

Vertical Green 2.0

Vertical greening for liveable cities - innovation to facilitate the breakthrough of an old concept

Programm / Ausschreibung	ENERGIE DER ZUKUNFT, JPI Urban Europe, ERANET Co-fund Smart Cities/Urban Futures 2016	Status	abgeschlossen
Projektstart	01.04.2018	Projektende	31.10.2021
Zeitraum	2018 - 2021	Projektlaufzeit	43 Monate
Keywords	urban bioenergy, food, water balance - automated harvest and maintenance for vertical green - co-creation and participative operation models		

Abstract

This project facilitates the transformation of urban areas to more sustainable, efficient and consistent spaces with the extensive use of vertical greening as a progressive food-water-energy nexus. Vertical greening measures comprise multiple important ecosystem services such as passive cooling, thermal heat insulation, urban flood alleviation, bioenergy and possibly food production, enhanced biodiversity, noise reduction etc..

In order to unfold the full potential of vertical green, three focal governance and management aspects will be analyzed, developed and tested for four large mid-latitude cities (Berlin, Vienna, Ljubljana and Taipei in Taiwan) in different geoclimatic zones: 1) integration of vertical green at the building and district scales with habitat, water, heat and energy management, 2) development of technological solutions for large-scale maintenance and automated harvesting machinery and 3) adaptation of design strategies and governance for a secure, city-integrated cultivation and operation concept. Using a transdisciplinary, stakeholder-oriented co-creational approach, we intend to re-think traditional urban greening fundamentally and will combine efforts from mechanical engineering, urban ecology and urban planning, ecohydrology and policy to enable decision-making using a nexus approach that considers the multiple co-benefits and trade-offs of naturebased solutions for the cities of the future.

Projektkoordinator

• Green4Cities GmbH

Projektpartner

• Universität für Bodenkultur Wien