

Leipzig BlueGreen II – Blue-Green Neighbourhood Development in Leipzig

The funding measure Resource-efficient urban districts for the future (RES:Z)

The city of Leipzig has taken on the challenge of further developing central infrastructures such as the sewage network in a climate-sensitive way. Advocates of water-sensitive urban development have encouraged a paradigm shift among experts towards decentralised, nature-based solutions. As a result of climatic changes such as droughts and heavy rainfall, urban stakeholders are now committed to implementing resource-efficient transformation of urban neighborhoods.

The German Federal Ministry of Education and Research (BMBF) is funding the project as part of the funding measure Resource-efficient urban districts for the future (RES:Z). The funding measure focuses on the resource-efficient use of water, land, material flows, energy and urban greenery in urban areas. The goal is integrative planning and sustainability-oriented management of urban neighbourhoods with the participation and coordination of all relevant stakeholders.

Climate Change Enforces and Enables the Sustainable Transformation of Urban Infrastructures

According to climate data from the German Meteorological Service (DWD), the city of Leipzig was one of the major German cities with particularly low annual precipitation in 2018 and 2019, resulting in dangerously low soil moisture levels. The amount of water available to plants is steadily decreasing and is becoming visible by large tree losses that occurred in 2019 and 2020, when more than 2.000 trees in public green spaces died. At the same time, the city of Leipzig must also respond to an increase in heavy rainfall events, putting enormous pressure on existing infrastructures such as networks, and centralised wastewater treatment plants. These challenges are further exacerbated by a increasing levels of sealing due to pending new construction and redevelopment in this rapidly growing city.

A major challenge now is to translate political goals and resolutions into municipal action. Concrete measures need to be defined for stakeholders, implemented and consolidated in the transformation process.

A Newly Built Urban Quarter with More Than 2,000 Flats Becomes Blue-Green

In the first funding period, blue-green infrastructures were successfully tested on a pilot scale and in the preliminary planning process for the new development area “Eutritzscher Freiladebahnhof”. The prospects for



Drone View of the Green Roof Research Infrastructure at the Helmholtz Centre for Environmental Research – UFZ.

implementing the results of the first funding period are enormous: this applies both to the implementation of the blue-green planning and modelling scenarios, the application of the technological solutions obtained therein, and also the co-design processes for the incorporation of the results by the city of Leipzig. The high level of participation in our workshops and the numerous nationwide interview requests have shown the general interest in the research topic and in the transfer of the results to other locations.

The scenarios and technologies developed for the planned new neighbourhoods, as well as for existing neighbourhoods, will serve as a blueprint for other locations. The results of the project will be recognised beyond the state of Saxony. Recommendations for action for a paradigm shift in urban water management have also been developed at the federal level.

Anchoring Blue-Green Urban Development Throughout Leipzig and Beyond

Valuable communication structures were established in the first funding period, and these are now being expanded as a model in the so-called “Kolonnadenviertel” as part of the upcoming portfolio renewal of the Leipzig housing association (LWB). At the same time, planning and decision-making processes for the city as a whole are being optimized through the preparation of potential analyses for investment planning for the bluegreen retrofitting of existing neighborhoods. In addition to the evaluation of public property, the preparation of a Leipzig action plan for the future use of blue-green investments is of great importance. Continuation beyond the project period is ensured by the support of the inter-agency Steering Committee for “Water-Sensitive Urban Development”. The committee evaluates, prioritizes, and prepares the implementations of bluegreen urban development. In the second phase of the project, the necessary organizational and legal frameworks will be developed, evaluated and introduced as recommendations for political decision-making processes.



System setup of retention green roof in the backyard on top of an underground parking garage, which can store large amounts of water in case of heavy rainfall and thus provide needed irrigation water.

Funding initiative

Resource-efficient urban districts for the future (RES:Z)

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Leipzig BlueGreen II – Blue-green neighborhood development in Leipzig

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