

International Green Roof City Network

Case Study Stuttgart, Germany



1) City Data

Location

Stuttgart is the capital of Baden-Württemberg, a federal state in southern Germany

Area

207,614 km²

Population

590,000

Other Information

Stuttgart's climate is characterized by its location in the river Neckar basin, shielded by the Black Forest to the west, the Swabian Alb to the south, the Schurwald Forest to the east and the Stromberg and Heuchelberg area to the northwest. Its location affects all climatic elements including radiation, air temperature, humidity, precipitation and wind. Stuttgart's landscape is characterized by variety, which arises from its geological conditions. The fertile agricultural area (the Gäuflächen) lies to the north, the Keuperbergland, which merges with the fertile lands of the Filderebene, is to the south. Another characteristic is the south to north cut through the urban area by the Neckar Valley. Stuttgart's centre lies next to the Neckar River in a Keuper basin (approximately 240 meters above sea level) which is almost completely surrounded by higher ground (up to 500 meters above sea level). One entrance to the Neckar Valley is via the Nesenbach River to the northeast. The Nesenbach runs into a narrow valley to the southwest, which is very important for Stuttgart's aeration.

2) Description of the local Green Roof Policy Initiative

2.1 Start

Year 1986

2.2 Expected environmental benefits

- Stormwater management
- Biodiversity
- Urban Heat Island Effect
- Air Quality
- Climate Change
- Energy Savings
- Beautification of the City

2.3 Environmental benefit that is the carrier of the green roof initiative

Bioclimatic and air hygiene shortcomings like high dust load, the overheating of inner urban areas, a lack of night time cooling, very dry and partly odour laden air.

2.4 Support instruments that are used by the municipality to promote green roofs

- Building, landscape, energy, or other code or policy (e.g. land-use plan, green roof bylaw, zoning code, green factor, design regulations, etc.)
- Reduced stormwater fee
- Financial Incentives (1986-2009, 2014-ongoing)
- Tax Credits
- Favourable Credit Terms
- Density Bonus
- Demonstration Projects
- Ecological Labels
- Press, Internet
- Education and Information (e.g. seminars, conferences, green roof tours, etc.)
- Research
- Local Green Roof Guidelines
- Consultancy offer for constructors, investors, building owner
- Other instruments

Description of support instruments

Building, landscape, energy, or other code: All new development plans require flat or pitched roofs (up to 12 degrees) to be greened.

Reduced stormwater fee: 50% reduction for green roofs

Financial Incentives Subsidies are only for existing buildings or new buildings when the construction plan does not already require a green roof. Since 1986 (until 2009) nearly 430 projects and 66,000 m² of green roofs have received funding. The subsidy was 17.90 Euro / m² (50 % of the installation and material costs, requirement 12 cm substrate height). The owner must maintain the green roof for at least 10 years. In 2014 a relaunch of the incentive programme took place.



Demonstration Projects: City parking garage and department of environmental protection

Press, Internet: Brochures

3) Number and area of green roofs

approx. 1 - 2 million m² (including landscaped underground garages)

4) Challenges and future prospects

- Relaunch of the financial incentive programme
- Urban heritage conservation in the city center
- View at the city roofscape from the surrounding hills

5) Contact persons

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6) Internet resources

http://www.stadtklima-stuttgart.de/stadtklima_filestorage/download/AfU-Heft-3-2010-Web.pdf
(German/English language)

<http://www.stuttgart.de/gruenprogramm>
<http://www.stuttgart.de/img/mdb/item/544697/102386.pdf>
(German language)