

Potential for use of environmental factors in urban planning



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Context

Projections for population growth estimate, on top of the current 7.4 billion world population, an increase of 2 billion people for the next 40 years. It is also projected that 66 per cent of the world population in 2050 will live in urban areas. To accommodate the urban population growth cities are changing continuously land cover to urban areas. Such changes are a threat for natural resources and food production systems stability and capability to provide food and other functions. However, little has been done concerning a rational soil management for food production in urban and peri-urban areas

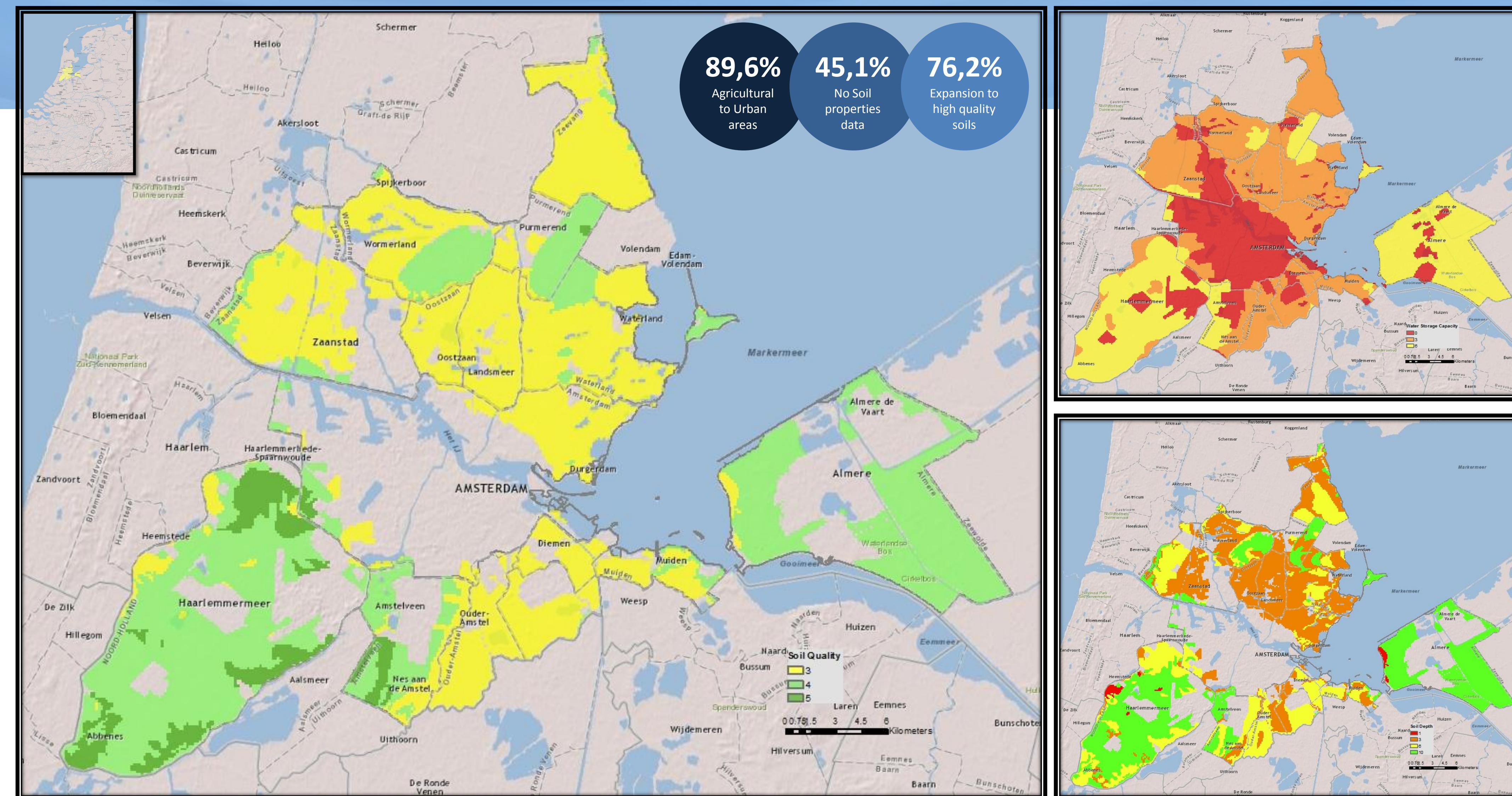
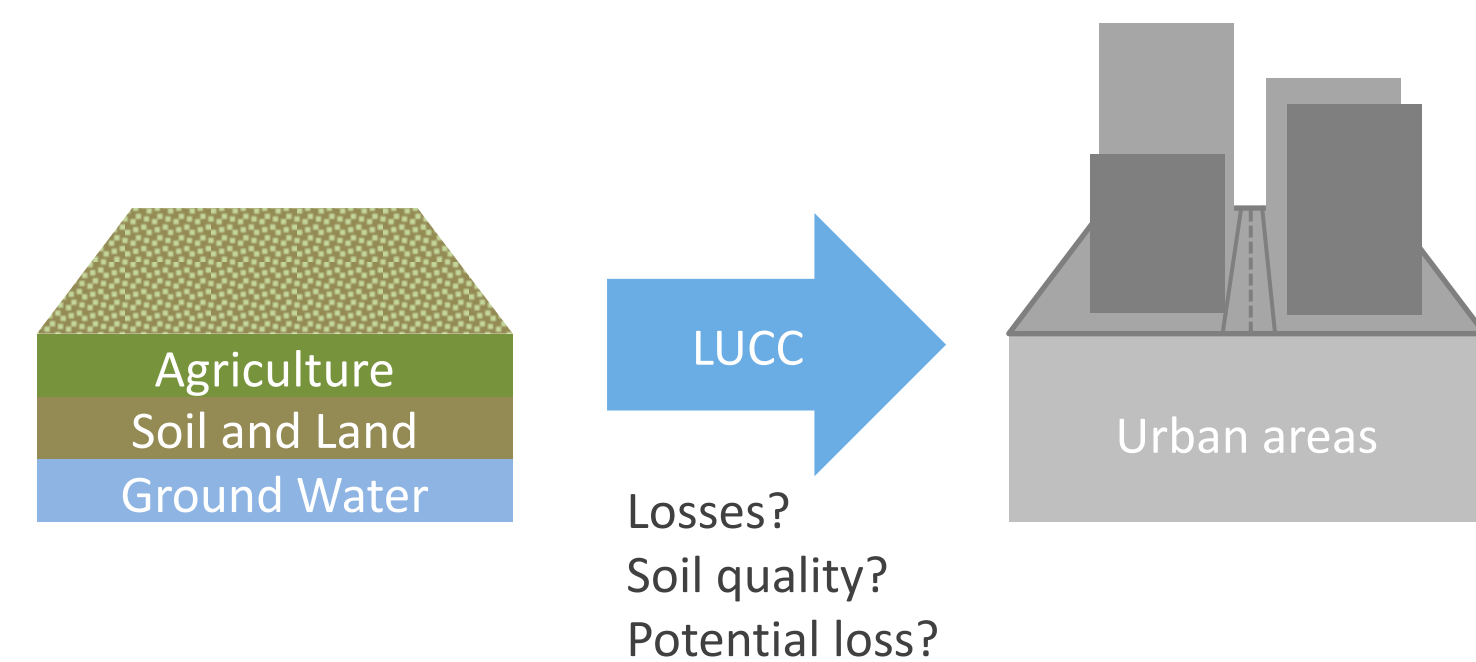


Figure 1. Amsterdam Metropolitan Area assessment. Left: Soil quality assessment. Top right: Water Storage Capacity. Bottom left: Soil Depth.

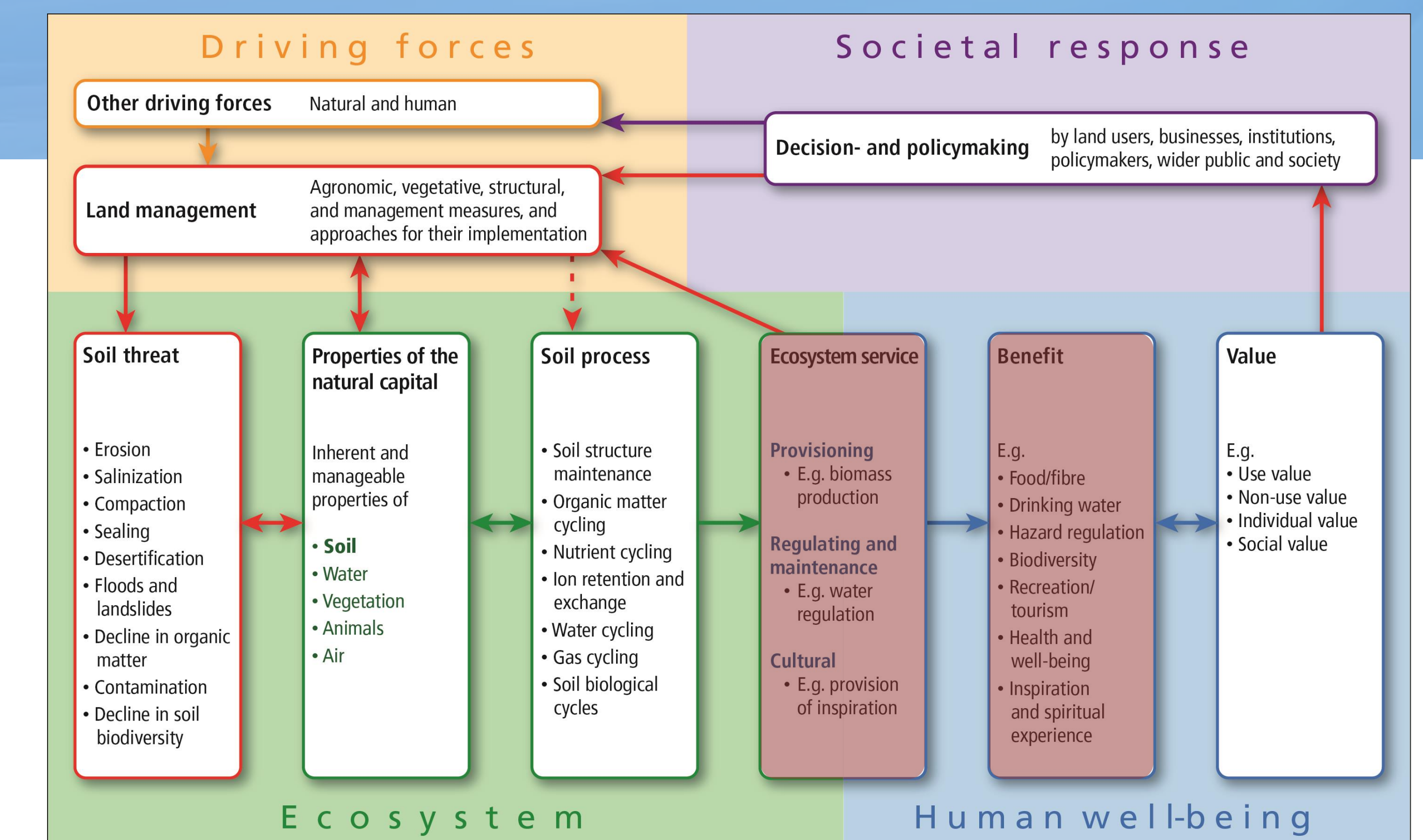


Figure 3. Proposed ecosystem services framework for RECAR (Schwilch, G. et al., in press). Next steps of the research project in red.

Next steps

Spatial Planning on a metropolitan scale focus on strategic development and regional integration, so less on environmental factors. Next steps will focus on the development of Ecosystem Services to provide a tool to assess environmental factors and measure the losses in soil quality and benefits of the community.

Data & Methodology

For the selection of data and development of the methodology it was considered both the integration of soil quality assessment and urban planning methods.

The main objective of the project is then to assess the quality of soil lost for urban expansion in the metropolitan areas of Amsterdam and Eindhoven, by integrating the properties of the soil and the services provided.

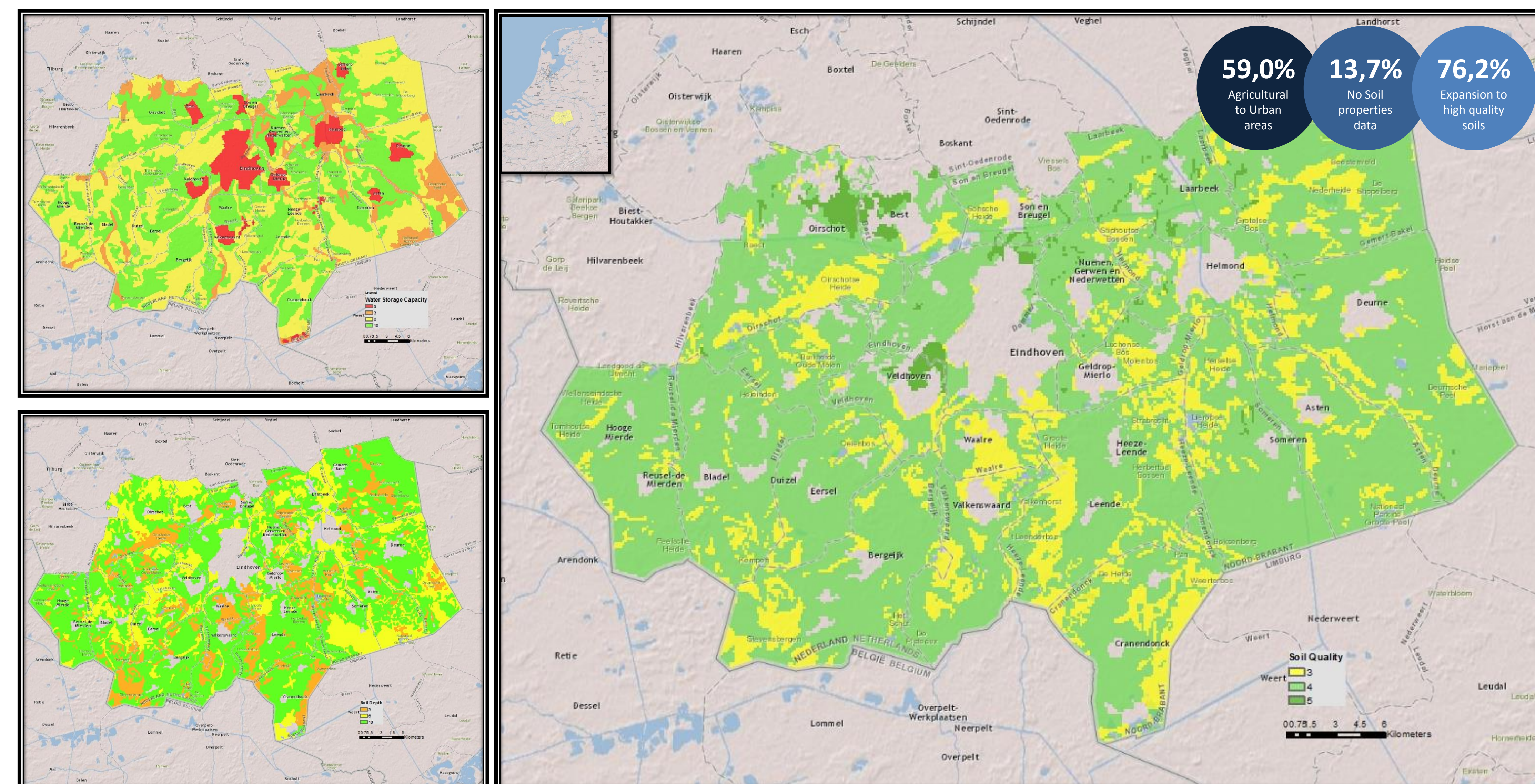
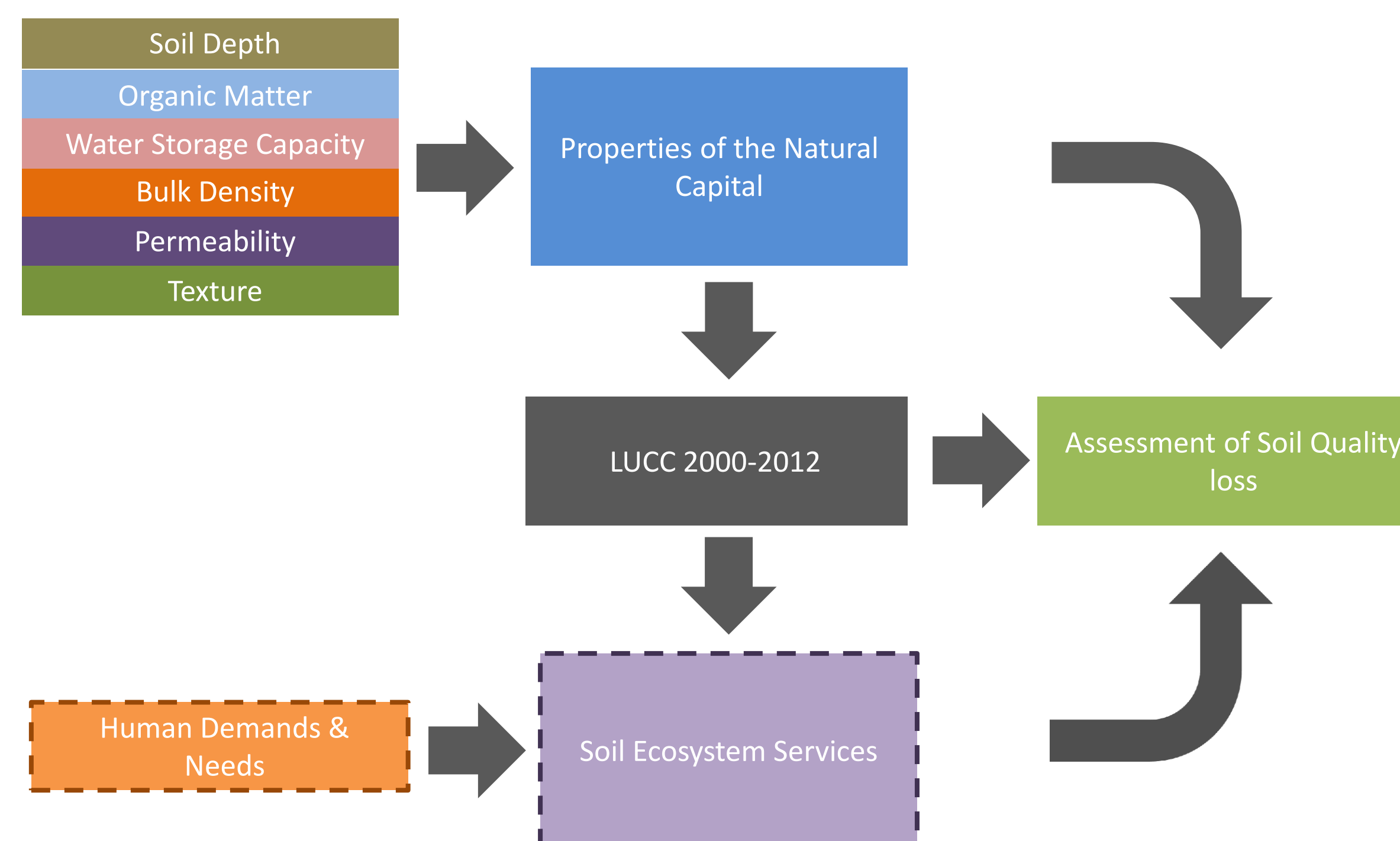


Figure 2. Eindhoven Metropolitan Area assessment. Left: Soil quality assessment. Top right: Water Storage Capacity. Bottom left: Soil Depth.

Comments & Feedback

References

Schwilch, G., Bernet, L., Fleskens, L., Giannakis, E., Leventon, J., Marañón, T., Mills, J., Short, C., Stolte, J., van Delden, H. & Verzaandvoort, S., in press. Operationalizing Ecosystem Services for the Mitigation of Soil Threats: A Proposed Framework. Ecological Indicators.

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