REPAiR - REsource Management in Peri-urban AReas: Going Beyond Urban Metabolism

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Akronim: REPAiR
Program: Horyzont 2020
Partner wiodący: TU Delft
Partner zagraniczny: 1. Delft University of Technology (TUD)2. Ghent University (UG)3. DiARC UNINA - University of Naples Federico II (UNINA)4. HafenCity Universität Hamburg (HCU)5. Institute for Regional Studies, CERS of HAS, MTA KRTK (RKI)6. Institute of Geography and
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Oficjalna strona projektu

A shift towards a more circular economy is crucial to achieve more sustainable and inclusive growth. The core objective of REPAiR is to provide local and regional authorities with an innovative transdisciplinary open source geodesign decision support environment (GDSE) developed and implemented in living labs in six metropolitan areas. The GDSE allows creating integrated, place-based eco-innovative spatial development strategies aiming at a quantitative reduction of waste flows in the strategic interface of peri-urban areas. These strategies will promote the use of waste as a resource, thus support the on-going initiatives of the European Commission towards establishing a strong circular economy. The identification of such eco-innovative strategies will be based as much as possible on the integration of life cycle thinking and geodesign in order to operationalise urban metabolism. Our approach differs from previous UM as we introduce a reversed material flow accounting in order to collect data accurate and detailed enough to allow for the design of a variety of solutions to place-based challenges. The developed impact and decision models allow quantification and validation of alternative solution paths and therefore promote sustainable urban development built upon near-field synergies between the built and natural environments. This will be achieved by quantifying and tracking essential resource flows, mapping and quantification of negative and positive effects of present and future resource flows, and the determination of a set of indicators to inform decision makers concerning the optimization of (re-)use of resources. The GDSE will be made available on an open source platform. With a budget of 5.1 million euro, REPAiR funds a consortium rich in experience in waste and resource management, spatial decision support, territorial governance, spatial planning and urban design, and has deep knowledge of the six case study areas. REPAiR is supported by a user board, of key stakeholders for the development of CE as well as local authorities, who are heavily involved in the GDSE testing.

Publikacje

Artykuły od 2013 roku

- *Czapiewski Konrad*, Mazurek Damian, *Traczyk Anna*, *Wójcik Marcin*: Waste material flow analysis in the Łódź Metropolitan Area. - European Spatial Research and Policy 2020, 27, 2 - s. 97-114.
- *Remøy Hilde*, *Wandl Alexander*, Cerić Denis, *Van Timmeren Arjan*: Facilitating circular economy in urban planning. - Urban Planning 2019, 4, 3 - s. 1-4.

Abstrakty, recenzje, notatki

- *Czapiewski Konrad*: Urban-rural region shifting to circular economy: Flows & governance. [w]: "Sustainable & Resilient Urban-Rural Partnerships – URP2020" - Book of accepted abstracts. Leipzig: 2020 - s. 78.
- Mazur Marcin, Konopski Michał, *Czapiewski Konrad*: Local self-government as a determinant for the implementation of circular economy in the rural areas of Poland. Diagnosis of the situation in spatial terms. [w]: Socio-economic, environmental and regional aspects of a circular economy. Abstract book of the international conference for the 75th anniversary of DTI, 19-20 April 2018, Pécs, Hungary. Red. Viktor Varjú. Pecs: MTA KRTK RKI Transdanubian Research Department, 2018 - s. 18.

Rozdziały od 2013 roku

- *Arciniegas Gustavo*, *Wandl Alexander*, Mazur Marcin, Mazurek Damian: Eliciting information for developing a circular economy in the Amsterdam Metropolitan Area. [w]: Regenerative territories. Dimensions of circularity for healthy metabolisms. Red. Libera Amenta, Michelangelo Russo, Arjan van Timmeren. Cham: Springer, 2022 - s. 175-192 (GeoJournal Library; 128)