## Japan Geoscience Union Meeting 2015

(May 24th - 28th at Makuhari, Chiba, Japan)

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HGG01-P02

Room: Convention Hall

Time:May 27 18:15-19:30

## Impact of planters in alley environments: A case study in Kyoto area

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#### Introduction

In many previous studies, it has been shown that greenery contributes to landscape appreciation in urban areas. However, it is difficult to conserve green space in urban areas. However, residential houses constitute a large part of urban land use. In addition to public administration, residents also should be encouraged to grow plants in their private gardens to create a greener environment in future.

Planters could be considered to be mobile green spaces and can be placed in environments without soil. Therefore, planters enable development of green environments in urban spaces outside gardens, thereby contributing to greener city environments. In particular, placing planters in alleys could improve the amount of greenery.

Alleys are spaces which are close to people's lives. They tend to have a double role as a public thoroughfare and a private space for the local community to meet. If planters are placed in these alleys, they could possibly serve as a trigger for conversation, a connection between neighbors, and a place for the local community to interact with each other.

The present case study in Kyoto area, examined the function and usefulness of planters in terms of their impact on the local resident consciousness. Moreover, this study also examined the relation between the number of pot plants and condition of environment. The primary purpose of this study was to examine whether the planters contributed to landscape appreciation in the alley and in the local community.

#### Methods

From an urban area in Kyoto, 126 alleys were selected for this study. A survey regarding the alleys was conducted with 278 residents living around alleys.

#### (1) Text mining approach

A text mining approach was applied to analyze the responses about the impression of the alleys. Correspondence analysis and cluster analysis were also applied for the analysis.

#### (2) Physical environmental condition

We counted the number of planters in each alley. Further, we examined the relation between the number of planters in, and the width and forms of the alleys. Alleys were classified into six categories, identified by direction of movement and forms, and 5 categories as per their width, based on measurements of 2 meters.

### (3) Resident consciousness

We investigated activities of neighborhood community and degree of peoples' friendliness in each neighborhood.

#### Results

#### (1) Text mining approach

Frequent key words regarding the residents' comments on the alley were identified and grouped. The results showed that an extension of commodities, for example, "pot plant," "bike," and "bicycle," were representative of objects found in the alleys. "Green condition" was also one of the 5 concepts residents recognized when classifying the alley.

#### (2) Physical environmental condition

A correlation was found between the number of planters and alley forms as well as between the number of planters and the width of the alley. It was found that many planters are placed in narrow alleys.

#### (3) Resident consciousness

It was found that residents who placed many planters in the alleys frequently used the space for chatting and sharing something with the neighbors, thus increasing the activities in the neighborhood community.

#### **Considerations**

Residents believed planters to be important parts of the alley as well as of the greening of the environment. However, alley width and forms affected the number of planters which were placed in the alleys. It was found that in many cases, the residents' consciousness prompted them to place the planters. Further, because potted trees and flowers require maintenance, neighbors often met each other in the alley, which encouraged and developed neighborhood participation. Therefore, it could be said that the greening of the alleys contributed to both the general urban landscape and the development of the local community.

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