

GartenLeistungen II – Evaluation of the multidimensional services of urban green

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

In cities, competition for undeveloped land is becoming increasingly intense. Urban gardens and public parks are often threatened. Yet they not only offer recreation and an experience of nature, but also make an important contribution to sustainable urban development by regulating water cycles and the microclimate. GartenLeistungen II is committed to making the positive effects of urban green visible in administration, planning and politics, and better utilized for sustainable urban development.

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 neighborhoods with the participation and coordination of all relevant stakeholders.

Urban green as the key to sustainable urban development

Urban gardens and public parks compete with other types of use for scarce space in urban areas. However, they are of central importance for sustainable urban development because they have a major impact on the urban climate, water cycles, biodiversity and the quality of life in cities. The GartenLeistungen II project aims to highlight these services in order to improve the decision-making basis in consideration processes for the relevant stakeholder groups. To this end, the processes already initiated in municipal planning and politics will be consolidated and transferred to municipal parks in the cities of Frankfurt and Berlin as well as allotment gardens in Leipzig. In addition, innovative approaches to solutions for a resource-efficient city will be further developed and the exchange between science and practice will be promoted through new associations in the real laboratories, expert discussions, networking meetings and the national conference.

Multidimensional services of urban gardens and parks

In the first phase, the project team recorded the multi-dimensional services of selected urban gardens and parks, generating sound information for policy consideration decisions in the implementation of sustainable land management. The researchers demonstrated that urban green oases can create significant values ranging from 200,000 euros to

up to 10 million euros per year, depending on their amenities, location, and size. For this purpose, the team determined and evaluated the retention of heavy rain, the cooling of the environment, the cultivation of food, climate protection through carbon retention, health effects through improved air quality, and also surveyed the social and cultural value of urban green spaces via a survey. In living-labs, scientific partners, along with the city administrations of Stuttgart and Berlin and representatives of park and urban garden projects, tested innovative concepts to enhance sustainable land and material flow management.



The contributions of the community garden himmelbeet are worth 1.5 million euros per year to the urban society.

Consolidation of a blue-green infrastructure in the urban space

In the second phase of the project, the processes initiated in Berlin and Stuttgart will be consolidated in municipal planning and policy and extended to other cities such as Frankfurt am Main, Leipzig and Stuttgart.

GartenLeistungen II thus develops conceptual prerequisites and concrete practical steps for the rapid dissemination of blue-green infrastructures in urban spaces. The transfer of the extended economic evaluation of the services of gardens, parks and green spaces carried out by the Institut für ökologische Wirtschaftsforschung (IÖW) provides an important further contribution to the discussion on the scope and transferability of economic evaluations of urban ecosystem services. The results of the second project phase are to be incorporated into current municipal processes in cooperation with the city administration. With a conference, GartenLeistungen II also strengthens the knowledge transfer of the project results and the nationwide networking of relevant actors from science, administration, politics and civil society.



This blue-green prototype in the Park am Gleisdreieck uses greywater for the vertical cultivation of lettuce.

Funding initiative

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

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GartenLeistungen II – Implementation, consolidation and transfer of approaches to socially, ecologically and economically sustainable land and material flow management in urban gardens and parks

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