

A study on the diffusion of eco-friendly building in the city after
Comprehensive Assessment System for Built Environment Efficiency is introduced

The purpose of this study is to clarify the actual construction trend of Green office building in order to identify immanent problem in current environmental policies. This study conducts the survey of environmental rating in Nagoya based on CASBEE rating system and sustainable planning regulations. The research uses data of CASBEE assessment sheets registered within 5 years from Nagoya city office. The advantage of choosing Nagoya as the target of this survey is that the city owns the most number of CASBEE assessment sheets available amongst Japanese major cities. Thus, reliable survey result can be expected.

Comparative analysis begins by extracting office building' s sheets from the all type of building' s assessment sheets open to the public at Nagoya city web site. As a result, 110 sheets were obtained with building' s detailed environmental performance evaluation. These 110 buildings are then compared by its building scale, BEE value and environment assessment category with non-energy related subjects such as location, the building-to-land ration and rental rate.

As a result, there is the trend verified that the environmental rating of large scale buildings where the total floor area exceeds 10000m², will continuously improve. On the other hand, the environmental rating of middle to small scale buildings where the total floor area smaller than 10000m², is generally low with a few exemptions. As a fact, these cases occupy about 60 percent of all the recently planned office buildings.

There are specific environmental assessment categories that mark low rating in middle to small scale buildings. Theses categories are Q3 and LR3 in CASBEE assessment. The average score of these categories are 2.2 while standard score should be 3. These categories relate to the subject of "environmental load for the surrounding area" . The subject is actually specified as priority items in Nagoya' s environmental policy since 2011.

In conclusion, It is clearly observed that there is the construction trend of office buildings in Nagoya that does not meet Nagoya' s environmental policy. For those buildings, improvement is needed on CASBEE categories of Q3 and LR3.

Key Words :

Green Building, CASBEE Nagoya, Sustainable Planning Regulations, Environmental Rating, Sustainable Office Building,

Graduate School of Media and Governance

Keio University

Terumoto Mizushima