

SUNEX

Formulating sustainable urban FWE strategy by optimizing the synergies between food, water and energy systems

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Abstract

The SUNEX project establishes an integrated modelling framework of advanced tools to model and assess the FWE systems' demand and supply sides and capture their interdependencies through a nexus view that endorses sustainable and efficient solutions for energy, water and food supply for urban regions - of city and surrounding peri-urban areas. The FWE-Nexus concept will serve as central approach to ensure coherent solutions on sustainable use and management.

SUNEX will be applied in the cities Berlin, Bristol, Doha and Vienna, reflecting different socio-economic and climate characteristics and addressing local and remote resource uses among the full FWE supply chains. Starting from the current situation and in co-design with local stakeholders and urban policy makers, future evolution of urban FWE demand and supply will be projected based on consistent scenarios reflecting the prospective future socio-economic and technological development of the considered cities. Moreover, seven selected SDGs are addressed and existing trade-offs and synergies will be identified to ensure inclusive sustainable urban FWE strategies. The scenario results will be analysed to identify possible implementation measures for improvement.

In co-creation with stakeholders and decision makers policy guidelines for the design of sustainable FWE strategies and governance for urban areas will be formulated.

Projektpartner

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