

# 27<sup>th</sup> Newsletter of the UFZ Green Roof Research



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Europäische Union

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Diese Baumaßnahme wird mitfinanziert durch Steuermittel auf Grundlage des von den Abgeordneten des Sächsischen Landtags beschlossenen Haushalts.

Forschungspartner:



UNIVERSITÄT  
LEIPZIG



Praxispartner:



Stadt  
Leipzig

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## Research project ValiGrün - Developing a toolset for the validation of the climate adaptation potential for optimizing the functions of blue-green infrastructures in urban areas

**Research aim** The ValiGrün project is investigating the condition of existing green roofs and how their contribution to climate adaptation can be reliably assessed. To this end, various measurements are being conducted on different green roofs to assess the condition of the vegetation and the effectiveness of the green roofs. The findings will help to maintain and optimize green roofs in a targeted manner and strengthen their contribution to climate-resilient urban development in the long term. In collaboration with the project partners, an integrated knowledge transfer and continuing education concept is also being developed.

### Project partners

#### Helmholtz Centre for Environmental Research – UFZ

Department Systemic Environmental Biotechnology – SUBT (Project coordination)

Department of Monitoring and Exploration Technologies – MET

Department of Urban and Environmental Sociology – SUSOZ

#### Leipzig University of Applied Sciences – HTWK Leipzig

#### Technical University Dresden

#### Leibniz Institute for Tropospheric Research- TROPOS

**Project duration** 1<sup>st</sup> September 2025 – 31<sup>st</sup> December 2027

**Funding** : This initiative is co-financed by tax revenues based on the budget approved by the members of the Saxon State Parliament (No. 100758418). The grant is provided from funds of the European Regional Development Fund (ERDF).



**Kofinanziert von der  
Europäischen Union**



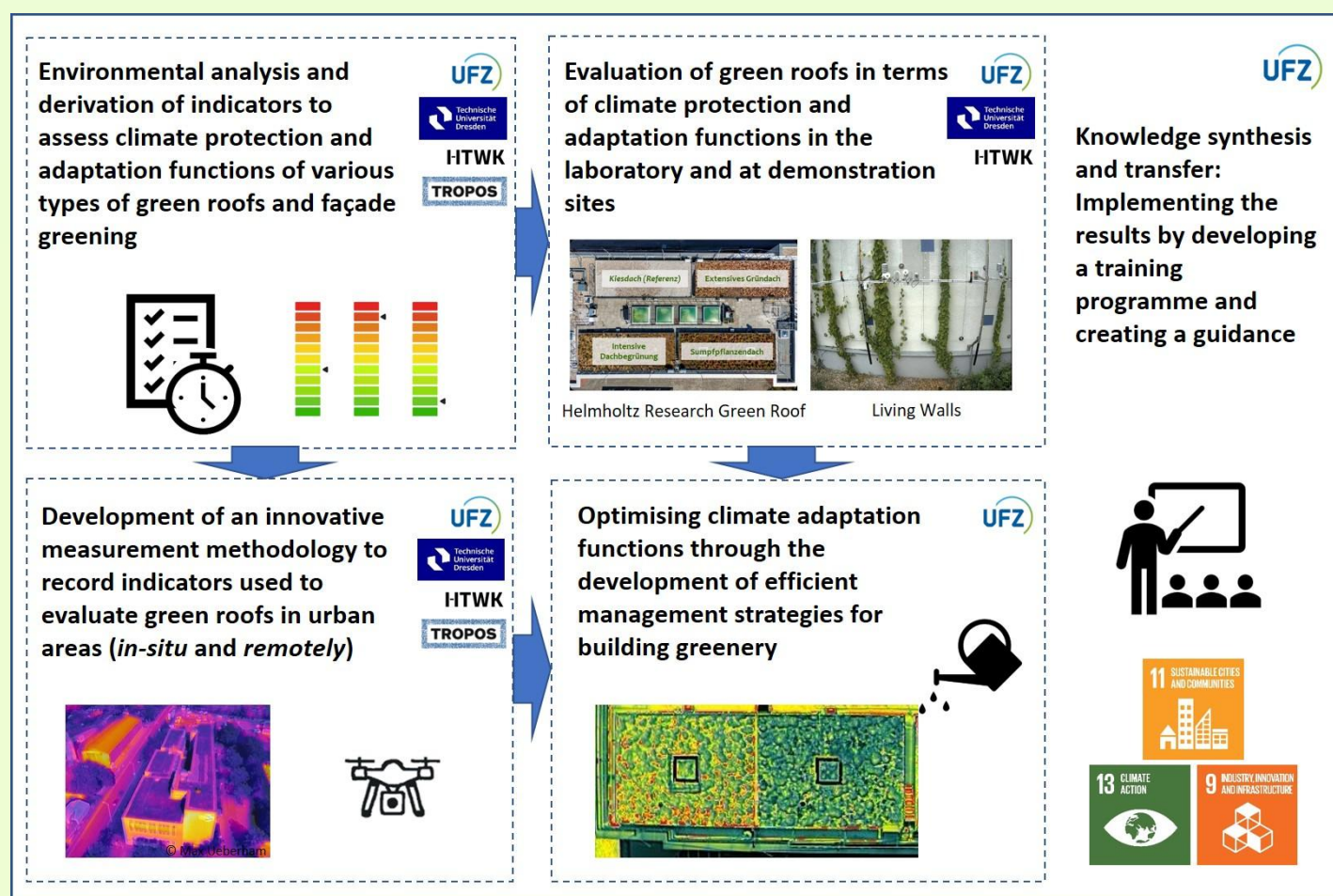
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## Project structure

The ValiGrün project is divided into five work packages (see Figure). After identifying indicators to measure climate protection and climate adaptation functions, these are recorded on twenty selected green roofs in Leipzig. Both on-site measurement systems and remote sensing technologies are used for this purpose. The results obtained will be used to evaluate green roofs and to develop efficient management strategies. The findings from the project will be incorporated into a digital continuing education program currently under development and into recommendations for action.

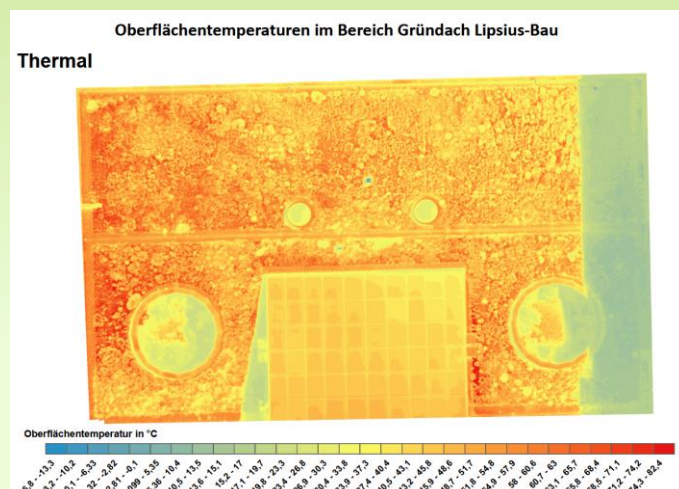
The project and its progress are presented on the website [www.ufz.de/valigruen](http://www.ufz.de/valigruen).



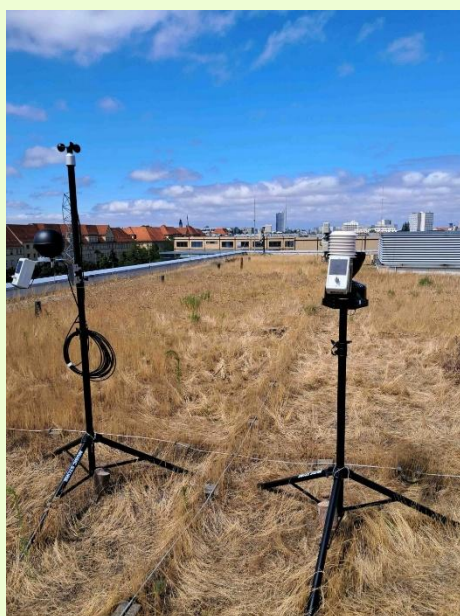


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## Overview of Measurement Methods



The **remote sensing concepts** are primarily based on regular drone flights to quickly and comprehensively assess the condition of the green roofs under study in Leipzig. The image shows the results of the flight over the Lipsius Building at the University of Applied Sciences Leipzig (HTWK). Clearly visible are the differences in the density and composition of the vegetation (left), as well as the significant variations in surface temperatures due to the roof's orientation and surrounding buildings. These factors result in differences in solar radiation and plant water requirements (right).

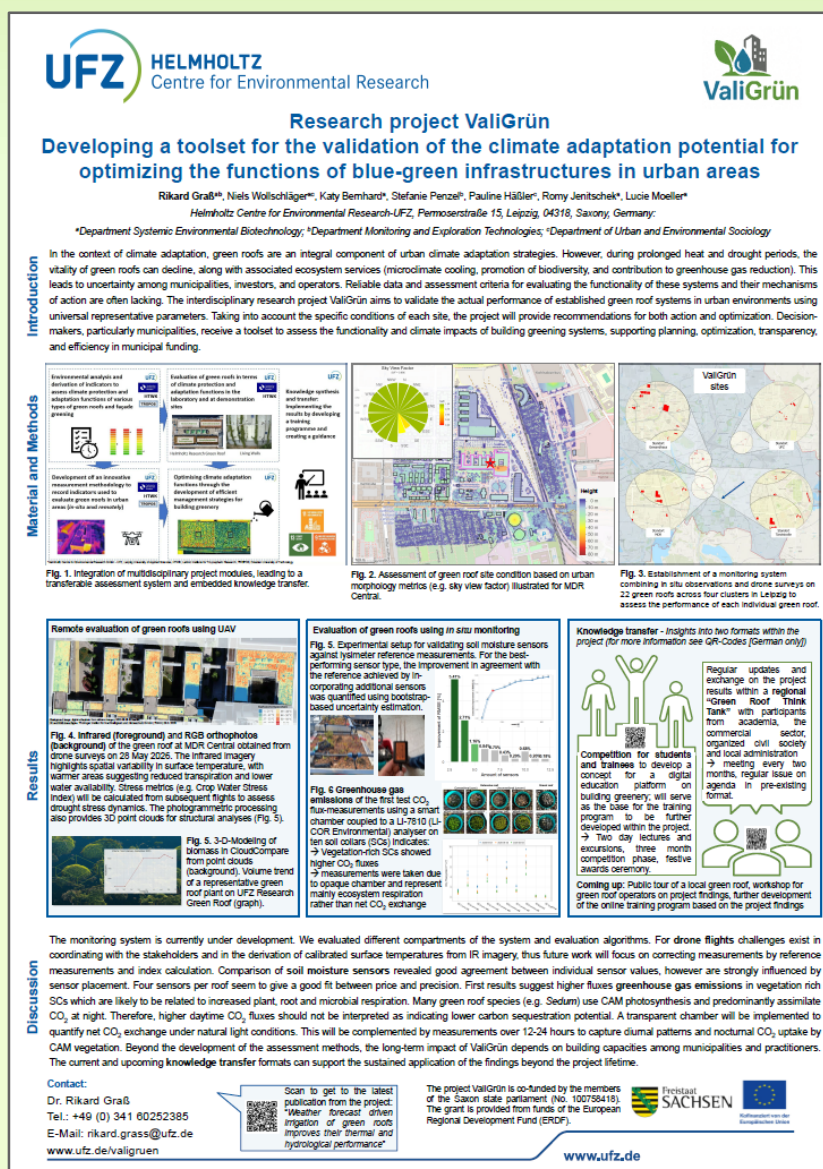


Various systems are used for **on-site measurements**, primarily to study the water and temperature balance on rooftops: microclimate sensors (left, © Rikard Graß, UFZ), substrate moisture and temperature measured using spot-sampling methods (center, top, © Rikard Graß, UFZ), spatially resolved systems based on optical fibers (center, bottom, © Dennis Meßerer, HTWK), and gas flow measurements (right, © Stefanie Penzel, UFZ).

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## Knowledge transfer

The ValiGrün project was presented to experts at the World Congress on Green Buildings in June 2026 in the form of a poster. The presentation was also published in the conference proceedings: <https://www.gebaeudegruen.info/weltkongress-gebaeudegruen-2026/> (pp. 240–241).



The initial findings will be presented on September 4, 2026, as part of the 21<sup>st</sup> meeting of the Leipzig Green Roof Think Tank, which brings together experts from academia, local government, and the field. This event will be held in a hybrid format; if you are interested in participating virtually, please contact us at [forschungsgruendach@ufz.de](mailto:forschungsgruendach@ufz.de).

The development of the education program on green roofs is the focus of this year's 6<sup>th</sup> Leipzig Green Roof College (see the 26<sup>th</sup> Newsletter of the UFZ Green Roof Research).