

---



## Rooftop Garden

Monthly TOPICS: HOT!

Staff Writer: Yoshie

Tokyo Metropolitan Government have revised the afforestation standard of “Regulation on Conservation and Restoration of Nature of Tokyo City” and “Guidance on Afforestation of Tokyo City”, to obligate the “greening of rooftop” when remodeling and constructing buildings. This standard, which will be effective from April 1, 2001, will be the first to “obligate” the “greening of rooftop”.

Public facilities with ground area of 250 m<sup>2</sup> and over and private facilities with ground area of 1,000 m<sup>2</sup> and over must submit the “Afforestation Plan” to create green area in 20% of it’s rooftop with trees, lawn, plants, and flowers.

Tokyo Metropolitan Government hopes to increase the current greening ratio of its 23 wards of about 29% to 32% in 15 years. Currently, in Tokyo 23 wards, the rooftop area of commercial area and semiindustrial area is about 8,000 hectares, and with 20% afforestation, some 1,600 hectares of green area is expected to realize.

The following four points are aimed to be achieved from the rooftop afforestation:

1. Curbing of heat island effect
2. Reduction in energy cost
3. Improvement in building durability
4. Clean air

In order to plant greens in the rooftop, introduction of waterproof structure, sufficient drainage and watering systems, and artificial light soils is required. This is very costly operation and may discourage the building owners to remodel or construct new buildings. However, the afforestation regulation applies to the private facilities with ground area of 1,000 m<sup>2</sup> and over, which means only large buildings with financial power are effected, excluding the small-medium size buildings without. Therefore, this will not lead to a situation where old buildings are left abandoned because the owners lack the financial background to renew them.

Increase of property management (PM) costs may also be another concern. However, conventional regulation already requires an afforestation, which is 20% of (ground area - construction area). Therefore, dramatic rise of maintenance cost is unlikely to occur. The PM costs may even be reduced due to the reduction of energy cost through the rooftop greens.

According to the Rooftop Development Research Institution (Okujo Kaihatsu Kenkyujo), only other city which obligates the rooftop afforestation is Mannheim, Germany. Since the implementation of Afforestation Regulation in 1989, the “grass roof” and “rooftop garden” have been very successful and enjoyed by the citizen of Mannheim.

Tokyo Metropolitan Government also operated an experiment from April to September 2000 before the official implementation, where 109 out of 119 subject buildings willingly cooperated by submitting the afforestation plan. Even the government officials were surprised by the willingness of the corporations.

In the Tokyo real estate market, most where development used to be only office buildings, is now changing to build more complex type with mixture of residents, hotels, and commercial facilities, such as a development of waterfront area. Tenants’ needs are now expanding to wide variety of areas such as entertainments and relaxation, which seemed to be somewhat neglected in the past. Together with the trend that tenants moving back to central Tokyo, an attractive rooftop garden may become one of the tools to attract tenants who enjoy the beauty and relaxation it offers.

