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REsource Management in Peri-urban AREas: Going Beyond Urban Metabolism

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REPAiR

REsource Management in Peri-urban AREas:
Going Beyond Urban Metabolism

The **key challenge** for REPAiR is to **integrate models and methods from, among others, the environmental sciences, geographic sciences and economic sciences with design** and **spatial planning methods**, both on a software and process level.
The integrated models and methods will enable local and regional stakeholders to use the geodesign decision support environment (GDSE) within a workshop setting to develop **fast and reliable alternatives for spatial sustainable development strategies**. The main objective of REPAiR is to demonstrate the feasibility and validity of the GDSE as a tool for enhancing waste and resource management. To successfully develop, test and implement the GDSE, the following project objectives have been defined:

1. To provide decision-makers with **comparative assessments** of different integrated **spatial resource management strategies** (WP2, WP6) by combining forecasting methods (WP4), strategy conceptualisations (WP5) and an integrated assessment of economic, environmental and social sustainability in a collaborative decision support environment (WP4).
2. To develop an understanding of the characteristics, mechanisms and **dynamics of European resource management systems** by analysing the relations between waste flows, environmental and spatial quality, allocation and governance in six peri-urban areas using life cycle thinking (WP3).
3. To better interpret the link between **metabolic flows and urban processes**, by extending the assessment of urban metabolism to include urban driver concepts and urban patterns, as well as environmental and spatial quality, and co-benefits (WP3, WP4).
4. To improve the knowledge and **reliability of waste related data by reversed material flow accounting** (WP3).
5. To implement **living labs in peri-urban areas** across Europe in order to develop, test, implement and assess **place-specific eco-innovative solutions** for resource management to improve environmental and spatial quality and quality of life (WP2, WP5).
6. To understand **decision making structures and processes** in the case study areas with regard to interests and priorities of different stakeholders in order to add transparency to the decision making process (WP6).
7. To develop a framework for **transferring** (a) the key modules of the GDSE itself; and, (b) the solutions and change models that it will produce across differentiated peri-urban areas (WP7).
8. To disseminate and ensure the further uptake of the project's insights on aspects of resource management and GDSE development by **including local and regional planning authorities, NGOs, public and private waste management companies**, and future urban planners in the project. Moreover, open dissemination of insights, tools and technologies is provided across Europe, establishing the foundation for knowledge-based consultancy services that support local implementation of policies and spatial investments aimed at developing a circular economy (WP8, WP2).

The REPAiR consortium consists of a good balance of partners from the case areas. The REPAiR consortium members can rely on their expertise in waste and resource management, spatial decision support, territorial governance, spatial planning and urban design. Moreover, the members have profound knowledge of the six case study areas. This allows us to develop a GDSE that is scientifically sound, apt for local decision makers and adaptable enough to be used in different locations. Together with the members of the user board, the entire REPAiR team comprises a complete range of representatives of the major stakeholders in all the metropolitan regions involved. The REPAiR user board includes key stakeholders for the development of a circular economy like planning authorities and public/private organisations involved in the strategic environmental assessment, and NGOs and industrial actors in waste and resource management.