

Global research on urban ecosystem services during 1996-2015: A spatially explicit bibliometric analysis (i-SEED project)

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Background

- Assessments and syntheses research are critical aspects of scholarship. Bibliometric analysis can illuminate general trends, key topics and important advancements in a research domain.
- As more than half of people in the world live in cities and urban ecosystem services (UES) are critical to human's well-being, considerable scholarly attention has been drawn to the research on UES since the late 1990s (Figure 2).

Methodology

- The data was collected by literature search through the ISI Web of Science. A total of 370 published scientific papers focusing on topics of urban ecosystem services were compiled.
- The methods used in this study include:
 - GIS spatial analysis
 - Social network analysis
 - Bibliometric analysis

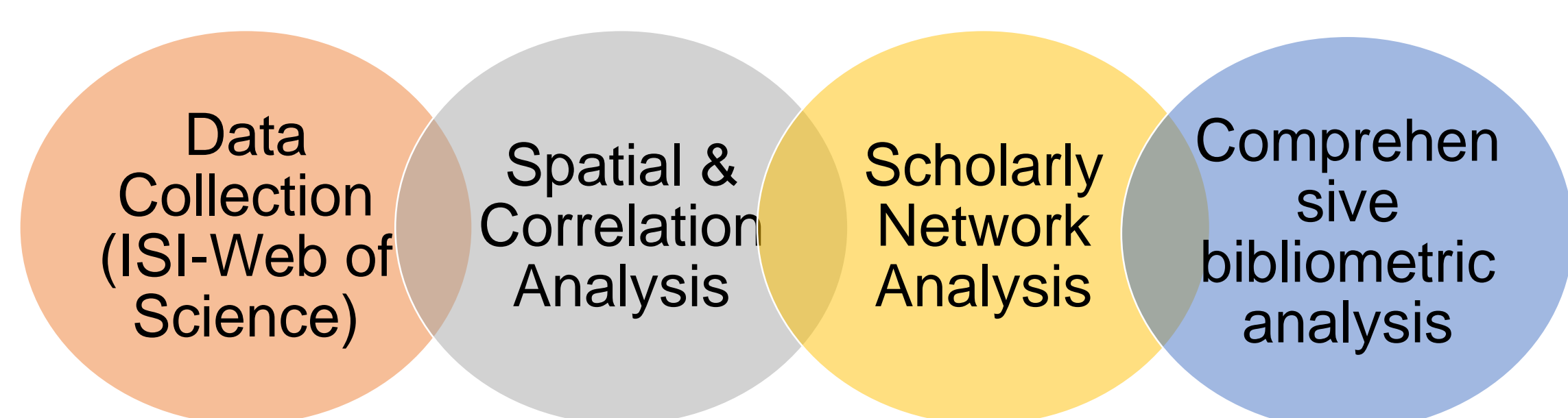


Fig 1. Data analyses of UES articles

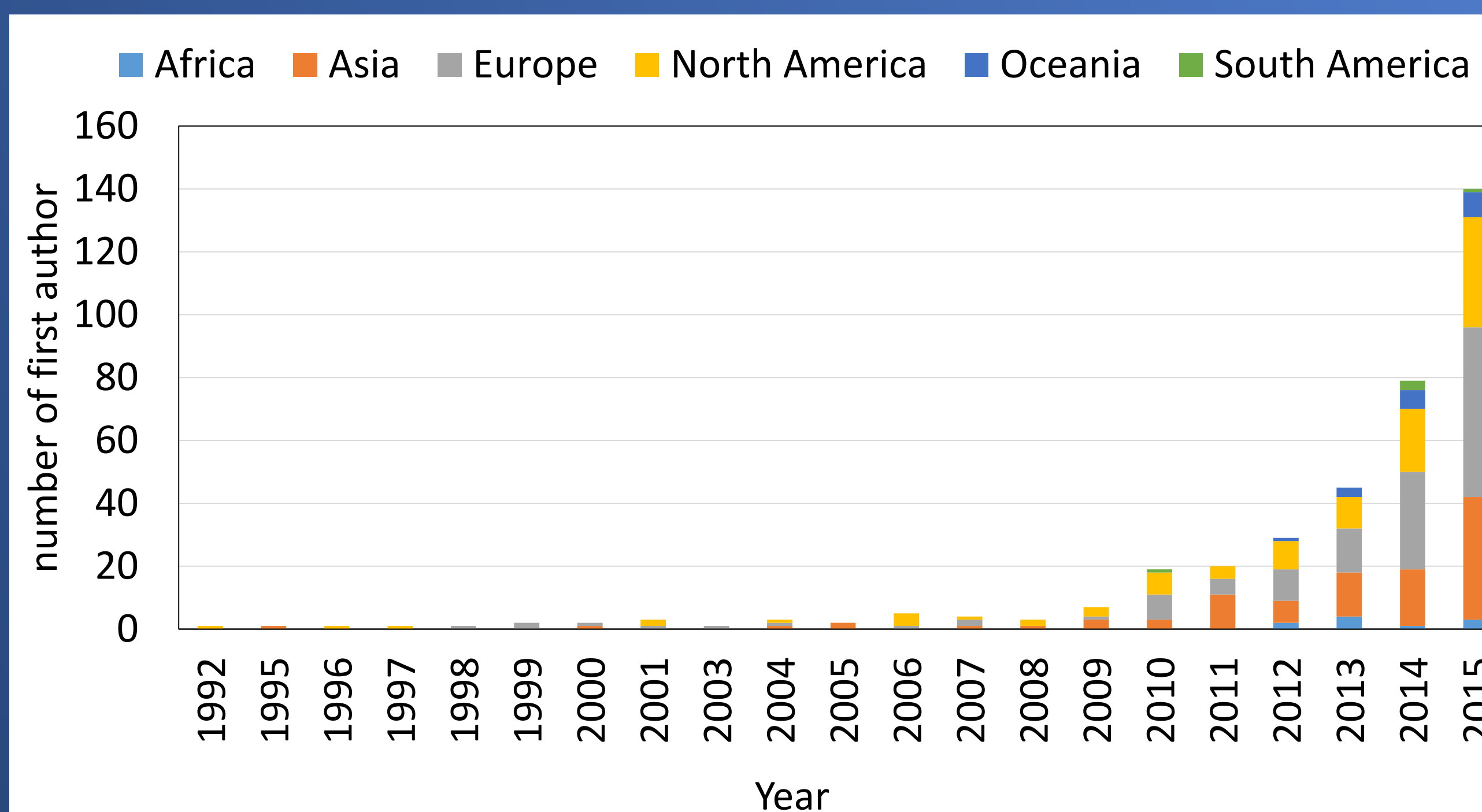


Fig 2. Number of articles/1st authors by continent

Results

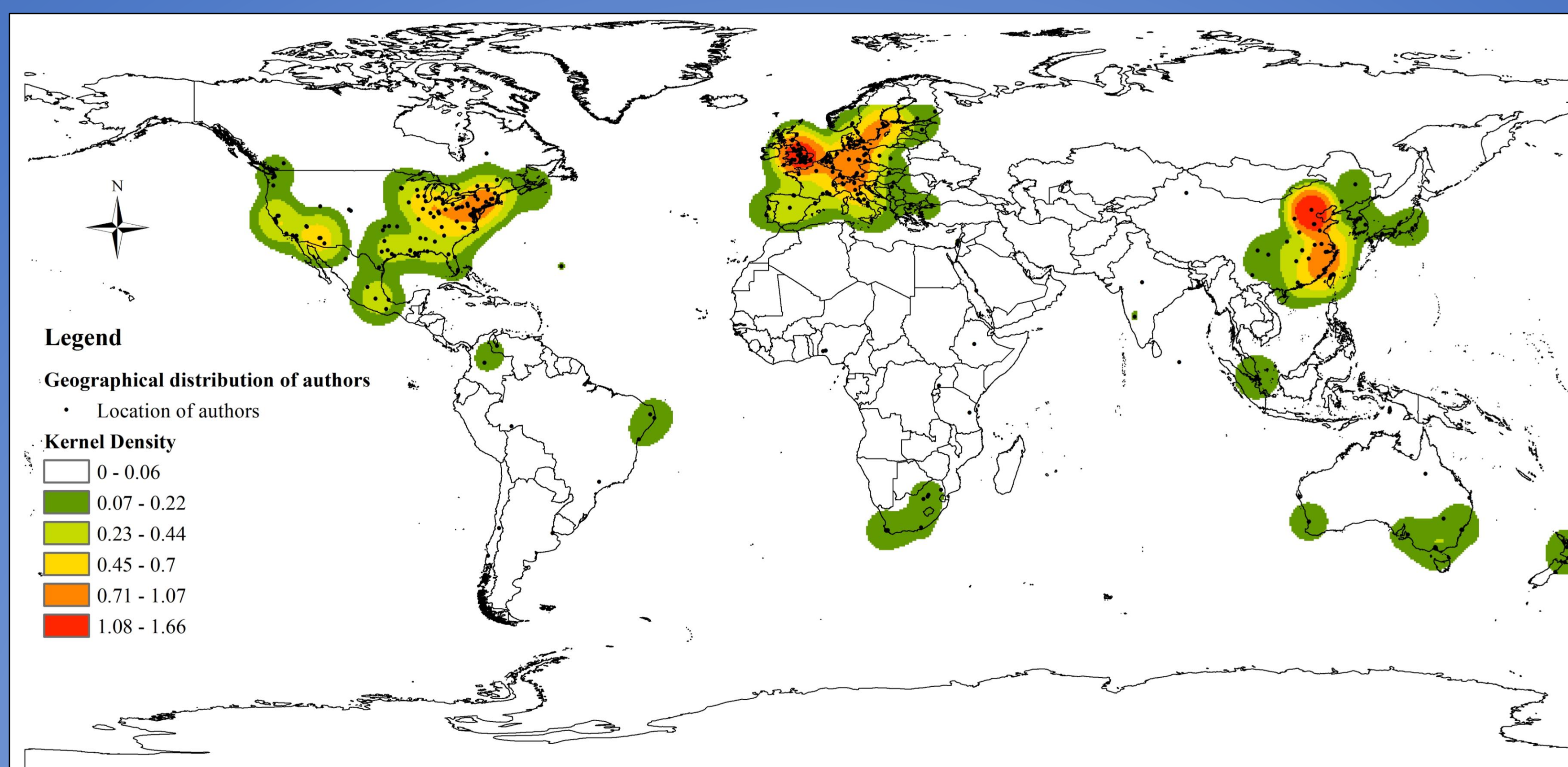


Fig 3. Kernel density estimation for the geographic distribution of authors

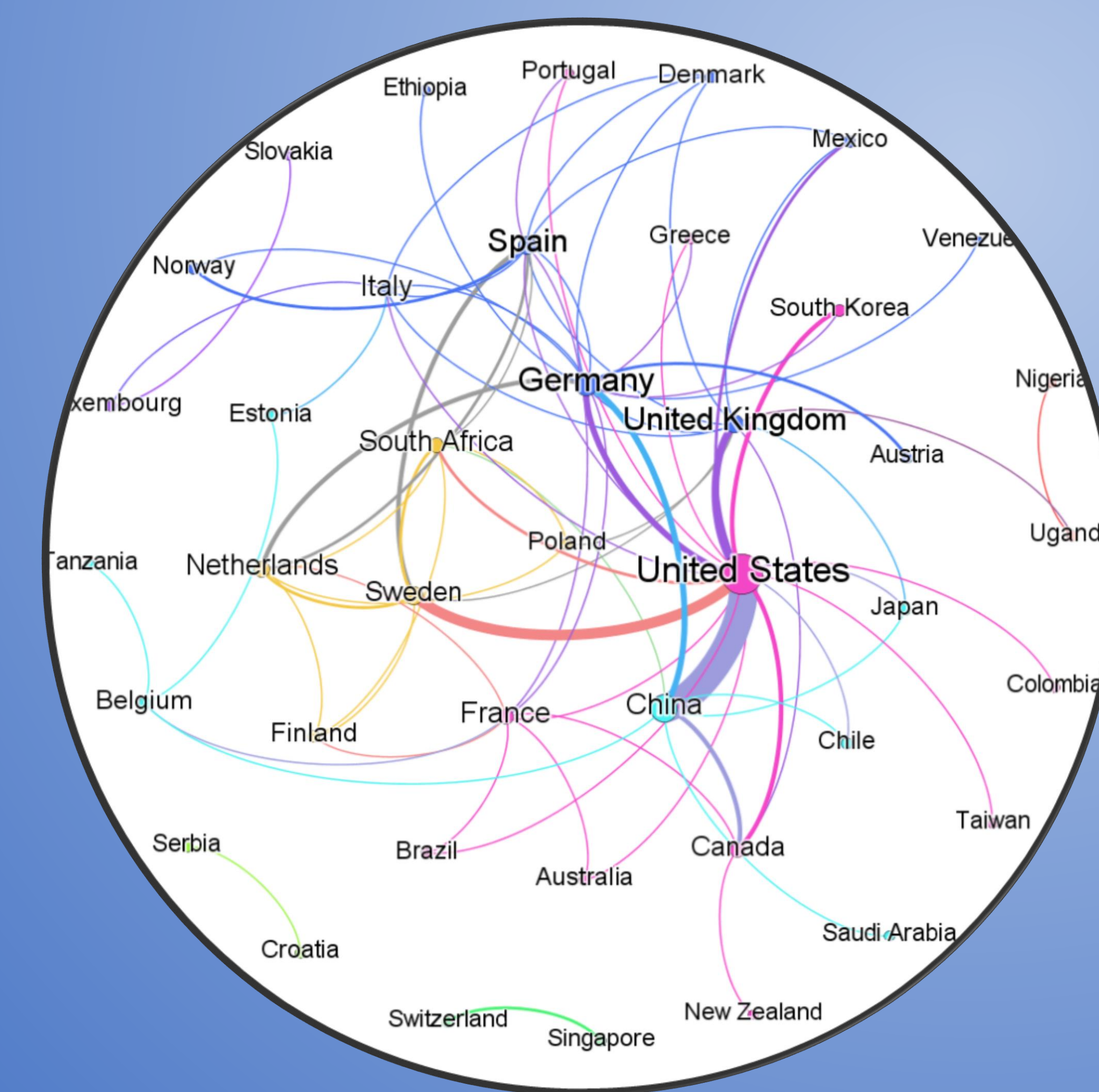


Fig 4. International collaboration networks

Summary of content analysis in UES articles:

- Cultural services receives relatively less attention in UES studies
- Need to consider brownfield land uses and rural surrounding
- Various models are used to value UES demand and/or provisioning
- Less than one third of studies involve various stakeholders

Population and location of studied cities:

- Hotspots of UES studies are mostly located in Europe, Asia, and North America.
- Small and medium sized cities, with population less than 0.3 million people, receive less attention in UES studies focusing on the U.S.

Results (continued)

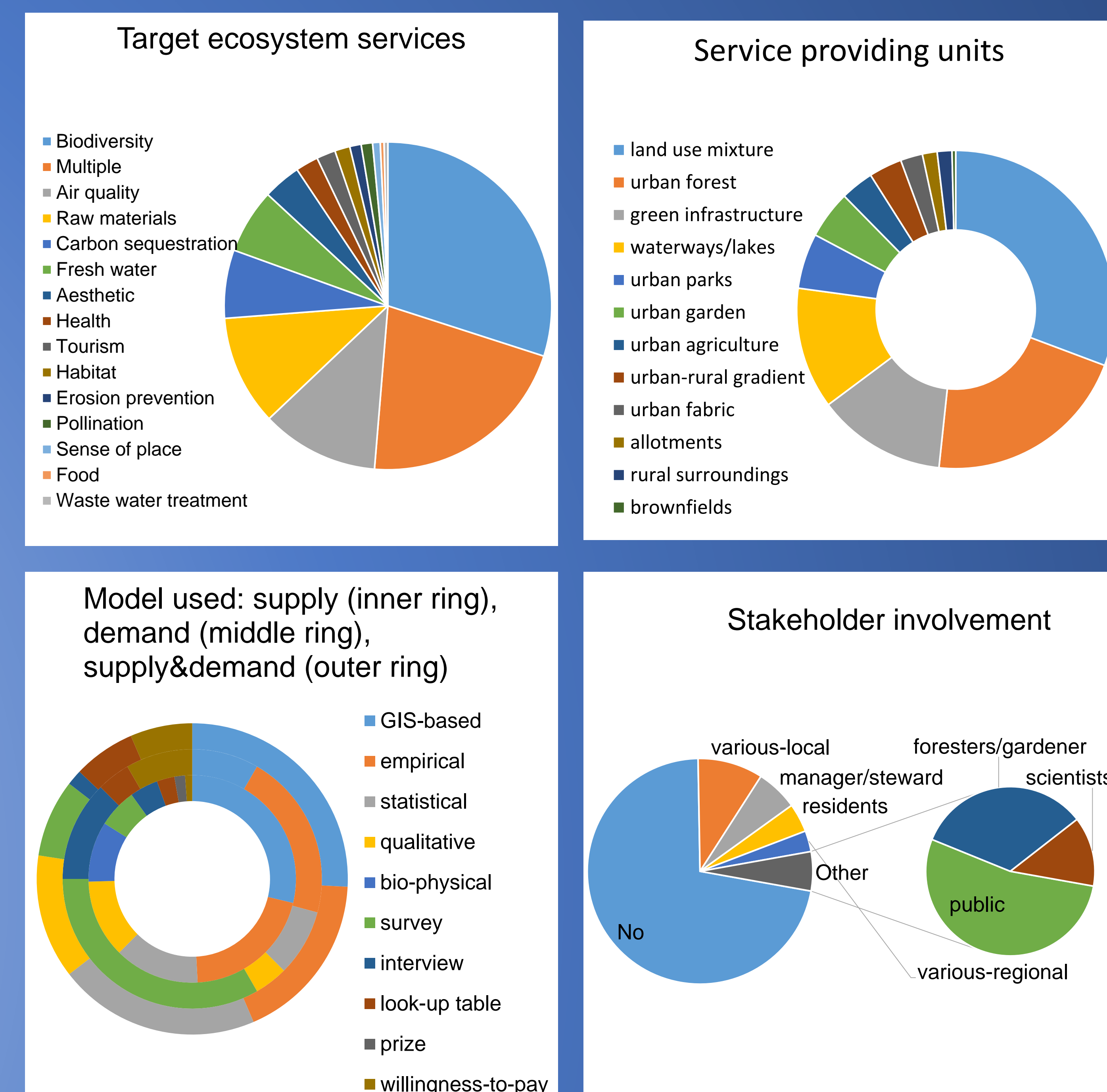


Fig 5. Comprehensive analysis of empirical UES studies

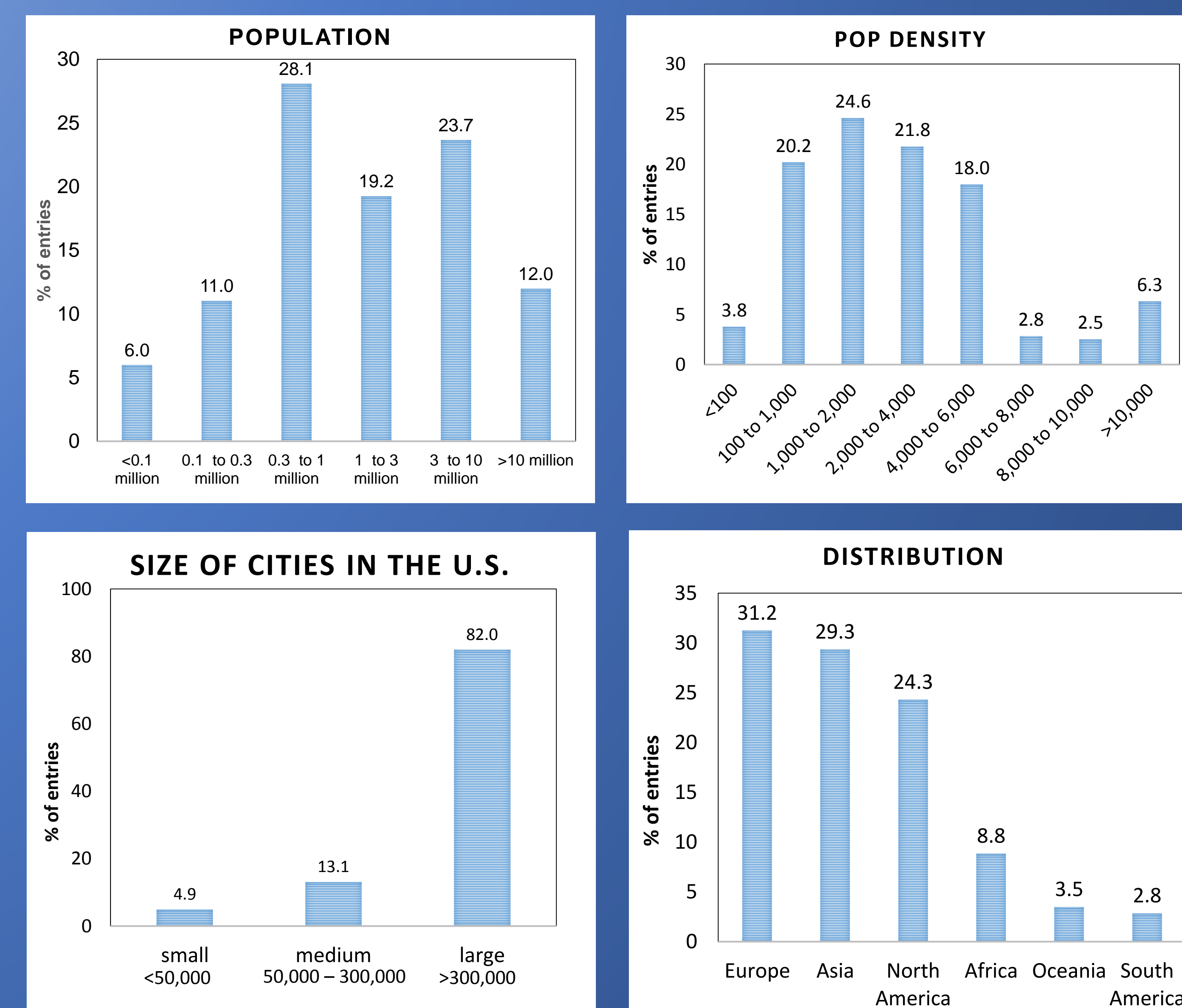


Fig 6. Studied cities, size of cities, and population density