Assessment of the Living Environment of Hirasuna, Oikoshi and Global Village Dormitories in the University of Tsukuba.

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1. Introduction

Students' living environment is significantly important in terms of their campus life. The university established and developed dormitories to provide students with a good living and studying environment and to contribute to a fulfilling student lifestyle through community living. The living environment of dormitory greatly impacts students' well-being. Therefore, questions related to the dormitory situation of students have become an important issue in public and social considerations. The study to evaluate the living condition of the dormitory is necessary to be conducted.

2. Objective

The main target of the study is to examine and evaluate the conditions of students' dormitories in the region of Hirasuna and Oikoshi from various standpoints, such as secure, aesthetic, economical, convenient, healthy and cultural perspective.

3. Methodology

The methodology is presented in Figure 1. Firstly, the data are collected using manual GPS and survey123. GPS is used for marking the location of the dormitory building. Then, survey123 is applied to identify the condition of dormitory building based on six criteria. Besides, the conditions are recorded and assessed using Logic Scoring of Preference (LSP) and Natural Breaks (Jenks) methods. The score is a range of 1-4 from lowest to highest. The dormitory environments are evaluated and categorized into 4 groups: excellent, good, average, and poor. Finally, the results are plotted and visualized using spatial interpolating.

4. Result

Based on field survey, there are in total 34 dormitory buildings located in the Hirasuna-Oikoshi area, including 7 buildings in Hirasuna, 16 buildings in Oikoshi, and 11 buildings in Global Village. The maps of convenient, healthy and comprehensive condition evaluation are shown in Figure 2-4. Overall, the living environment of Global Village is better than Hirasuna and Oikoshi according to their average score (Global Village: 3.1, Hirasuna: 2.3, and Oikoshi: 2.2). Oikoshi 22-24 and Hirasuna 10 building are the oldest constructed, and their secure conditions are worst. Their emergency exits have always been unlocked and frequently resulted in the theft affairs. While Global Village A-K buildings are located in an excellent situation because of the great facilities welfare and newly built environment. 26 facilities including parking lots, bus stops, convenience shops, tennis courts, Kasumi market, etc. are used for assisting the identification of convenient dormitory conditions based on network analysis. The most convenient buildings are Global Village B and Oikoshi 21. The health conditions of dormitory are judged based on noise and cleanness. Oikoshi 25-27 are the quietest and cleanest buildings, while the environment and facilities of Oikoshi 22-24 and Hirasuna 10 should be improved and renovated.
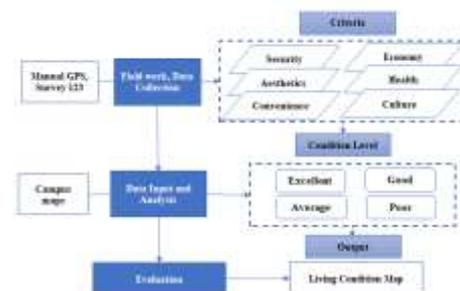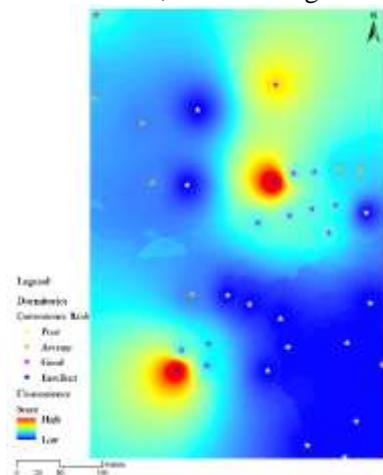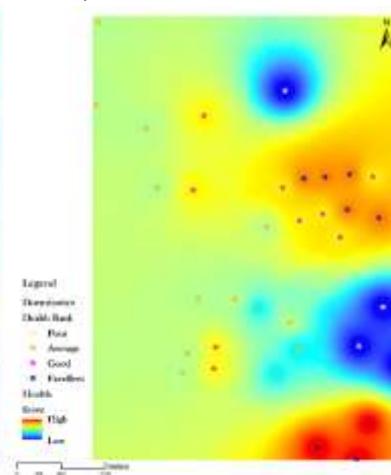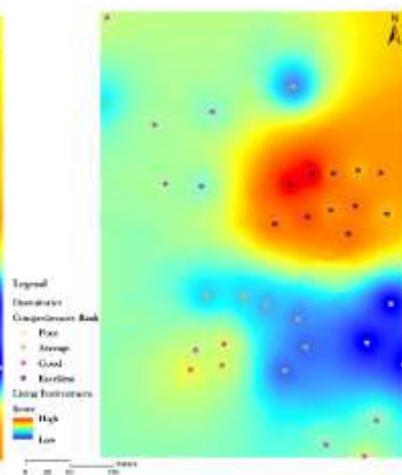

Figure 1. Flowchart of this study

Figure 2. Convenience condition

Figure 3. Health condition

Figure 4. Comprehensive condition