

International Green Roof City Network

Case Study Tokyo, Japan



1) City Data

Location

Tokyo is the capital of Japan. The Tokyo metropolitan prefecture is an area of high population density on the Honsu Island. The eastern area is made up of 23 wards (City of Tokyo until 1943) and the western region is made up of 26 municipalities.

Area

2,187.66 km²

Population

13,184,161

Other Information

Summers are warm and rainy and winters are sunny and dry. Tokyo is known for its urban heat island effect which is caused by its consolidation.

2) Description of the local Green Roof Policy Initiative

2.1 Start

In the year 2000 the Tokyo metropolitan prefecture administration included green roofs in their 1985 advisory guidelines for greening the city. The “Plan for a green Tokyo” also received funding for the first time with the result that the number of green roofs grew. After the Tokyo metropolitan prefecture administration passed a directive for green roofs in 2001, 19 wards and one municipality in the Tokyo prefecture made funding available.

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

An urban ecological problem in Tokyo is, above all, the urban heat island effect. The number of tropically hot nights has doubled between 1982 and 2001. The Tokyo metropolitan prefecture administration supports green roofs in order to solve this problem.

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
- 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: Accessible roofs on new buildings or building extensions with a roof area of 1,000 m² or more must be at least 20 % greened.

Financial Incentives: The Tokyo metropolitan prefecture administration does not offer direct funding for private investors. The public foundation of the Tokyo metropolitan prefecture provides funding for green roofs on public buildings to cover up to 50 % of installation costs, or 2,000 Euro (whichever sum is lower).

Favourable Credit Terms: The industrial union of the Tokyo metropolitan prefecture offers favourable credit terms for companies which install a green roof.

Density Bonus: The urban planning office allows the approved floor space ratio of a building to be exceeded if green roofs are included.

Demonstration Projects: In 2002 the Tokyo metropolitan prefecture environment office greened the parliament buildings of the Tokyo metropolitan prefecture ward of Shinjuku. The 750m² green roof is home to 17 different kinds of plants. Public buildings are often equipped with a green roof to set a good example and to encourage others to follow step.

Education and Information: The environment office has put together a brochure about green roofs as well as a collection of examples from existing buildings.

Research: The correlation between green roofs using various kinds of vegetation and the reduction in the urban heat island effect was researched in 2003.

Local Green Roof Guidelines: The Tokyo wards are providing exact guidelines for green roofs in their own characteristic ward areas.

Consultancy offer for constructors, investors, building owner: Citizens, home owners and green roof companies can get advice on green roofs from the environment office. The environment office established a green roof forum for citizens in 2002 and a seminar on green roof incentives, especially for green roof companies, in 2007. The Tokyo metropolitan prefecture explains all elements of green roofs and has led the way for other cities in Japan to support green roof sponsorship. The Tokyo wards are also involved in intensive communication with ward citizens and green roof companies and are providing financial support.

3) Number and area of green roofs

1,345,250 m² (17.06.2011)

4) Challenges and future prospects

- Decrease of green roof installations
- Integration of facade and indoor greenery
- High installation and maintenance costs
- Improvement and development of the Green Roof Policy

5) Contact persons

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6) Internet resources

<http://www.kankyo.metro.tokyo.jp/en/greenery/>

http://www.kankyo.metro.tokyo.jp/climate/other/countermeasure/countermeasure/english_version.html