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Internal Dynamics of a Sustainable City: The Case of Nilai Municipality Council

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ABSTRACT

This paper is based on the premise that spatial relationships and space-time activities contribute to the liveability of city. The first part of this paper discusses the sustainable city concept using the idea of liveability. The paper then presents the scenario of the Nilai Municipality to elucidate on what makes for the vibrancy of a city. The paper concludes with some thoughts on sustainable urban living in an intermediate city.

ABSTRAK

Dayahuni sesebuah bandar itu terikat kepada hubungan ruang masa dan aktiviti-aktivitinya ruang-masa yang melihat kelestarian sesebuah bandar itu terhasil dari kekukuhan dayahuninya. Kertas ini menggambarkan bagaimana satu penelitian dayahuni berdasarkan pola ruang masa penduduknya dapat dilakukan dengan menggunakan Bandar Baru Nilai sebagai contoh. Akhirnya apa yang melangsungkan kelestarian kehidupan di sebuah bandar perantara dibincangkan.

INTRODUCTION

Much has been articulated and debated about the sustainable city in recent years (Haughton & Hunter 1994; Castells 1996; Rogers 1998; Newman & Kenworthy 1999; Newman 2004; Egger 2006).

An often-quoted concept of the sustainable city is one with a sustainable economic growth and from the accumulated wealth, develops programmes for socio-economic advancement for the urbanites and the country are pursued within the boundary of ethical responsibility to nature. This is basically a productionist approach to the definition.

However, the sustainability of a city can also be analysed from a consumerist approach, basically from the city's user perspective. It is an approach that emphasizes people's response to space produced by the city, and in turn creates their own space. A study on liveability is a study on people's strategies, and the result of these strategies on the cityscape. We argue that the liveable city concept represents such a perspective of the sustainable city and that sustainability can be glimpsed through the everyday life in the city.

Studies on spatial relationship and space-time activities contribute significantly towards the understanding of liveability. The first part of this paper discusses sustainable city, using the liveable city concept. Secondly, the space-time activity of city will be drawn from the case of Nilai Municipality (Figure 1) to show the vibrancy of life in the town leading back to the idea of sustainable living.

Building A Liveable City

The essence of sustainable city is captured through the concept of liveable city. A liveable city is simply about the quality of life as experienced by the residents of the city. (Timmer & Seymoar 2006). In this context, sustainable city is the ability to sustain the quality of life we value or to which we aspire. In operational terms, it is often viewed as enhancing the economic, social, cultural and environmental well being of current and future city residents. The urban liveability is a relative rather than an absolute term whose precise meaning depends on the place, time and purpose of the assessment and on the value system of the assessor (Pacione 1990).

The liveable city has been discussed among researchers, planners and decision makers to get a consensus view on what 'liveable city' is all about (Pacione 1990; Van Kamp 2003). Drawing from an expanding literature on the subject of liveable city, we may summarize the features of a liveable city as follows:

The city economics is growing with sustainable industrialization and business input. The accumulated wealth generated by the urban people makes socio-economic development possible. Meanwhile, there is an increasing awareness and in the number of pro-active programmes for urbanites to conserve nature through out the urban area. The activities of the programme include recycling campaign, planting trees by schools children and others, to make the city lively and healthy. The city is also safe from major crimes such as rape, murder, theft and robbery. Overall, the citizens feel that the city is congenial, safe, healthy and lively with a strong sense of belonging.

Internal Dynamics of City Life

In terms of understanding the overall daily space-time vibrancy of the city area, the concept of urban metabolism is used to illustrate space-time circulation of people. Urban metabolism was introduced by Wolmann (1965) and has been further discussed and extended by Newman and Kenworthy (1999), both of them argued that the model acknowledges the city as a system, operating in a similar way to biological ecosystems, and in that it balances input of resources with outputs of waste. The city as a system is vulnerable as other natural systems are. Even if a balance is achieved between inputs and outputs, the city may not necessarily be sustainable due to the consequences of unexpected disturbances.

While a system is often viewed from this resource to waste balance perspective, this paper argues that a system can also focus on process dynamics, emphasizing on the flows within the system. Using activities as resources, the pattern of activity flows can be seen as the dynamics within the system. If the flows are not limited to only one part of the city then they are unencumbered, and the city's liveliness are spread all over the city implying higher liveability. Flows that are constrained to only a few areas have a tendency to create not only congestion, but various other imbalances including locational rent, crime and health problems due to neglect and abandonment. Strong activity concentrations at central areas enhance demand and thus locational rent. Areas that are deserted for most of the day or for long periods of time are prone to take over by criminal or socially negative activities. These areas also pose many public health problems especially dengue. A healthy metabolism of the city requires a free flow of activities. Space-time patterns of these activities can provide an understanding into its current situation.

Based on this concept of metabolism, the space-time activities of people in the Nilai Municipality Council area were identified and observed around 24 hours on weekdays for several months. Land use data were gathered through land use maps. The daily metabolism information was contextualised in the whole land use of the Municipality. The data were analyzed using Geographical Information Systems (GIS) to yield space-time activity pattern maps. Figure 2 shows the concentration area in the morning; Figure 3 shows the high points at noon while Figure 4 shows the main concentration points in the late afternoon and evening.

Daily Metabolism in the Nilai Municipality Council Area

Nilai Municipality Council is located on the border of Selangor – Negeri Sembilan area. The Municipality Council was upgraded since 2001 after

reaching its minimum revenue level of RM1 million. The area under the Nilai Municipality Council includes Nilai Lama, Bandar Baru Nilai, Taman Semarak, Nilai Mini, Nilai 1 and 2 and Nilai 3 (Figure 1). The number of people living within the Nilai Municipality Council has increased over the years. In 1921 the number of people recorded in the old Nilai was 669 but decreased to 428 in 1970 before making a jump to 1,308 and 1,698 in 1980 and 2000 respectively (Statistic Department 2000). In 2003, the number of people estimated was 114,134, showing a tremendous increase over the three years, largely being the outcome of administrative boundary change of the Municipality as well as in-migration of workers especially to the new industrial area (Nilai Structure Plan 2003).

Figure 1. Nilai Municipality Council Area
Source: Google Earth 2007

The space-time activities have been divided into three time categories, early morning (6 am – 11 am); noon (12 pm – 4 pm); and late afternoon/evening (6 pm – 12 midnight). The main points of people's

concentration during the early morning were at the commuter station, wet market, and coffee shops/restaurants that are located at the old Nilai and Taman Semarak, and also at the Nilai Municipality Council building where people went for their morning coffees cum breakfast before starting work at the government office nearby. At the same time, other concentration points were at the wet market where people went to buy their daily supply of fish, vegetables, meat, etc. The other places that show high concentration were at schools where parents were sending their children in the early morning (between 6.30 am – 7.30 am). There are a few schools located around old Nilai and within Nilai New Town. (Figure 2)

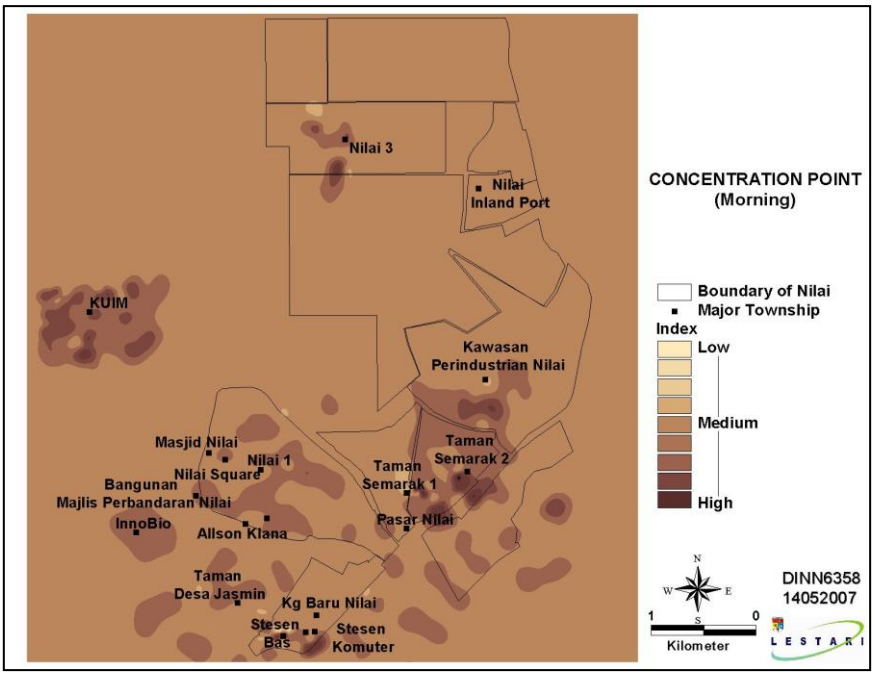

Figure 2. Concentration points in the morning

In the afternoon (12 pm – 4 pm), the concentration of people moved to the commercial areas when most of the shops had started to open around 10 am and 11 am. The commercial areas such as retail outlets, motor workshops, banks, information and telecommunication premises are major attractors, patronized especially by school and college students who are located close by. Post office and banking premises attracted a

higher concentration of people in the afternoon. Other places, such as Nilai Square, the surrounding area close to Allson Klana Hotel, Nilai Municipality Council Building area and old Nilai town seemed to attract less people. Compared to the morning, the afternoon concentration points showed that Nilai 3 area is always an attractive place frequented especially by shoppers and tourists, often from all over Peninsular Malaysia. (Figure 3)

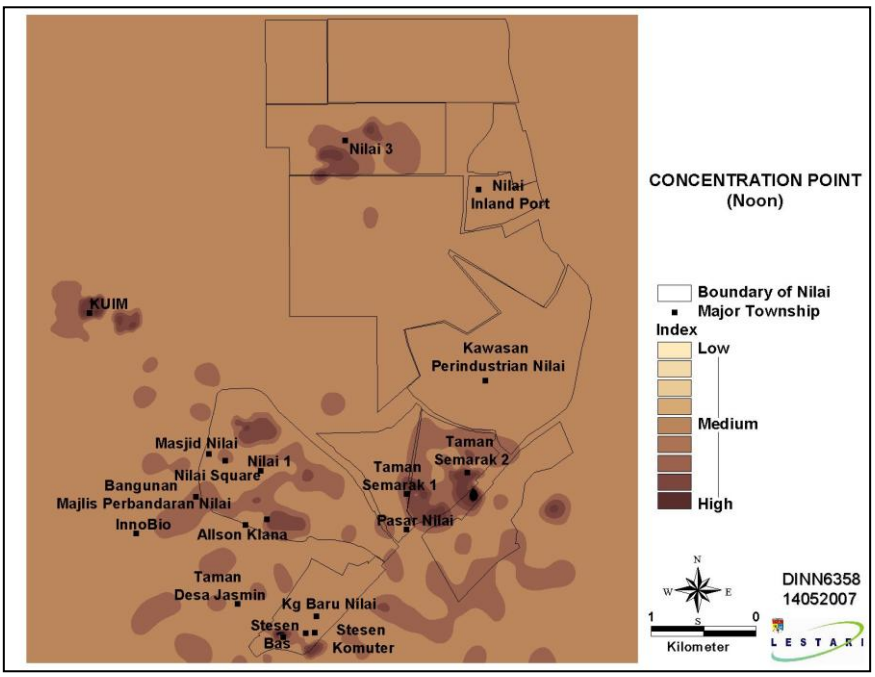

Figure 3. Concentration point at noon

During the evening (8 pm – 12 midnight), apart from expected the concentration of people in housing areas where people had returned homes, activity hubs around eating-places for dinner. This is a relatively new phenomenon for the Malays with their families, but not for the Chinese (Figure 4). The restaurants and stalls are attractive points for people for a leisurely outing at these hours.

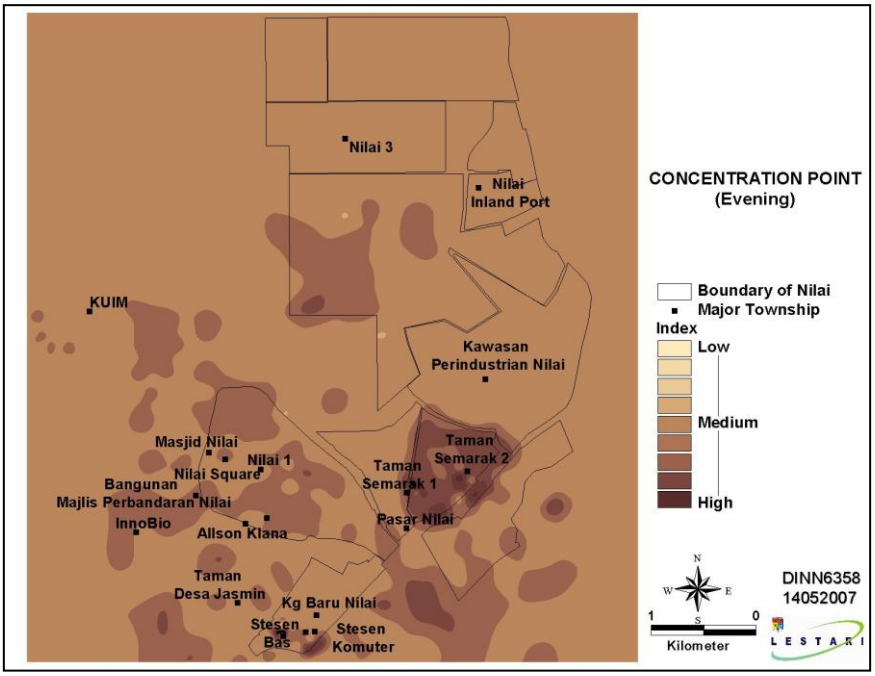

Figure 4. Concentration point in the afternoon/evening

In summary, the series of space-time maps presented in Figures 2 to 4 capture some major spatial patterning of the movement of urban people (inclusive here people from outside the Nilai Municipality, who were in the municipality area during our observation days) within Nilai, converging on functional points in the municipality. We have identified two broad groups of movements, first the routine movements and the more amorphous circulation of shoppers. As expected in the early morning of a working day at midweek the main movements comprise children going to schools before their working parents travel to their respective work places. Another wave of movements of people is seen in the next few hours till noon to shop for provisions, settling of bills or using the post office or banking facilities. Yet others may be travelling to get services at the automotive centres for minor work on their cars or changing tires, and getting petrol at the petrol stations. At noon most movements of people are to eating-places. Some, of course, combine their lunch with activities such as going to the bank or to places for settling of bills. Major reverse movements take place in the afternoon for school

children returning homes while in late afternoon till dusk, around 5-7 p.m., office workers make their return journey home.

Beyond the routine movements are the shoppers, traversing the shopping areas-both in the old shopping streets and in the new shopping complexes in Nilai 1 and 3 for bargain on array of cloths while at Nilai 3 for a range of household, clothing and ornamental products. The majority of shoppers are people from outside the municipality. On weekends, a larger volume of tourist shoppers including from other states frequent the wholesale areas in Nilai 1 and 3. During the duration of field observation some of these tourist shoppers come from outside Malaysia who travelled on mass charted transport modes or by private cars to visit Malaysia, but make a stop over at these places in Nilai.

The movements of people within the municipality summarize the daily metabolism of the Nilai municipality that shows how lively the municipality is throughout the day. Traffic movements are seen in all directions utilizing fully the broadened streets. On a normal day the streets are full with cars often spilling over the somewhat limited parking bays. All these indicate the overall vibrancy of the municipality. Yet, to the casual observers, the dynamism in the day-to-day space-time interactions between places in the municipality does not produce any clear change to the use of space, let alone to the overall urban land use in the municipality.

Over time, persistent patronizing of the entire major functions in the municipality by people has several implications for future development of the municipality. The functions in space along with the time of use bring out certain immediate needs that may entail bringing changes to the surrounding physical environment to accommodate high volume of users with for example, parking requirements at certain time of a day. The situation may require finally a major decision either to shift the particular function to a more spacious place or to split the function to many locations within the municipality so that the vibrancy of the municipality is sustained. With that decision, there is a need for a better management of traffic movements and planning for parking throughout the day.

CONCLUSION

What this paper articulates is how the broader globalisation of production has impacted on the vibrant development of Nilai-a small town on the border of Selangor- a developed state - and Negeri Sembilan- a developing state - in Malaysia. The small town has grown from a sleepy hollow four decades ago to become an important municipality that

contributes to the development of Negeri Sembilan today. The vibrancy of life in the city as revealed by the daily metabolism of the municipality through population flows in the daily space and time testifies to the increasing liveability of the municipality. Being close to the Kuala Lumpur International airport and to the faster growing Langat basin, Nilai has the locational advantage to benefit further from the growth of urban explosion in neighbouring southern Selangor. Although the daily metabolism in the Nilai municipality seems to bring out no changes to its space, a closer examination reveals patterns and growth trends in the municipality that require careful future development in order to sustain its vibrancy as a lively and liveable municipality in Negeri Sembilan.

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