

Planning for Regional Sustainability in Uncertain Times: Urbanisation through the Waves of Global Crises

Perancangan untuk Kelestarian Wilayah dalam Ketidakpastian: Perbandaran melalui Krisis Gelombang Global

ABDUL HADI HARMAN SHAH, ABDUL SAMAD HADI, SHAHARUDIN IDRUS & AHMAD FARIZ MOHAMED

ABSTRAK

Perancangan untuk kelestarian pada masa yang tidak pasti khususnya ketika krisis-krisis global seringkali diteruskan buat sementara waktu memerlukan perancangan sampingan untuk mencapai matlamat dalam jangka masa pendek. Ketika tempoh-tempoh perlambungan menyebabkan berunsurnya aliran masuk modal besar kelihatan ianya akan sentiasa bertambah dengan cepat, dan pecahan tempoh-tempoh menunjukkan ianya tidak terkawal dan merosot secara umum. Satu penglihatan dengan lebih teliti menunjukkan terdapat lebih banyak turun naik dan ketidakpastian; melalui keputusan untuk mengembangkan perniagaan atau mengambil masa lebih panjang dan terdapat banyak lagi keputusan yang terlibat dari apa yang dapat dilihat pada dasarnya. Kertas ini membentangkan dapatan kajian dari perbandaran dalam rantau Bernam Linggi, kawasan-kawasan yang merentangi negeri-negeri seperti Perak, Selangor dan Negeri Sembilan di Malaysia. Gabungan bandar-bandar ini telah berkembang dengan pesatnya melalui pusat-pusat yang berbeza yang kini telah bersatu untuk mewujudkan satu kawasan pembangunan yang saling berdampingan. Kertas ini juga membentangkan bagaimana perubahan tersebut memberi kesan ke atas infrastruktur dan komuniti, yang mengakibatkan perubahan liabiliti dan potensi ketahanan. Kertas ini juga mengutarakan satu perancangan rantau yang memerlukan satu analisis yang tidak mengandaikan kestabilan dan mengkaji kerumitan pendekatan untuk memahami keperluan perancangan untuk pembangunan rantau Bernam-Lingga bagi memudahkan proses-proses rumit pertumbuhan serantau.

Kata kunci: Kelestarian kawasan; Bernam Linggi; kompleksiti bandar; pelaburan sosial

ABSTRACT

Planning for sustainability in uncertain times, especially due to global crises, often proceeds tentative, requiring the placing aside of grander comprehensive plans for a more achievable short term gains. While boom periods characterised by the influx of large capital seems to be constantly increasing rapidly, and bust periods show uncontrolled decline in general, a more detailed look will show more fluctuations and uncertainties; with decisions to expand a business or fold taking longer and that there are more decisions involved than what may seem at the surface. This paper presents the findings of a study on urbanisation in the Bernam Linggi region, an area that spans the states of Perak, Selangor and Negeri Sembilan in Malaysia. It is fast becoming an urban conurbation with different centres currently fusing together to create a contiguous development area. The paper presents how these changes impact upon and are impacted by the infrastructure and the community, resulting in changing livability and sustainability potential. The paper argues that planning such a region requires an analysis that does not assume stability and employs a complexity approach to understand the planning needs for the development of the Bernam-Lingga region to capture the intricate processes of regional growth.

Keywords: Regional sustainability; Bernam Linggi; urban complexity; social investment

INTRODUCTION

What makes for a suitable planning candidate for development, driven by global crises that impacts upon current population and landuse, giving an unstable urbanisation process through uncertain times? Planning during such times needs to take into consideration the

fact that there are many more participants during the peaks and valleys of development. These make the overall patterns of growth and decline more apparent especially for the economy in general and affecting the general perception of individuals within. The mob or herd mentality that drives a pattern up or down is often triggered by a threshold of participants that have been

reached, or breached. However, general trends tend to mask the difficult decisions made to change directions and do not highlight the various attempts at saving a business or even the difficulties in starting or expanding one. As with many theories of economic development the relationships presented are simplifications that need to be given local context, geographic and social. These are often forgotten or simply unrecognised in understanding impacts of development projects. Local social topography skews regional development results to benefit a portion of society, at times to the detriment of others. Planning for regional sustainability would require the understanding of these social valleys and ridges.

In its historical development, urban planning has had to deal with changes arising from contemporary issues appropriate to the day. At this juncture, the current issues that have to be dealt with in cities revolve around the larger problem of sustainable urbanisation. Within it city sustainability issues loom large, especially in fast developing country like Malaysia. Not only a large number of rural people still circulate from rural localities to the urban areas to impact on the larger cities for work and shelter, but cities also grow and expand beyond their boundaries to sprawl into the countryside. In the man and environment interactions in the cities, success and problems intermingle. Is urban planning to date able to handle the issues?

Development requires an impetus, a reason for changing. In very stable conditions change is difficult to accept – it is simply not needed. One might call it the development comfort zone, different priorities or whatever, in well established agricultural cores the focus is on ensuring the continuity of the status quo and local hierarchies. It is outside capital, impinged by the need to invest, with surrounding areas being the most viable choice for development that result in the conversion of rural land to accommodate urban activities. The patterns of change to be considered by planning need to include spatio-temporal clustering and contiguity, and be tempered by an understanding of the people's perception and acceptability towards these changes. It is expected that the changes and the functional relationships for these changes are non linear in nature, requiring the appropriate tools to analyse. For such an approach, the traditional core-periphery theory of development is inadequate.

The core-periphery theory of development proposes that for development to be effective there must be a central area, which serve as the loci for development. In terms of physical design, this center must be distinguishable from a less developed – in fact even underdeveloped – periphery. This theory emphasised that each has its own function to fulfill. However, this means that the selected center will have the urban activities and amenities that go with modernisation while the periphery remains agricultural and non-urban in nature. Some types of development need a place to start and that is usually the urban center while the periphery waits its turn in development.

Another concept that goes with the core-periphery idea is the trickle down effect, and the immersion of development into the periphery is often just that – a trickling. The urban areas are often provided images of development that far exceed that of the rural periphery. These images of development subsequently attract the young and the labour force away from the rural to the urban. Since labour is needed to develop an area, development in rural areas remain at a minimum. While economists can claim that the urban is where the work is, and there is of course truth in that, the impact of development image cannot be downplayed. While there are jobs elsewhere, labour tends to go where development is more apparent – or expressed. Even when the place is more expensive to live in. This is perhaps a reason why industries still prefer to remain in larger urban areas even when smaller areas are offering better incentives. Thus, while the labour market would go where the jobs are, given a choice of places, the areas perceived to be more developed are often more attractive. For these, process and change indicators for planning are needed, together with the identification of nodes and lattices within the networks of change that make up alternative scenarios of possible sustainability futures.

THE PLANNING OF SUSTAINABLE REGIONS

The idea of a region has always been a point of contention among planners. The questions is whether it refers to a scale of analysis, a planning implementation body or simply a demarcation of space. For the purpose of this paper, based on our research premise, we refer regions to be an area that spans several local areas, and in this case we limit the idea of regions to that within a country.

Planning a sustainable region can take on several meaning and approaches. In Malaysia, economic regions tend to be developed using the developmental state concept, as a response approach, with the role of the state going beyond assisting the economy to actively determining the outcome. The role is not merely to develop policies and create an attractive economic environment or infrastructure, but to be involved directly in the development process, even to the level of individual firms.

The Third Malaysia Plan was a landmark national policy which opened up a floodgate of opportunities for the rural population. The state embarked on a large scale development plan attempting not only to guide but to change the path of development – and consciously include the rural population in its development agenda. It was during this period that the mass urbanisation took place for many of the ruralites. For the first time job opportunities in the form of new factory employment arose. The state also increased its public service jobs, attracting increasing number of the rural and fringe population as well as the recently urbanised.

This not only changed the role of the state but also the relationship between the state and the world system. If previously there was as if a given hierarchy and network (within which the third world countries need only take their place in the new world order), there exist a retro-movement from individual states to take charge of their own economy and development path. This concept revived an older idea by List in the 19th century (White, 1988). List was of the opinion that when societies with different levels of development meet, the more developed and productive societies would create a marginalising competition in the less efficient and economically developed society. This will cause an economic marginalisation and structural deformation if not corrected by the individual state through taking the economy and society out of international competition, even though temporarily (Hoogvelt, 1997).

At the beginning of the 21st century the dominance of global structure has undergone changes. An amorphous global machine has begun to change adapting to local and regional needs, interests and concerns. Cultural values and local idiosyncracies are adopted by global corporations in advertisements and marketing strategies. In a global village, sub communities emerged. Identities that re-assert meaning for the local began re-emerging. These local identities coalesce into regional identities better equipped to implement changes and make demands at the global scale. While there is an old saying in regional planning – a region is what planners defines it to be – the definition will be more strongly based on the local. New development regions re-align the local to the global and the local need to be well prepared for such re-adjustments. This will include the creation of new circuits of capital to move development projects at all scales and to re-link the broken chains of development. Yet Malaysia has always developed its region from the top down. The various earlier attempts at regional development, Federal Land Development Authority (FELDA), or Regional Development Authorities

(RDA) all are federal or central attempts at developing the region in a comprehensive manner.

What we are having today however are the smaller areas and communities being fused together by processes that are influenced but not determined by these central efforts. These communities self organises into a region of variable cohesiveness.

A COMPLEXITY APPROACH TOWARDS DEVELOPMENT ECONOMICS

The complexity approach towards understanding development is used to complement the sustainability goal of progress, one that is very much embedded in the idea of growth from below (sustenair) as opposed to the usual top-down approach.

The crux of development from below is set within the theory of adaptation and learning. Development occurs when local agencies are able to adapt, or willing to participate in the potential change (Figure 1). The adaptation of local agencies, each working separately when widespread enough self organises another structure much akin to the idea of structuration by Giddens (Figure 2).

A COMPLEXITY APPROACH TOWARDS NON-ECONOMIC SOCIAL DEVELOPMENT

Urbanisation is not necessarily only about economic growth. The creation for a neighbourhood is a salient local example on how urbanisation proceeds. Take the example of street use in a neighbourhood. The first child decides to play in the street and another child joins in, setting up a game among them. Other kids will look and start joining in, as long as their parents let them be. In a short span of time the children will naturally form groups, self organised for play. The street comes alive,

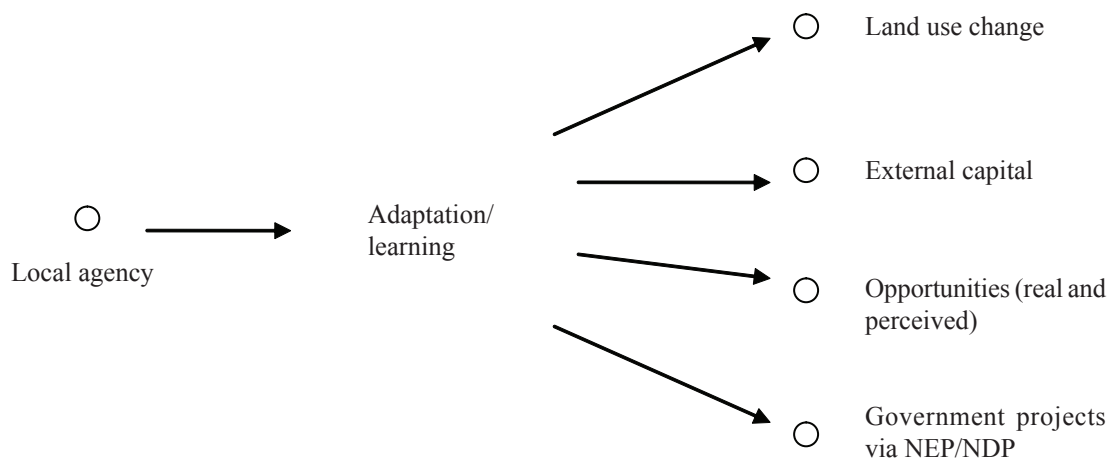


FIGURE 1. Adaptation of Local Agents

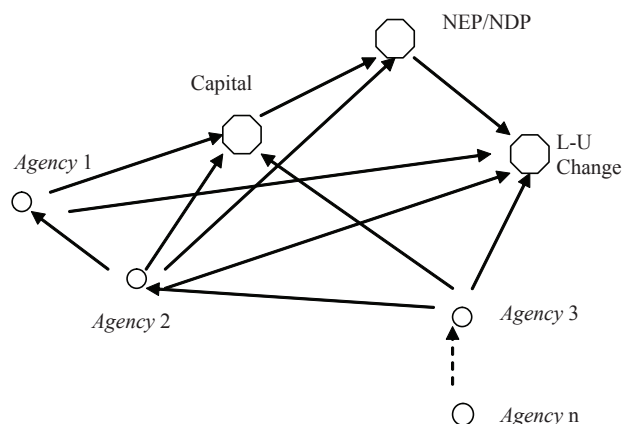


FIGURE 2. Local Networks

every evening perhaps, after school in the evening. The neighbourhood then increases in livability and becomes a home, a *kampung halaman*.

However, if an accident occur, or something unfortunate, a first kid will be disallowed to play. A second child will respond by following suit, then a third and a fourth. Soon the street will no longer be used as a playground, and the neighbourhood becomes vulnerable.

These changes will impact upon and be impacted by the infrastructure and the community, resulting in changing livability and sustainability potential. The patterns of change will be analysed to include spatio-temporal clustering and contiguity, and will be tempered by a study of the people's perception and acceptability towards these changes. It is expected that the changes and the functional relationships for these changes are non linear in nature, requiring the appropriate tools to analyse. Process and change indicators will need to be developed, together with the identification of nodes and lattices within the networks of change that make up alternative scenarios of possible futures. The actual changes in landuse type for example are the results of social processes that include the economic as well as the non-economic drivers, and the impacts of these changes are dependent on the people and institutions affected.

INDIVIDUAL UNCERTAINTIES AND SOCIAL INVESTMENT

If sustainability is about the future, sustainable development then is about the investment for the future. This investment would be the communities' investments as well as individuals' decisions to better themselves. Individuals make many decisions that do not seem to connect to one another but the sum total of their decisions have a direct impact on the future of the community as a whole. This study looks at three investments, the individuals, the business community, and the local institutions.

AN OVERVIEW OF THE RESEARCH PROJECT: THE MODELING OF LOCAL URBAN SUSTAINABILITY

The research project on modeling local urban sustainability looks at the urbanisation process of the Bernam-Linggi basin in Malaysia, a regional conurbation that resulted from earlier sporadic growth that has since fused into a relatively contiguous region. This fusion took place within the Malaysian economic growth context which has undergone several economic crises due to global and local conditions ever since its independence. This general scenario for Malaysia has visible impacts upon the development of the Bernam Linggi region, an area which basically followed programmes developed by the government. The effects of the programmes, the lag times, tipping points and sustainability all have lasting impact on the region as a whole. These developments reflect the relationship between Malaysia's plans and the production of place within the late-capitalist and post-fordist era while at the same time inheriting traits from an industrial time with many agrarian communities still very much alive in the area.

The usual modeling approach that relies on consistent trends and ready data is often inadequate for such situations. A different approach is needed to capture the dynamics of development in the Bernam-Linggi Basin. What we have in the basin are broken lines of data to be pieced together through a model that not only explains but also interpolates the missing parts. Uncertainty and incompleteness of information require careful attendance and approaches in error analysis provides some answers to the problem.

The dilemma presents itself in the form of theoretical sophistication as opposed to the technical capability of operationalising the theoretical construct itself. While quasi-physics models such as Reilly's gravity model have been useful in explaining basic spatial interactions, non behavioural models such as this have been out of favour in the light of behavioural theories that have spawned many behavioural models to explain relationships. The uncertainties that relate to planning and decision making and impacts of the subsequent land use changes make simple linear relationships inadequate.

Uncertainties are often handled either using probability and logit type analyses or the currently more popular scenario development and analysis method. These allow for a deviation from a deterministic approach in planning. Yet comprehensive structure plans as the main tools for planning in Malaysia have yet to benefit from this way of thinking.

In this research project we argue that there is a critical path towards the sustainability of a region. This spatio-temporal critical path implies two necessities in the attainment of the sustainability goal. The first is a temporal state that a development process undergoes and the second is the spatial pattern that either links

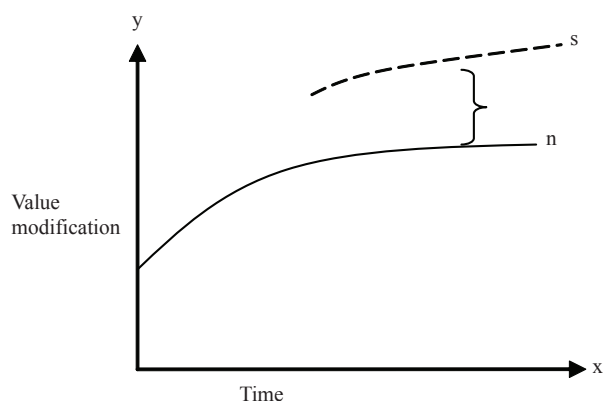
development or leaves the area as pockets of previous growth that decays over time. It is commonly assumed that developers look at adjacent development to see the potential of growth at any given area. A possible highway or a shopping complex will suddenly make any one site more favourable in terms of development. Prices increase and potentials suddenly come to the fore.

Within the Bernam-Linggi region conurbations can lead to sprawl and unsustainability or they can lead to networks that allow for continuous development of new areas in a more sustainable manner. We further argue that the growth of any one area is dependent on the growth of nearby areas indicated through several factors including local growth, surrounding city growth, national growth as well as one-off parachuted development into the area.

We assume that the core idea in sustainable development is development that allows future generations to realise their potentials. Sustainable development, thus, involves the prediction or projection of future needs, which in turn assumes knowledge of future values of the society. Often, any prediction of future values by a present generation is based on present values of the society or an assumed improved situation of commonly accepted values. Thus, development in this sense is the production and reproduction of such values. The structure or system for understanding or predicting future values of societies is the ethical system of such a society, barring total annihilation or destruction of present values.

Sustainability, and sustainable development, then can be argued to be value-informed development where informed connotes knowledge and prediction of values. Our argument includes the need for understanding the resilient values of past generations in the formation of present and future values. In the Malaysian context the system of local traditions known as *Adat* plays an important role in moulding future values.

We then argue that adjustments to values are dependent upon two types of change; a 'natural' perceived progression and a radical break from the current 'progression curve.' The shift in y in turn is dependent on an acceptability factor in the society and the tipping or inflection point of the society.



METHOD

We set our study to incorporate three periods of economic crises that affected the sustainability of the basin, and perhaps the country as well. From just after the financial crisis and recession of 1988 we determined areas that took the shortest time to recover and became more sustainable as well as areas that seemed to be taking much longer to recover. We also looked at the changing sustainability from the early periods of Independence to just before the economic recession in 1987.

Our area of study focus in the spine of the Bernam Linggi basin. There are several aspects of urbanisation that we looked at:

- The rate of urbanisation for the region
- The rate of primary landuse change (PLU)
- The rate of 'service' landuse change (SLU)

The idea of primary and service landuses follow the simple classification of economic base theory that set some landuses to be export oriented and others servicing the area. While theories of city growth have 'outgrown' these basic demarcations, we feel that they serve the purpose of preliminary evaluation for the sustainability of the region, modified by a complexity analysis component later in the study.

The study developed a social investment analysis through a combination of questionnaire surveys and in-depth interviews of residents, businesses and local institutions. Stratified and snowball sampling strategies were used to target 280 respondents that provided a temporal view of changes in individual families, businesses and institutions. While the focus of the survey is on investment patterns, the historical and decision making context of individual investments are also inquired into.

We identified patterns of housing growth (Shaharudin et al. 2009) and local public participation networks (Abdul Hadi et al. 2009) that contribute to the meaning of local sustainability. This paper highlights the regional sustainability and cohesiveness aspect of the study as a function of local social investments.

THE BERNAM LINGGI BASIN

The Bernam-Linggi Region is an urban conurbation with different centres currently fusing together to create a contiguous development area from the southern part of the state of Perak to the Negeri Sembilan. Its main area is in the State of Selangor and from a peripheral agricultural supply region that buffers core industrialisation in the Klang Valley and the Seremban-Mantin industrial area, global forces have taken over and began to create yet another high development area. However, the twist of recent events has left many development plans unfinished and uncertainty looms in the region. To ensure

the sustainable development of the region, a planning approach that is sensitive to the changing cultural environment as well as the physical ecosystem health is necessary. This requires an approach which integrates the readiness of the people, the current development network, local economic development needs along with with environmental and social considerations.

Beginning from the north with Tanjung Malim, a small town once known for Malaysia's first teacher's training college, to Port Dickson, a tourist haven at the southern edge, the Bernam-Linggi region was once more at the outskirts of development rather than being part of it. Its agricultural and village landscape can still be seen along several stretches of the alternate road from north to south. Changes in the Bernam-Linggi area has been erratic with periods of dormancy followed by stretches of rapid development, quickly tapering off in a sometimes off again on again situation.

Over the past twenty years it has been exposed to various global events that impact upon the local car industry, the new universities, and townships. In the Bernam valley the Proton City Project, Bukit Beruntung and Lembah Beringin are among the major developments that arose out of these plantation areas. Unfortunately, to date, development projects in the Bernam Valley have faced major financial setbacks, especially with respect to the latter two. The Proton Plant at Tanjung Malim started construction in 1996 but was deferred one year later. It only resume work in 2001. This is an example of the on again off again pattern of development in the region. Development setbacks have impacts that last for years, often exacerbating into other problems including social, environmental and even health. These are established agricultural areas that have remained consistent, without major changes since the 1950s. The focus on agriculture continued after the first two Malaysia Plans (1971 – 1980). The very stability of the regions was not conducive to change towards industrialisation. The focus then was to intensify agriculture, even extensifying it to include areas that were either undeveloped or underdeveloped. Only after the 1980s period did small industrial areas appear in the Bernam section of the basin.

RESEARCH FINDINGS ON SOCIAL INVESTMENT IN THE BERNAM REGION

The study identified different patterns of investment between all four towns in the Bernam basin. Within each town there is a correlation between several types of social investments. These indicate different potential for sustainability as well as different planning strategies that will be required to enhance the social sustainability of the areas.

As shown in Table 1 for towns that are categorised to be matured, that of Kuala Kubu Bharu and the older

section of Tanjung Malim, the past five years have seen stable and at times declining investment in all three social investment categories. Local economic investments have seen a slight decline (5 percent) while institution investments are about the same (6 percent). There was a mixed response in terms of household investments where there is a similar percentage between stability (27 percent), decline (30 percent) and increase (33 percent). These are correlated to the family lifecycle, with younger families having increased investments while older families being either stable or slightly declining in their social investments.

For towns that are considered new development and rapid growth areas such as Beranang, Batang Kali and the new section of Tanjung Malim, there were increased investments in all categories, the difference being the level of increase. These show vibrancy and optimistic expectations from the residents and the businesses. Local economic investments by the respondents have increased by 30 percent over the past five years while households record an increase in at least 15 percent of their social investments. The demographics of the residents and businesses also explain the vigor. Most of the respondent residents are younger families, and the businesses have a good mix of experienced and new ventures.

Areas that are on the decline economically have lost various social investments as well. Kerling and Rasa have been facing a decline for several years. Interestingly enough they are not much affected by the global crises, partly perhaps because they have already been at the margins. There were no significant shift in the trend of overall investment over the past twenty years. The business sector respondents in Rasa and Kerling have been reducing their overall investments (10 percent) due to reduced clientele (13 percent). Some have even divested their business interests (5 percent) and began looking for other places including Behrang and Rawang. Attempts to develop near the two areas (Bukit Beruntung near Rasa and Lembah Beringin near Kerling) have failed resulting in acres of abandoned an incomplete housing. Contributions from local institutions however have remained relatively the same. Most of the respondent residents have been staying in the area for more than twenty years. The apparent lack of new residents show a stagnancy common in declining areas. More than 30 percent do not see the possibility of moving out of the area although pessimistic about improvement in their area. They have already reduced their investment into the renovation and upkeep of the houses.

The findings point towards mixed impacts of the global crises on the local communities. New development areas are developed to meet global demands but there are also areas that are bypassed by these developments. The oscillations of economic growth have resulted in a cautionary attitude among local residents and businesses. Combined with the demographics of the different local

TABLE 1. Summary of Social Investment Findings

	Local Economic investment (LEI)	Household investment (HI)	Institutional investment (InI)
Matured areas. (stable) Kuala Kubu Bharu; old section Tg. Malim	Stable, even declining over the past 10 years.	Stable communities, stable high participation	Increasing investment by political and private sectors
Rapid growth: Batang Kali (Liga Mas)	Increasing investments in all areas	High new investment; moderate continuing investments	Moderate increase in institutional contributions, stable contributions from private sector
New development: Behrang 2020; New section Tg Malim	Increasing investments	New investment; High time participation, New family participaiton	Low, stable financial investment; high contribution of time
Declining area Rasa (Bukit Beruntung) Kerling (Lembah Beringin)	Increase in sale Reduction in investitures. High level of incomplete housing	Decreasing investment yet inability for owners to move out. Renters moving out.	Stable institutional contributions; Reduction in private sector donations

areas, these result in different levels of risk taking and local resilience.

CONCLUSION

The process of urbanisation in Malaysia has moved from the first phase of rural-urban migration to the phase of settling down and making a place for oneself in the urban area. The concern of many now is how to make the urban a more livable place, a place with a better ‘dayahuni’ as the writers would argue. This is not to say that the first phase has ceased to be, Malaysia is still facing rural-urban migration, or at least circular movements between the urban and the rural (A. Samad Hadi 2009) but the choices and destinations are much more varied than before.

There has always been an interchange between rural and urban experiences. These interchanges redefine both rural and urban place in Malaysia. The rural individual has always been bombarded by a variety of urban experiences that change the place within which the individual lives as well as his or her aspiration of future places. The individual experience is always contextualised within a specific communal setting with its own cultural demands. The individual’s expectations are adjusted to immediate capabilities and cultural constraints.

The processes that make up the experiences of urbanisation are not just behavioural in function, they are also very much symbolic. Following Burke, while behavioural functions aim at solving a problem, symbolic functions aim at the manner by which a problem is solved. In the case of urbanisation, the issue is not merely ‘becoming’ urban but the manner in which ‘becoming’ urban is achieved. Thus, the articulations of urbanisation that have come to represent the phenomena also reflect this interplay between actual development

and its presentation. Among the many articulations include the oft-used concept of post colonialism to explain the development landscape of countries that gained their independence from colonial forces.

There are many ways to address uncertainty in planning. One is the rational-technocratic way of controlling the many possible outcomes. Another is to come to terms with the fact that one could not predict all the possibilities. The option then is to be up front with the community but presents the possible scenarios. uncertainty through local collaborations. Malaysia approaches planning from all sides, ad-hoc, middle range and comprehensive. Such is often the case in the practice of planning. To sift through the everyday routine of development control and determine a future route is difficult but some patterns can be discerned. The focus on compliance towards development control standards and procedures have remained throughout the planning exercise in Malaysia.

Yet regions cannot be planned through standards. It needs to be planned with a better understanding of the elements that make up the region. The region itself can either be close-knit or it can be more of a loose joining of communities. What is needed for sustainability is the working together of all the parts. If the sub regional elements are working separately, then the functionality of the region declines.

ACKNOWLEDGEMENT

The writers gratefully acknowledge Science Fund Modeling Local Urban Sustainability (06-01-02-SF0228) from the Ministry of Science, Technology and Innovation, Malaysia as the main source of funding for this research, together with the Arus Perdana research grant (UKM-AP-PI-18-2009/1) for sponsoring the presentation of the paper at the Malaysian Social Science 7 Conference 2010.

REFERENCES

- Abdul Hadi Harman Shah, Abdul Samad Hadi, Shaharudin Idrus, Ahmad Fariz Mohamed. 2009. Resilience and Decline of Place-Based Participation: Rural Communities in the Face of Uncertain Urbanisation, International Conference on People's Participation & Rural Development, ISR-DS, VSU, Leyte.
- Abdul Samad Hadi et al. 2009. *Dayahuni Bandar (Urban Livability)*. Bangi: LESTARI.
- Batty, Michael. 2009. Complexity and Emergency in City Systems: Implications for Urban Planning. *Malaysian Journal of Environmental Management* 10(1): 15-32.
- Giddens, A. 1986. *The Constitution of Society: Outline of the Theory of Structuration*. Berkeley: University of California Press.
- Hoogvelt. 1997. *Globalisation and the Postcolonial World*. London: Macmillan.
- Mc Gee, T. 2009. *The Spatiality of Urbanisation*. Lestari Public Lecture Series No. 8. Bangi: LESTARI.
- Shaharudin Idrus, Abdul Samad Hadi, Abdul Hadi Harman Shah, Erza Haslinda Sharani, Marlia Zahura Baharudin. 2009. Two hundred Years of Neighborhood Expansion in Seremban Municipality Area, Malaysia. *Malaysian Journal of Environmental Management* 10(1): 133-145.

Abdul Hadi Harman Shah
Faculty of Social Sciences and Humanities
Universiti Kebangsaan Malaysia (UKM)
43600 Bangi, Selangor Malaysia

Abdul Samad Hadi, PhD
Institute for Environment and Development (LESTARI)
Universiti Kebangsaan Malaysia (UKM)
43600 Bangi, Selangor Malaysia
asamad@ukm.my

Shaharudin Idrus
Institute for Environment and Development (LESTARI)
Universiti Kebangsaan Malaysia (UKM)
43600 Bangi, Selangor Malaysia

Ahmad Fariz Mohamed, PhD
Institute for Environment and Development (LESTARI)
Universiti Kebangsaan Malaysia (UKM)
43600 Bangi, Selangor Malaysia