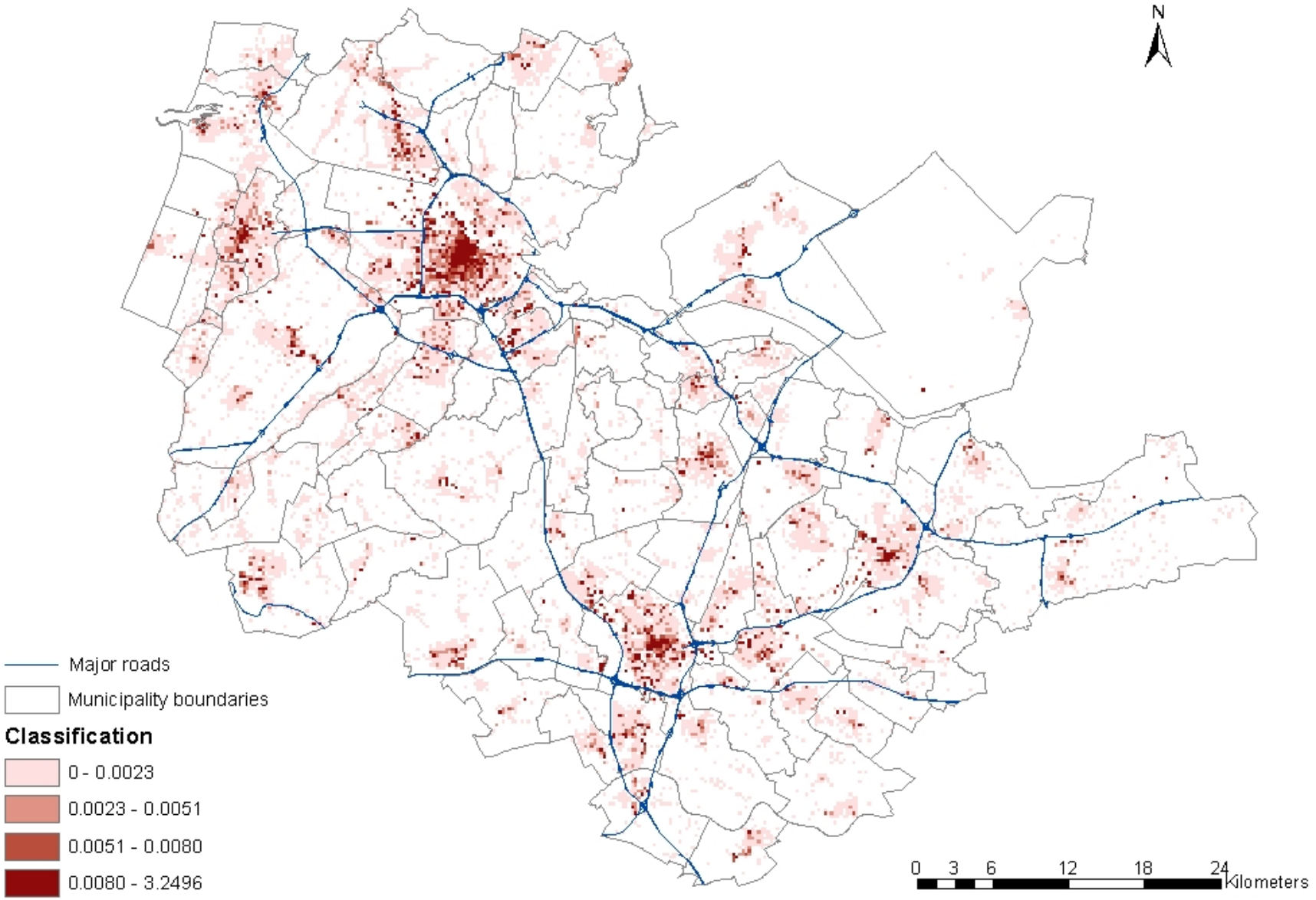
- Density

- Description
  - Average number of employees per square metre of developable land in an urban area.

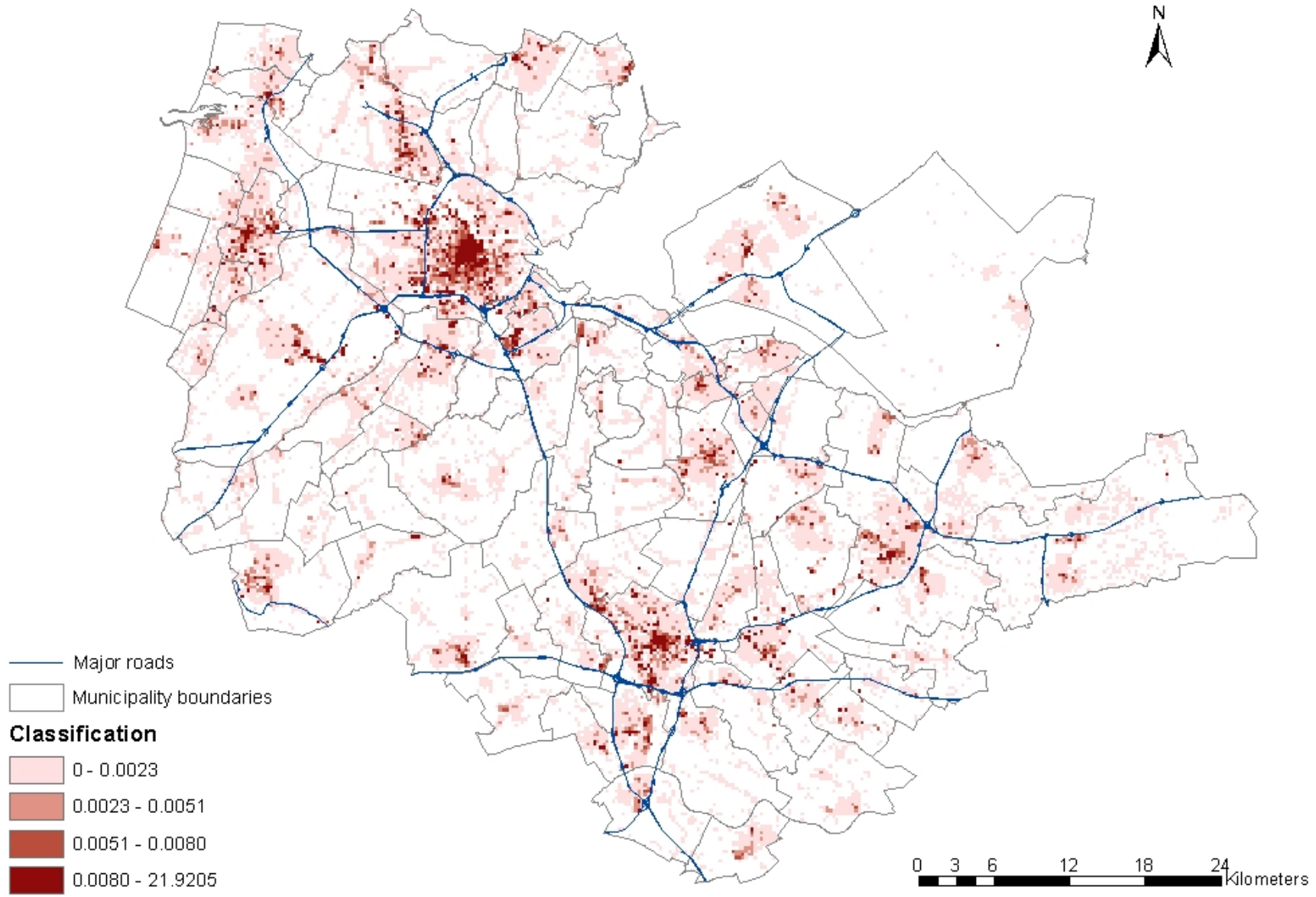
Density


1991
1996
2000
N
Municipality boundaries
Major roads
Density (ha)
0 - 0.0023
0.0023 - 0.0051
0.0051 - 0.0080
0.0080 - 21.9205
0 3 6 12 18 24
Kilometers

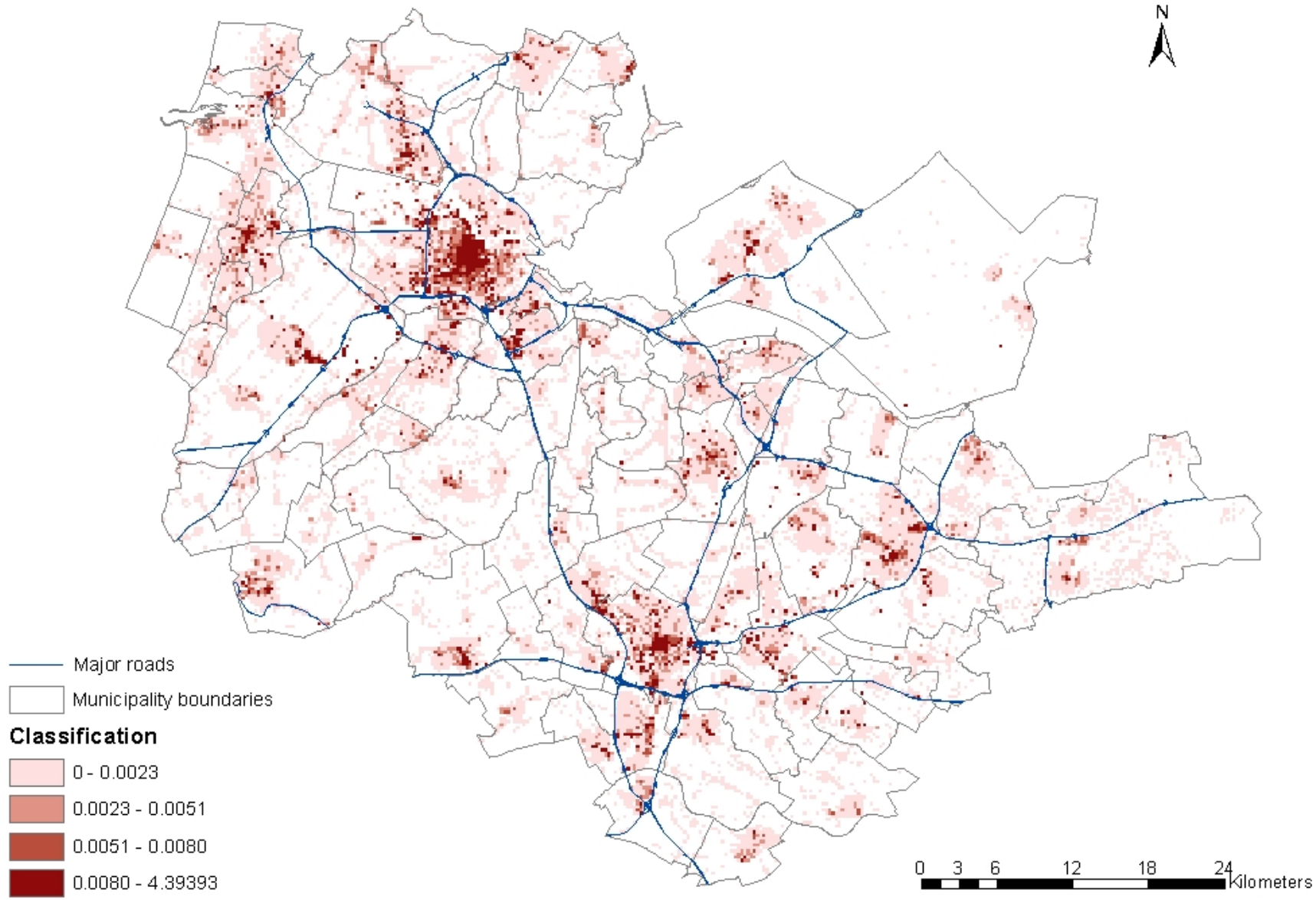
Level of density in the North Wing of the Randstad, 1991



Level of density in the North Wing of the Randstad, 1996



Level of density in the North Wing of the Randstad, 2000



Results density

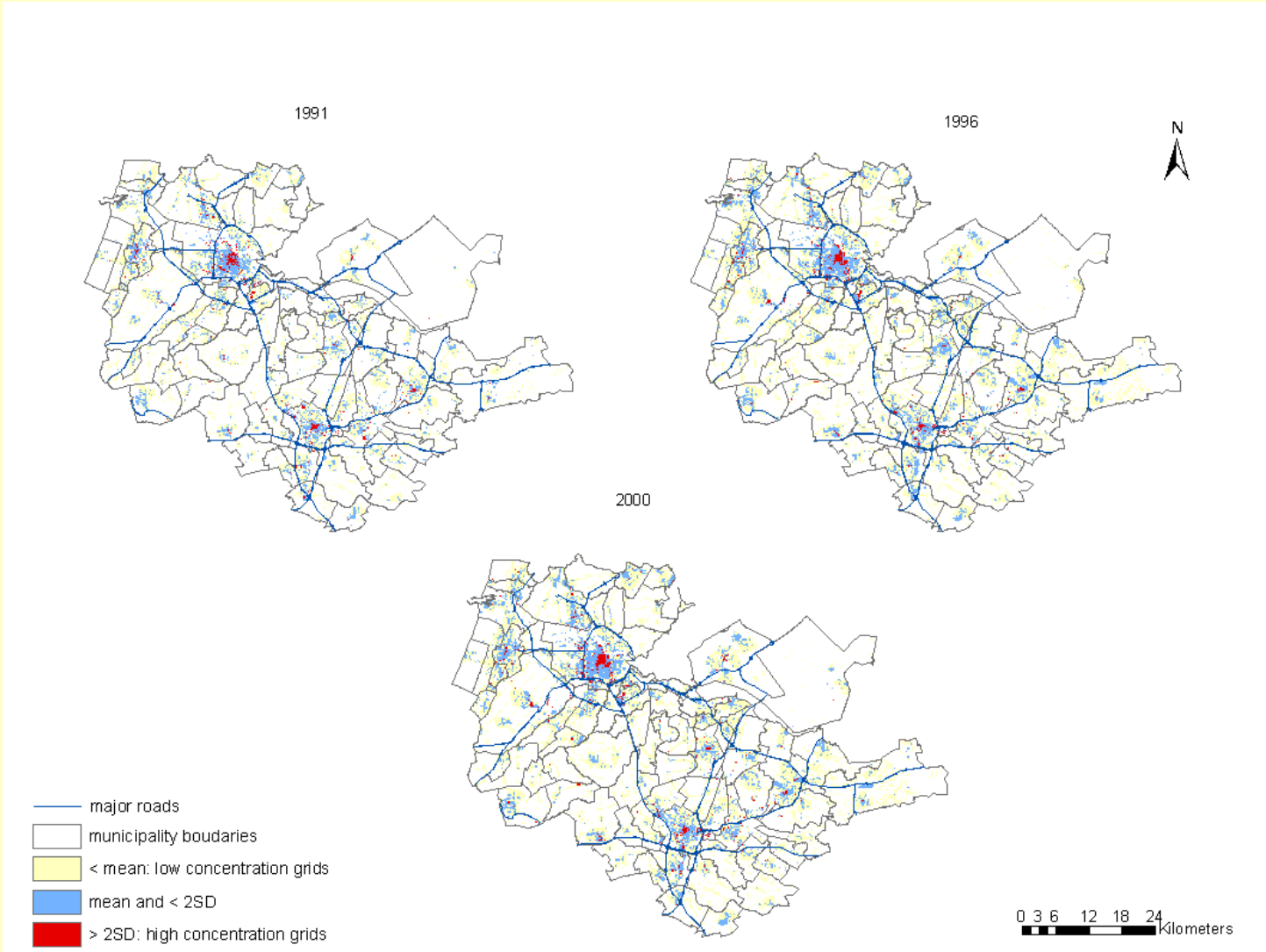
- Density increases throughout the entire period
- Growth of high density areas in:
  - City centres
  - Suburban locations
    - Near and alongside roads
    - Where connecting roads meet
    - Business parks

Quantitative method (6)

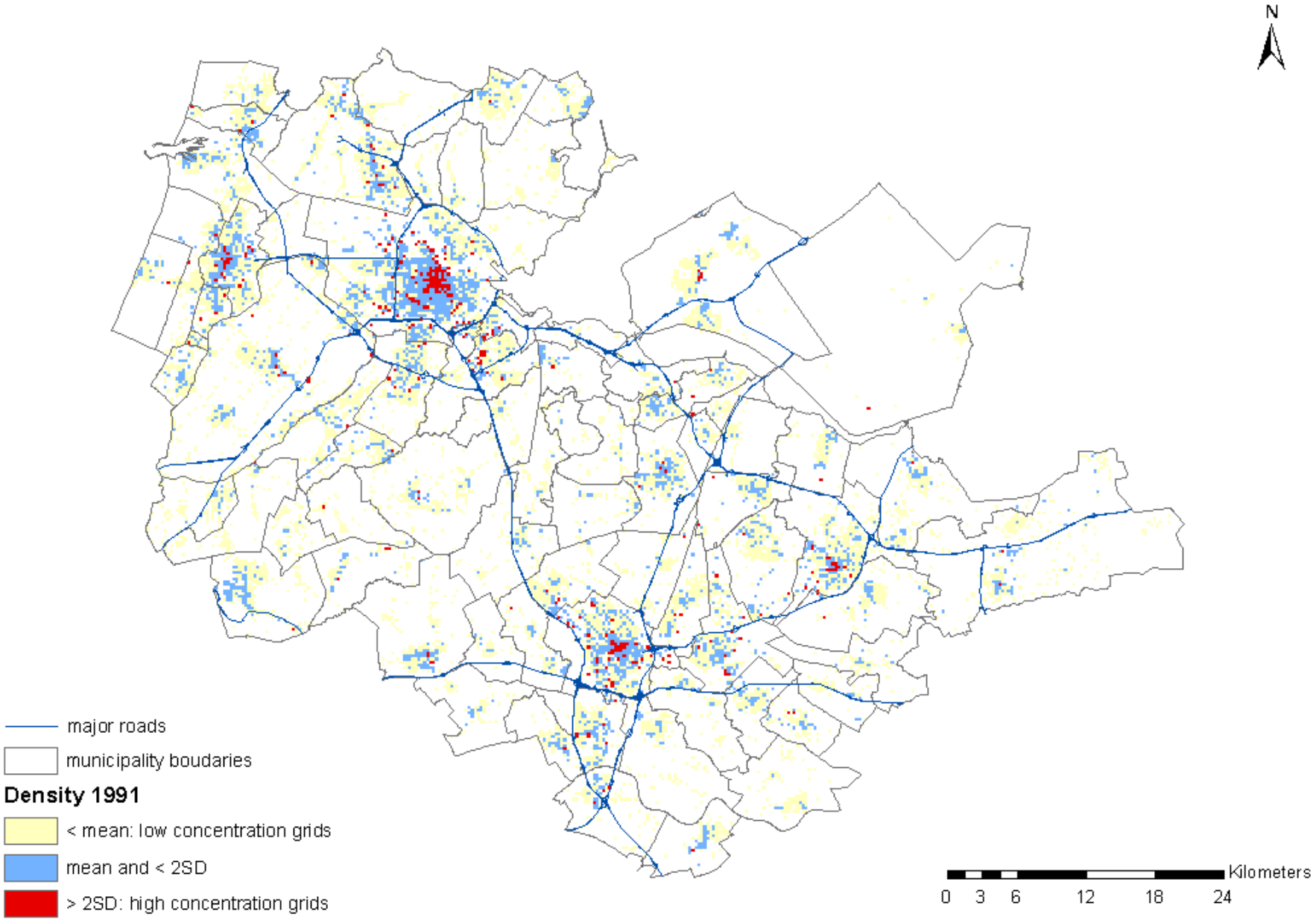
- Concentration
- Based on density thresholds

  – Description concentration
    - Level in which employment is located in relatively few areas or is spread evenly throughout the urban area.

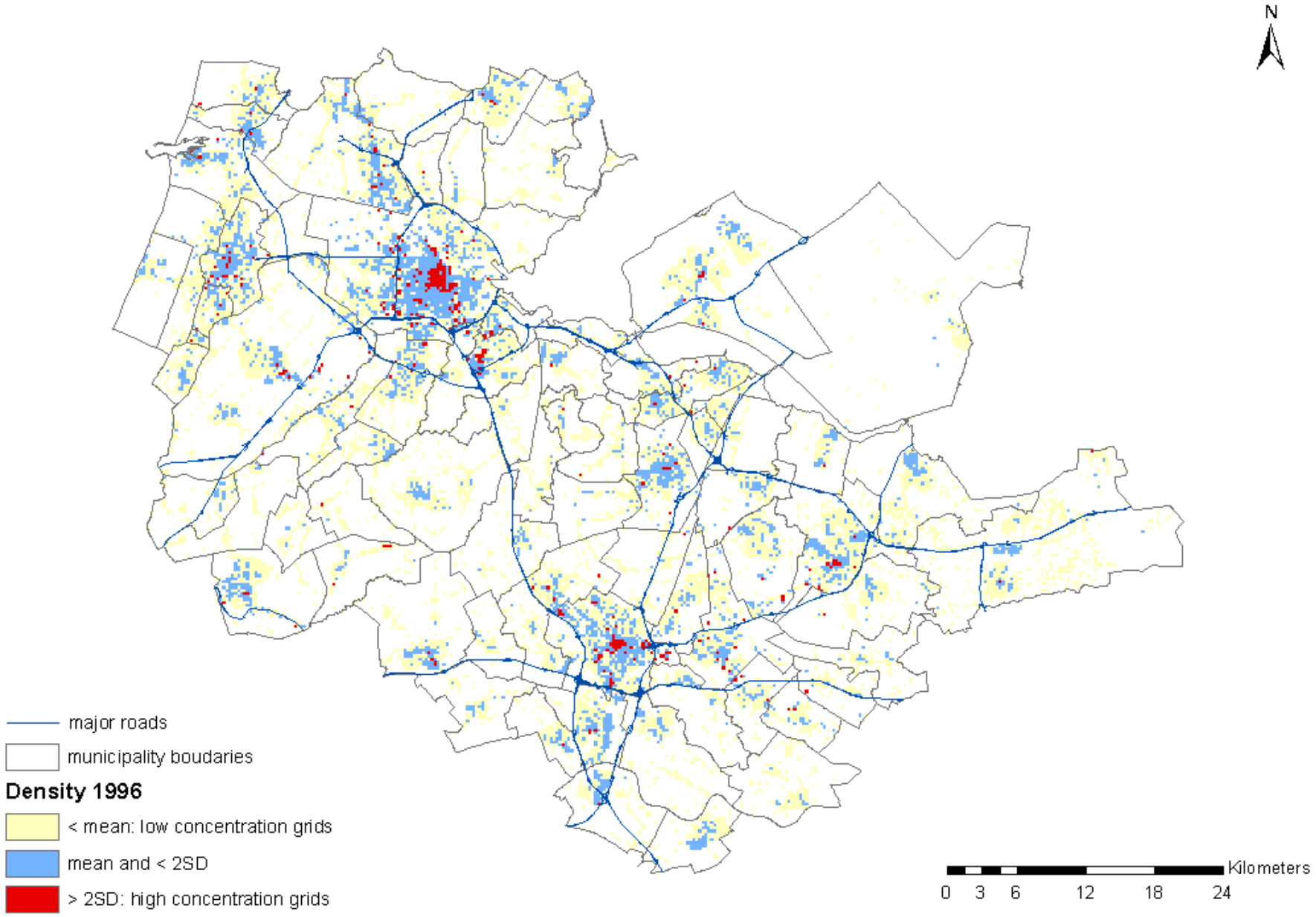
Concentration



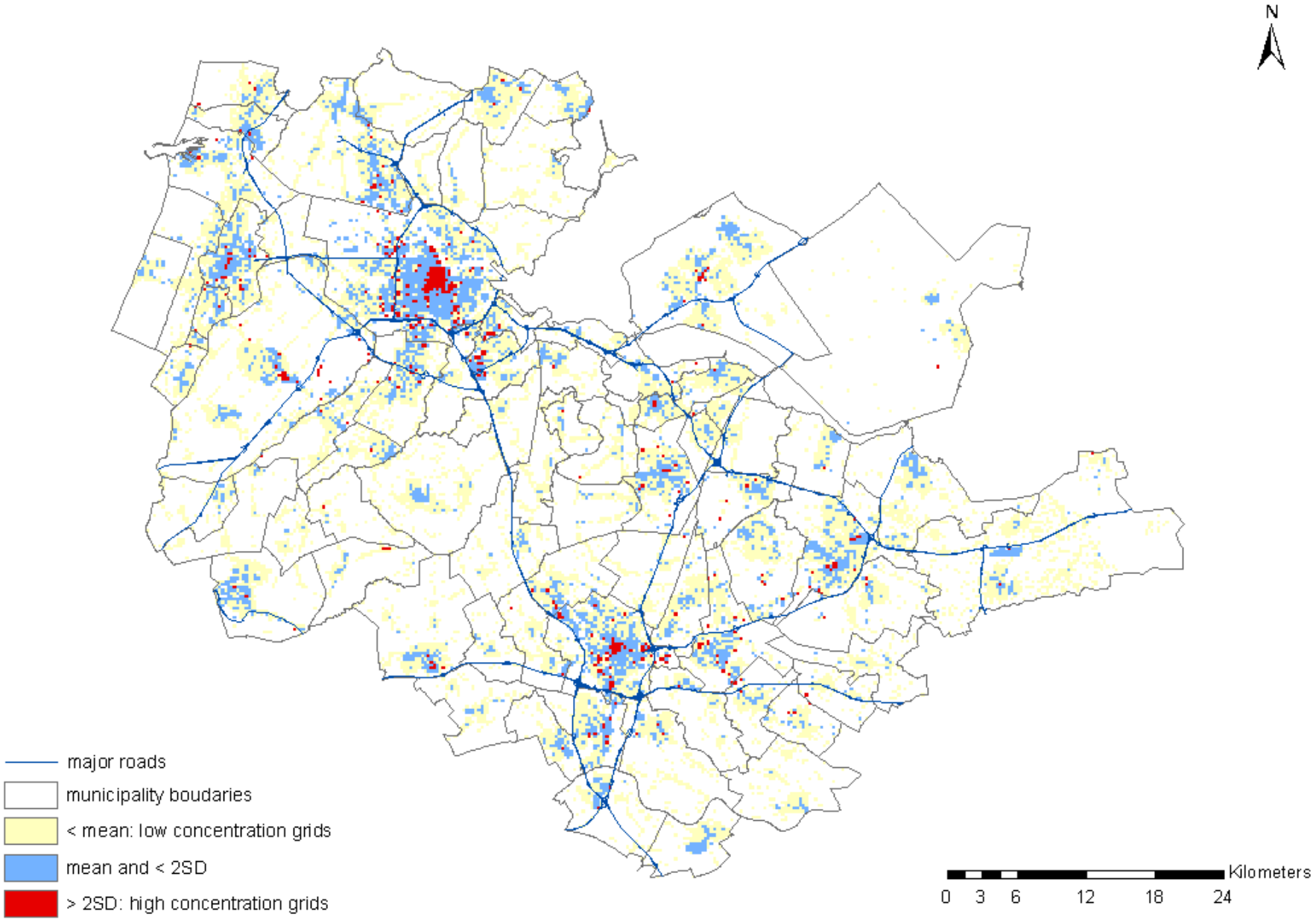
Level of concentration in the North wing of the Randstad, 1991



Level of concentration in the North wing of the Randstad, 1996



Level of concentration in the North wing of the Randstad, 2000



Results concentration

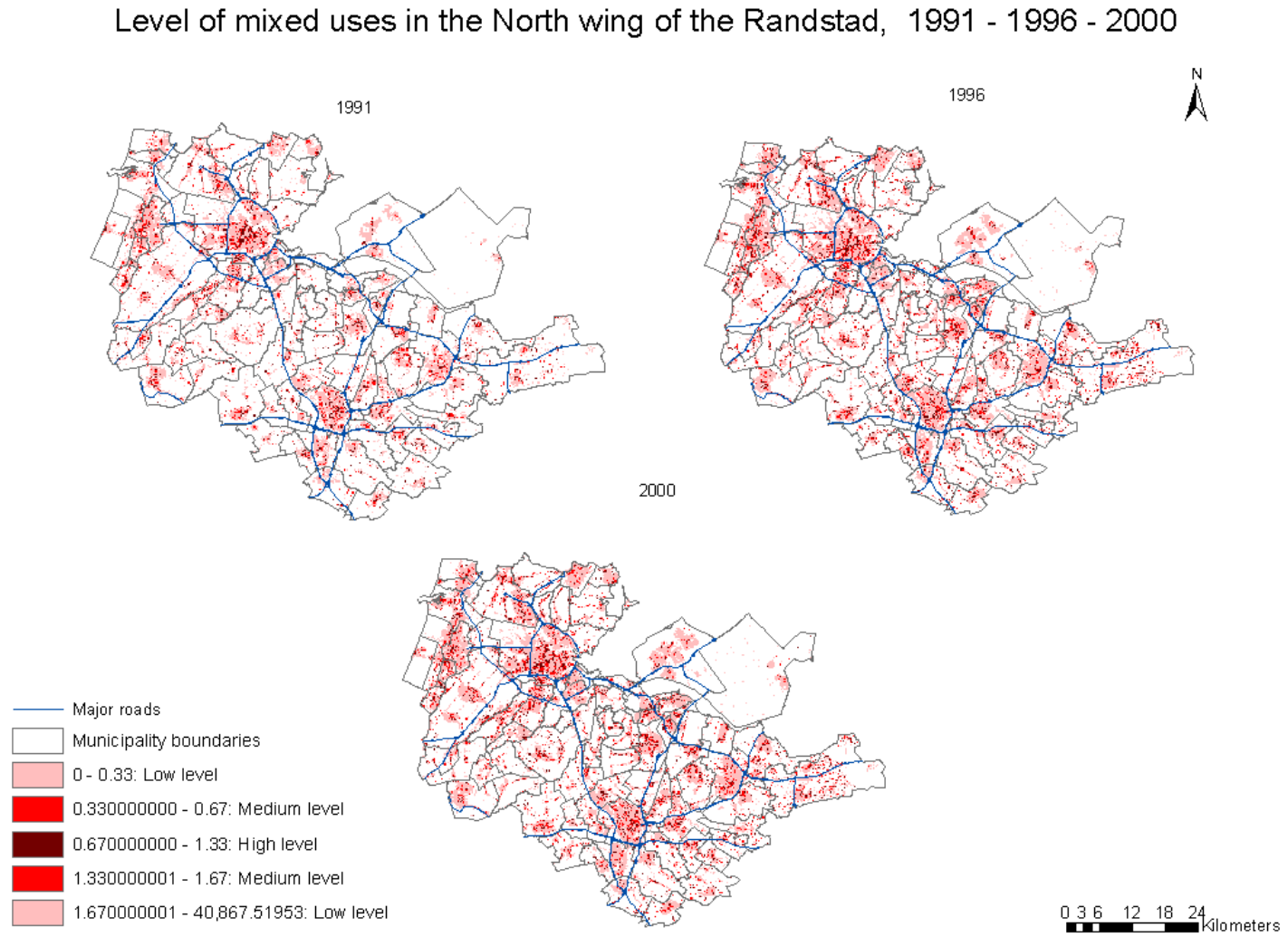
- Growth of high concentration areas is relative constant
- Growth of ‘low’ concentration areas is strongest between 1991 and 1996

  – Cities grow closer together

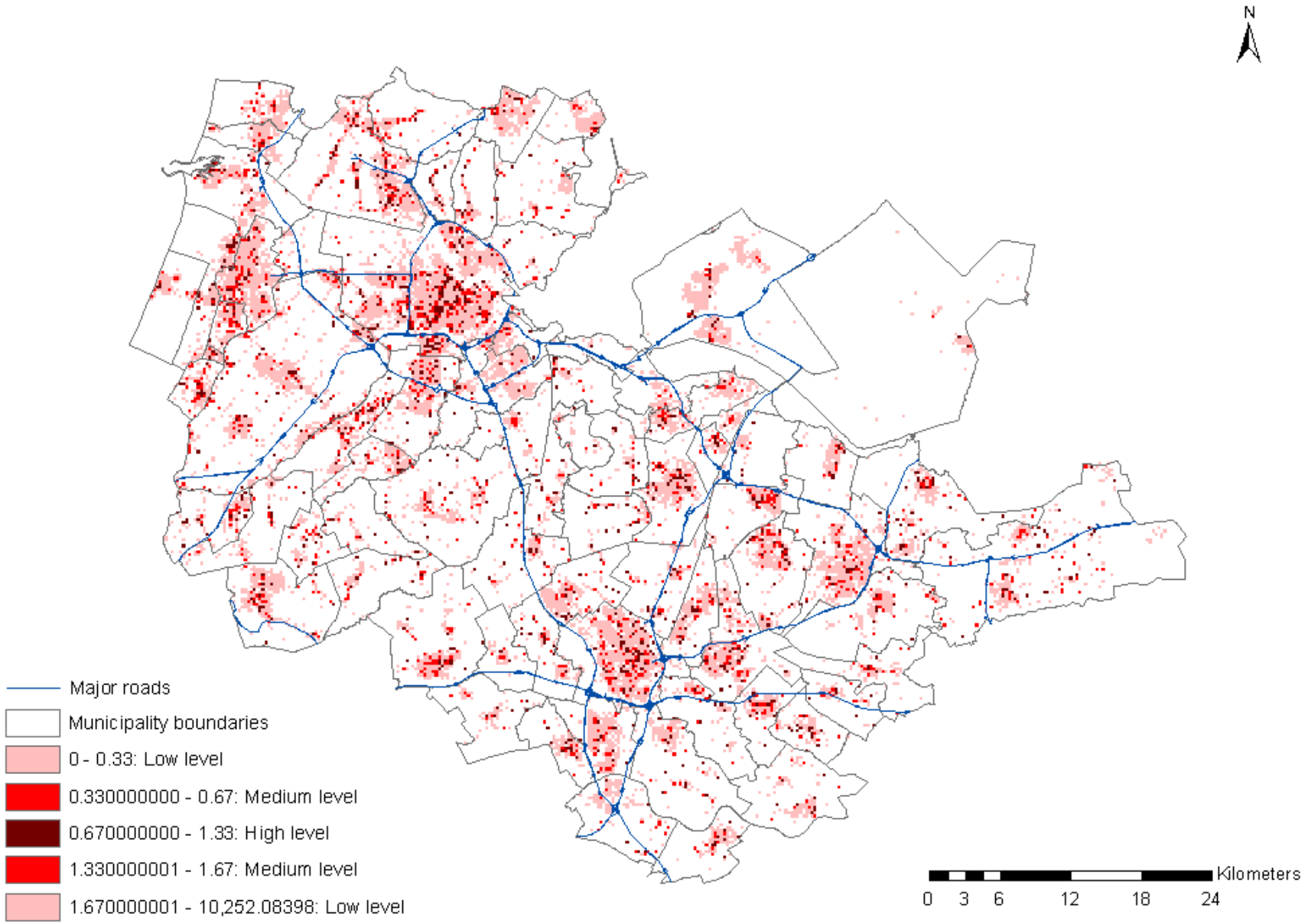
Quantitative method (7)

- Mixed use
- Description
  - The degree to which two different land uses/ functions coexist within the same small area

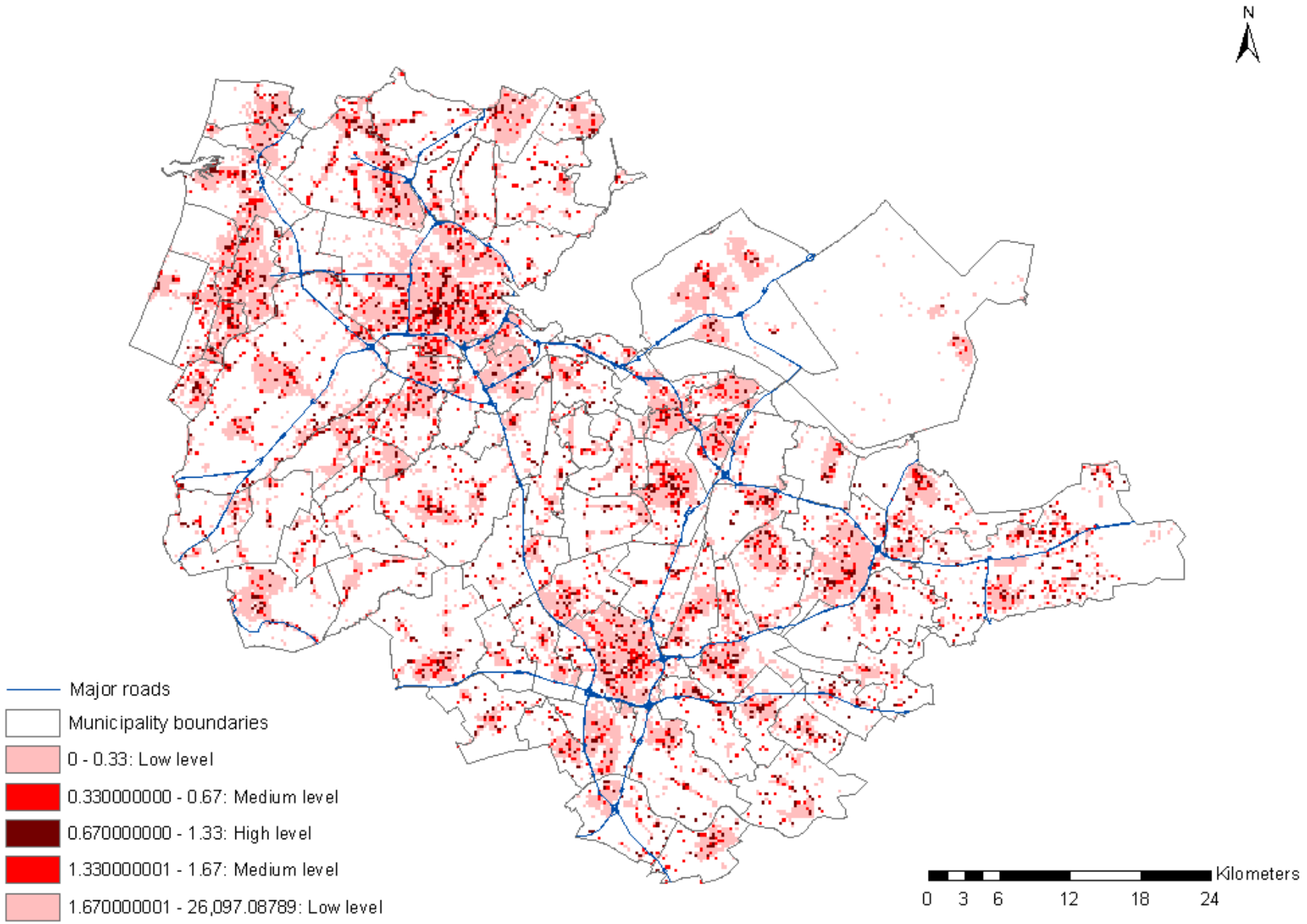
Mixed use


Level of mixed uses in the North wing of the Randstad, 1991 - 1996 - 2000
1991
1996
2000
N
Major roads
Municipality boundaries
0 - 0.33: Low level
0.330000000 - 0.67: Medium level
0.670000000 - 1.33: High level
1.330000001 - 1.67: Medium level
1.670000001 - 40,867.51953: Low level
0 3 6 12 18 24
Kilometers

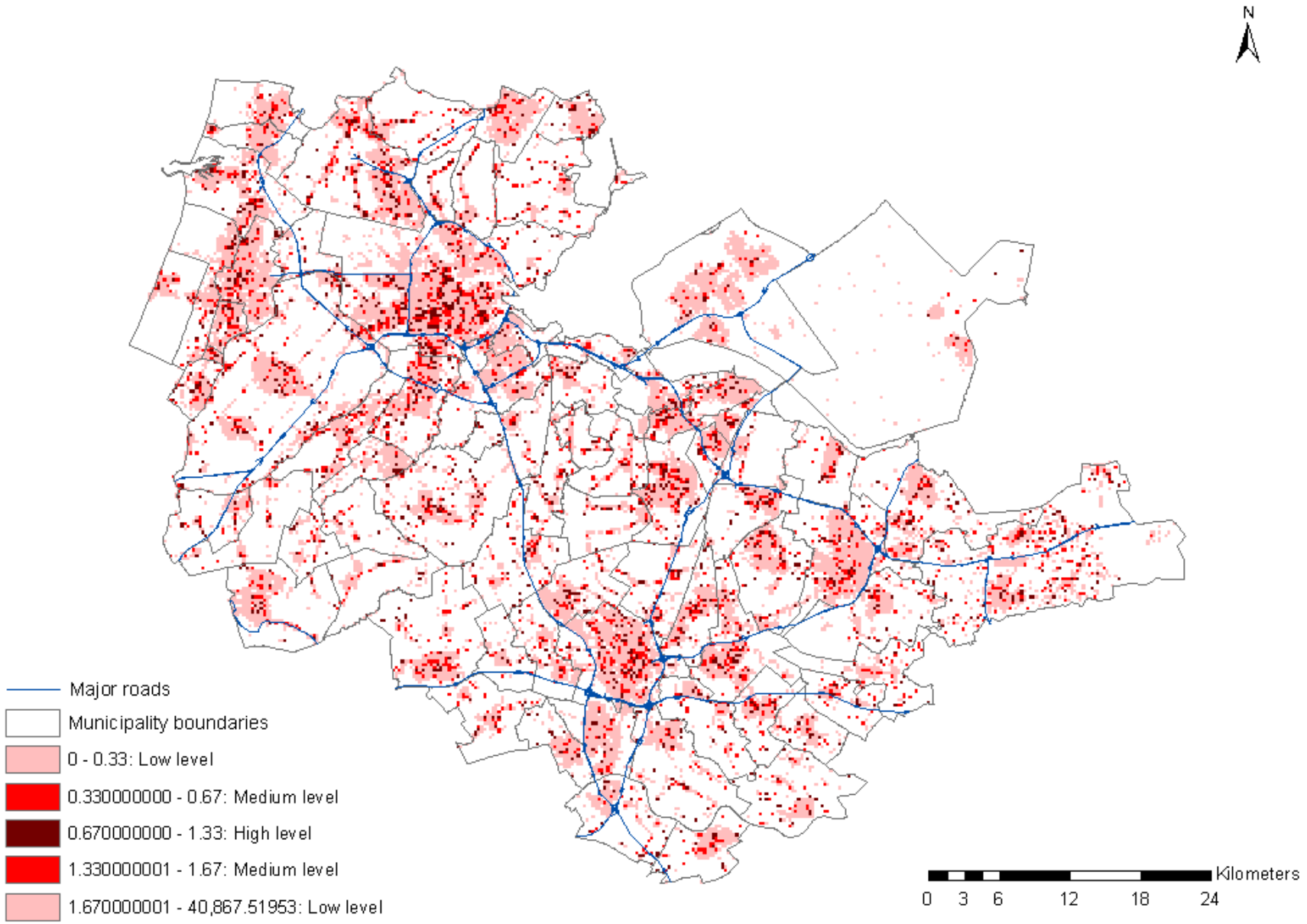
Level of mixed uses in the North wing of the Randstad, 1991



Level of mixed uses in the North wing of the Randstad, 1996



Level of mixed uses in the North wing of the Randstad, 2000



Results mixed use

- Increase 1990 - 1996
- Decrease 1996 – 2000

- Areas with relatively more employees than inhabitants:
  - Increase alongside roads
  - Increase alongside railways
  - Increase on business parks

Conclusions: National contexts (1)

- Netherlands
  - Economic deconcentration led by producer services
  - Less deconcentration retail and personal services
- UK
  - Deconcentration and growth in city centres
- Denmark
  - Growth of economic land uses evenly distributed over metropolitan area
  - Trend back to the city

Conclusions: National contexts (2)

- Spain/ Italy
  - Strong metropolitan monocentric employment distribution
- Czech Republic
  - Employment deconcentration preceded residential deconcentration
  - Especially retail, distribution, industry and offices
- Israel
  - Especially deconcentration of retailing and business services

Conclusions: National contexts (3)

- Metropolitan variations:
  - Total employment
    - Growth in total employment in all case study cities larger in the suburban rings than in the core or central cities
    - Israel, the Netherlands and the UK have experienced the largest increase in the number of jobs
    - Growth mainly in inner suburban rings, but also in outer suburban rings (NL, UK, Rome, Prague)

Conclusions: National contexts (4)

– Share in total employment
  - In general, decrease in the core of the central cities
  - The cores of Prague, Brno and Aarhus accommodate still the majority of jobs
  - Copenhagen, Tel Aviv: share of the core is one third
  - Dutch cities: share of the core is less than 25%

Conclusions: Methods (1)

- Methods
  - Data availability
  - Definition of urban rings (functional classification based on national situation)
  - Employment density basis for most measures

$$\frac{\text{Employment}}{\text{Surface developable land in a 250m x 250m area}}$$

Conclusions: Methods (2)

- Data
  - Study areas divided in rings basis for data assembly quality of life indicators

Quality of life indicators: database