Review of: "Designing for Social Sustainability: How Urban Environments Influence Crime"

Hideki Takebayashi[1]

1 Kobe University

Potential competing interests: No potential competing interests to declare.

This study analyzed the relationship between the urban environment, as represented by the urban heat island phenomenon, and the number of crimes. Although very interesting, I judged that this manuscript should not be published as an academic paper because of the inadequacy of its analytical methodology as shown below.

There are a number of inadequacies in the validity of air temperature data used in the analysis, as follows.

Since it is obvious from previous studies that the urban heat island phenomenon varies with season, weather conditions, and time of day, the monthly average temperature cannot be used to characterize the phenomenon. It is necessary to use air temperatures on the day and at the time of the crime.

Since the urban heat island phenomenon is represented by the difference between urban and suburban temperatures, it is inappropriate to use the monthly average temperature at a single location. The temperature difference between two points must be used.

It is necessary to objectively explain that air temperatures measured at a particular point used in this study are representative of the spatial distribution of air temperatures in the target district from which the data on the number of crimes were obtained. Is the data measured in the targeted district? Is air temperature distribution within the district small enough? The location of the crime and air temperature measurement points must be consistent.

The various monthly average temperatures used in Table 1, Table 2, and Figure 3 represent seasonal temperature changes, but do not directly represent the effects of the heat island effect or global warming. These monthly mean temperature data (horizontal axis in Figure 3) are dominated by temperature changes with the month.

Figure 4 does not even show the relationship with air temperature.