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PLANNING IN
MULTICOLOUR

Malaysian townplan



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09

MALAYSIAN TOWNPLAN

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Cover Design ■

PLANNING IN MULTICOLOUR

Welcome to our 'Multi-colour' edition. Our idea of attaching meaning to planning approaches via colours took off in 2009. We then had our Townplan Journal themed "Planning in Red" followed by 'Planning in Green' and 'Planning in Blue' consecutively in 2010 and 2011. But planning, after all, is a holistic and an integrated affair and because we would like to cover as many stories within the whole spectrum of planning, in different flavours and perspectives, we called this 2012 edition 'Planning in Multicolours'. Indeed, a plan consist not just of one 'colour', planning has multiple objectives to achieve a balance between competing needs. The harmony and beauty of the multicoloured rainbow for instance, taken in the context of planning may also represent the harmony that can be created through good planning practise when dealing with the many challenges in sustainable development.

Many situations in planning are attached to colours, such as cities that are referred to 'Smart, Green and Connected', Neighborhoods and Communities that are green, green and blue network, black spots, hot spots, brownfields and red alerts in an impact assessment matrix for instance. Pink is the colour for happiness and health when places are designed to create Happy and Healthy Cities. There are also bad colours as a result of poor implementation of plans, or at worst, non-conformity to plans and being plain criminal to nature. The colour of dirt and shades of orange are the colours of hills being obliterated, devoid of trees. Tea with milk is the colour of rivers and lakes, as a result of pollution from rampant and illegal land clearing. As I write, these are destroying Cameron Highlands and other highlands and hill slopes in various Local Authorities. We should be turning orange rivers to the blue they once were.

On a more positive note, the good old 'brown' holds a lot of promise. Development of brownfields is associated to urban regeneration and gentrification, sharing existing infrastructure, more energy-efficient and potentially supporting low carbon agenda, a more sustainable approach than going for a bee line to the far flung green field areas. Likewise, technical representations of landuse on maps, satellite and remote sensing images are rendered in different colours and have their own colour codes.

In this edition among articles that we have on board address the all important housing situation, urban regeneration and gentrification, urban governance, Geographical Information System issues, trust and civic involvement in planning, disaster reliance in development and a subject that connects the many colours in planning, public transport. Indeed, 'Planning in Multicolour' reflects the balance in sustainable development.

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INCORPORATING HAPPINESS AND WELL-BEING INTO SUSTAINABLE DEVELOPMENT INDICATORS FRAMEWORK



ABSTRACT

This paper discusses the concept of happiness and well-being in the context of sustainable development. It describes situations where Gross National Happiness has become increasingly significant as compared to its traditional status of being sidelined over economic development. This paper also highlights happiness criteria that have been used in selected countries and its potential as a basis for decision-making and policy development. To further highlight happiness as part of the sustainable development framework, the MURNInets (Malaysian Urban Rural National Indicators Network for Sustainable Development) initiative has incorporated Happiness index within its framework. Preliminary findings of the MURNInets initiative had also been highlighted including some facets on spiritual well-being contributing to the Happiness Index. Consequently this paper had reviewed the Bristol Happy City Initiative where rigorous local participation and social network had contributed to the creation of Happy Communities. This paper concludes by revisiting the relationship between place-making and happiness as the way cities and city neighbourhoods are designed and maintained have a significant impact on the happiness of its communities.

Keywords: Happiness Index, Well-being, Sustainable Development Indicators, Community, Neighbourhood Design



INTRODUCTION

The World Happiness Report 2012 has recognized that “Sustainable Development” combines human well-being, social inclusion, and environmental sustainability and have aptly stated that happiness is intimately linked to the quest for sustainable development. The idea of Happiness Index, a growing trend around the world, views well-being and happiness as critical components for successful, vibrant communities where the aspirations of individuals are valued, their needs addressed and community engagement encouraged and facilitated. Thus such a framework provides a comprehensive measurement of progress that incorporates economic, social, health, cultural and ecological dimensions. Similar framework has been used to describe liveable cities, vibrant cities and sustainable cities addressing the many aspects of well-being. Though liveable cities criteria¹ attempt to be all-encompassing, little is known about the more intangible and subjective dimensions related to happiness, spiritual or moral values that binds individuals and families as part of a sustainable community. Studies have shown that even in countries with high scores in the liveable city ranking, have episodes in suicides, delinquency, moral and spiritual decline.

Happiness has increasingly been recognized as a science and is pre-requisite in individual, family and

community life and development. Gross National Happiness rather than Gross National Income has been seriously considered as a measure for development. There is growing awareness among governments and economists that Gross Domestic Product (GDP) and other traditional metrics of economic progress have not fully succeeded in measuring the kind of progress that makes life better and that the focus on economic growth to measure well-being is outdated. Meanwhile Hargens (2007) argues that Gross National Happiness can also be regarded as the next evolution in indicators for sustainable development, going beyond measuring merely material values such as production and consumption, but instead incorporating all values relevant to life on this planet, including the most subtle and profound: happiness.

WELL BEING AND HAPPINESS AS SUSTAINABLE DEVELOPMENT INDICATORS

Well-being is a positive physical, social and mental state; it stems from a host of collective goods and relationships with people and places. It requires that basic needs are met and is enhanced by conditions that include supportive personal relationships, community empowerment, good health, financial security, rewarding employment, and a healthy and attractive environment. Subjective Well-being (SWB) can be assessed with a series of measures

¹ political and economic stability, cultural vitality, threats of terrorism, crime rate, educational quality, health care, efficient infrastructure, recreational opportunities, traffic congestion, currency exchange regulations, political and media censorship, schools, housing, public safety, environment, level of corruption, climate conditions, entertainment, foods & cuisine, pollution, vibrancy, inflation, cost of living, public transportation, permeability and access, cleanliness, aesthetics / attractiveness, easy mobility, child friendly, common spaces as focus of social life, no waste, jobs and employment opportunities, inclusiveness (dialogue and involvement of all), diversity, mutual respect, clubs and leisure facilities, information, innovation – new technology and clean water

representing distinct concepts, such as satisfaction with life, happiness, quality of life and life fulfilment. SWB has been defined as the total sum of the cognitive and emotional reactions that people experience when they compare what they have and do in life with their aspirations, needs, and other expectations (Calman 1984). Well-being and happiness have been used interchangeably, though traditionally well-being is associated with socio-economic indicators while happiness (being more intangible and subjective) is attached to psychological state and their enabling environments.

INTERNATIONAL TRENDS IN HAPPINESS STUDIES: THE WORLD HAPPINESS REPORT 2012

The World Happiness Report produced in 2012 by Columbia University's Earth Institute reviews the state of happiness in the world and shows personal and national variations in happiness. The rankings are in the form of a "life evaluation score," measuring how happy people are with their lives taking into account a variety of factors including health, family and job security as well as other social factors and values.

Commissioned by the UN General Assembly for the United Nations Conference on Happiness, the World Happiness Report indicated that there is a global demand for more attention to happiness as criteria for government policy. The report compiled survey responses received from 2005 until mid-2011 to "measure the happiness level" of 156 countries. It is now well documented that the happiest countries in the world are all in Northern Europe (Denmark, Norway, Finland, Netherlands). Their average life evaluation score is 7.6 on a zero to ten scale. The least happy countries are in the poor category in Sub-Saharan Africa (Togo, Benin, Central African Republic, Sierra Leone) with average life evaluation scores of 3.4. Happier countries tend to be richer countries so in this case the dimension on socio-economy as a factor for happiness, still predominates. However many social attributes such as social support, the degree of personal freedom, good behaviour and politeness, stable family life, enduring marriages and the absence of corruption have also contributed to

making people happier. In the USA, similar reporting has been made through The Gallup-Healthways Well-Being Index. It is a compilation based on interviews with more than 350,000 people with "life evaluation" for cities based on job opportunities, personal finances, physical health, moods, emotions, and communities. The challenge in planning is how to prescribe and affect the above characteristics and values into spatial interpretation, rendering physical design for the creation of happiness in various environments.

GROSS NATIONAL HAPPINESS AND HAPPINESS INDEX

The Government of Bhutan has for over three decades given due focus to Gross National Happiness (GNH) over Gross National Product (GNP) with her policies designed to directly enhance people's happiness. The concept of GNH is based on the premise that true development of the human society takes place when material and spiritual development occur side by side to complement and reinforce each other (Hirata 2009). The brand for Bhutan's Government is 'Without peace, security and happiness we have nothing'. Bhutan's happiness criteria encompass economic, environmental, physical social, mental and spiritual wellness. Wellness in the workplace as well as political wellness have also become part of happiness considerations. Geo-politically Bhutan is stable and has a history of attaching great value to family and spiritual values.

In an unsimilar geographical location and society as compared to Bhutan, Britain in 2010 has announced initiatives measuring her people's levels of happiness and taking measures to improve well-being. The announcement was the latest evidence of a growing awareness among governments and economists that Gross Domestic Product (GDP) and other traditional metrics of economic progress had failed to measure the kind of progress that makes life better. The UK Office for National Statistics (ONS) had been given the task of choosing several Subjective Well-Being (SWB) questions to be included in the Integrated Household Survey, the biggest source of social data in the UK after the census. The process involved nation-wide public

consultation, involving both the general population and specialists focussing on relevant questions to assess the effectiveness of the government's policies in terms that really matter to people. In July 2012, the UK Office for National Statistics released its first national well-being survey in an effort to produce an alternative scale for measuring national performance apart from the traditional GDP. Responses from 165,000 people in the annual population survey reveal the average rating of "life satisfaction" in Britain is 7.4 out of 10. The key areas that matter most to people's well-being include health, levels of education, inequalities in income and the environment. Likewise, France and Canada are also looking at how to incorporate happiness into governance.

SPATIAL CONSIDERATIONS AND HAPPINESS

Questions have often been asked on the basic requirements for happy cities, whether there are evident spatial considerations that promotes or deplete happiness. Does the design of the city and its neighbourhoods and the way those places are maintained have an effect on happiness? Leyden (2011) hypothesizes that the way cities and city neighbourhoods are designed and maintained can have a significant impact on the happiness of its communities. Places facilitate human social connections and relationships and because people are often connected to quality places that are culturally attractive and distinctive. However neighbourhoods are differently designed and have different levels of cohesiveness. Some are designed and built to foster or enable connections. Others are built to discourage them (e.g. gated neighbourhoods).

One of the first remarks about the interconnections of spatial and happiness was made by geographer Richard Florida. His book 'Who is your city' introduced an idea about individuals and households behaving, especially locating - as maximizers of their personal happiness. Florida suggests that in the search for happiness people make three big decisions during their lifespan: what to do, with whom to do it and where to do it. According to Florida, happiness studies have often focussed on the

	<p>first two questions while the question regarding 'where' was given less attention. While suggesting that "place is the missing link in happiness studies" it can be assumed that (with sufficient economic resources in place) individuals have a willingness to migrate and move about in order to seek a location contributing best to their personal happiness. In yet another book 'The Happiness of Cities', Florida attempts to answer why some cities are happier than others and that well-being has a direct relationship to the form of the built environment. Increasingly, researchers and practitioners have become aware that some neighbourhood designs appear better suited for social connectedness than others. Planners and urban designers should take cognizance of the need to create cohesive neighbourhoods, inclusive communities, urban spaces to support creative social interactions and activities, simply to design great places to live in, fostering health and happiness. To assist, current Planning Guidelines prescribing best practices in planning and design could be implemented to create superior but affordable living environments that promote happiness.</p> <h3>HAPPY CITY INITIATIVES</h3> <p>Consequent to the interests in Happiness Indicators, many cities have started their own brand of Happy City Initiatives, enhancing the relationship between spatial attributes and happiness. Bristol's Happy City Initiative is a uniquely practical, sustainable and accessible process enabling towns and communities to directly increase happiness through participation, collaboration and celebration. The Happy City works to share ideas, projects the opportunities in every part of the city and help build long lasting happiness for people and place. Thus all of these have a relationship to the design of built form and spaces, 'making the most of your street, your community or your city'. The following thrusts, some of which are already in the sustainable development indicators framework have been identified as contributing to the Bristol Happy City Program (Bristol Happy Cities, 2010):</p> <ol style="list-style-type: none">i. A positive approach for the individual, family & neighbourhood;	<ol style="list-style-type: none">ii. Stronger and safer communities through resilience & reduction of crime;iii. Focus on children, young people & family aspiration & achievement;iv. Develop the culture and creativity of neighbourhoods;v. Enhancing education in neighbourhoods through provision of facilities & new knowledge;vi. Urban regeneration and affordable housing through inward investment & revitalizing local economies;vii. Sustainable prosperity of the urban environment through wealth of know-how;viii. Promoting transport and digital connectivity via an integrated public transport system;ix. Reduce inequality in health and wealth through health improvement & wealth distribution; andx. Climate change adaptation through awareness on renewable energy & green development. <p>In summary, dimensions in the Happy City Initiative focus on the human capital, at the individual and community level, involving children, youth, family and the neighbourhood, addressing issues on community resilience to reduce crime, enhancing education and know-how, promoting sustainable prosperity and reducing inequality in health and wealth, provision of affordable housing, revitalizing local economies, promoting culture and creativity and up scaling awareness in climate change adaptation. These dimensions are similarly used in other frameworks of sustainable development indicators in describing well-being; however facets of spiritual values have not been sufficiently explored.</p> <h3>THE MALAYSIAN SUSTAINABLE DEVELOPMENT INDICATORS FRAMEWORK VIA MURNINETS</h3> <p>In line with international initiatives related to happiness within the Sustainable Development context, the Federal Department of Town and Country Planning (FDTCP), focal point for MURNInets (Malaysian Urban Rural National Indicators Network for Sustainable Development) has incorporated the happiness index into the MURNInets framework. Based on Sustainable Development Strategies and Sustainable Development Goals, 6 dimensions have been identified</p>
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from which the 36 indicators have been derived. These dimensions are **Competitive Economy**, Environmental Quality, **Sustainable Communities**, **Optimum Use of Land & Natural Resources** **Efficient Transportation & Infrastructure** and **Effective Governance**. The 36 major indicators² were derived from the various issues identified under the 6 dimensions, happiness index falls within the dimension of Sustainable Communities.

The Happiness Index Study (HIS) within the framework of MURNInets consists of a background study and primary data collection, a joint effort between FDTCP, local authorities and their residents. At present 71 out of 151 Local Authorities in Malaysia have participated in the nationwide survey which was conducted by cluster sampling, with 44,500 questionnaires being distributed throughout Malaysia. Interim findings had shown that what matters most for communities in Local Authorities that has scored high happiness ranking is the happiness found with partner and family, in spiritual believes that provides inner peace and tranquillity and in good relationships with neighbours and community. Other supporting environments for happiness are related to health, enjoyment at the work place, income, safety, and efficient Local Authority services and facilities. It was also revealed that Local Authorities in rural settings had scored the highest in happiness ranking. Design for the questionnaire which commenced in 2011 had taken into consideration other international initiatives in happiness and well-being studies.

The questions posted to respondents are as follows:

1. How do you rank your stress level?
2. Are you satisfied with your health?
3. How satisfied are you with your life partner and family?
4. Are you happy at your workplace?
5. Are you satisfied with your current monthly income?
6. Do you believe that religion or spirituality can bring you joy and happiness?
7. Do you have a good relationship with your neighbours?
8. Do you enjoy it when you get involved with community activities in your area?
9. Do you feel safe in your home?
10. Are you satisfied with the facilities

provided in your neighbourhood?

11. Are you satisfied with services provided by local authorities in your area?
12. Are you satisfied with the service of the political representative in your area?
13. Are you happy with the quality of your living environment?

These questions were designed to describe happiness in the context of family and community cohesiveness, health, spirituality, income, safety, community facilities, services provided by the local authority, political representation and the quality of living environment. Though these were derived from contemporary perspectives on sustainable development principles, these were also based on values that have been exemplified by Malaysia's Total Planning and Development Doctrine that has been developed by the FDTCP in 1997.

The Total Planning and Development Doctrine is a guiding philosophy in the development planning process calling for the sustenance of the three relationships, i.e. the relationship of Man with His CREATOR, relationship of Man with and his fellow MAN, and the relationship of Man with his ENVIRONMENT. According to this philosophy, in explaining the 'relationship of Man with His Creator', spiritual principles and priorities are prerequisites and essential. Translating this to spatial planning does not only mean providing facilities for spiritual pursuits but also furnishing centres for the inculcation of knowledge and human development. The interpretation of 'relationship of Man with his Environment' is a manifestation of Man as the manager of the Planet, responsible for its well being. Planning and development must be based on sustainability to ensure that the natural resources are conserved and improved for present and future consumption. The 'relationship between Man and his fellow Man' reckons man as the main societal element, driving individual, family and community pursuits towards collective happiness and well-being. This trinity of relationships form a holistic approach toward Sustainable Development and Sustainable Communities.

² The indicators used in MURNInets are Employment growth rate; Urban Poverty Rate; Poverty Rate; Growth rate of private investment; Cleanliness level of rivers; Environmental Air Quality; Percentage of Population Living in Flood Prone Areas; Percentage of per capita solid waste generation; Total programs / environmental campaigns carried out in Local Authority areas; Percentage of quality affordable housing units; Percent residential coverage within 400 meters of community facilities; Ratio of cases related to public nuisance complaints per 10,000 population; Ratio of cases in water and vector borne diseases per 10,000 population; Percentage of 'Grade A' food premises; Percentage of 'Grade A' public toilets; The ratio of index crimes per 10,000 population; Dependency Ratio; The rate of change in land use from non-built-up to built-up; Urbanization rate; The ratio of public open space per 1,000 population; Unsold residential properties; Percentage change in forested areas; The number of tourist attractions and recreation centres; HAPPINESS INDEX; The volume of domestic water consumption per capita; Total electricity consumption (KW) per capita; Percentage of total waste recycled; Percentage of domestic solid waste collected on schedule; Number of integrated public transport terminals / stations; The percentage of homes with centralized sewerage services; Residents' satisfaction level on Local Authority services; Number of community programs implemented by Local Authorities; Local Authorities revenue collection performance; Percentage of total maintenance expenditure compared to the overall Local Authority spending Percentage of approved planning applications that comply with development plans / local plans and Number of operations enforced according to Local Authorities' schedule.

CONCLUSION

As we progress, technology and material seem all encompassing and in many cases the bottom line benchmarks for physical and policy planning focus on the economy and tend to overlook the subject of society and communities. Traditionally, in evaluating the quality of life, little has been discussed on the aspects of happiness and subjective well being whereby perspectives on social capital has been often insufficiently addressed. However with the current focus on sustainable development and the need to put people in the equation in the science of happiness, many initiatives have come to the forefront to address the situation. In some governments Gross National Happiness rather than Gross Domestic Product has been seriously considered as a measure for development.

In Malaysia, we have our home-grown initiative to incorporate the Happiness Index into the framework of Malaysia's Sustainable Development Indicators. Happiness Index is incorporated as one of the 36 Sustainable Development

Indicators in MURNInets (Malaysian Urban Rural National Indicators Network for Sustainable Development). The process of enriching MURNInets had also produced a Happiness Study for Local Authorities in Malaysia whereby preliminary findings reveal that what matters most for communities in Local Authorities that has scored high happiness ranking is the happiness found with the partner and family, in spiritual pursuits that provides inner peace and tranquillity and in good relationships with neighbours and community. Geographical variations and community characteristics also effects values on happiness. From initial findings it was also found that rural areas are happier places to live in. Happiness index provides guidance to local authorities interested in improving the level of well-being of their communities.

There is also a need to revisit the relationship between place-making and happiness as the way cities and city neighbourhoods are designed and maintained can have a significant impact on the happiness of its communities. well-being has a direct

relationship to the form of the built environment. Planning guidelines which proposes best practice towards a superior living environment would also promote Happiness through the various Neighbourhood Designs prescribed in them. Among classic features of urban design are designing the public realm to foster cohesiveness and inclusiveness of communities and urban spaces to enrich creative social interactions and activities. The Local Agenda 21 platform can also be used for Happy City Initiatives through enabling cohesive communities.

From Bhutan and United Kingdom to Malaysia, we believe that the idea of happiness is not just an abstract but can indeed be incorporated in planning concepts and community designs and implemented. The incorporation of happiness in the framework of Sustainable Development Indicators also enriches and balances the existing framework. Indeed happiness and subjective well-being is intimately linked to the quest for sustainable development.

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ROLE OF THE LAND USE PLANNING SYSTEM IN MANAGING HOUSING SUPPLY: A CONCEPTUAL FRAMEWORK



ABSTRACT

The role of the land use planning system in housing development is not only limited to meeting housing needs, but also encouraging and ensuring the efficiency of the housing market system. Even in the failure of the housing market, the planning system is seen as being able to rectify that failure by properly governing the activities of housing approval. The land use planning mechanism, particularly through development plans and development control, is recognized as a tool in determining the current and future housing needs, formulation of housing policies, allocation of the amount of land and identification of suitable locations for housing development. The planning mechanisms also play important roles to facilitate and control the housing production process. Against this background, this paper will highlight the debates about the capability and the approach of land use planning operations in housing development; discuss the relationship between the land use planning system and housing development; and explain generally the process of housing development in Malaysia. This paper ends with a detailed explanation about the process of planning and controlling the housing supply in Malaysia.

Keywords: Land Use Planning, Housing Development, Housing Planning, Housing Supply

INTRODUCTION

Recognising housing as an important economic sector has not only raised a debate about the extent of housing investment benefits to the economic development, but also led to the discussion of how efficiently and effectively its delivery system operates (von Einsiedel, 1997). There are numerous factors, such as economic performance, fiscal policy, government intervention and policies as well as the market system that arguably influence the efficiency of the process of housing development (Bramley, 2003; Ratcliffe *et al.*, 2004). It is also equally important to relate it with the operation of the land use planning system.

Previous studies, for example by Pearce (1992), Hull (1997), Asiah (1999), Adams and Watkins (2002) and Carmona *et al.* (2003), had discussed extensively the role and importance of land use planning activities in housing development. In relation to this, although it is generally accepted that the land use planning system plays a pivotal role in achieving sustainability, efficiency and effectiveness of housing development (Golland and Gillen, 2004; von Einsiedel, 1997), the capability and the way it is operated still generate various debates.

The first debate is about the ability of the system to intervene and influence the process of housing market. Von Einsiedel (1997) stresses that although most of the housing activities are shaped by market forces, the planning system also has its own role especially in governing its production process. The second debate is about the nature of housing planning which focuses on meeting housing needs. Nicol (2002) argues that meeting housing needs alone is insufficient to achieve a more integrated and effective housing development. The third is on the extent to which the planning system considers the criteria of market demand. Hull (1997) stresses that apart from playing a role in meeting housing needs and household effective demand, the planning system should also look at the importance of the market demand criteria.

The subsequent argument is that the planning system constrains the efficiency of housing development. According to Monk *et al.* (1996), planning controls have often been

considered as a constraint since they restrict the supply of housing land, the location of housing development, the type and density of the development as well as the timing the development could take place. Next, is the extent to which the planning system plays its role in allocating the quantity and locations of housing and controlling the production of new housing. Rydin (1993) stresses that the planning system should operate to allocate sufficient land for housing and respond efficiently to the planning applications for such development. According to Pearce (1992), the housing planning goals are considered achieved if the planning decisions can assure an adequate and continuous supply of land for housing and provide acceptable choices at the available and preferable locations.

The above debates try to argue the role and capability of the planning system in housing development in various perspectives, but if read between the lines, is actually centred on the problems of managing housing supply. In this respect, the operation of the planning system is seen to have concentrated only on meeting the broad housing needs by neglecting the aspects of household effective demand and market demand in planning housing supply. Since there are many arguments about the capability of the planning system in managing housing supply, it is thus necessary to explore this profoundly, particularly in the context of the Malaysian planning system.

LAND USE PLANNING SYSTEM AND HOUSING DEVELOPMENT PROCESS

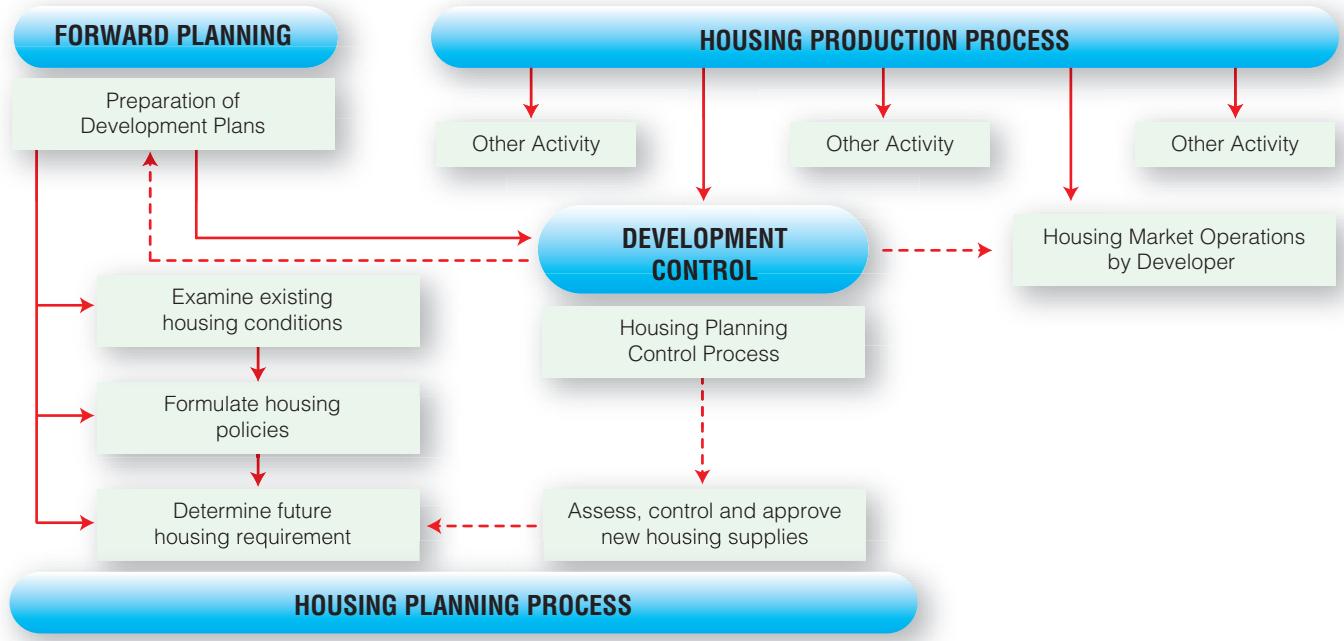
The land use planning system through the mechanisms of development plans and planning control, and the market system as operating in the housing production process are among the systems which exist and influence the structure, process and outcomes of housing development (Golland, 1998). According to Adams and Watkins (2002), the operation of the systems, in relation to the production of housing supply, are not separated but interrelated and complement each other. The argument is supported by Rydin (1993) who stresses that the housing development goals can only be achieved through a good interaction between the operation of

land and housing markets by house-builders with the activities of land use planning administered by local authorities. The land use planner's role in the housing development process is not only limited to fulfilling the goal of meeting housing needs and ensuring the development of housing in a sustainable manner, but also to encouraging efficiency in the system and operation of the housing market (Greedy, 1996; Chan, 1997). Indeed, it is recognised that the planning system has an ability to rectify the imperfection and failure of the housing market by properly governing the process of housing approval (Rydin, 1993).

It becomes a key function of land use planning to allocate adequate land for new housing development according to planned assessment of the housing needs and to coordinate these land allocations with supporting infrastructure (Carmona *et al.*, 2003). With regard to this, there are two dominant discourses wrapped around the decisions regarding allocation of land for housing. The first is the amount or quantity of new-build required and the intensity to which land should be developed. The second concerns the marketability of the land supply released by local authorities in their housing land availability schedule (Hull, 1997). This concern basically relates to where and how to allocate suitable locations for current and future housing development. Adam and Watkins (2002) perceives that the land use planning system can play a significant role in this aspect by determining potential areas and specific localities for future housing and considering the expected future market demands.

The matters of land allocation, quantity and location for housing have attracted Carmona *et al.* (2003) to debate further. According to Carmona *et al.* (2003), the philosophy of 'predict and provide' as previously adopted by the UK's housing planning had forced local authorities to comply with the housing numbers predicted at the national and regional levels, to deliver their allocation in advance of demand. This system arguably contributed to the provision of housing in the wrong type and quantity and caused the locational mismatches between the supply of and demand for housing. The introduction of the 'plan, monitor and manage' system in the UK was

Figure 1: The role of the land use planning system in housing development process



Source: Adapted from Alias *et al.* (2007)

perceived as a responsive approach to planning for housing in the right type and quantity and in the right locations (Carmona *et al.*, 2003). This new system has led LPAs to endeavour to meet the best housing requirement for local population (Adams and Watkins, 2002).

The role of the land use planning system in the housing development process was practically exercised through the activities of forward planning and development control. The preparation of development plans, as a mechanism for forward planning, will examine the existing housing conditions, formulate housing policies and determine future housing requirements in terms of quantity, land area and location. This is subsequently followed by the process of development and planning control which has become an important stage in the overall housing production process. At this stage, housing development applications will be assessed by the planning authorities before development is permitted (**Figure 1**).

In exercising the housing development process, it becomes fundamental for the land use planning system to achieve the objective of meeting housing needs by providing adequate housing (Golland and Gillen, 2004). Basically, the housing planning goal

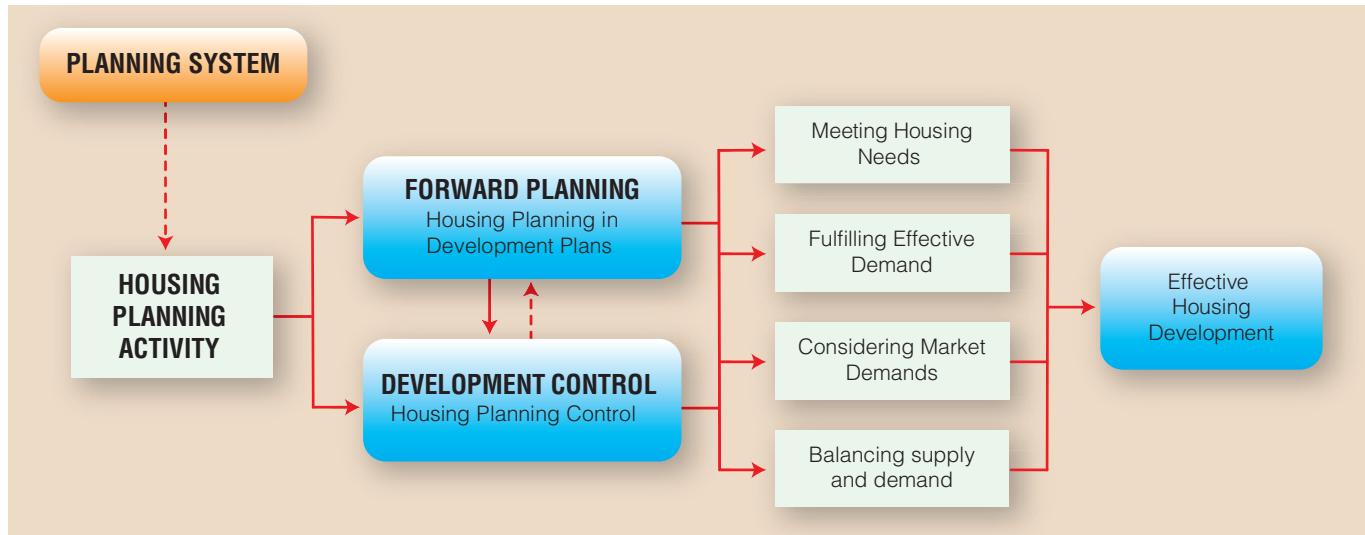
is considered achieved when the objective of meeting housing needs is met (Pearce, 1992). Nicol (2002) however, argues that meeting housing needs alone is insufficient to achieve a more integrated and effective housing supply. Nicol proposes the housing planning process to take into consideration as well the aspects of housing demand. This is agreed by Golland and Gillen (2004) who viewed that by considering the housing demands, it will help the planning authority to know more about the choices households will make in gaining access to a new house and their ability (effective demand) to pay for housing.

Market demand criteria, in addition to the household 'effective demand', is also important in the housing planning process. Bramley (1992) identifies several elements in the housing market criteria, such as local housing market conditions and the house buyer preferences in terms of price, location and type of housing. The importance of these factors have been emphasized by Hull (1997), who stresses that apart from playing a role in meeting housing needs and housing demands, the forward planning and development control process should also look at the importance of the market criteria, especially with regard to the factor of marketable location.

The significance of market demand criteria is also addressed by Bramley *et al.* (1995), who proposed a greater awareness of the market by the housing planning process through incorporating policies and procedures sensitive to the needs of the market. Pearce (1992) and Nicol (2002) also highlight the responsibility of local authorities in the adequate understanding of housing market before the decision to release new housing supply. In similar tone, Golland and Gillen (2004) emphasize the necessity for the planning process to understand the consumer's 'taste' in housing market. Stressing on the above arguments, Healey (1992) proposes three approaches towards achieving the housing planning goals by the planning system consisting of following the market, managing the market and creating the market.

The above discussion clarifies that the land use planning system through the mechanisms of development plan and planning control play an important role in the process of housing development, particularly in relating to housing supply. The mechanisms should operate not only to meet the broad housing requirements in general, but also to fulfil and consider the household's effective demands and the current and future market demands. It also becomes the role of the mechanisms, particularly planning

Figure 2: The objectives of planning and controlling housing development



control to balance the quantity of housing supply with the requirement of housing demand required by the household and market. In principle, by properly exercising the activities of housing planning in the development plans and planning control, an effective housing development will be attained (**Figure 2**).

OVERVIEW OF THE MALAYSIAN HOUSING DEVELOPMENT PROCESS

Housing development in Malaysia is carried out by both the public and the private sector through the concepts of 'sell and build' and 'build then sell'. The public sector (through the National Housing Department, Syarikat Perumahan Negara Berhad and other government agencies) concentrates mainly on low-cost and affordable housing while the private sector (private housing developers), apart from complying with the 30 percent low-cost housing provision, concentrates on medium-cost and high-cost housing developments. The Malaysian government has also formulated a housing policy that aims to strengthen the involvement of the private sector in housing production and delivery.

The development of housing is given emphasis in various plans at the federal, state and local levels. At the federal level, the current and future housing requirement are planned and targeted through the five-year Malaysia Plans, National Housing Policy and National Physical Plan. Various housing policies have also

been formulated in the plans to guide the process of housing development at the state and local levels. One of the prominent policies in the plans is to ensure all Malaysians have access to adequate shelter and related housing facilities (Ahmad Zakki, 1997; Asiah, 1999). At the state and local levels, the development of housing is planned through the preparation of structure plan (SP), local plan (LP) and special area plan (SAP). It is also guided by various housing policies and guidelines formulated by the state authority and planning authorities.

The process of housing development in Malaysia is very complex and highly regulated (Asiah, 1999). As shown in **Figure 3**, after acquiring the land, there are many stages of approvals regulated by various laws and rules of different agencies that need to be obtained by housing developers (KPKT, 2002; Ibrahim, 2008). Among them are:

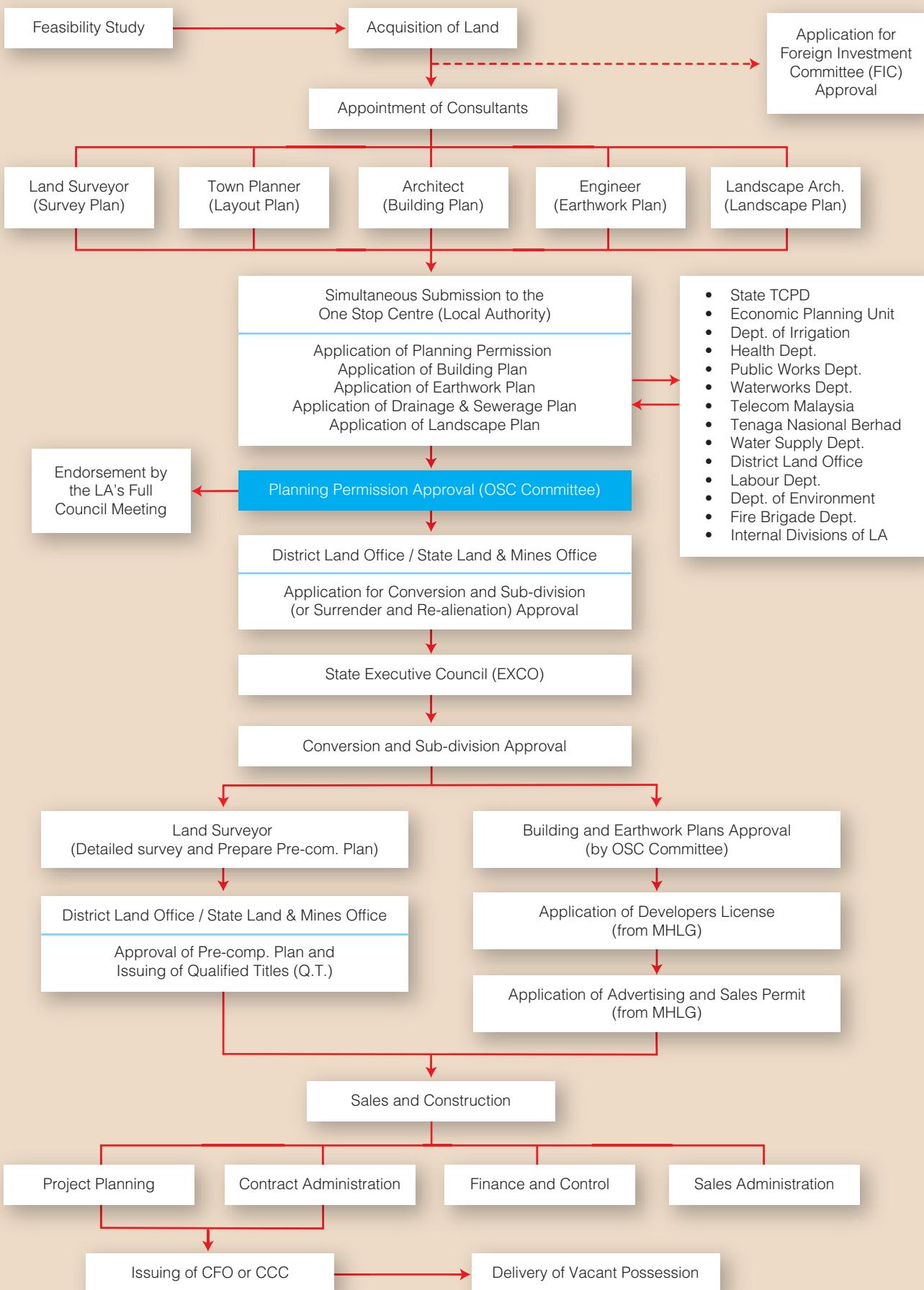
- i) The approval of land development applications (conversion, subdivision and amalgamation) by the State Authority (enacted under the NLC, 1965);
- ii) The approval of planning permission by LPA (under the Act 172);
- iii) The approval of building plan by local authority (under the Street, Drainage and Building Act, 1974);
- iv) The approvals of earthwork plan (under the Street, Drainage and Building Act, 1974) and landscape plan by local authority;
- v) The approval of developer's license by the MHLG (under the Housing

Developers (Control and Licensing) Act, 1966);

- vi) The approval of advertisement and sales permit by the MHLG (under the Housing Developers (Control and Licensing) Rules, 1989); and
- vii) The approval of certificate of fitness for occupation (CFO) by local authority (under the Street, Drainage and Building Act, 1974) or the issuance of certificate of completion and compliance (CCC) by qualified professionals.

Previously, all the approvals had to be applied separately (step-by-step), but with the formation of one-stop centre (OSC) at every local authority beginning June 2007, the applications for the planning permission and other plans can be submitted simultaneously through the centre. This initiative formed by the government aims to speed up the process of getting an approval and to enhance the delivery system in the housing development process (Tan, 2007).

There are several issues in the process of housing development in Malaysia that can be explored. The problems of bureaucracy and co-ordination in the approval process, speculation activity and unaffordable supply are among the issues that are frequently related to the process. This paper however, will not touch the issues in detail. The concern is more on the aspect of planning and controlling of housing supply, which is also one of the important components in the whole process of housing development.

Figure 3: Housing Development Process in Malaysia

Sources: Adapted from Tan (1996), KPKT (2007) and Alias (2006)

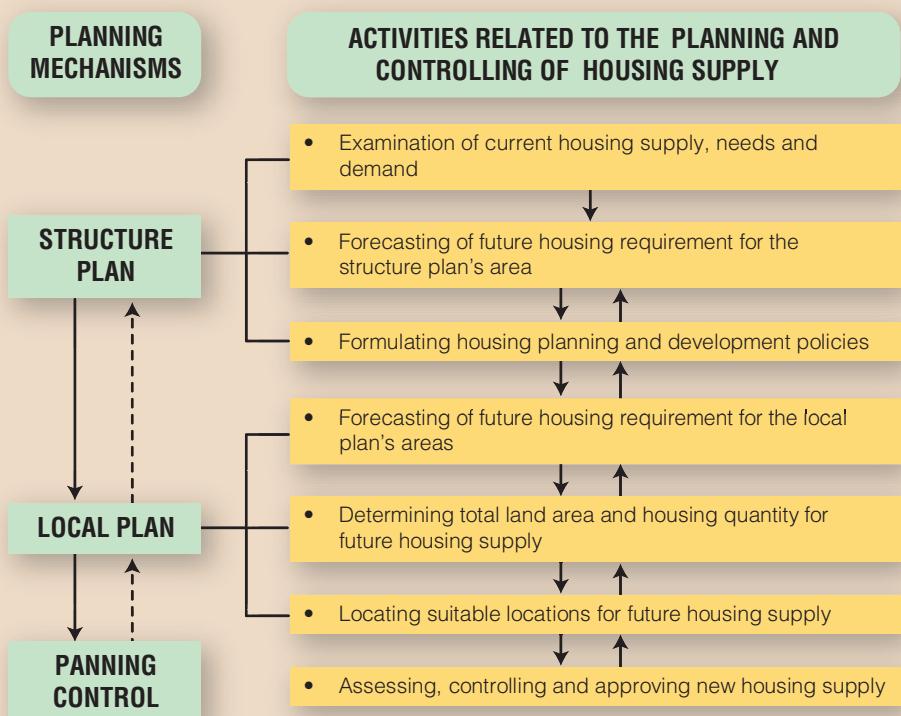
THE PROCESS OF PLANNING AND CONTROLLING THE HOUSING SUPPLY IN MALAYSIA

The process of housing planning in Malaysia is guided by the provisions of the Town and Country Planning Act, 1976 (Act 172). This Act has provided statutory power to the State and local planning authorities to formulate and implement policies related to housing planning and development. As shown in **Figure 4**, the housing development policies will be formulated during preparation of SP. Prior to that, the SP examines the current housing conditions and forecasts the future housing requirement for the whole SP area. Broad housing policies in the SP will be detailed out in the preparation of the LP. The LP further proceeds with the forecasting of future housing requirements, followed by the determination of total housing land area and distribution of suitable locations for future housing development.

Besides development plans, the planning control mechanism also plays a significant role in the process of housing planning by controlling and monitoring the applications of housing development. At this stage, all housing development applications submitted by the applicant (housing developer) will be assessed before approval by local planning authorities (LPAs). The process and procedures to control and monitor the housing development are stated in Part IV (Planning Control), Act 172. The provision under section 18(1) for instance, states “*no person shall use or be permitted to use any land or building otherwise than in conformity with the local plan*”. This provision clarifies that any housing development should be in line with the outcomes and proposals produced by the LPAs.

Thus, the planning control procedure requires the LPA to consider several aspects in controlling housing supply, such as compliance to the proposed land use zoning, stipulation of housing development priority areas (housing development phases), density control, planning guidelines and current housing policies (Asiah, 1999; Alias, 2007) (**Figure 5 and Figure 6**). Legally the LPA may only grant an approval if the housing application is situated in the housing zone. Nevertheless, in practice there are many cases where approvals were still given although

Figure 4: The process of planning and controlling the housing supply



Source: Alias *et al.* (2007)

Figure 5: The procedure of controlling and approving the housing supply

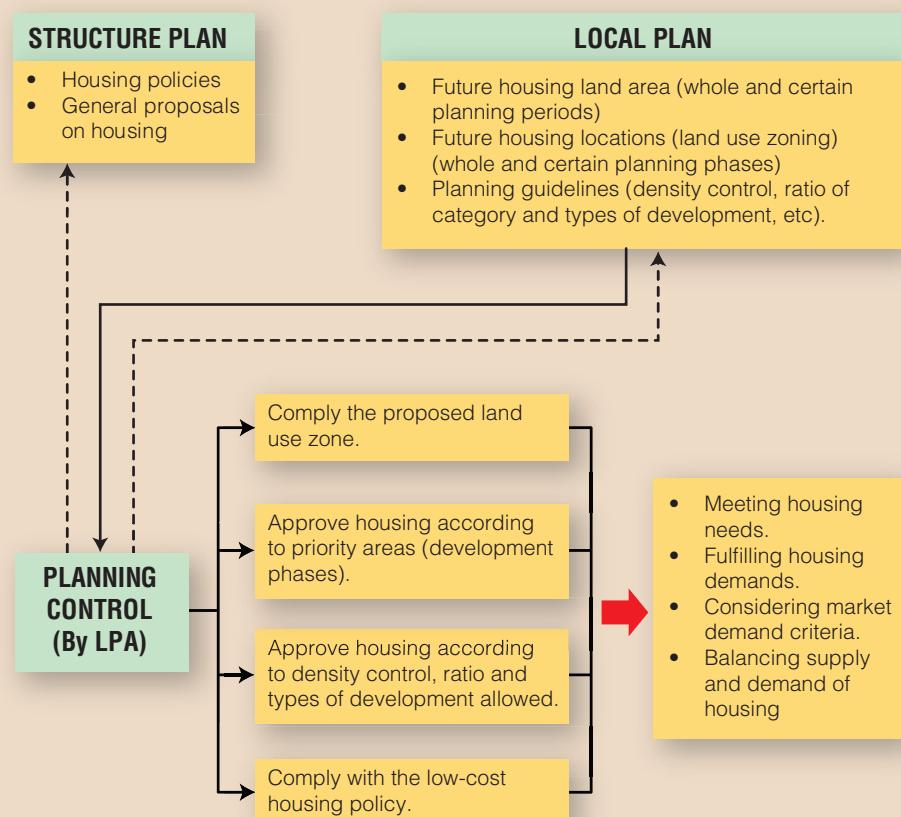
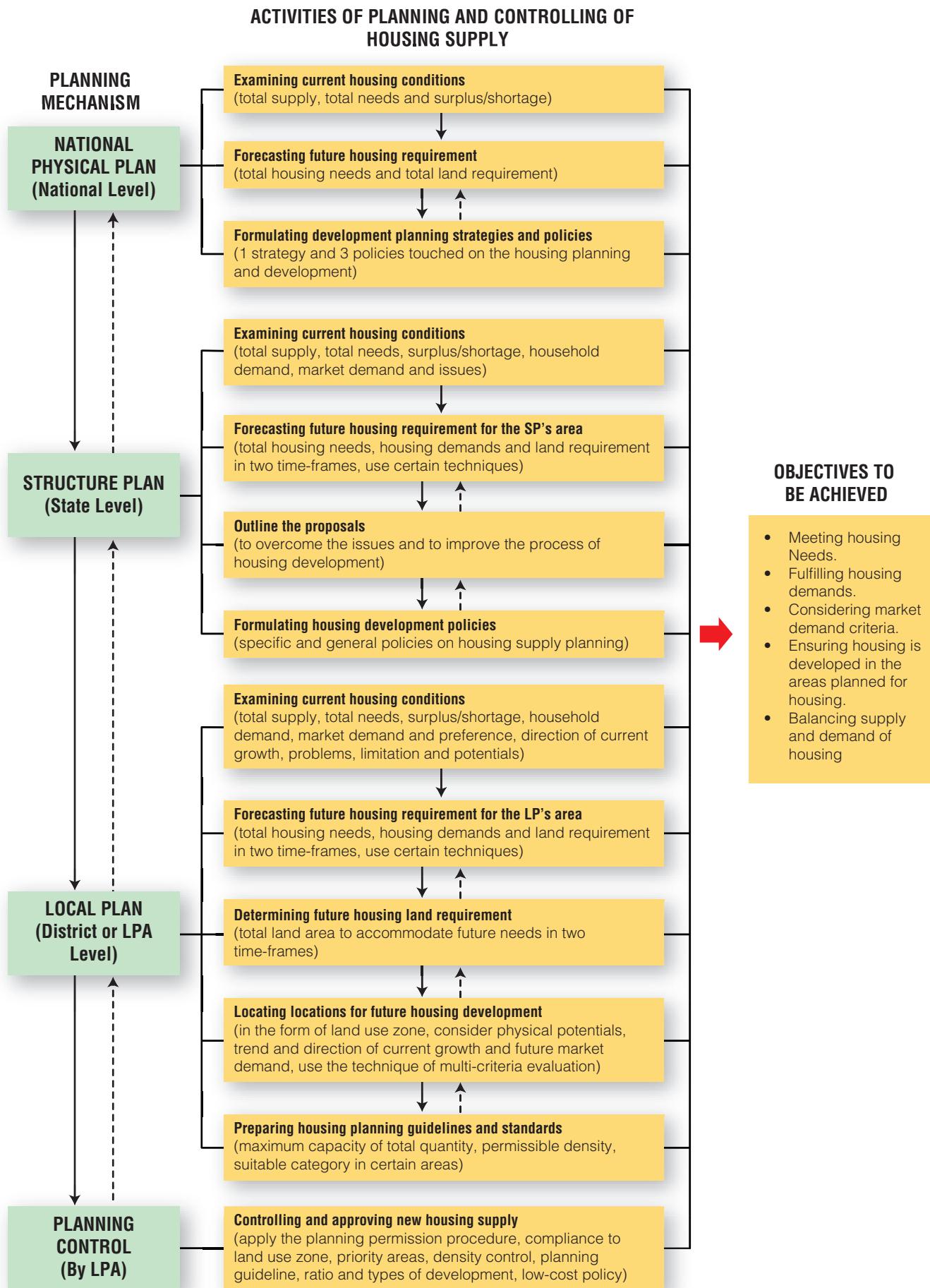


Figure 6: The framework of the process of planning and controlling the housing supply





the sites are planned for other land use activities or located outside the permitted development area. The practice of non-compliance to the LP's land use zoning occurred extensively in mid 1990s. This practice was argued to have contributed to the existence of housing oversupply and property overhang in Peninsular Malaysia (Mohamad Fadzil, 2005).

In relation to the requirement to comply with the stipulation of priority areas for housing development, less attention is given regarding this aspect in the process of controlling and approving of housing supply in Malaysia. The failure of most LPs to mark clearly the boundary of housing development priority areas (housing development phases) has discouraged the LPAs to consider this factor (Alias *et al.*, 2007). With regard to density control, housing development applications will need to follow the permitted maximum density as outlined in the LP. Basically, there are two methods of housing density control enforced by LPAs, namely a control by area (e.g. 6-8 units per acre for village settlement area and 10-15 units per acre for urban area) and control by housing category particularly for flatted housing (e.g. 20 units per acre for condominium, 40 units per acre for apartment and 60 units per acre for low-cost housing) (JPBD Johor, 2002).

The planning guidelines related to the ratio of housing category and types of housing development have also become a significant factor in controlling housing supply. Most of the LPAs particularly in the Johor State impose a ratio of 40:40:20 (40.0% for

low-cost housing, 40.0% for medium-cost housing and 20.0% for high-cost housing) as a condition that need to be followed by housing developers (Alias, 2007). In relation to the type of housing development, there are LPAs that set the condition, such as only landed housing is permitted to be developed in certain areas aimed at preventing housing developers from developing flatted housing, especially low-cost, in unsuitable areas (Alias *et al.*, 2007).

Besides having to be in conformity with the LP, the housing development applications also have to fulfil the current housing policies formulated by each State. The policy on low-cost housing allocation is one of the significant policies that are directly related to the control of housing supply. This policy requires housing developers to construct at least 30 percent (40 percent for the Johor State) of the total housing units as low-cost housing (Alias, 2007).

In exercising the process of planning and controlling the housing supply, it becomes the role of all planning mechanisms, development plans as well as planning control, to achieve the objectives of housing planning. According to Alias *et al.* (2007), the process should fulfil at least four objectives, namely meet the population housing needs, fulfill the household housing demands (household effective demand), consider the current and future market demands and match the quantity of housing supply with the requirement of housing demand. The objective to meet the housing needs becomes the main basis for the process of housing planning.

The achievement of this objective is important to ensure the aim of the national housing development policy to provide adequate housing for all Malaysians is achievable (Asiah, 1999).

Achieving the objective to meet the population housing needs alone, however, is insufficient in order to achieve a more integrated and responsive housing planning. The process of housing planning also needs to fulfill and consider the aspects related to housing demand, particularly household effective demands (household affordability) and current and future market demands. In relation to the objective to balance the housing supply with housing demand, Ho (1994) and Alias *et al.* (2007) generally perceive that the process of planning and controlling the housing supply has to achieve the objective to avoid mismatch between the housing supply and demand that may cause shortage or surplus to the housing supply.

CONCLUSION

The above discussion clarifies that the land use planning system, which acts as a government intervention instrument in the process of urban development, plays an important role to plan and control housing development, especially in relation to the aspect of housing supply. The role of land use planning in this aspect is not limited to achieving the objective of meeting housing needs, but also to fulfilling the household housing demands. With regard to this, it is important for land use planning

to understand and distinguish the concepts of housing needs and housing demand in planning housing supply. The need to differentiate between housing needs and demand is not only significant at the stage of formulation of housing policies but also important at the stage of determination of the volume of housing to be produced, the tenure of new housing development, locations and the types of housing to be built.

The market demand criteria, in addition to the aspects of housing demand are also important to be considered and incorporated in the planning of housing supply. The local housing market conditions and the expected house buyer preferences in terms of price, location and type of housing are among the criteria that influence the effectiveness of the land use planning system in managing housing supply. In other words, to achieve an effective planning for housing supply, it is vital for the land use planning system to understand, be sensitive and responsive to the need of housing market.

Another important issue relates to the system of 'plan, monitor and manage'. This system, as applied in the UK, has led the LPAs to endeavour to meet the best housing requirement for local

population. The introduction of the system was perceived as a responsive approach to planning and controlling housing in the right type and quantity and in the right locations.

It can also be seen that the development plan and planning control as legislative mechanisms in the land use planning system have a specific role in the process of housing supply. The development plans play a role in formulating housing policies and determining future housing requirements, followed by the process of planning control to monitor and control the applications of new housing development before it is approved to be developed. In carrying out the activities, both mechanisms should recognize that the future housing requirement is not only driven by the population trend but also influenced by other factors, such as effective demand (household affordability and their willingness to pay for housing), household choices (in terms of tenure, dwelling type, form and method of new homes to be developed) and market demand criteria (conditions of local housing market and buyer preferences in terms of price, location and type of housing).

The above discussion also explains the activity of planning for housing supply

was given special attention in all hierarchies of development plans. The NPP has formulated a general strategy and policies to guide the planning and controlling of housing supply in Peninsular Malaysia. In the preparation of SP, the activity continues through the examination of the existing housing conditions, forecasting of future housing requirement and formulation of specific policies to be enforced throughout the state.

The preparation of LPs plays a greater role in planning housing supply. These plans have to examine in detail the existing housing conditions, forecast the future housing requirements accurately, determine the total housing land area required for certain periods and distribute the most suitable locations for future housing development. The activity of controlling the housing supply is exercised through the procedure of planning permission. This procedure requires LPAs to consider the outcomes of development plans before making a decision to approve a new housing development. Theoretically, by following the existing processes, from the stage of preparation of NPP to the planning control process, housing supply should be planned and controlled effectively and fulfil the objectives of housing development.



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GENTRIFICATION AND LOCAL STRATEGIES TO MITIGATE DISPLACEMENT: CASE OF KUALA LUMPUR, MALAYSIA



ABSTRACT

Social displacement mitigation strategies such as affordable housing production and retention as well as socio-economic upgrading have been discussed in several literature and technical reports in developed and developing countries. However, most of these strategies are not presented in the context of socio-spatial urban phenomena, such as gentrification, particularly in developing countries. This study examines the outcome of urban development strategies, particularly in mitigating displacement and social exclusion in Kuala Lumpur, Malaysia. Gentrification attributes and stages are considered in evaluating such strategies to determine their feasibility and effectiveness. The findings of this study indicate that housing programmes in Kuala Lumpur can be categorised based on three key strategies, namely "affordable housing production", "affordable housing retention", and "asset-building". However, these strategies do not consider corresponding gentrification stages so social and spatial exclusion of city residents is still an issue. This study suggests an integration of low-cost housing programmes and strategies with appropriate gentrification stages and characteristics in order to achieve a more socially inclusive approach.

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Keywords: Displacement, Gentrification, Affordable Housing, Housing Programmes.

INTRODUCTION

Gentrification constitutes one of the challenging urban phenomena that have remained a part of urban studies throughout the past forty years (Lees *et al.*, 2010; Rérat, 2012; Bondi, 1999). As a primary definition, gentrification refers to the displacement of low-income groups by wealthier ones in central and working-class urban areas, and as an outcome of the rehabilitation of those areas (Glass, 1964). Gentrification literature for a long time has been divided into two aspects: consumption-side and production-side. The emergences of gentrifiers such as professional, technical, and administrative labor forces (new urban elites) as well as their consumption preferences are the centres of focus by the scholars who deal with consumption-side (Bondi, 1999; Hamnett, 1991; Ley, 1996; E. K. Wyly & Hammel, 2005). On the other hand, production-side associate the gentrification process to the role of capital rather than new urban elites in moving the affluent households back to the central city (Smith, 1979).

Gentrification is associated with both negative and positive aspects. The minus side of gentrification results in the loss of social diversity to be replaced with emerging wealthy enclaves. Due to the changing demand of these higher-incomes, the neighborhood business structure inevitably changes as it no longer serves the low-incomes. In contrast, from the positive point of view, gentrification counteracts urban sprawl, limits crime rates, reduces vacancy rates and revalorizes properties.

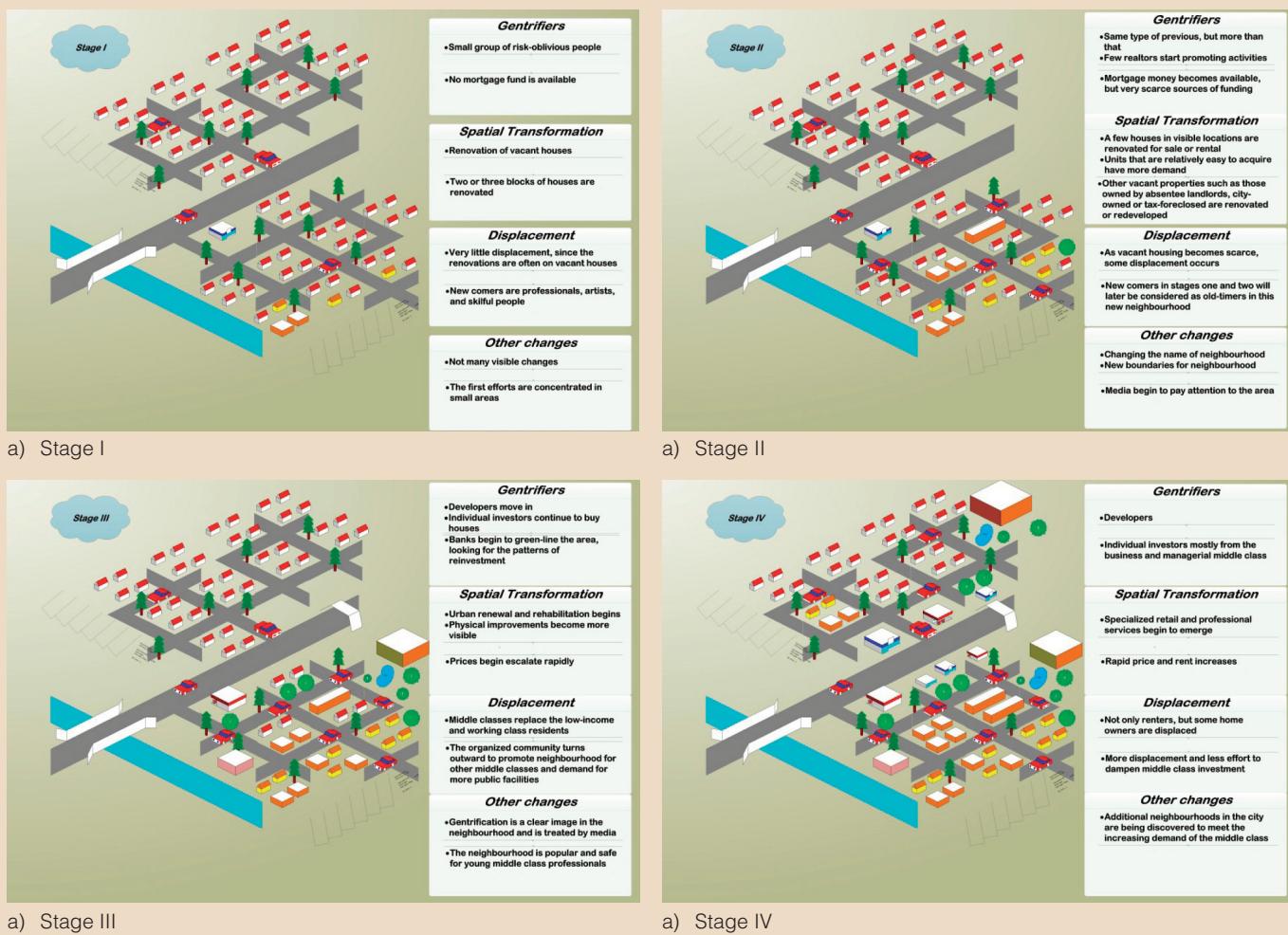
While gentrification has a number of positive outcomes, the negatives are overriding especially from the social point of view. However, a complete disapproval of gentrification is neither productive nor an achievable goal in contemporary urban transformations. Although the early stages of gentrification can contribute to a more socially balanced environment, its later stages result in the most socially exclusive neighbourhood arrangements (Levy *et al.*, 2006a, 2006b). Accordingly, considering gentrification impacts at early stages of neighbourhood transformation would be appropriate (Levy, *et al.*, 2006a).

Gentrification with its positive and negative impacts has been spread from Global North (i.e. UK, US, Australia) to the Global South (i.e. Latin America, Middle East, Southeast Asia) through 'New Urban Policy' and 'Modernisation' (Inzulza-Contardo, 2012; Lees, 2011; Winkler, 2009). In most cases, it remained in the premier cities and the central parts of the city (Guzey, 2009; Shin, 2009). For instance, in particular neighbourhoods of central Shanghai gentrification is forced by direct intervention of the national and local government in favor of the whole nation and at the expense of the displacement of local communities (He, 2010).

In the context of Kuala Lumpur (KL), there are many aspects of gentrification that are generated from national urban policies as well as local redevelopment, regeneration, and revitalization strategies (Sabri, 2012). The rapid socio-economic development in Malaysia and particularly in KL, as the capital city, during the last four decades has some implication of gentrification which brought about two major transformations (Bunnell *et al.*, 2002; Hogan *et al.*, 2011; Rimmer & Dick, 2009). First, the dramatic increase of urban land prices resulting in clustering of activities in particular areas. Second, the emergence of new socio-economic profile with their specific preferences and lifestyle (Embong, 2002). These new socio-economic groups are known as middle classes who are mostly professionals, managers, and administrators. These transformations have led to the displacement of low-income and squatter settlers who were offered new settlements far from their job centres (Bunnell, 2004).

If gentrification is going to be a consequence of government strategy, actions to balance the negative and positive effects have to be initiated. Additionally, support and help has to be given to those who are directly or indirectly affected by displacement or excluded from gentrified neighbourhoods. Hence, a big challenge for city officials and housing practitioners is to ensure a balance between redevelopment/regeneration of neighbourhoods and reducing the risk of displacement of low-income families.

Figure 1: Stage Model of Gentrification Adopted from Clay (1979).



In this study, we examine the housing programmes for low-income residents in Malaysia, and KL in particular, using the concept of gentrification to determine the extent to which they are feasible and effective. This study first examines displacement mitigation strategies with regard to stages of gentrification. The national and local housing strategies are next evaluated based on the predetermined stages. The study comes to an end with recommendations to achieve more socio-spatial equitable strategies.

GENTRIFICATION

Traditionally, gentrification is viewed as essentially a class-based process whereby the rundown areas of the city and working class are transformed into middle-class residential areas following changes in commercial use (Hamnett, 2009). The literature on gentrification has extensively focused on underpinning mechanisms for movement of middle classes

(Botermana *et al.*, 2010; Wang & Siu Yu Lau, 2009), out-migration of working classes (Lees, 2008; Lees & Ley, 2008), and displacement (Davidson, 2011; Lees & Ley, 2008; Wyly *et al.*, 2010). Conversely, the focus of this study is on mitigating displacement as one of the major consequences of gentrification. For this purpose, we establish the contemporary stage model of gentrification.

The early stage models of gentrification were developed in the 1970s and 1980s (Lees *et al.*, 2008). Clay (1979) developed the stage model of gentrification based on the expert's opinion and an extensive study on urban transformation in several US cities. He outlined this process from pioneer gentrification (stage 1) to maturing gentrification (stage 4) (Figure 1).

However, the processes of urban change have evolved and so too have the definition of gentrification to identify new forms of social and spatial

transformation, new geographies, and new driving factors (Davidson & Lees, 2010; Lees, 2011; Lees *et al.*, 2008, 2010; Réat, 2012). Accordingly, new stage models have been developed based on the contemporary understanding of gentrification. Two recent attempts to model gentrification by Hackworth and Smith (2001) and Lees *et al.*, (2008) have been developed based on the gentrification process in the United States and introduced different gentrification waves associated with new driving forces which consequently have been evaluated in other contexts such as Australia (Bounds & Morris, 2006) and Switzerland (Réat *et al.*, 2010).

Both models indicate the role of state policies as a support for accelerating gentrification by increasing socio-economic impact of large developments on neighbourhoods. This trend can be considered as the beginning of the third-wave gentrification in the US, when the inflow of large-scale capital was linked to low

Figure 2: Stage Model of Gentrification Based on its Third and Fourth-Waves' Conceptualization

NEW GENTRIFICATION STAGES		
EARLY	MIDDLE	LATE
<p>Gentrification Drivers:</p> <ul style="list-style-type: none"> • Government policies in transforming the socio-spatial context of the cities • Local Government in changing the zoning and land use regulations • Large developers <p>Displacement:</p> <ul style="list-style-type: none"> • No displacement, where there is a vacant property • Large displacement, where there are squatter settlements or public housing to be redeveloped 	<p>Gentrification Drivers:</p> <ul style="list-style-type: none"> • Large and medium developers • Media and real estate promotions for middle class residents <p>Displacement:</p> <ul style="list-style-type: none"> • Little displacement, in neighbouring properties due to price escalating • Evacuation of renters by landlords for transforming the property to new activities or redevelopment 	<p>Gentrification Drivers:</p> <ul style="list-style-type: none"> • Large and medium developers • Transnational companies • Commercial and service activities to meet middle class requirements <p>Displacement:</p> <ul style="list-style-type: none"> • More displacement due to class conflicts and less access to facilities for low-income people • Owners sell their properties as market demand is very high and prices are significantly increased

interest rates of mortgage funds which encouraged massive developments. This capital inflow resulted in housing inflation, spikes in housing costs thus forcing the low-incomes to move far from the job centres and consequently, many job cuts (Lees *et al.*, 2008). In the fourth-wave of gentrification identified by Lees *et al.*, (2008), the gentrification was tightly coupled with national and global capital market. The nations have developed strategies to achieve the global status and attract more capital from transnational companies. As a result, in the fourth-wave of gentrification, the new urban policies formulated by the states are considered as the main driving force for gentrification. Other role players are large developers who are aligned with the government to spur the redevelopment and regeneration in the cities. In developing countries, the role of state policies and local governments are also confirmed as gentrification drivers (Lees, 2011). Hence, the early stage model of gentrification can be modified based on the impact of the new drivers (**Figure 2**).

DISPLACEMENT MITIGATION STRATEGIES

The literature suggests a number of social, economic, and development strategies and tools to balance the positive and negative outcomes of gentrification. **Table 1** summarizes the strategies that have been applied in the US to mitigate displacement. It should be noted that in many cases the combination of two strategies have been more successful. For instance,

combination of housing rehabilitation and affordable housing production secured the housing for low-income residents in the Reynoldstown neighbourhood of Atlanta, GA.

These strategies apparently have been successful in providing facilities for low-income and senior citizens in retaining their living places despite the

impact of new developments on land values. However, there are two general challenges in the implementation of these strategies. First, the time of action is highly important as some of the strategies are only feasible in a particular stage of gentrification. For instance, homebuyer programme provides early support in improving the incumbent residents economically.

Table 1: Housing Strategies to Mitigate Displacement.

Strategy	Main Objective
Affordable Housing Production	To ensure the needs of incumbent and new lower-income residents for home-ownership and rental.
Housing Rehabilitation	To retain incumbent residents while improving the housing stock.
Infill Development	To turn vacant lots and abandoned buildings into developable land parcels and habitable properties.
Housing Levy	It is a property tax assessment that raises funds for affordable housing preservation, production, and assistance.
Housing Trust Fund	To ensure non-residential development assist with low-income housing needs connected with job growth
Homebuyer Programs	To assist eligible applicants from low- and moderate-income homebuyers or first time homebuyers to purchase the home.
Individual Development Account (IDA) programme	To enable participants to build wealth and serve as a community building tool
Gentrification task Forces	To assist in the development of affordable housing and to ensure that very low and extremely low income families are targeted for subsidies
Systematic Housing Code Enforcement Programme (SCEP)	To inspect all residential rental properties with two or more dwellings every three years to determine housing code compliance
Rent Stabilisation Ordinance (RSO)	To protect renters from sharp rent increases, while securing landlords investments with reasonable returns.
Land Trust	To help stabilise the community by bringing existing housing under community ownership

Source: Levy *et al.* (2006b)

Thus, this strategy would be more effective in the early stages of gentrification, although it would also be effective in the middle and late stages, but with lower degree. Second, most strategies are effective only when they are continuous, otherwise it is not possible to maintain their usefulness for affordable housing. As an example, the Rent Stabilization Ordinance (RSO), with the objective of protecting the renters from sharp rental increase should always support the target groups with regard to housing to maintain the affordability and effectiveness.

As a conclusion, Levy *et al.*, (2006) suggested three key strategies as listed below, which have different feasibility and effectiveness in each stage of gentrification (**Figure 3**).

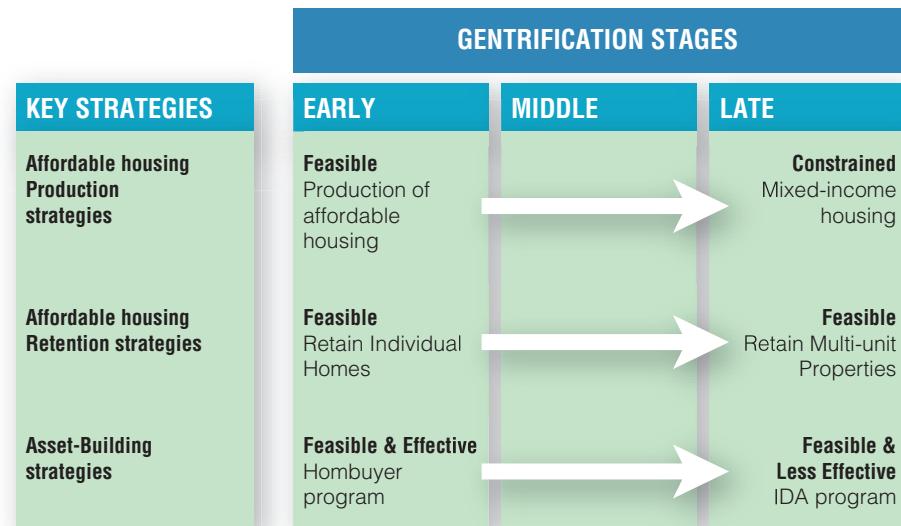
- Affordable housing production strategies
- Affordable housing retention strategies
- Asset-building strategies

Using the framework that is presented in **Figure 3**, this study examines the housing programmes in KL to identify the strength and weaknesses of the strategies in mitigating gentrification forced displacement.

HOUSING PROGRAMMES IN KUALA LUMPUR

In line with the Malaysian national housing policy and the development plans, the City Hall of Kuala Lumpur (KL) has been involved in providing adequate housing and ensuring quality housing for the city residents through two structure plans in 1980s and 2000s (Kuala Lumpur City Hall, 1981, 2004). The KL Structure Plan 2020 has highlighted the issues related to the quality of housing environment for low-cost and public housing, squatters and long houses as well as dilapidated housing. The KL Structure Plan also addressed the demand for affordable housing and uneven distribution of different housing types in the city (Kuala Lumpur City Hall, 2004). Nevertheless, the issue of housing remains as one of major concerns, when there is still an oversupply of high-cost housing and a significant shortage of low and medium-cost housing types (Tan, 2012).

Figure 3: Affordable Housing Strategies and their Feasibility in Gentrification Stages as a Conceptual Framework.



Source: Adapted from Levy *et al.*, (2006).

Table 2: Housing Programmes and Provisions in Malaysia and KL Context.

Housing Programme	Goal
Low-cost Housing Revolving Fund (LCHRF)	Established by the Malaysian National Bank (Bank Negara Malaysia (BNM)) with a capital of RM 1 billion. (In states such as Johor, Pulau Pinang, Selangor, and Sabah)
National Housing Corporation (Syarikat Perumahan Negara Malaysia Berhad (SPNB))	To increase the supply of houses costing RM 150,000 and below
Four-tier pricing scheme	As an incentive to housing developers to participate more actively in providing low-cost houses
Integrated People's Housing Programme (Program Perumahan Rakyat Bersepadu (PPRB)).	Resettling squatters in urban areas
Home Ownership Campaigns	To help reduce housing stock overhang
Public Low-Cost Housing Programme	For households with income levels of less than RM2,500 per month.
Housing Maintenance Fund	To address the issue of poor housing maintenance.
Tabung Perumahan 1Malaysia (1Malaysia Housing Fund)	To provide support for the maintenance and major repairs of low-cost housing in KL.

During the Seventh Malaysia Plan (1996-2000) while the government concentrated on producing low-cost housing, the private sector was encouraged to build more low and low-medium-cost houses. During the Eighth Malaysia Plan 103,219 low-cost units were completed by the public sector including the various state economic development corporations (SEDCs). From 1990 to 2009, about 808,000 low-cost affordable housing units were provided

with approximately 128,000 built during the Ninth Plan period. One of the housing development projects in KL was allocated a budget of RM 1 billion under the "Employees Provident Fund (EPF)", where employers and employees contribute from monthly wages and the government provides required lands for housing development (Ooi, 2005). The main programmes that are implemented in Malaysia as well as KL are summarized in **Table 2**.

Figure 4:

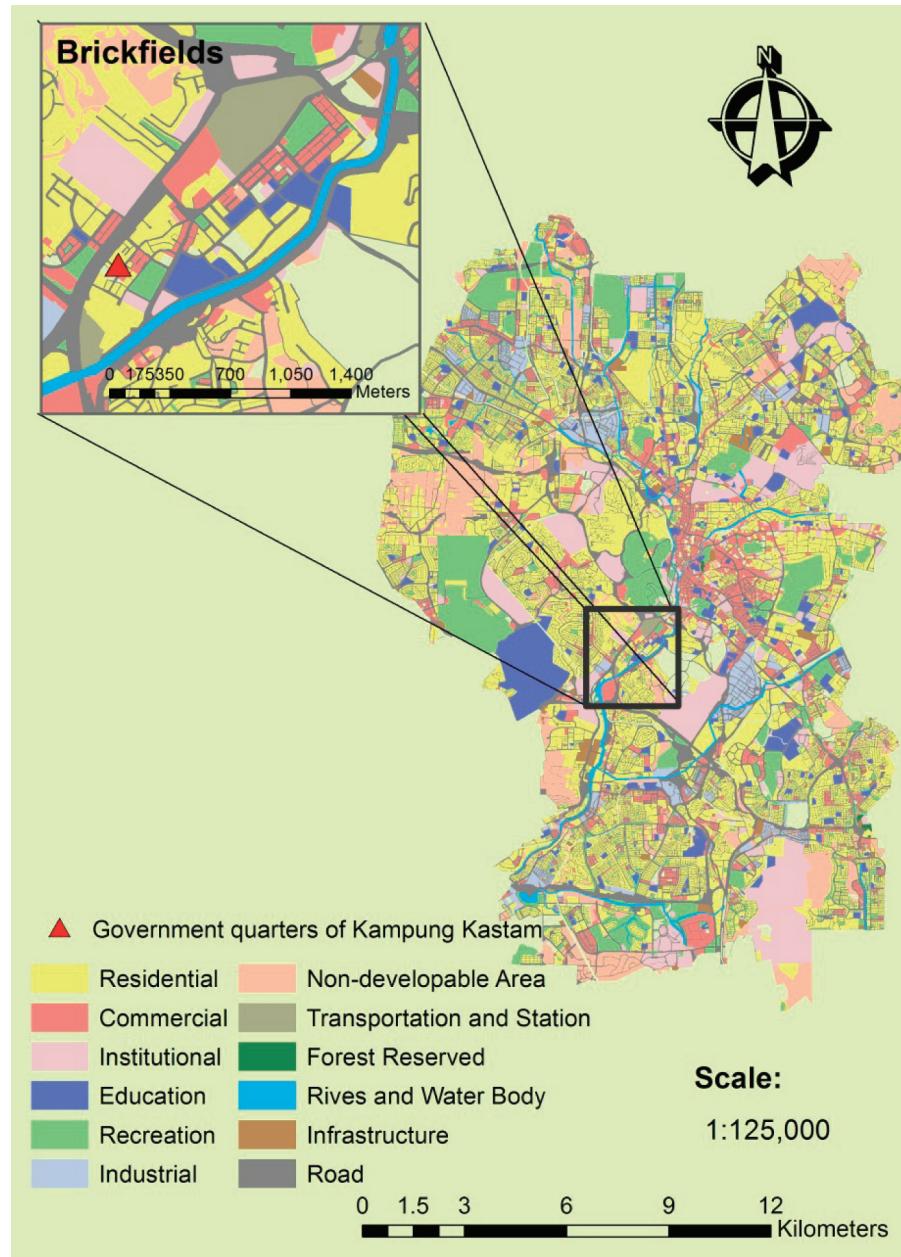
Other mechanisms provided by the National Housing Policy are outlined as below:

- **Encouraging urban rejuvenation through an en-bloc sale mechanism**
 - Incentives for private redevelopment of old properties in prime locations
 - Amending laws governing the sales of property and land to ease the sale of collectively-owned developments.
- **Strengthening monitoring and enforcement**
 - To protect the preferences of house buyers
- **Promoting the adoption of the Build-Then-Sell (BTS) approach**
 - Shortening the approval processes for land and building plans
 - Exemption of deposit payments for licensing housing developments
- **Rehabilitation of abandoned housing projects**

Despite all these strategies KL is still facing the issues of affordable housing and displacement. Acquisition of land for urban areas has been one of the major challenges in developing low cost housing specifically in KL (Ong & Lenard, 2002). Since one of the major factors that contribute to the price of housing is the availability of land, especially in urban areas, the Ministry of Housing and Local Government has taken several steps in acquiring vacant land in strategic areas of towns and cities to build more low and medium-cost houses. However, there would be less likelihood for the development of low-cost housing since the value of the acquired vacant lands becomes more expensive. As an example, a project related to EPF involved the development of low and medium-cost housing as a new township comprised of 20,000 units on 236 hectares of land located in a forest reserve area of northern KL. Despite the fact that this project targeted for 98,000 squatter settlers, the facilities favoured the middle and upper-income households (Ooi, 2005).

Rapid developments in KL can be considered as the other reason for the lack of affordable housing and displacement issue. Certainly, after huge developments and proliferation of high-end residential, commercial,

Figure 4: Location of Brickfields in Kuala Lumpur.



and institutional buildings the implementation of low-cost housing programmes would be critical and more displacement is expected to take place in the area. For instance, the KL City Hall has proposed the replacement of public housing to accommodate residents from other low-cost areas (PPR Sri Pahang & KTM flats) in the government quarters of Kampung Kastam in Brickfields (Kuala Lumpur City Hall, 2008). However, its implementation would be precarious since the neighbouring lands are already developed or proposed to be built as mixed-use residential and commercial (Figure 4).

The above discussion reveals that most low-cost housing schemes in KL have been handled by the government. However, the private sector is more interested in developing medium and high-cost housing rather than low-cost (Tan, 2012). In other words, KL sees a shortage of low cost and an oversupply of high and medium-cost housing (Tan, 2012; Tenth Malaysia Plan, 2010). As a result, the low and medium-income residents are forced to move to the urban fringes or out of urban areas seeking affordable housing (Kuala Lumpur City Hall, 2004). The next section examines a clear example of gentrification in Brickfields, a

neighborhood recently named as Little India, and located a short distance from Kuala Lumpur City Centre.

TRANSFORMATION OF BRICKFIELDS

Brickfields is a neighbourhood in KL that has been transformed as a result of the development of Multimedia Super Corridor (MSC). MSC, as a national economic development project caused the removal of several already established settlements along the way from KL International Airport (KLIA) to KL City Centre (KLCC) (Bunnell, 2004; King, 2007) (**Figure 5**). The transformation of Brickfields took place when the KL Central Transit Station (KL Sentral) was developed in this neighbourhood to connect the KLIA to KLCC (Baxstrom, 2009; Bunnell, 2004). Proliferation of top-level business districts, five-star shopping malls, hotels and restaurants are the outcomes of these developments during the last two decades (**Figure 6**). Despite defining low-cost housing programmes in this neighbourhood, the new developments have caused many displacements and escalating housing prices, which are considered as barriers for the development of affordable housing.

According to Baxstrom (2009), Brickfields has been depopulated by about 4,000 people during 1980 to 2000 (**Table 3**).

During the last decade, a significant number of condominiums, office towers and hotels have been erected in Brickfields and housing prices have jumped significantly. **Table 4** indicates a number of condominiums with their average annual price growth. This table shows that at least 1,000

medium- and high-cost residential units have been built in Brickfields indicating the emergence of new lifestyle, more suited for expatriates and high-income people.

Obviously, huge developments in Brickfields will have price and cultural implications on nearby neighbourhoods as well. This impact on increasing price and changing cultural structure of neighborhoods can be accelerated by adjacent

Figure 5: Multimedia Super Corridor (MSC) and Location of Brickfields.

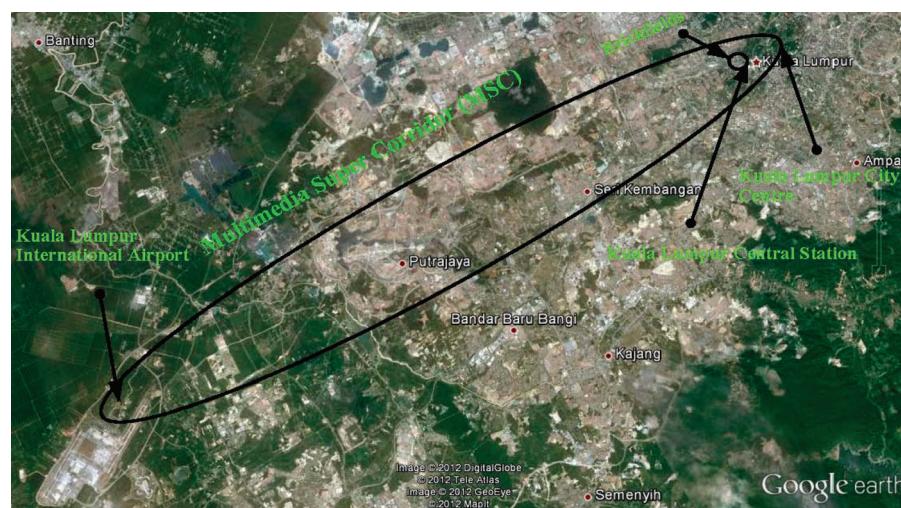


Table 3: Population Changes in Brickfields, KL by Ethnic Group.

Year	Malay	%	Chinese	%	Indian	%	Other	%	Non-citizen	%	Total
1980	3,779	25	5,521	36	5,888	38	184	1	--	--	15,372
1991	4,081	29	4,096	29	5,142	37	122	1	617	4	14,058
2000	2,726	23	2,885	25	4,371	38	156	1	1,521	13	11,659

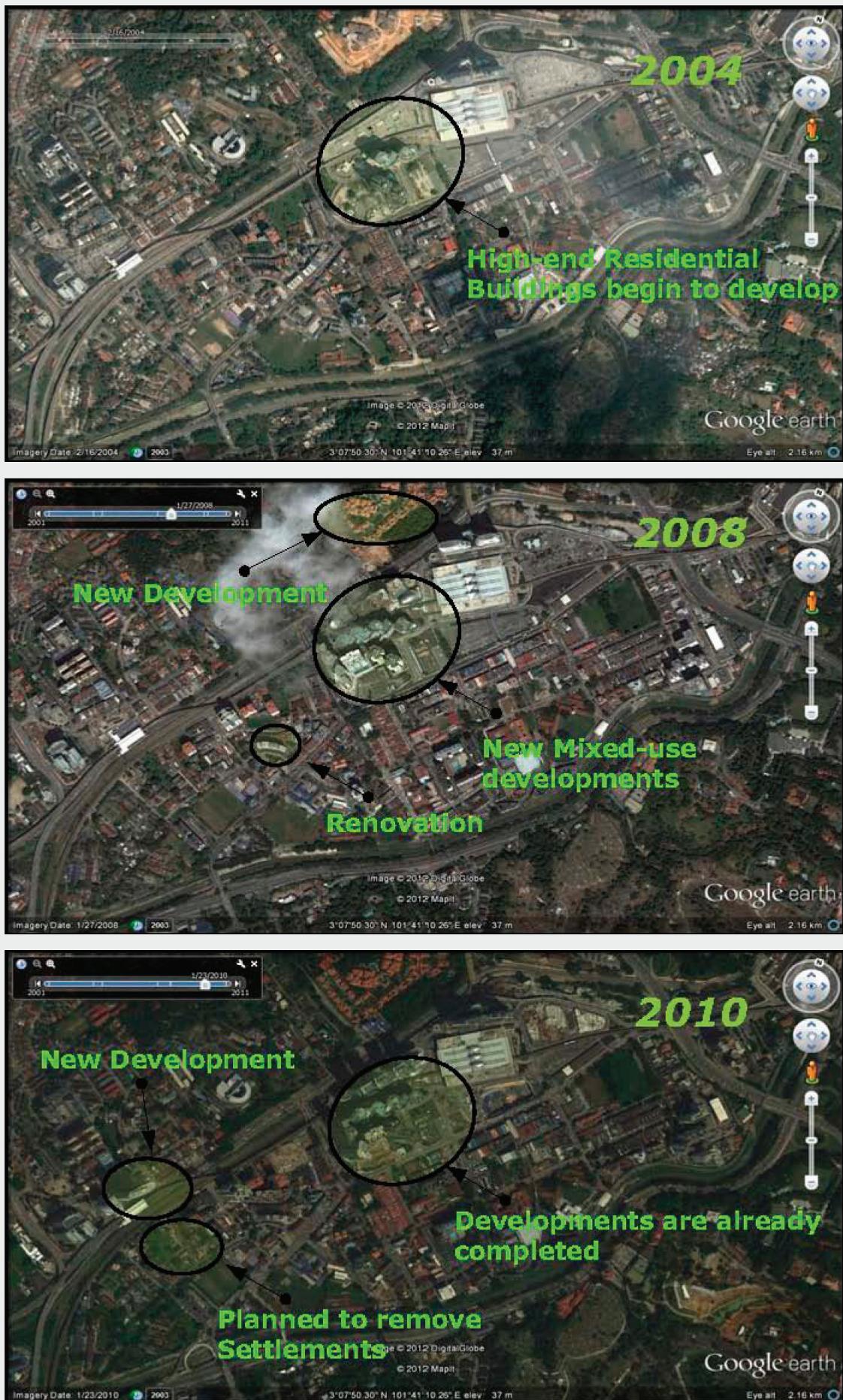
Source: Baxstrom (2009)

Table 4: New Housing Stock and Price Changes in Brickfields, KL.

Name	Developer	Completion Date	Type	No. Units	Built-up From (sf)	Price (RM/sf)	Current Price (2012) (RM/sf)	Ave. Annual Growth
633 Residency	Private	2009	Condominium	180	822	450	640	8.81
Villa Scott	Private	2000	Condominium	2 Blocks 25 stories	1100	268	496	4.74
Residency Mutiara	Private	2011	Condominium	110	1068	550	572	3.92
Menara Pelangi	Private	2000	Condominium	280	790	367	453	1.62
Sri Impian	Private	2007	Condominium	249	1500	347	439	3.92
Palm Court		Late 1990s	Apartment		950	263	425	3.20
Scott Sentral	Private	2006	Condominium	189	804	235	490	10.50

Source: On-line Real Estate Advertisements (2012).

Figure 6: New Developments in Brickfields and their Impact on Neighboring Properties



developments such as the Mid Valley Megamall (high-end shopping complex) in Southern Brickfields. As a result, it seems that the new developments in KL have accelerated to increase the housing prices and changed the housing types and consequently transformed the physical and social aspects of the city, although the problem of urban poor and affordable housing remains unsolved, which are indications of the gentrification process. Hence, while the national and local governments have provided various strategies to prevent social exclusion in Malaysia and KL, the feasibility and effectiveness of these strategies should be addressed.

The housing programmes in Brickfields closely correspond to the three key strategies displayed in Figure 3. These are “LCHRF” and “SPNB” as “affordable housing production”, “Tabung Perumahan 1Malaysia” and “Housing Maintenance Fund” as an “affordable housing retention” strategy, and “Home Ownership campaigns” and “Public Low-Cost Housing Programme” as “asset-building”. However, the programmes are formulated and implemented without regard to gentrification stages. This significantly contributes to the failure in implementing the low-cost housing program in KL. As a conclusion, **Table 5** explains the best prospective links among the different gentrification stages and KL housing programmes.

Table 5: The Best Prospective Links among the Different Gentrification Stages and KL Housing Programmes.

Housing Programme	Gentrification Stages		
	Early	Middle	Late
Low-cost Housing Revolving Fund (LCHRF)	✓		
National Housing Corporation (Syarikat Perumahan Negara Malaysia Berhad (SPNB))	✓		
Four-tier pricing scheme	✓	✓	
Integrated People's Housing Programme (Program Perumahan Rakyat Bersepadu (PPRB))	✓		
Home Ownership Campaigns		✓	
Public Low Cost Housing Programme	✓		
Housing Maintenance Fund		✓	✓
Tabung Perumahan 1Malaysia (1Malaysia Housing Fund)	✓	✓	

CONCLUSION

This study set out to examine strategies to mitigate displacement and social exclusion as the outcomes of urban development from the point of view of gentrification. The evidence in the study suggests that implementation of housing programmes which disregard the attributes of gentrification are less feasible or effective. An example of this is seen in the unlikelihood of implementing housing programmes for poor residents in KL, since the rapid economic growth and development projects in KL caused the surge in land prices and at the same time displacing the working class residents. This study reveals a number of challenges that have persisted since 1970s in spite of attempts to overcome the shortage by the Malaysian housing programmes in KL.

It has however been observed that KL is one of Southeast Asian cities that have been better managed and delivered a better quality of life than other mega cities in the region (Rimmer & Dick, 2009). Nevertheless the future planning strategies should provide a more equal opportunity for the working class as well as the middle class that will prosper the city in the long-run. A solution for this is a long-term development of land use and housing provision within a dynamic planning framework. Additionally, planning departments should have more insight into new urban phenomena such as gentrification which is a product of globalization. Accordingly, these emergent urban processes should be continuously studied and integrated into the planning concepts.

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TRIALS AND TRIBULATIONS OF TRANSFORMING THE PUBLIC TRANSPORT SYSTEM IN MALAYSIA



ABSTRACT

The national aspiration towards becoming a progressive and high-income nation as envisioned in Vision 2020 demands an efficient and seamless public transport system. Provision of an efficient public transport system is identified as one of the fundamental building blocks in supporting the economic development and population growth. However, the quest to transform the current public transport system is laden with many challenges spanning institutional, economic, and environmental concern. Disintegrated planning between agencies and unclear demarcation of functions and roles is one of the root causes for unreliable public transport network and systems. Conflicting and complementing policies need to be taken into consideration which impact on mode share. From the economic aspect, the challenge is to balance the interest of public transport operators and welfare of the people. Affordable pricing and sustainability of services is critical. Meeting our promise at the international forum in tackling climate change forces us to seriously look at ways in contributing to reduce carbon emissions. Moving forward, there is no single solution where one-size fits all. Prioritization and customization of strategies is inevitable.

Keywords: Public Transport, Land Public Transport, Transformation of Public Transport System

INTRODUCTION

The role of public transport is to provide people with mobility and access to employment, education, health, commercial and recreational facilities. It benefits those who choose to ride, as well as those who have no other choice i.e. to those without access to a car. Public transport has the capacity to transfer large numbers of people. For example, the current Kelana Jaya LRT line carries approximately 170,000 passengers a day. If these people choose to travel by cars instead, that would mean an additional 142,000 cars (occupancy rate of 1.2) would use our roads. Thus public transport helps to reduce traffic congestion, increases access to employment, lower transportation and business costs which helps to lower the cost of living and increases business productivity.

From the environmental perspective, public transport produces up to 95% less carbon monoxide and 50% less carbon dioxide and nitrogen oxide per passenger kilometre travelled compared to cars. If more people travelled by public transport, pollution and greenhouse gas emissions can be lowered and air quality improved. Consequently this will bring about improved community's health and quality of life.

Provision of an efficient public transport system is identified as one of the fundamental building blocks in supporting economic development and population growth. However, the quest to transform the current public transport system

is laden with many challenges spanning economic, institutional, and environmental concern. For a planner, a thorough comprehension of the multifarious trials and tribulations needs to be addressed if an effective public transportation system is desired.

CHRONOLOGY OF PUBLIC TRANSPORT SYSTEM TRANSFORMATION IN MALAYSIA

A glimpse of public transport system in yester years, as in **Figure 1** (chronology of rail system), **Figure 2** (chronology of bus system), and **Figure 3** (chronology of taxi system), shows that Malaysia has come a long way. The transformation of the public transport system is closely linked to the progress of the community and areas.

Figure 1: Chronology of Rail System Transformation in Malaysia

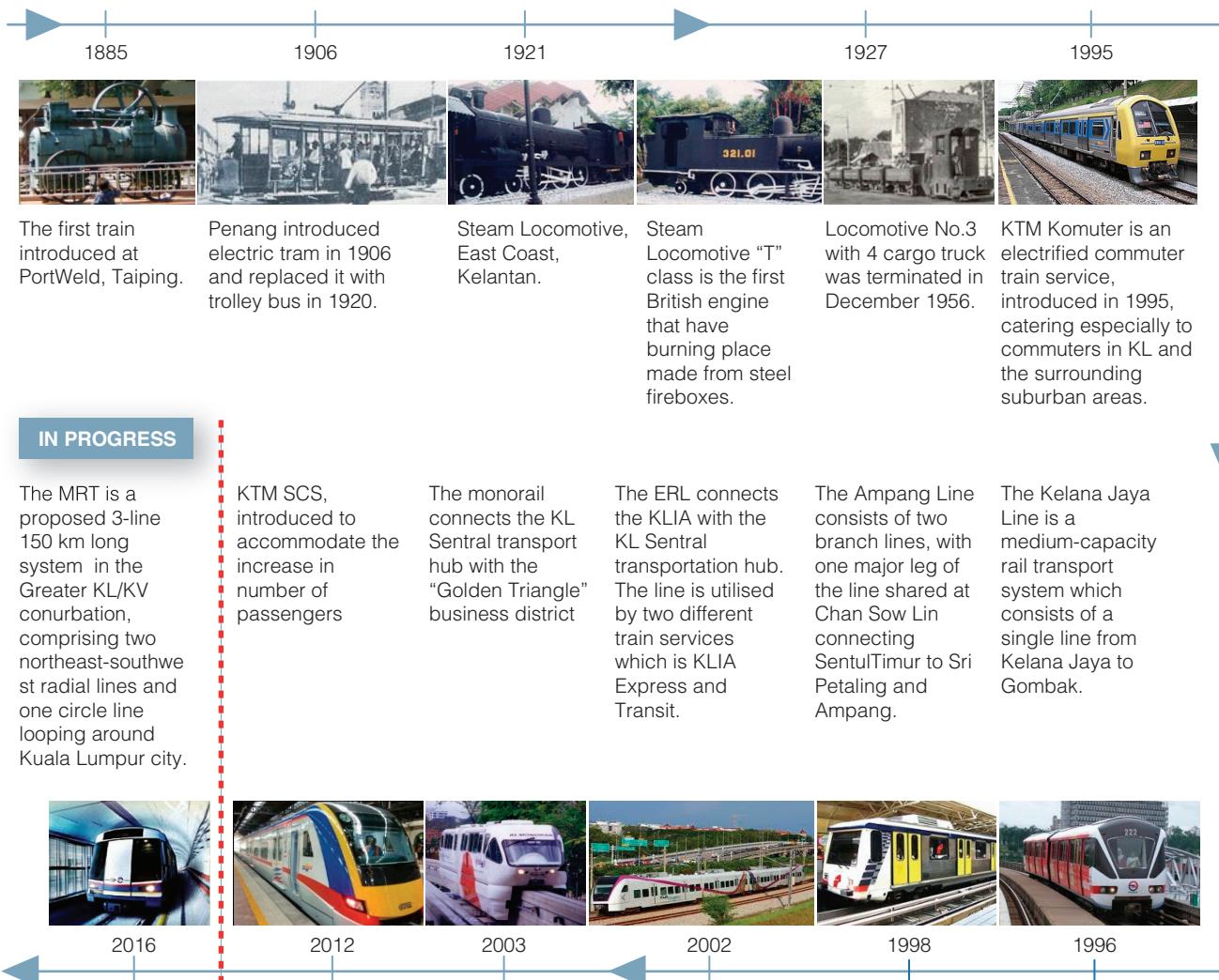
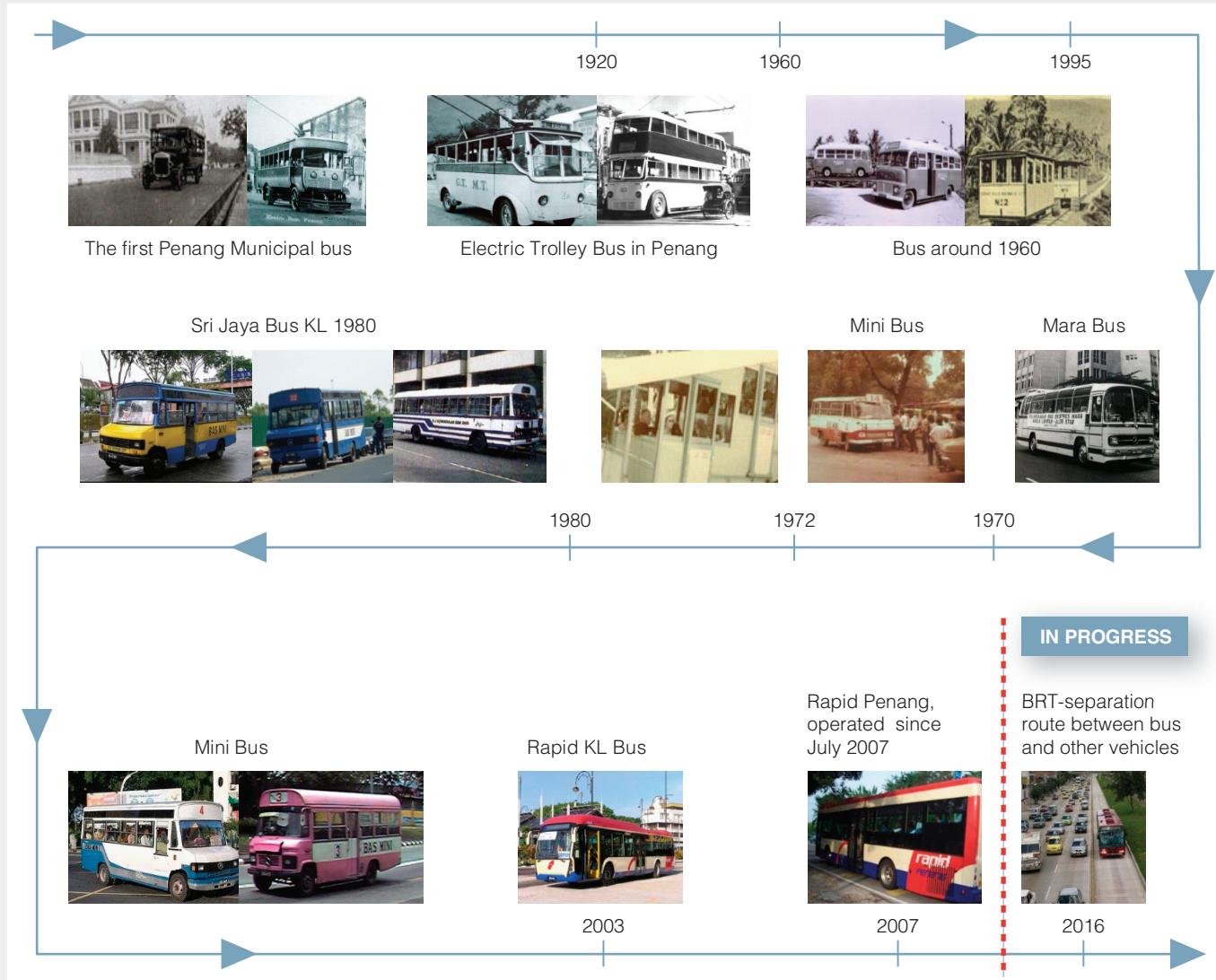
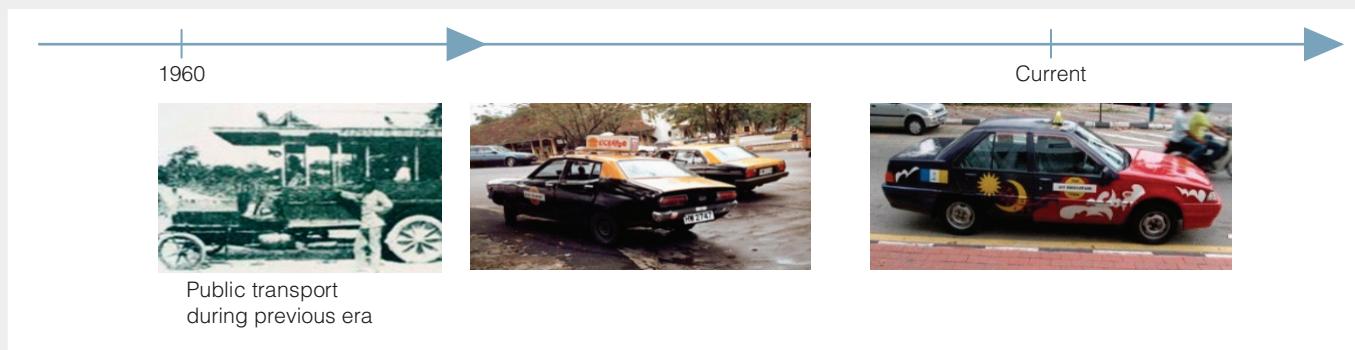


Figure 2: Chronology of Bus System Transformation in Malaysia**Figure 3:** Chronology of Taxi System Transformation in Malaysia

ISSUES AND SIGNIFICANCE OF TRANSFORMING PUBLIC TRANSPORT SYSTEM FROM ECONOMIC PERSPECTIVE

Supporting Economic Development and Population Growth

Malaysia's economy is growing rapidly. The World Bank data indicated that in 2010, Malaysia had a Gross Development Product (GDP) of USD 8,423 and it is forecasted to grow by 30% to USD 10,939 by 2015. Population in 2020 is forecasted to grow 20% to 26.2 million and 50% to 32.5 million by 2030. This growth in the economy and population will add to existing pressures and challenges to satisfy demand for attractive land public transport services. An efficient, effective land public transport system can support growth by providing the high levels of connectivity and capacity and the choices necessary to access jobs and employment. However, there are already capacity and quality issues in many areas of the land public transport system and there are gaps in network connectivity. Unless these are addressed, future growth will be constrained. The importance of this

is recognised by the Second National Physical Plan (NPP2), which highlights that "an integrated and efficient infrastructure, particularly public transport" is 'crucial'.

As a consequence of economic growth, our country is undergoing rapid urbanisation with the population living in urban areas increasing to 66.9% in 2010. Not only has the population shifted towards urban areas but the urban population itself has also become more concentrated into a smaller number of conurbations, particularly Greater KL/KV, Georgetown and Johor Bahru. The NPP2 forecasted that the percentage of urban population will increase further to 75% by 2020.

Combined with overall growth, this will further increase the demand for travel within the urban areas and will have significant implications for land public transport. This will add to the existing challenges where capacity is often constrained and land public transport does not provide effective services to all areas. For example, despite its relatively extensive land public transport networks, in Greater KL/KV

a third of the population are not within easy access of a land public transport service.

Addressing Urbanisation and Urban Mobility

Urban areas are locations of high level of concentration of economic activities. It is also a complex spatial structure that is supported by transport systems. The most important public transport problem is when the system cannot satisfy the numerous requirements of urban mobility.

Urban productivity is highly dependent on efficiency of its transport system to move resources between multiple origin and destinations.

Greater Kuala Lumpur is an example of an urban area which is undergoing massive change in its economic landscape (**Figure 4**). Contributing 38% of the country's GDP, connectivity and accessibility to employment and various economic activities becomes critical.

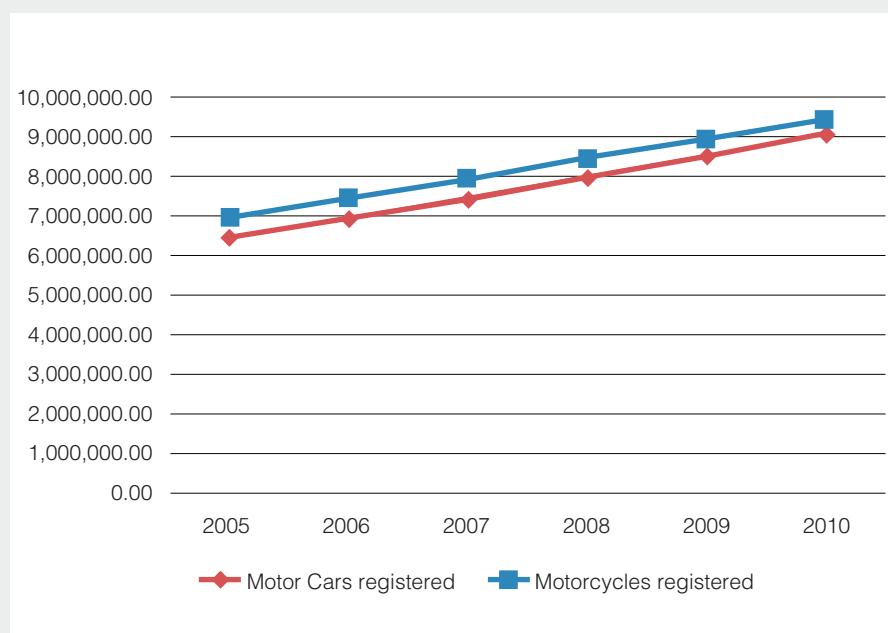
Among the most notable urban transport problems faced by commuters in Greater Kuala Lumpur are:

- **Traffic congestion** - Congestion is linked with motorization and wide distribution of vehicles, which has increased the demand for transport infrastructures. However, the supply of infrastructures has not been able to keep up with the growth of mobility. The average time spent travelling from the suburbs to Kuala Lumpur City Centre is approximately 180-300 minutes (SPAD, 2011).
- **Longer commuting** - On par with congestion, people are spending an increasing amount of time commuting between their residence and workplace. An important factor behind this trend is that commuters are trading time for housing affordability. Housing located in central areas (where most of employment remains) are too expensive.
- **Public transport insufficiency** - The public transport system is either over or under used. During peak hours, crowdedness creates discomfort for users as the

Figure 4: Greater Kuala Lumpur



Greater KL will encompass 279,327 ha, which is an area four times the size of Singapore. By 2020, seven out of 10 Malaysians are expected to live in urban areas like Greater KL

Figure 5: Number of Vehicles Registered in Malaysia from 2005 - 2010

Source: SPAD (2012)

system copes with a temporary surge in demand. Low ridership makes many services financially unsustainable, particularly in less profitable routes.

- **Parking difficulties** - Since vehicles spend the majority of the time parked, motorization has expanded the demand for parking space, which has created space consumption problems particularly in central areas. Vehicles looking for parking space create additional delays and impair local circulation.
- **Accidents and safety** - Growing traffic in urban areas is linked with the growing number of crashes and casualties. Accidents account for a significant share of recurring delays.
- **Freight distribution** - Globalization and robustness of the economy have resulted in growing quantities of freight moving within urban areas. As freight traffic commonly shares infrastructures with passenger movements, the mobility of freight in urban areas has become increasingly problematic.

Dealing with Dependency on Private Vehicles

A developed economy invariably leads to personal achievement and wealth accumulation. Private

vehicle ownership is considered as an essential due to a variety of advantages such as on-demand mobility, comfort, status, speed and convenience. When given the choice and the opportunity, individuals will prefer using a car.

Car ownership has been on an increasing trend from 2005 to 2010. Increase in income and quality of life justifies many households to have more than one car. It is estimated that approximately 500,000 new cars are registered per year in Malaysia (Figure 5).

Massive use of cars has an impact on traffic circulation and congestion, and also leads to the decline in public transport efficiency when both are sharing the same roads. In addition, road infrastructures are subsidised as they are considered as public service where drivers do not bear the full cost of car use. Like the "Tragedy of the Commons", when a resource is free (roads), it tends to be overused (congestion).

Limiting car usage has been recognised as one of the measures to reduce congestion. In Mexico City, a programme consisted of a regulation mandating that each car could not be driven on one specific day (determined by license plates) during the week. The Greater KL/KV Land Public Transport Master Plan has identified

travel demand management measures in order to curb the number of cars entering the city centre i.e. parking controls.

Singapore is the only country in the world which has successfully controlled the growth rate of cars by imposing a heavy tax burden through additional registration fee and purchasing permits (certificate of entitlement) on car owners.

Achieving economic sustainability

The National Urbanisation Policy (NUP) identifies an integrated and efficient urban transportation system to be one of the key thrusts to ensure efficient and sustainable urban development, contributing to sustainable population and economic growth.

The Second National Physical Plan (NPP2) forecasted that Malaysia's population and economy will continue to grow over the next twenty years. This will intensify the need for greater accessibility and mobility, both within and between the conurbations as well as links between rural and urban areas.

The initiatives in the Government Transformation Programme (GTP) and Economic Transformation Programme (ETP) acknowledge the need for an integrated land public transport system that connects people to job and business. It is reasoned that efficient people and freight mobility will enhance productivity and encourage economic activity, thereby increasing national output and competitiveness – which is paramount in achieving national aspirations of Vision 2020 and 1Malaysia. There is a need to expand capacity and connectivity with development of high quality land public transport system to provide efficient and reliable connections in relation to accessing jobs and business as well as efficient links to international gateways.

The provision of land public transport services needs to be efficiently run and provide value for money to ensure that it does not become an excessive cost to the nation or unaffordable to the people. Securing efficiency requires good coordination to optimise service provision and avoid excessive provision or wasteful competition. Equally it requires operational and

economic regulatory frameworks that provides the ability to monitor and ensure the promised services are provided reliably and with good quality while encouraging high levels of operating efficiency and giving reasonable returns to investors.

Gaining maximum value for money also requires optimising the use of existing assets. Investing in new services and infrastructure should be prioritised only where it can add real extra value rather than as a substitute for improving existing performance and use of assets. The current situation leaves operators without sufficient security or incentive to invest in higher quality, and the government with insufficient powers or information to demand good service performance.

Providing an Affordable Public Transport System for All

It is important socially and economically, that all Malaysians can enjoy maximum benefits from the development of the nation. There are many areas where poor connectivity restricts access to the land public transport network. This is particularly the case in more rural areas and other areas of low demand but even in the major cities there are areas with poor access.

The groups most disadvantaged and excluded by the current land public transport network are those with mobility difficulties. Most systems have not been designed to assist people with mobility difficulties. Examples include stations and buses with high steps and no level access. Similarly, systems do not provide for people with disabilities such as poor vision. Potential improvements range from more accessible vehicles and infrastructure to staff trained to assist all users.

The cost of travel can be a significant limitation for those people with lower incomes. However, too low fares risks undermining the financial viability of the services themselves or resulting in excessive cost to government.

In setting fares on land public transport services, a careful balance must be struck between ensuring that they are affordable for most Malaysians while at the same time securing the necessary income to sustain high quality services.

The lack of a comprehensive and reliable public transport system often leaves those who do not have access to a private vehicle, with limited or even no access to education and employment opportunities and other basic necessities of everyday life.

Recognising the above, key thrusts in NPP2 and 10th Malaysia Plan include development of integrated, efficient and reliable land public transport system and establishment of strong rural-urban linkages to improve connectivity and accessibility. This in turn will help to achieve its objective of promoting balanced regional development.

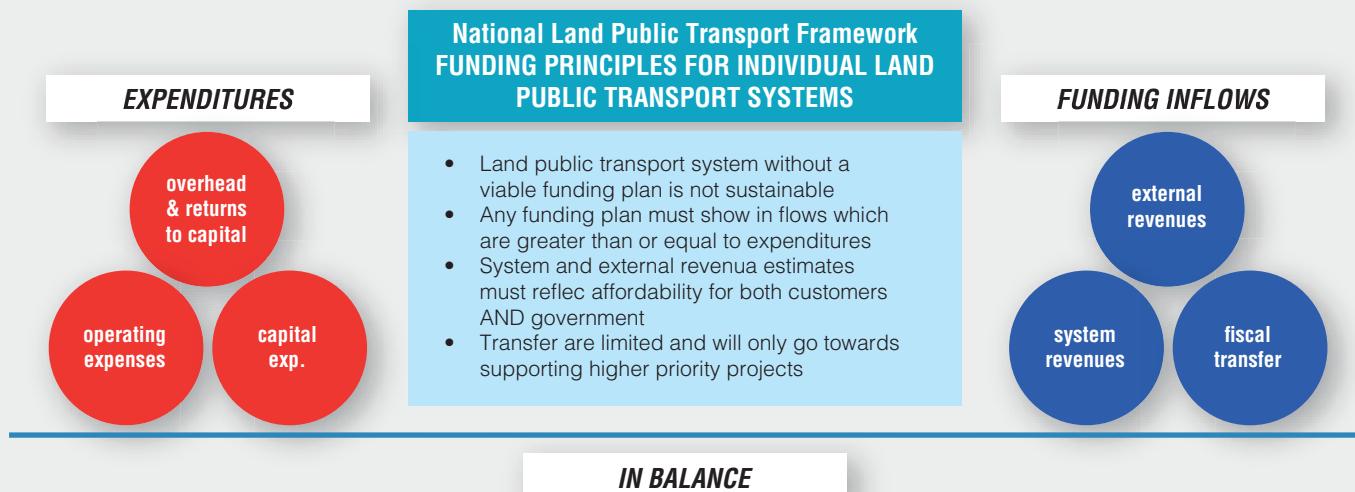
Meeting the needs of, and expanding accessibility for all, and where appropriate, the needs of particular groups and communities – including rural people, children, elderly and disabled – is key to improving social inclusiveness across the country. Fares also have an important role to play in ensuring the service would be affordable to all.

Funding and Financing

Vital to the success of any plan is its funding and affordability. There are no prescribed forms of funding although a number of critical principles such as long term viability and financial sustainability are essential. However, different approaches to funding must be considered within development of master plans and the approaches proposed should provide good value. In considering the optimal approach, different concepts of potential options and the key funding principles that agencies will be expected to have considered in undertaking the development, analysis and assessment of plan options are as follows:

- **Funding** involves paying the cost of service development or provision. Funding is basically 'paying the bills' for land public transport system development and operation. For example, fares that customers pay can fund the costs of bus driver salaries. Alternatively, a local government's general budget can fund the cost of bus driver salaries if passenger fares are insufficient. Regardless of a chosen approach, some source of money must fund the basic cost of land public transport services; and

Figure 6: Funding Principles for Individual Land Public Transport Systems



- Financing** is a means for shifting monetary resources around in time to meet present or future expenses. Financing involves paying for present expenses over time or saving now to pay future expenses. For example, the national government may obtain money now by issuing bonds that require repayment over many years (along with interest).

The challenge of funding a public transport plan is to ensure funding inflows for a given land public transport service balance with the outflow of funds used to develop or provide services as illustrated in **Figure 6**.

Levers may be exercised on both sides of the funding balance provided that inflows remain sufficient to sustainably support expenditures. Other funding policies for specific outflows or inflows will be subjected to the discretion of the finance authority. The challenges are on:

- how to optimise outflows such that money spent achieves the best possible value;
- how to obtain sustainable external revenues so that funding volatility does not compromise land public transport investments or service delivery;
- how to ensure affordability in design of capital expenditures; and
- how to maximise system revenues in order to approach full cost recovery without compromising affordability of lower income passengers and adequate connectivity and integration.

ISSUES AND SIGNIFICANCE OF TRANSFORMING PUBLIC TRANSPORT SYSTEM FROM INSTITUTIONAL PERSPECTIVE

Complementing and Conflicting Policies

Planning and implementing public transport plans and policies cannot be done in a vacuum. There are overarching national policies as well as sector specific policies which require a level of harmonisation as well as collaboration. In many cases responsibility for these broader policies will be the mandate of different agencies. The challenge is thus to achieve integrated approach in finding the best possible solution for public transport without compromising sector specific agenda.

Key policy areas relevant to the development of public transport plans and policies are highways, land use and development control, enforcement and funding. In planning and managing highways and parking it is also important to consider the needs of land public transport so that, where practicable, priority can be given to land public transport. In areas where modal shift to public transport is targeted generally, public transport improvement should be given priority over highway investment. Provision of **bus express transit** (BET) and **bus rapid transit infrastructure** (BRT) needs to be considered for inclusion within highway planning. Emphasis on **transit oriented development** (TOD) would be a good basis for determination of land use. Locating high development

areas close to highly accessible public transport services has the capacity to gain a high mode share from the trip generators.

Uncoordinated Planning for Development of Public Transport System

Decisions on national physical and spatial plans are determined at federal level, and these are cascaded down to state and local level for implementation. The problems lie in the disassociation of issues at central level from the state and local levels. Setting a national mode share target is easy but the path towards that goal is dependent on many factors which manifests at the grassroots.

As urban areas continue to flourish, it becomes more dispersed, the cost of building and operating public transportation systems increases. Dispersed residential patterns make public transportation systems less convenient to support urban mobility needs. Unplanned and uncoordinated land use development has led to rapid expansion of the suburban areas. For example, more and more people are buying houses in places like Hulu Langat, Sabak Bernam, Bangi, or even further down to Seremban. By selecting outlying areas, potential access to public transportation is restricted.

Existing regulatory framework for public transport, involves multiple authorities. The authority of each agency is aligned to its own mandate. Physical integration is a component

of spatial planning, which is the purview of local Authorities. There is lack of coordinated and integrated planning across various agencies and authorities.

Local policy and project-level responses, for both planning and public transport, will require assessments of local trends, issues and goals, in cooperation with affected community and interests. Lack of comprehensive land public transport policy and planning has resulted in connectivity gaps between each transport mode making it inefficient, ineffective and not user-friendly.

This lack of coordination and integration makes land public transport journeys longer and more difficult and will act as a barrier to increased use. Further, without good integration, new initiatives to improve land public transport will be poorly linked and coordinated and fail to achieve their full potential contribution. As well as providing connectivity and capacity, attracting users to land public transport requires services that are reliable and have reasonably quick journey times competitive with the private car. Currently low levels of priority for buses, lack of coordination between services, unreliability of infrastructure and vehicles, and ineffective operational control often undermines the provision of reliable services.

Ensuring Consistency of Transformation to Regional Areas

Although growth is expected to be greatest in Greater KL/KV, all regions will contribute to the overall growth requirements. Economic developments in all regional areas require an efficient land public transport network to support the settlement patterns across the Peninsular and the movements between regions.

Regional master plans are to be developed at state level with an objective that ultimately all areas of Malaysia will be covered by a master plan. It is envisioned that master plans are developed under the following principles:

- i. State master plans shall be developed by state government in partnership with the authority. The production of master plan as a sub-plan within an integrated transport

master plan is supported. State level master plans shall be informed by state structure plans and in turn should guide the production of local plans;

- ii. Where there are existing plans which overlap in scope with the proposed state master plans, then planning should build on work carried out to date as far as possible but such that the resultant plans stay consistent and in accordance with the national public transport policies and guidance;
- iii. Master plans shall be consistent with sector and inter-regional plans as set out at the time of planning; and
- iv. Endorsement of master plans is subject to the following criteria being met:
 - a) In accordance and consistent with the guidance, policies and guidelines described in National Land Public Transport Policy.
 - b) Integrated with complementary policies at the state level.
 - c) Comprehensive planning undertaken in accordance with standardised transport planning process.
 - d) Has a strong focus on plan delivery.

A partnership with all the key stakeholders in the regional planning effort is a key component of the national master plan. In ensuring consistency of transformation, a comprehensive and integrated planning of public transport is required. The cooperation and commitment between central agencies and state/ regional authorities needs to be established through a mechanism both at institutional as well as technical level. State participation in regional planning is critical in order to:

- i. facilitate the level of planning detail required for optimised services;
- ii. align with Malaysia's framework for government;
- iii. leverage state influence on local governments and complementary policies (especially land use planning);
- iv. put decision making closer to the point of service delivery to ensure that land public transport customers are heard; and
- v. to allow customers to shape their local land public transport networks more directly.

The Challenge of Integrated Services, Fares and Information

The lack of integration between services presents a substantial barrier to attracting more people to use land public transport. Many journeys will require the use of more than one mode or service. Too often interchange between services is inconvenient with lengthy walk between stops. Similarly, separate fares on different services increase costs and complicate travel; and integrated information is often missing. Making land public transport attractive involves better planning of integrated services, fares and information, together with infrastructure designed to link seamlessly with other services.

People's experience of the land public transport system extends beyond the service itself. If it is difficult or inconvenient to reach the stops or stations, users will be discouraged from choosing land public transport. The first and last mile in the journey can often be the weakest part of a land public transport journey. Better access and environment is being pursued through initiatives such as pedestrian walkways in central Kuala Lumpur but more needs to be done to improve walking routes and access to land public transport, with the type of provision consistent with likely demand.

Choosing the Right Delivery Model

Formulation of public transport plans demands a robust delivery model. It is envisaged that the following delivery models will offer the means for state, local, or national government authorities to develop and provide land public transport services:

- i. regulated public service provision;
- ii. regulated private land public transport system development and/or service provision;
- iii. unregulated private land public transport system development and/or service provision; and
- iv. public-private partnerships.

Each of these models has unique advantages and disadvantages which are not optimal in all circumstances. In many instances, providing integrated land public transport services will involve a mixture of delivery models within a given service area. For

example a delivery model for profitable bus services may resemble lightly regulated private service delivery whereas an adjacent LRT scheme may involve a public private partnership delivery model. Delivery models may also differ across an identical land public transport mode. For example, an unregulated private delivery model may suffice for profitable bus routes while serving social routes may require highly regulated private service provision in order to manage the use of public subsidies (**Table 1**).

Monitoring the Transformation

To gauge the performance of the transformation process of the current land public transport system, a monitoring mechanism is required to ensure that the set of targets and goals that have been identified are on track. Indicators which consist of quantifiable variables and provide a simple way to measure the progress of the delivery of respective strategic objectives need to be established. A key prerequisite in supporting these indicators is the

availability of a robust, precise and reliable database to support initiatives and policy recommendations. Policy analysis and planning require accurate information for guidance. Indicators can measure various levels of impacts, from the planning process to travel behaviour, impacts on people and the environment and economic effects (**Table 2**).

Table 1: General Guidance on when Delivery Models may be Appropriate

UNREGULATED PRIVATE	REGULATED PRIVATE	PUBLIC-PRIVATE PARTNERSHIP	REGULATED PUBLIC
<ul style="list-style-type: none"> Private sector is robust & viable; Little/no risk of abusing dominant position; Market functioning aligns with policy objectives OR; Last resort – no other options available. 	<ul style="list-style-type: none"> Robust private sector & some favourable market mechanism – BUT; Need to safeguard public interest from private sector OR; Need to guard private sector from being taken by public sector. 	<ul style="list-style-type: none"> Sharing risk adds value. Public sector has some but NOT all capacity required; Equitable, transparent & predictable regulation possible; Private sector is robust but service is not viable without public transport. 	<ul style="list-style-type: none"> Private sector involvement is not possible; Public sector has strong capacity for implementation; Market mechanism has little/no potential for adding value.

Table 2: List of indicators in Monitoring the Transformation

Strategic Objectives	Indicators	Brief Definition
To support economic development and population growth	Accessibility to Employment	Employment accessibility maps - number of jobs within 75 minutes of travel time
	Accessibility to International Linkages	Service provision of public transport access to airports, ports and road network
	Public Transport Network Provision	The number of coverage including total kilometres of road and rail network in operation
	Travel Demand	The number of trips or journey stages undertaken by each of mode (origin –destination) per day
	Mode Share	Proportion of trips undertaken by each mode
	Public Transport Ridership	Annual current daily ridership of public transport services
Enhance quality of life through better journey experience	Public Transport Users Satisfaction	Satisfaction rate of public transport users by mode
	Public Transport Crowding	Satisfaction of those travelling on the network with the level of crowding in the vehicle, on the principal public transport modes
	Public Transport Reliability	Current frequency of public transport services
	Perception of Noise	Perception of noise levels of the local community/city
Ensure socially inclusive and affordable systems	Access to Services	Average journey time by public transport, walking and cycling to work, education, health services, quality food shopping and open spaces
	Physical Accessibility to the Public Transport Systems	Provision of public transport facilities that enhance physical accessibility to people with disabilities (PWD)
	Real Fares Level	Fares index for main public transport
	Operating Cost Per Passenger Kilometre	Operating cost per passenger kilometer, for the principal public transport services
Improve safety and security of travel	Road Traffic Casualties	Number of accidents reported and also number of accidents involving public transport
	Crimes on Public Transport	Crimes per million passenger journeys by public transport mode
	Perception of Crime/Safety	Public perception of the sense of safety and fear of crime when travelling on public transport
Ensure a sustainable and healthy environment	CO Emissions	Emissions from all identifiable road transport, expressed as tonnes of CO

SETTING A SUSTAINABLE PUBLIC TRANSPORT SYSTEM

The Malaysian government has pledged in the Copenhagen Climate Change Summit to lower carbon emission by 40% by the year 2020 (compared to 2005). The NPP2 has identified the need to encourage the use of public transport system as one of the principal spatial strategies to support this commitment.

People have become more concerned about noise and impacts on the environment. There is opportunity for the public transport master plan to encourage mode shift from car to land public transport, resulting in fewer cars and less congestion both of which are major factors in air quality and noise impacts.

A high land public transport mode share will contribute significantly to reducing the overall environmental impact of transport. Fewer cars will mean less emission and a healthier environment for all as well as a lower carbon footprint. Ensuring that land public transport has low environmental impacts is also important. High standards of maintenance will minimise emissions. The design of new land

public transport systems can also contribute to reducing environmental impacts and contribute to the target for a 40% reduction in carbon emissions between 2005 and 2020. In the wider context, use of land public transport will encourage generally healthier lifestyles, with higher levels of walking and physical exercise.

CONCLUSION

The Malaysian public transport system has metamorphosed over the years from steam locomotive to sophisticated rail systems, from municipal buses to modern low floor buses, and from *kereta sewa* to modern taxis. The metamorphosis of the public transport system needs to continue into a first class system and become people's first choice in meeting their mobility needs.

Amidst the economic, institutional and environmental landscape, it becomes imperative that these elements are addressed not only at national level but also at local level. A standardised approach in the development of the public transport plan will also have to ensure certain levels of customisation are met.

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CIVIL SOCIETY EMPOWERMENT TOWARDS EFFICIENT URBAN GOVERNANCE IN KUALA LUMPUR CITY-REGION



ABSTRACT

The aim of this paper is to discuss the concept of civil society empowerment towards efficient urban governance in the Kuala Lumpur city-region. This is in line with the implementation of the new policy of the Malaysian government of One Malaysia, People First, Performance Now. National development has been a major issue in the country's latest development agenda. The issue is more obvious in the city-region due to its role as an engine of growth and economic development. Now, with its sights set on attaining the economic level of a fully developed nation by 2020, Malaysia must focus on securing a credible share of the lead sectors of the globalised economy. The world today needs a new, comprehensive and holistic model of urban governance that involves all sectors (government, business and the civil society) as equal partners in development. Urban governance integrates all sectors including public, private and other social organisations in participatory decision making. Efficient urban governance is characterized by sustainability, subsidiarity, equity, efficiency, transparency and accountability, civic engagement and citizenship and security. In line with this, Malaysia emphasises the importance of efficient urban governance that would make Malaysia more competitive and attractive to investors and facilitate the achievement of the nation's development goals.

Keywords: Civil Society, Empowerment, Efficient Urban Governance, City-region



INTRODUCTION

The world today needs a new, comprehensive and holistic model of governance that involves all sectors (government, business and the civil society) as equal partners in development. These three sectors of national development are involved through interface as development partners of equal position. The framework of governance is vital because in this more complex and modern era, where society is more educated and intelligent, the question of happiness is no longer limited solely to receiving the benefits and advantages of development. The matter of happiness is also linked with public participation in the process of how development is planned, executed and evaluated.

The objectives are to listen to and channel the complaints and grievances of the people as well as to obtain and endorse their ideas and opinions concerning development. This paper discusses the concept of efficiency in urban governance towards the implementation of the policy of One Malaysia, People First, Performance Now. National development has been a major issue in the country's latest development agenda. Now, with its sights set on attaining the economic level of a fully developed nation by 2020, Malaysia must focus on securing a credible share of the lead sectors of the globalised economy. The first priority will be to re-establish economic stability and emerge from the current global economic downturn stronger

and with a long-term strategy for Malaysia's economy that can serve all of her people.

This article is based on the early findings of our research initiative to analyse the idea of civil society empowerment in the city-region and its relation with the practice of efficient urban governance in Malaysia's development. According to Malaysia's National Integrity Plan (PIN), it is the government's intention to reinforce the principle of transparency, accountability and good governance in order to preserve and strengthen the political system that we have been practicing, which has proven to be efficient, effective and successful in achieving stability, harmony and development in our multicultural and multi-religious society. The next section of this paper tries to clarify the concept of governance, efficient urban governance, civil society in the modern state, civil society empowerment and the aspirations for civil society empowerment in the Kuala Lumpur city-region with regard to national development.

EFFICIENT URBAN GOVERNANCE

The Urban Governance Initiative (TUGI) of UNDP focused on nine principles of good urban governance which are: participation, rule of law, transparency, responsiveness, consensus oriented, equity, effectiveness and efficiency, accountability, and strategic vision. Urban governance is the integration of

effort between the community, private sector and city-region authorities where the urban authorities perform the coordinating role and determine the quality of the microeconomic environment and location that is favourable attract investors and people. In most cases, the private sector provides the much needed financial assistance and business expertise to operate independently or in association with the public sector. The community provides the individuals who are employees, consumers or are beneficiaries of the governance process. **Table 1** shows a summary of definition and application of urban governance.

According to the Communities and Local Government Department of United Kingdom, 2006, an efficient local government is all about raising productivity and enhancing value for money. Efficiency gains are achieved by one or more of the following:

- i. Reducing inputs (money, people, assets etc) for the same outputs;
- ii. Reducing prices (procurement, labour costs etc) for the same outputs;
- iii. Getting greater outputs or improved quality (extra service, productivity etc) for the same inputs; or
- iv. Getting proportionally more outputs or improved quality in return for an increase in resource.

Therefore, the aim of the efficiency in urban governance is to ensure that the resources available to local government are used in the optimum

Table 1: A Summary of Definition and Application of Urban Governance

NO	SCHOLAR	DEFINITION OF URBAN GOVERNANCE	APPLICATION
i.	Bailey, 1995;	As a coalition of interests brought together in order to prepare and oversee strategies for combating urban problems.	When a partnership is effective, it leads to the emergence or strengthening of social cohesion between the different partners.
ii.	Healey, 1997, 1998;	As partnership and network among the stakeholders, such as city-region government officials, individual citizens, businesses, and citizen groups.	Settles complex urban issues by mutual cooperation and consensus among the actors.
iii.	Stoker, 1998	As an outcome that is visible to a citizen, is a key feature that allows empirical tests of the city as a place or as a sustained achievement of performances. A form of co-governing generated for a specific place such as a city-region.	The contemporary urban environment with its multitudinous urban issues is too complex and diverse to be addressed by municipal government independently. The common view now is that it is time to solve urban issues by building up an urban governance structure with stakeholders having interdependence and participation.
iv.	Mehta,1998	As the concept of networking of one city with other cities or with key actors such as firms, labor unions and business associations, as well as other states.	A number of indicators of networking such as the number of inter-city, regional, and international networks as well as the extent of technological interchange and collaboration.
v.	Andersen and Van Kempen, 2001	As a political response to broader developments in society, such as globalization, internationalization, and privatization.	A centralized and department based government is no longer seen to be able to resolve the problems that have arisen with these developments.
vi.	Hamilton et al., 2004;	As the cooperation between policymakers and other stakeholders	A more integrative approach, one that goes beyond the boundaries of the different departments (inter-departmental cooperation),
vii.	Dekker & Van Kempen, 2004	As the reliance on self-organizing networks and bottom-up approaches, and considers the citizen as actors, participating to make important decisions for the administration and process of urban policy	The type of participation in urban governance is substantial and positive rather than formal and negative. The relationship among participants works in a horizontal structure of partnerships and networks with those in authority and having accountability.
viii.	OECD, 2005	As the roles and responsibilities of different levels of government operating in metropolitan regions, intergovernmental co-ordination and new relationship with the private sector and civil society.	There is a strong interest in developing an adequate formula that will respond to metropolitan challenges now visible everywhere.
ix.	Bingham,2006	As ways to engage citizens in urban policy decisions. These processes let people demonstrate that they have the potential to engage in dialogue and reach consensus on what is the best for their community.	The integration of reasoned discussions by the citizens and other residents into the decision-making of public representatives, especially when these approaches are embedded in the workings of local government over time.

way to deliver better public services according to local priorities. An efficient urban governance system should be established to administer urban growth and development at various levels particularly at the local authority level. This will ensure that the value of assets, economy, social and the environment will be maintained and value-added towards attaining sustainable development in Malaysia. The local authority, as the main agency responsible for urban management, needs to update the administration and management system to optimize its financial revenue including finding new sources, upgrading its capacity-region to enable towns to become more competitive and viable, strengthening human resources by employing skilled and experienced staff as well as expanding the use of technology.

With rapid urbanisation, local authorities should emphasize the use of innovative approach and technology to reduce cost and increase efficiency in all aspects of urban planning, development and management. In addition, these efforts will contribute to the management of a more viable environment. The management and administration system practised should be founded on an ethical work culture, and be transparent and efficient to ensure a more effective delivery system. In this light, there is a need to review and strengthen the respective system and work procedure, implementation approach, standards and guidelines to achieve the highest standard of services. To complement actions being carried out, the existing legislations related to urban administration and management

should be reviewed for a more effective enforcement and implementation of the urban development. Local authorities need to cooperate closely with the local community, non-governmental organizations and the private sector to plan and implement appropriate urban planning and management programmes that meet with their requirements for sustainable development as mooted in the Local Agenda 21.

Such cooperation will provide opportunity for the local community to monitor and give feedback on the programmes implemented in their respective area. To facilitate this proposal, the local authority should establish a unit responsible for coordinating and managing programmes to improve local

community participation in urban planning and governance activities. Efficient urban governance should consider economic and environmental aspects in an integrated manner. It should be supported by the community which believes in the importance of and is committed to changing the unsustainable approaches. Efficient urban governance focuses on achieving a better integration between transport and land use in protecting the strategic transport corridors at the regional level while implementing local integration at the community level.

The concept of urban governance refers to the complex set of values, norms, processes and institutions by which cities are managed. Efficient urban governance can be defined as an efficient and effective response to problems by accountable local governments working in partnership with civil society. It works towards making cities more efficient, equitable, safe, and sustainable and involves participatory decision-making. It not only involves the federal, state and local governments but also civil society, such as the private sector, community-based institutions and the media. The practice of urban governance ensures that views and priorities of these groups are reflected in the priorities of cities and the way they are run. The progress of a country depends in no small measure on the quality of its governance.

Government lays the foundation for good governance; a vigilant and active citizenry is essential for its sustenance.

CIVIL SOCIETY EMPOWERMENT IN URBAN GOVERNANCE

What is civil society? Civil society is a concept located strategically at the cross-section of important strands of intellectual developments in the social sciences. Pierson (2004) mentioned that civil society involves a quite distinctive characterisation of the non-state sphere. In modern time, we early always find it used in the couplet 'state and civil society', though sometimes accompanied by a third or further complementary terms. Pierson (2004) also isolated two distinctive positions of the state-civil society relationship such as; i) Civil society as the benign sphere of individual freedom whose integrity needs to be jealously guarded against the incursions of a domineering state. This has often been tied to an argument for the sanctity of private property and some sort of restraint upon the authority of democratic decision making; and ii) Civil society as an anti-social " war of all against all", economically necessary, but needing to be controlled and patrolled by powerful state embodying a wider social and public interest.

The concept of partners in development in the framework of the

efficient urban governance will not be able to be realized if the worldview of all stakeholder does not change. This change will only come about if the platform for the concept of partners in development is prepared. That platform is actually the understanding and practice of empowerment. In the framework of urban governance, empowerment has to be viewed as philosophy of concept and as an approach or strategy, that shape the platform that will enable the concept of partners in development to operate. Government should enable and propel the business sector and the civil society to be involved in the structure and process of decision making that involves them.

Blanchard, Carlos and Randolph (1996) mentioned that empowerment offers the potential to achieve a pool of human resource capacity. Harrison (2007) mentioned that empowerment has become a reference in three key areas of contemporary governance such as:

- i) Empowerment based on a revival of liberalism on a global scale, expressed as a desire to see citizens voluntarily acting in non-violent ways to enhance their democratic rights and to exercise some form of check on state power;
- ii) Empowerment as a key to successful development policy that requires a fuller engagement



by the targets of the project. This engagement requires that recipients of a project attain the requisite level of awareness of mobilization to support the project. This process of attainment is encapsulated by empowerment here. The process relates to practical concerns about information sharing, local contributions to support the project, and the generation of local resources, whether tangible or in the form of social capital; and

iii) Empowerment as a buzz word for contemporary public service reform in the West especially the United Kingdom. As service provision has been privatized, devolved, and subject to intensified financial discipline, governments have sought to increase the involvement of service users in the management of those services. This approach to public service provision comes with cynicism about state bureaucracies and a faith in ordinary individuals' capacities to make a productive input into the way public services are managed.

Empowerment aims not to change society in any bold fashion, but to make it work better. Images of popular empowerment, based on historical collective interest and focused on a future structural change in power relations, are distant from contemporary approaches to empowerment. Mills and Friesen (1995) described empowerment as management style. The meaning is almost similar, but not identical to delegation. They defined it as the subordinate's power to make decisions and to take action. It gives the implication that workers who are empowered have greater freedom and discretion. Today, more organizations have embraced empowerment. This is due to the fact it has been proven that empowered workers are more productive and effective.

Empowerment of civil society does not mean giving power to them. On the contrary, it is a process of channeling idealism, vision, knowledge, experience, activism, motivation and energy which they already possess. Saifuddin (2008) mentioned that in terms of the practice of empowerment, all individual, agencies and organizations must be prepared to experience a paradigm shift in terms

of their way of thinking and acting. Any existing structure and hierarchy must be thinned out. This will involve the adjustment of at least three aspects:

- i) The rule of decision making is changed. A decision is brought down to the level of actions.
- ii) Job description is widened and everyone who is involved becomes multi-efficient and capable of making decisions when dealing with acquaintances or customers; and
- iii) Formal and layered communication is replaced by a communication network that is flexible with the assistance of ICT.

Saifuddin (2008) also suggested the role of government must also change from provider to facilitator. Due to this demand, the national development process needs a new approach. A paradigm shift is again needed. What is meant by this shift is a change from the "for the people" development approach to a "with the people" development approach. "With" here indicates empowering the people as a genuine partner of development leadership. Empowerment is also about ownership. When the people are involved in each level of the country's development process, they will have a strong sense of belonging and ownership towards it that may possibly make it more valued, beneficial and sustainable.

CIVIL SOCIETY EMPOWERMENT IN KUALA-LUMPUR CITY-REGION

The National Urbanisation Policy of Malaysia has acknowledged that with the rapid pace of urbanisation by 2020, urban governance is faced with various complex challenges ahead. These challenges require that the respective parties be more focused in undertaking each and every responsibility in urban development. There are several issues of urban governance in Malaysia that should be raised, as seen from the business perspective and more so by the civil society, and which need rectification. However, the involvement of multiple agencies and departments in urban management has made it difficult to coordinate many actions and in turn has affected the effectiveness of those actions. Good urban administration and management also need to take

into consideration the capability of each local authority as each local authority differs in terms of manpower, skills and financial capacity to provide good service for its population.

Varying levels of cooperation in the relationship among sectors in the state system such as: i) a strong government and business sector relationship ii) a weak government and civil society sector relationship where at times the government has been seen as too patronizing and iii) a loose civil society and business sector relationship which in many instances is nothing more than the relationship between an organizer and a sponsor, or a petitioner and a contributor. Questions arise as to who actually wants the pure concept of partners in development.

The urban policies and programmes of the government not truly people-oriented and people-friendly but more government or business oriented. There is wide gap between the expectation of the community and the ability of the local authority to fulfil these expectations. The various roles that are expected of these local authorities to attain a liveable city with a high quality of living have put pressure on these authorities to acquire a strong organisation. The pressure is felt more intensely by small and medium-sized local authorities that lack finance, manpower, skills and equipment in providing the expected services. The local authority is also confronted with the diverse aspirations and interests of community groups that it has to fulfil, as well as various social issues and negative influences.

Since urban governance is the process of decision-making and the process by which decisions are implemented, an analysis of urban governance focuses on the formal and informal actors involved in decision-making and implementing the decisions made and the formal and informal structures that have been set in place to arrive at and implement those decisions. Public cooperation and involvement are much needed to address these problems. However, inadequate community participation in activities organised by the local authority also do little to fulfil that aspiration of the local authority to involve the community in the planning and development of urban areas. Urban governance challenges for Malaysia in the 21st century are:

“More than 5,000 people came to a forum, attended workshops, were respondents to a survey, or participated in focus-group discussions and technical working committees, or made suggestions via the web site”.

- i. How do city-regions deal with urban governance fragmentation in face of growing economic regions?
- ii. How can urban governance in city-regions respond more quickly to new economic changes?
- iii. How responsible are local authorities towards efficiency and effectiveness in urban governance of city-regions?
- iv. How much civic engagement is possible in urban governance today to encourage public participation and responsiveness to civil society needs?
- v. How are public and private leaders working in a variety of public-private partnerships and hybrid institutions held accountable to citizens for outcomes?
- vi. What kind of urban governance is required to enhance competitiveness and earning opportunities within city-regions?

The development and management of urban centres is one of the major challenges and the most complex task in our society now. In an increasingly urbanized world, sustainable development depends largely on the management capacity of cities and the active participation of citizens. In cities, it is possible to integrate human, economic and technological resources in an efficient way. Well-managed cities are a precondition for successful urban development. Moreover, sustainable urban development depends on improved management of cities. Policies and programmes for the development of human settlements require strong, open and accountable local government agencies working in tandem with interested parties.

“More than 5,000 people came to a forum, attended workshops, were respondents to a survey, or participated in focus-group discussions and technical working committees, or made suggestions via the web site”. These activities were part of the public consultation process that the Kuala Lumpur City Plan 2020 undertook throughout the plan-making period. Public consultations were undertaken to empower the people in decision-making especially in deciding on their preferred lifestyles and what they want in making living in Kuala Lumpur safe, healthy and prosperous. The consultations also provided opportunities for the people to raise specific or general issues as

well as to contribute ideas towards the development and implementation of the Kuala Lumpur City Plan 2020.

The Kuala Lumpur City Plan 2020 must meet the needs of the people. The inputs provided are vital for the development of Kuala Lumpur as it reflects upon a strong social foundation that creates an inclusive society for the city. Meeting these needs is a commitment from the City Hall of Kuala Lumpur that the economic, social and environmental performance is working towards one Vision i.e. A World Class City that promotes quality living and a liveable city. The Plan acknowledges that the needs identified through the consultation sessions evolve around a quality built-environment and the desire to be part of the decision making system, that is, to be consulted. Thus, this must be adopted as part of the practice of City Hall Kuala Lumpur by being transparent and providing feedback on any matter raised.

ONE MALAYSIA, PEOPLE FIRST, PERFORMANCE NOW AS CIVIL SOCIETY EMPOWERMENT

Civil society empowerment is the process whereby elements in society with power and authority influence and enact policies, and make decisions concerning lifestyle, economic and social development. The term is usually used in a normative manner to describe a move towards a process where the formal institutions of government enter into a dialogue about the policy process with actors from civil society. The era where the government imposed excessive controls and adopted the attitude of “government knows best” is over. The Malaysian government’s policy to emphasize on “One Malaysia, People First, Performance Now” is seen as:

- i. a pledge for unity in diversity as the foundation of strength;
- ii. a responsive government serving the needs of all people today and of future generations;
- iii. giving priority to accountability by measuring and monitoring outcomes and impacts of performance;
- iv. a sharing of values and norms and a common purpose to transform the country to a higher level of development, wealth creation, security and societal well-being;

- v. a sense of integrity and high standards to preserve the public trust;
- vi. building a stronger and united community based on mutual respect and trust;
- vii. a new approach towards a transparent and accountable government, focused on delivery for the people; and
- viii. acknowledgement that government services are valued and vital to the nation's long term prosperity

To ensure the goal of incorporating valuable input from the public is met, public agencies must now engage with the people and other stakeholders before, during and after a process that affects the public interest. This said, in the two-way relationship between the government and the people, the media remains a vital and invaluable communications conduit. The media has social responsibilities as well. They must understand issues when reporting, failing which reports published based on lack of research and facts could hurt not only Malaysia, but also the credibility of the media as well. The introduction of 8 values under One Malaysia continues to strive and double government efforts to improve its actions and processes within the government and civil society.

The concept of One Malaysia, People First, Performance Now also allows empowerment which is the platform that will enable the concept of partners in development to operate. The government should enable and propel the business sector and the civil society to be involved in the structure and process of decision making that involves them. Empowerment belongs in a continuum which is 'from opportunity to rights' and 'from informal negotiation to a structured and formal involvement in the decision making process'. Empowerment allows decisions to be made more quickly and customer-oriented by workers who have a higher understanding of the customer's need. Empowerment is also about ownership – if people are involved in each level of the country's development process, they will have a strong sense of belonging and ownership towards it that may possibly make it more valued, beneficial and sustainable.

An efficient urban governance system should be established to administer

urban growth and development at various levels particularly the local authority level. This will ensure that the value of assets, economy, social and the environment will be maintained and value-added towards attaining sustainable urban centres in Malaysia. The local authority, as the main agency responsible for urban management, needs to update the administration and management system to optimise its financial revenue including finding new sources, upgrading its capacity to enable towns to become more competitive and viable, strengthening human resources by employing skilled and experienced staff as well as expanding the use of technology. The policies and programmes of the government must be ensured in order to be truly people-oriented and people-friendly in terms of responsibility.

With rapid urbanisation, local authorities should emphasize the use of innovative approaches and technology to reduce cost and increase efficiency in all aspects of urban planning, development and management. In addition, these efforts will contribute to the management of a more viable environment. The management and administration system practised should be founded on an ethical work culture, be transparent and efficient to ensure a more effective delivery system. In this light, there is a need to review and strengthen the respective system and work procedure, implementation approach, standards and guidelines to achieve the highest standard of services.

Efficient urban governance allows for close cooperation and coordination with all the state governments to revitalize the national economy. The people's needs come first and the government should be there for the people of Malaysia. Continuous efforts should be made to improve the public delivery system so that we can compete effectively. There must be better understanding of the stakeholders in order to be able to deliver what they require. The government must place priority on performance and the people must come first. We must reach out to all regions of the nation in the process of implementing One Malaysia, People First, Performance Now. The liberalization of the services and financial services sector aims to ensure

that maximum benefit will accrue to Malaysia. PEMUDAH'S (Special Taskforce to Facilitate Business) scope of duties will be expanded to serve the needs of the people besides its task of facilitating smoother public-private sector business dealings.

The concept of partners in development in the framework of the efficient urban governance under One Malaysia, People First, Performance Now will not be able to be realised if the worldview of all stakeholders does not change. This change will only come about if the platform of understanding and practice of empowerment is implemented as a serious commitment and aspiration by the Malaysian government. Empowerment allows decisions to be made more quickly and customer-oriented by workers who have a better understanding of the customer's need. However, as important as that is, Malaysia needs a national consensus around how that and the other important policy debates of our time must be brought together i) transparently and openly; ii) respectfully and fairly; and iii) with the interests of every Malaysian at heart.

The government has promised greater transparency in its quest for performance-oriented administration. For transparency and performance to become the pillars of its rules, it has to make sure that all ministers and their civil service handlers respect the established rules and regulations. For economic renewal and other key items on Government's agenda, there needs to be a dedicated civil service and the cooperation of the private sector, NGOs, the thinkers and participation of the younger generation. A vibrant political and public dialogue is the best way forward for Malaysia; the times demand it and the people expect it. One Malaysia, People First, Performance Now will successful if there is:

- i. a change in the role of the government from that of a provider to that of a facilitator;
- ii. sustainability in all dimensions of urban development;
- iii. devolution of authority and resources to the closest appropriate level;
- iv. equity of access to decision-making processes and the basic necessities of urban life;
- v. efficiency in the public services

and in promoting local economic development;
vi. transparency and accountability of decision-makers to all stakeholders
vii. civic engagement and citizenship; and
viii. security of individuals and their living environment

CONCLUSION

As globalization and the information society have progressed rapidly since the 1980s, the role and function of the state, market, and civil society have changed. The functional power of the state and government has decreased, while the role of capitalistic markets has increased. The government is taking steps to enhance the integrity, transparency and accountability of the public and private sectors and further improve the level of good governance. These gains from good governance will make Malaysia more competitive and attractive to investors and facilitate the achievement of the nation's development goals. The Prime Minister has to get down to the real work of delivering on his pledge of building a more transparent and accountable government. He proclaimed that the area of excessive government control and the mindset that 'the government knows best' is over. The integrative approach may affect social cohesion between policymakers and other institutional parties; the focus on empowerment is more relevant to the social cohesion between policymakers and residents, especially where citizen participation is concerned.

Consequently, urban governance is carried out in pursuit of collective actions through mobilizing cooperation, consensus, partnership, networks, interaction, social capital, empowerment, and accountability

in the urban policy making process. Values of One Malaysia are paramount in our collective efforts to add value to Malaysia as a developing nation. No one single value can be imbued without the other in order for One Malaysia to truly take shape. While these values have long been taught in our culture, the application of these values must be renewed. All Malaysians should inculcate and cultivate these values in our daily practices and actions not just amongst close friends and family, but in the workplace and our community at large.

Both strategies proposed by the Government are achievable through the process of efficient urban governance which integrates all sectors including public, private and other social organisations. The old way of governance uses government as the axis. Civil society is not capable of thinking for the country and merely become followers of policies and participants of programmes. New development constitutes that platform to think, plan and frame national development policies and programmes that are more people-oriented. The people need the space and opportunity to voice their grievances, views and notions about their life and future. New development that is more people-oriented and in sync with the elements of participation will be better able to serve the interests of every citizen at heart.

Empowerment is also about democracy. If democracy is defined as "government of the people, by the people, for the people", thus democracy and national development must tread on the platform of empowering the people, so that at least we will not have the situation of "government off the people, buy the people, force the people".

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FUNDAMENTAL GIS ISSUES AFFECTING TOWN AND COUNTRY PLANNING IN MALAYSIA



ABSTRACT

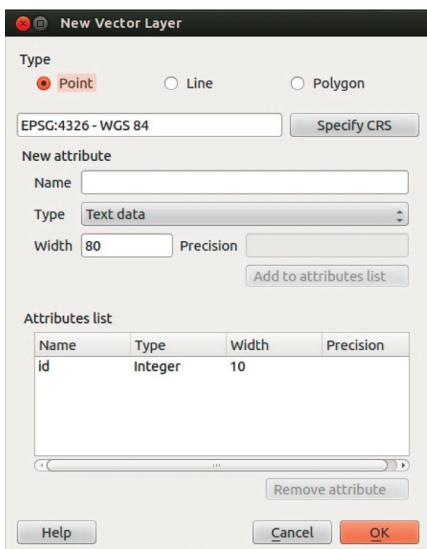
The desktop GIS software has been around for more than 20 years and has been the principal ICT tool among town planners to prepare physical and mandatory development plans. However, for GIS to be effective, it must be able to properly capture and translate real world physical features into digital forms so that GIS data can be analyzed to churn out important GIS information. The Simple Feature Vector model adopted by many GIS softwares handles one:one cases and offers representation of the physical features to the digital world using a point, line or polygon. But in the real world, there are many incidences of one:many cases that have planning implications which the local authority needs to take into account. Therefore, if the desktop GIS software has limitations in data collection, how does one go about it? The paper initially looks at 3 basic GIS elements that form a thematic map and then makes recommendations of 2 alternative ways to overcome the shortcomings of the desktop GIS software by introducing the desktop GIS - Relational Database Management System (RDBMS) package either at the desktop or server level where the preferred choice is the latter with the ability to accommodate the concurrent use of a central geospatial database.

Keywords: Coordinate Reference System, Database Management System, Geographical Information System (GIS), Quantum GIS

INTRODUCTION

The uses of a Geographical Information System (GIS) are basically for mapping and spatial analysis of geospatial information. Most people use a proprietary desktop GIS software. The GIS software is such a modular tool making it a desirable ICT tool for agencies that deal with geospatial information. Since 2009, Open Source GIS software too has been gaining popularity because it is free, user-friendly and can function as good as any proprietary GIS software. Agencies that previously kept information about their resources in non-spatial format such as spreadsheet now realize their information can be more valuable and powerful if linked to a spatial element such as a spatial location. Dr. Marvin Marshall¹ stated that the brain thinks in terms of images and not in terms of text so geospatial information sieved by different thematic maps can easily help decision-makers. Man's progress has to do with the technological advancement of his era yet is also curtailed by its limits. For GIS, the main task is to translate real-world physical features into digital data. Later, it can be manipulated to extract important digital information. The key question is whether the current desktop GIS software can properly do such a thing? Many people assume it can, maybe because they never questioned or dare to question it. The reality is that such is not true. The desktop GIS software has been around over 20 years but it is felt GIS technology still has its limits. GIS is very technical and is complicated for

Figure 1: New Vector Layer from Quantum GIS



the average person. Thus, this paper does not plan to jump into complex GIS issues which may discourage the reader from continuing to read but to concentrate on 3 basic elements that go towards making a GIS map and how this affects the business of town and country planning. They are:

- Features
- Coordinate reference system
- Attributes

Firstly, before the basic GIS elements are elaborated, it is important to understand the difference between 2 vastly different feature:attribute scenarios in physical planning or else the subject of GIS is going to be even more complicated:

- One:one
- One:many

In town and country planning, most situations in landuse planning are based on one:one incidences. However, there are also situations where one:many incidences do occur and for GIS to be effective, both scenarios must be digitally captured and stored. In the first scenario, a digital GIS feature is assigned one function. To exemplify, a plot of land can have one function e.g. agriculture activity. In the second scenario, a digital feature is assigned to more than one function. To exemplify, a plot of land, in certain cases, can have more than one function e.g. an apartment with commercial and residential activities. The problem is that the current desktop GIS software was designed to handle one:one cases. The inability to comprehensively collect GIS data leaves out a crucial part of data collection involving one:many cases wherever they may exist and this is not good. The worry is when it involves mix landuse activities. How does one go about it using the desktop GIS software? Let us first look at how a new vector layer is formed.

FEATURES

The first element that forms a GIS layer requires a choice of 3 digital feature or type to represent a physical feature (**Figure 1**). To exemplify, a point can represent a fire hydrant, a line can represent a road and a polygon can represent a plot of land. Most GIS software adopt the

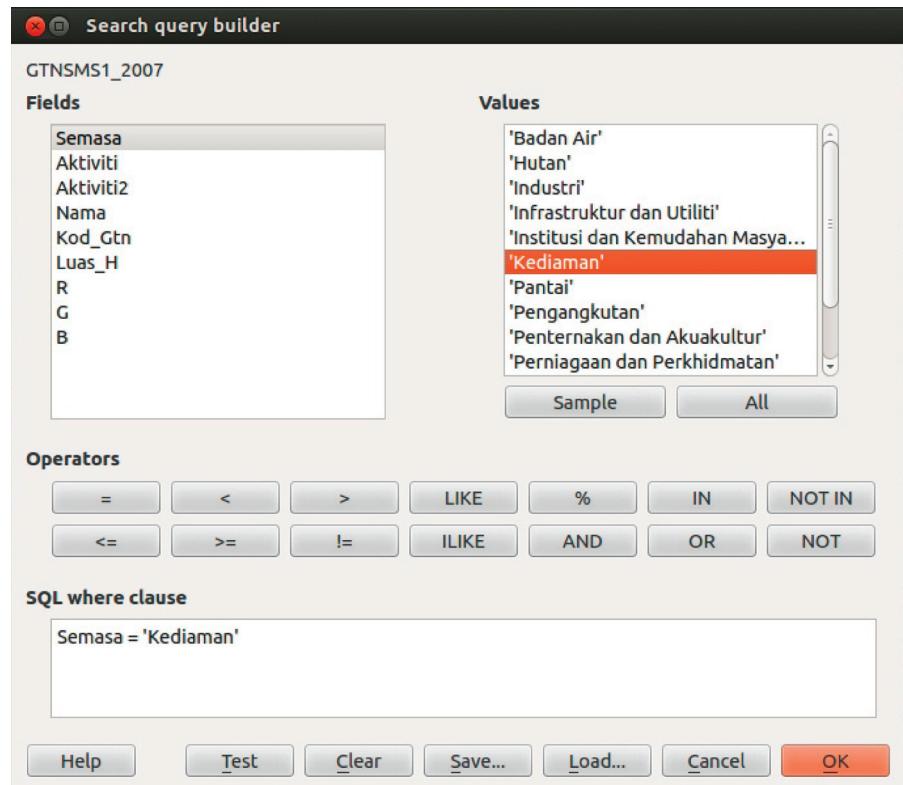
¹Marvin Marshall (2012). Discipline and Parenting without Stress.

Simple Feature Vector (SFV) model which was designed to handle one:one cases well. This condition makes the SFV model screen fixed so it is impossible to accommodate one:many cases which represents mix landuse activities. To compromise, GIS users endorse the major landuse in a plot of land as the principal landuse activity e.g. a plot of land may contain a religious building, residential and commercial apartments but is recognized as a 'commercial' landuse because commercial activities occupy the largest floorspace. In the case of agriculture, a residential dwelling is allowable on agriculture land² but since agriculture occupies the larger area, 'agriculture' is recognized as the main landuse activity. This means, sometimes, data on secondary landuse activities do not get collected. This implies GIS data may not represent a true scenario of what is actually happening on the ground especially when it contains one:many cases. If the percentage not captured is high, the result of an analysis would be grossly misleading.

COORDINATE REFERENCE SYSTEM

The second element that forms a GIS layer is the coordinate reference system (CRS). When a GIS map is created, map projection configuration orients the map to the local coordinate reference system. The issue here concerns the effect of different cadastral map projections between state authorities in Malaysia. JPBD, like other technical agencies, are end-users of topographical and cadastral maps produced by the Department of Survey and Mapping, Malaysia (JUPEM). Federal agencies find difficulty in integrating state cadastral maps because state cadastral maps use different reference points unlike a uniform reference point for topographical maps in Peninsula Malaysia at Kertau, Pahang. When it concerns border issues, those along state boundaries are worst hit by the lack of a clear boundary between state cadastral maps. This disparity creates boundary issues such as land property, land administration, public transport infrastructure routes, common boundaries like river and legality become messy because state jigs do not fit accurately and seamlessly to the national jigsaw. Subsequently, it affects data

Figure 2: Search Query Builder from Quantum GIS



completeness and accuracy for planning studies. In town planning, cadastral maps are duplicated, then value-added as thematic maps e.g. zoning plan. End-users generally do not reproject the original cadastral map unless there is a specific reason for doing so. A GIS software can be made to reproject map projections but this is generally avoided because of the high possibility of topology error, for instance where a projection error of 1 degree is equivalent to a point shift of about 70 km. on the ground. Agencies that rely on JUPEM maps acknowledge the issue of different cadastral map projections between states and this is outside their scope of jurisdiction. In this context, JUPEM need to quickly address the issue between state JUPEM departments. Until then, this problem remains unresolved.

ATTRIBUTES

The third element that forms the GIS map is the attribute (**Figure 2**). GIS users will begin to appreciate the importance of quality textual data when they advance from mapping task to spatial analysis. Simple Query Language (SQL) is often used by GIS software for GIS analysis. This

² Government of Malaysia (1965). National Land Code, 1965(Act 56).

tool is exemplified in Quantum GIS as the Search Query Builder. While it is a powerful tool, it can bring about disastrous results for spatial analysis simply due to spelling error because SQL query is word specific and can also be case specific. If words were wrongly spelt for the field names and attributes, the GIS software does not pick them up when processing data and the output becomes inaccurate. When humans have to deal with too many monotonous data, e.g. Petaling District GIS layer alone contains 800,000+ polygon features, after a while, they become 'mentally blind' and auto-correct errors in their mind. It was not surprising that a random inspection of field names and attributes in local plan GIS layers revealed many spelling errors of attributes. Thus, the importance of data verification by the relevant party that prepares a GIS map and that data verification should never be carried out by the same person who prepared it in the first place. Another aspect that concerns attributes is that certain GIS software adhere to UNIX rules imposing a need for field names not to exceed 10 characters. If this is not observed, that particular GIS software will not process data required by certain modules. This is a legacy issue because some GIS developers prefer programming rules while others are more flexible. In such cases, pre-inspection of GIS data is crucial. If the GIS software to be used adheres to UNIX rules, it is necessary to amend the relevant field names and conform them to UNIX rules before spatial analysis begins. Finally, a third issue which concerns attributes is that the attribute table of the current GIS software was designed to handle many attributes per feature and not create sub-levels in the attribute table. In other words, the design of the attribute table is fixed and a row in an attribute table cannot be further broken down into smaller rows to accommodate different landuse activities. This means it is impossible for an attribute table to accommodate one:many cases.

IMPLICATIONS

Town planning is a multi-disciplinary field, therefore, the need for data-sharing becomes more pertinent and the need to establish a uniform GIS format becomes crucial. A starting point is the GIS Manual for Development Plan produced by

the Federal Department of Town and Country Planning, Peninsular Malaysia (JPBD). Although the GIS Manual categorizes 13 types of landuses³, it does not cater for mixed landuse activity which covers one: many cases. The GIS Manual has now already been adopted by state planning departments and local planning authorities so the matter is not only internally but also externally felt. The need for data completeness also means a need to amend the GIS Manual and accommodate the mixed landuse activity but there is a big implication. The moment the current GIS Manual is amended and accommodates mixed landuse activities, the GIS user has to adapt to a different ball game and upgrade from the desktop GIS software to a more sophisticated software that can store GIS data for both one:one and one: many cases. There are two alternatives to this, each with its respective pros and cons:

- Desktop GIS-Desktop RDBMS package
- Desktop GIS-Server RDBMS package

DESKTOP GIS-DESKTOP RDBMS PACKAGE

Where the GIS user's is contented to store his GIS data in his own computer and has no intention of sharing his data, he can opt for the Desktop GIS-Desktop Relational Database Management System (RDBMS) package (**Figure 3**). Here, the spatial data is kept in the desktop GIS while the non-spatial data is kept in a desktop database such as Microsoft's Access or Open Office's Base of the same computer. To enable communication between the GIS and database applications, an Open Database Connectivity (ODBC) driver is used. The package also requires a common denominator between those two applications. That is the spatial data in the desktop GIS. It is replicated and linked to its twin in the non-spatial RDBMS. While this package fulfills what the desktop GIS alone cannot do, the key limiting factor is that it does not allow multi-functional use by the concurrent sharing of the GIS data. In this respect, office productivity cannot be increased as the distribution of work is restricted to the use of one computer.

³ JPBD Semenanjung Malaysia (2009). Manual Sistem Maklumat Geografi (GIS) Kajian Rancangan Pemajuan.

DESKTOP GIS-SERVER RDBMS PACKAGE

On the other hand, when multiple jobs need to be carried out concurrently by several people for tasks such as mapping, editing, data verification, analysis, monitoring, updating and reporting by the sharing of a centralized geospatial database through a Local Area Network (LAN), it is best to adopt the Desktop GIS - server RDBMS package (**Figure 4**). This enables the distribution of workload and subsequently improves office productivity. Assuming a LAN is already available, this package requires use of a server and that means the user has to fork out additional money even though the user opts for an Open Source RDBMS software. Further commitments are also needed to train manpower resources to properly manage and annually maintain the server, operating system and geospatial database application. When the use of this package advances and becomes mission-critical, the user must get more funds to acquire high-end servers and supporting infrastructure e.g. active mirror server to serve as a backup server as well as web and application servers. It shows that even though this package excels in the concurrent use of the GIS data, it is a costly affair, can be a complex setup and the user must have a good grasp of RDBMS database management to fully exploit the potentials of this enterprise database.

CURRENT EFFORTS

The Initiative 20: Upgrading GIS workshops⁴ March-April 2012 noted that a few state planning departments have already been using a proprietary GIS database application at the server level to store their GIS data, namely JPBD Penang, JPBD Perak, JPBD Negeri Sembilan and JPBD Malacca. However, its prohibitive cost hinders other state planning departments from utilizing such software. The National Landuse Information Division (BMGN) was already aware of this matter much earlier and looking elsewhere, BMGN in 2011, studied the possibility of migrating GIS data in their native format kept in a storage server to an Open Source RDBMS kept in a geodatabase server⁵. QGIS was made

to function as the desktop GIS and PostgreSQL-PostGIS as the geospatial database. This way, GIS data could be uploaded from respective desktop GIS to a centralized geodatabase server. The study concluded it is possible and fairly easy to transform GIS data from the traditional native format to a RDBMS without the need for any customization.

This approach made it possible to forgo the dependency of a File Transfer Protocol (FTP) software and there was no more need to make duplicate copies of the same GIS layer to several users. Nevertheless, it is accepted that customization of the RDBMS makes the system simpler to use, for example versioning purpose, but the easier it is to use a system, the more complex and difficult it is to design, such is the pro and cons of customizing ICT applications. In the meantime, issues and database complexities relating to table relationships are being further studied in detail. Similarly, JPBD Central Zone Project Office (PPZT)⁶ is also currently working on a RDBMS project to address the need to capture, among others, landuse activities in a strata data. This should be of great benefit to the urban local authority heading towards becoming a compact city since it is often filled with many plots of land housing many building blocks of different levels that contain different landuse activities. PPZT's choice to use the Open Source server package PostgreSQL-PostGIS is excellent because it shows that it does not incur any cost for local authorities to procure softwares and allows them to concentrate their financial resources on hardware and consultancy fees. Additionally, there can be seamless integration between a desktop GIS, namely, QGIS and the geospatial component, specifically, PostGIS because both QGIS and PostGIS adhere to guidelines⁷ formulated by the Open Source Geospatial Foundation (OSGeo), a non-profit organisation that helps improve cross-project collaboration of Open Source softwares. In fact, Majlis Perbandaran Ipoh (MPI)⁸ which recently exposed itself to QGIS is already pursuing the development of its geospatial database along this line and hopes soon to integrate its non-spatial property assessment database to a geospatial database.

⁴ BMGN (Mac-April 2012). Bengkel Pelan Tindakan Pelaksanaan Makmal Pembangunan Hartanah Initiatif 20:Upgrading GIS.

⁵ BMGN (2011). Projek Pembangunan Transformasi Pangkalan Data Jabatan dari Native Format kepada RDBMS.

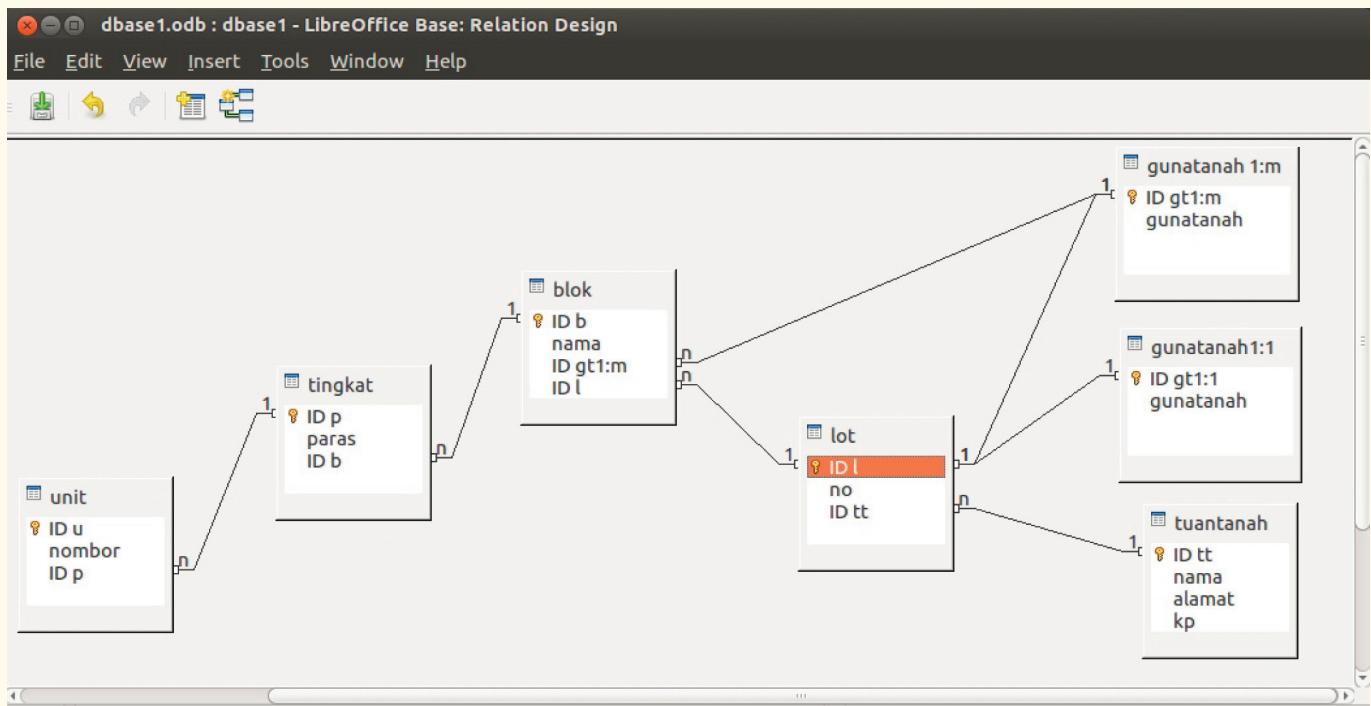
⁶ Wan Andrey Wan Mahmood (2012). Pelaksanaan Relational Database Management System (RDBMS) dalam Penyediaan Data GeoSpatial.

⁷ OSGeo (2012). About the Open Source Geospatial Foundation.

⁸ Telephone conversation between Mr. Abbas Abdul Wahab, JPBD Semenanjung Malaysia and Mr. Abdul Rasef Abdul Rani, Majlis Bandaraya Ipoh (June 2012).

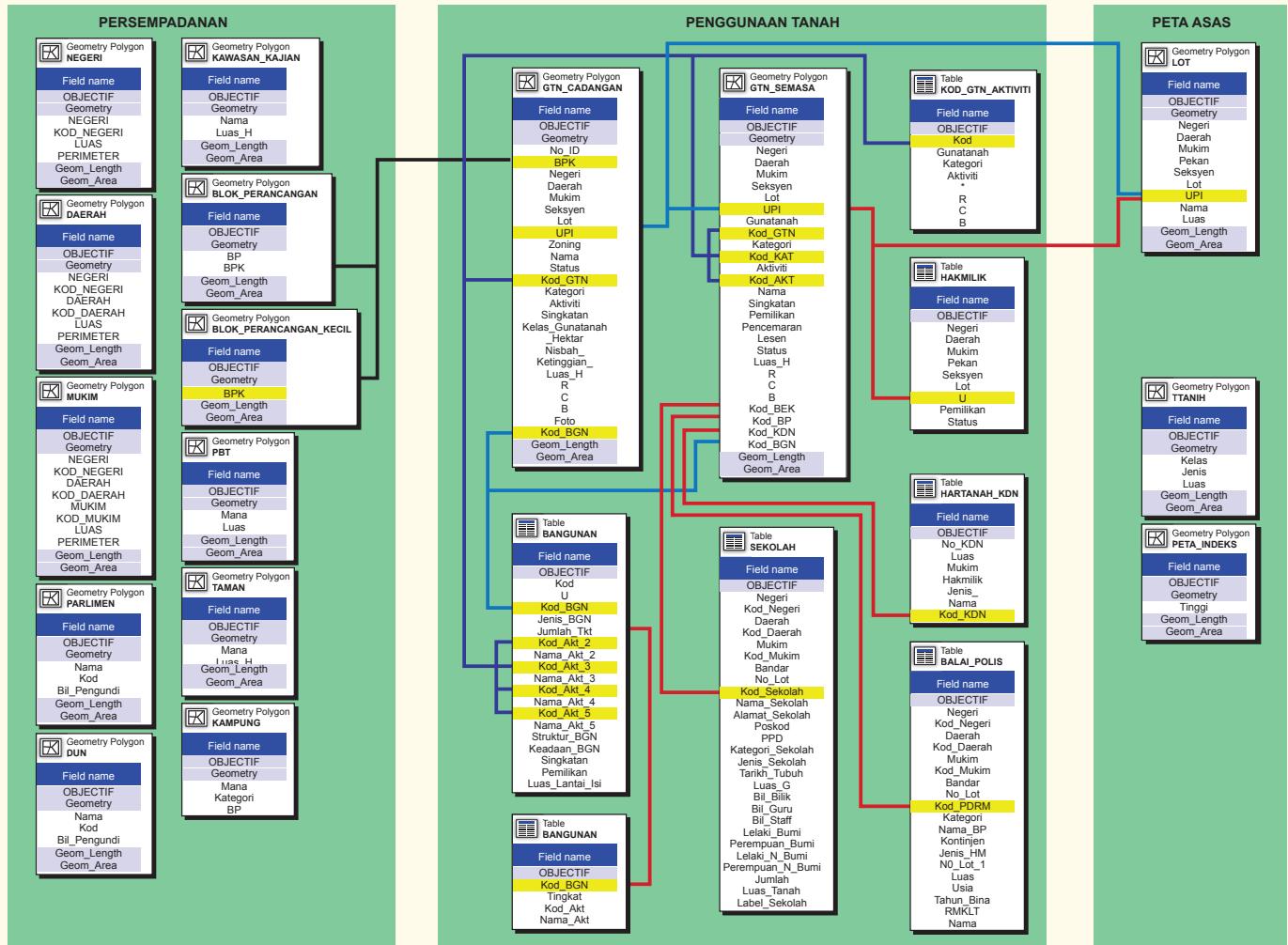
FEATURES

Figure 3: Relationship of Attributes in A Desktop Database That Shall Link to A Desktop GIS



Note : ODBC driver is required to link to the spatial data in the desktop GIS.

Figure 4: Relationship of Attribute in A Server RDBMS at JPBD Central Zone Project Office



Note: In this case, the desktop GIS serves as the interface between user and the geospatial database.

CONCLUSION

GIS data collection for town and country planning purpose in Malaysia all this while has generally been based on the use of desktop GIS software. One can therefore deduce the level of comprehensiveness of data collected throughout development plan studies that now constitute the National Landuse Information database of the department. Having said that, under the constraint of the present architecture of the desktop GIS software, data collected then is better than nothing at all. There is always room for improvement and since town planning and data collection is a dynamic process, with improvement in technological advances, it is positive to say that things will get better in days to come. However, depleting annual financial resources pose another challenge and without a doubt, the use of Open Source software such as QGIS and PostgreSQL-PostGIS is a saviour for agencies constrained by limited budget yet wanting a comprehensive geospatial database which they can depend on for their daily task and at the same time, be able to share their data with others in need. In this sense, the desktop GIS - server RDBMS package is the way forward for geospatial development affecting town and country planning in Malaysia. The faster it is adopted, the less painful it is for JPBD to implement the iPLAN: the department's integrated National Landuse Information System.

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TRUST AND CIVIC ACTION IN URBAN PLANNING: EVIDENCE FROM SUBANG JAYA



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ABSTRACT

This paper explores the types of action people take to influence planning decisions and the possible associations between these engagement behaviours and trust. Three dimensions of trust are explored in this study, i.e. trust in neighbours, trust in community representatives and trust in the local authority. This paper provides evidence that there are great differences in the trust level between active and less active residents of the community. In conclusion, this paper recommends that in order to increase engagement and participation, future strategies should not only focus on improving the existing participation mechanisms, but emphasize on the fostering of trust between all actors involved in urban planning.

Keywords: Participation in Planning, Civic Action, Trust



INTRODUCTION

The first principle of the United Nations Rio Declaration on Environment and Development from 1992 states that "Human beings are at the centre of concerns for sustainable development" (United Nations, 1992) This declaration suggests the need to provide platforms to include the public in the decision-making by promoting public awareness and making information widely available. Local Agenda 21¹, the "inclusive city" campaign² by the United Nations and the "people-centric planning" theme³ in Malaysia, are examples of initiatives under the sustainable development umbrella to encourage people to play active roles in governmental decision-making.

A sustainable city shall stress on the importance of representation and inclusion of people in its policy and decision-making process. Inclusion refers to allowing citizens to have a say and influence city policies and decisions, especially those that have direct implications on the public such as the planning of the land uses in a city. Davidoff (1996) stresses the importance of having representatives from a community in preparing unitary plans because this helps to stimulate city planning by having alternatives that are supported by the community instead of being "the mental exercises of rational planners" (Davidoff, 1996

p.213). This can relieve the planning agency from creating alternatives that do not reflect public interests and minimize conflicts.

The existing definitions of participation range from "public consultation" to the more specific views that define participation as a process of involving the public in public policies or decisions. Some public bodies refer "consultation" (Nottinghamshire County Council, 2010; Basingstoke and Deane Borough Council, 2011) as the catch-all term that encompasses various forms of communication and involvement, while some argue that consultation as the weakest form of participation (Smith, 1998; Njoh, 2003). In some cases, the public may participate by simply attending public hearings or briefings and being the passive recipients of information from the governing body (Berry Portney *et al.*, 1993; Moynihan, 2003). In some cases, public opinion may be sought through questionnaires or focus group discussions, but the final decision still lies in the hands of the decision-makers. A more meaningful participation are those that allow public representatives in the process of decision-making such as through public representation on the advisory committee. Bass (1995) develops the following typology of public participation that illustrates the many types and levels of participation.

¹ The implementation of Local Agenda 21 in Malaysia started in January 2000 under the pilot project that involved four Local Authorities namely Petaling Jaya Municipal Council (MPPJ), Miri Municipal Council, Kuantan Municipal Council and Kerian District Council.

² Launched in 1999 by the United Nations, the inclusive city campaign promotes growth with equity by emphasizing on participatory planning and decision-making in order to empower people to fully participate in the social, economic and political opportunities that cities have to offer.

³ "Sustainable Development : People-centric Planning" is the theme of the World Town Planning Day initiated by the Malaysian Federal Town and Country Planning in 2009.

TYPOLOGY OF PARTICIPATION

1. Participants listening (e.g. receiving information from a government PR campaign or open debate).
2. Participants listening and giving information (e.g. through public inquiries, media activities, hotlines)
3. Participants being consulted (e.g. through working groups and meetings held to discuss policy).
4. Participate in analysis and agenda setting (e.g. through multistakeholder groups, roundtables and commissions)
5. Participants in reaching consensus on the main strategy elements (e.g. through national roundtables, parliamentary/select committees, and conflict mediation).
6. Participants involved in decision-making and the policy, strategy or its components.

Note: At each level, participation may be narrow (few actors); or broad (covering all major groups as well as government).
Source: Bass *et al.* (1995 p.iv).

The Department of Provincial and Local Government of South Africa (2005) defines public participation as an open and accountable process that allows individuals and groups within selected communities to exchange views and influence decision-making. Steven Schatzow (1977) carefully explains that public participation is distinguished from public influence. According to him, while participation refers to the direct involvement of the public in decision-making through a series of formal and informal mechanisms, it however does not necessarily mean that public influence is exerted as public views and opinions may be ignored by decision-makers. Influence refers to the effect of the public upon decision-making, and may operate even when the public does not actually participate in decision-making.

Verba (1967) use the term "democratic participation" to refer to acts that are intended to influence the behaviour of those empowered to make decisions. By stressing on "intention to influence decision-makers", Verba reiterates that the definition excludes what can be called "support participation", where citizens take part by expressing support for the government as he believes that successful participation refers to acts that have the intended effect – which are for the government to "get the message" and act in favour with those not formally empowered. This definition is limiting the scope on looking at participatory arena as a "battle" with the government in which case, one party wins and one party loses (Verba, 1967; Campbell and Marshall, 2000). Given institutional encouragement for public involvement, some individuals and groups showed a remarkable willingness to engage

with the processes of government. However, the engagement between politicians, planners and the public did not create a sense of working together and quite the reverse seems to be taking place (Campbell and Marshall, 2000).

Local authorities in Malaysia, which is functioning as local planning authorities, have had long statutory responsibilities in involving the public especially in land use planning and this had been clearly spelt out under the Town and Country Planning Act 1976 (TCPA). The opportunities to participate in urban planning are provided during the formulation of local plans.

Local plans are legal documents that have specific and detailed policies, strategies and guidelines for land use development in local authority areas. Once a local plan is gazetted, the local authority, in processing a planning application, does not need to conduct a public hearing for nearby residents to make objections. The local authorities are only obliged to issue a written notice to all neighbouring property owners on the details of the developer's proposal and invite for objections. The word "neighbouring lands", according to the TCPA Section 20(8) refers to "lands located within a distance of 200 meters from the boundary of the land" (JPBD Semenanjung Malaysia, 2003). By emphasizing the term "owners of the neighbouring lands", this provision grants the rights to object only to those who are assumed to be injuriously affected by a development. This provision disregards the fact that a planning decision sometimes may cause negative repercussions not

only to those living nearby but may transcend to the widest segment of the community.

In recent years, there has been a growing feeling of resentment portrayed by the public on decisions made by the local authorities, especially decisions that relate to land development in urban areas. It is frequently discussed in the local newspapers on residents' complaints on governments' decisions regarding land developments and the most common issue discussed is the conversion of parks (Nadeswaran, 2007; Malay Mail, 2008; M and Menon, 2011) and public utility lands (Chan, 2011; Lim, 2011) into residential or commercial development. Many raised the issue that some of the development projects were carried out without their knowledge and some questioned the local authorities' credibility for their inability to gauge the impacts of the controversial developments towards the community (Sulaiman Mahbob, 2006; Singh 2007; Goh, 2008; Ramadas, 2011). These disputes between the local authorities and residents hint at the feeling of distrust of the general public of their representatives.

Past studies on public participation largely focus on the issues that exist when people participate (or do not participate) in formal participation channels. Lack of emphasis had been stressed on community action in urban planning that occurs outside the formal channels which include petition signature, contacting authorities and participating in online discussion. The objective of the study is to explore possible associations between trust and civic action in planning. According to Moro (2010), civic action refers to a form of citizenship to implement rights, take care of common goods and empower citizens. The term "civic action" is used in this paper to illustrate the methods used by the public to influence planning decisions. These methods include the informal channels of participation such as petition signing and writing to newspapers.

TRUST AND CIVIC ACTION

Trust is usually measured by expressions of generalized trust in people and in institutions. As an important element in a society, trust

can drive people to work together to achieve a common goal in their society. In representative democracy system, trust is placed on the representation, sometimes called the Elites, to make decisions which best benefit the people. However, from the literature on the rising demand for public participation, it is found that distrust of the government (Dennis 1977; Herriott-Watt University, 2003) do have intense impact on demands for participation. Dennis (1977) asserts that a person's trust refers to "his assessment of the probability that, without his doing anything at all himself, the orders and policies of his rulers will be beneficial to him and to others he cares about" (p.15). He elaborates that when established authorities are able to meet the needs of the people, trust would be absolute and there would be no pressure or demand for participation. However, he cautions that excessive trust in government is not good because it may deprive the people from effective participation. This may result in the public hallucinating, thinking that the government is putting their best interest at heart, which sometimes may be quite the opposite.

Continued distrust may sometimes lead to decrease of motivation to participate. It is important for the public to feel confident that they are engaging in something that is likely to have tangible results. When such confidence declines, the motivation will decrease. Mazmanian and Niemaber (1974) note that history is replete with instances of enthusiasm for direct involvement in participation, followed by distrust and even opposition. Motivation wanes as the public sees that participation is time-consuming when they start to feel that government officials are resistant to change. The fundamental conflict arises when citizens want not only to speak their mind at an open hearing, but also to have some control over policy outcomes (Berry Portney *et al.*, 1993). When the participants fail to get what they want, they would feel that their involvement is wasteful because they are not able to influence the decisions. This may cause them to shy away from future participation exercises.

From the discussions, it is clear that both trust and distrust have significant impacts on participation behaviour. It may cause people to be more vigilant

in pursuing their interest, or in other word – to fight the government, or it may lead to decrease of public interest to participate.

Another form of trust is the trust that is placed on other members of the community. Beam (1999) states that he prevalence of trust in a community leads to the formation of shared values. Shared values are the driving forces of why people would make time to interact with strangers. Urban planning provides opportunities for conflicts to occur between the government and the public. The government is always perceived to be oblivious to public wants and needs.

Eric M. Uslaner's (2003) study of the varieties of trust deserves much scrutiny as he has proposed several arguments against the findings from Putnam. Putnam (2000 as cited by Uslaner, 2003) wrote that those who actively engaged in community life are both more trusting and trustworthy. However, it is unlikely for people to place trust in people who are not part of their civic life, whether or not those people are community-engaged people (Uslaner 2003). From his evaluation of a variety of more recent surveys in the United States, Uslaner found that there is a weak reciprocal link between trust and civic engagement. He highlights that not all trust is the same and not all civic activity is the same. For example, when people work together to challenge local authority decisions, the trust that exists is particularized trust and not generalized trust. The act of working together is not perceived by an outcome of generalized trust but, they just happen on that particular episode. That "neither consume nor produce trust" (para 15). The prevalence of generalized trust is believed to be limited in urban areas with a less diverse range of individuals. As Pennant (2005) points out, the more ethnically diverse an area is, the less likely people are to trust others within that area.

Trust can be positively or negatively influenced by social interaction and communication (Hoppner, Frick *et al.*, 2007; Faizal Farook *et al.*, 2010). A person's trust on an object (i.e. person, institution, organization) can be affected by past experiences and outcomes. This type of trust is known as knowledge-based trust

which refers to trust relationship that is built by previous experiences and knowledge of the other objects of the trust (Maguire, Phillips *et al.*, 2001). It is perceived that a positive encounter, interaction and communication will promote a more solid future trust relationship.

Active trust is another form of trust that is built through public participation and community engagement activities (Edwards, 2008). This type of trust is built from the act of working together in solving common problem and achieving common vision. While these engagement processes seem to be able to promote active trust, Edwards (2008) however highlights that the exercise (and perhaps abuse) of power by some actors may bring the opposite result which is distrust.

Based on the discussions, it is suspected that there is a close association between trust and the tendency for people to get involved and engaged in participatory processes as they provide opportunities for communication and interaction. The main framework of this paper is based on the hypothesis that trust affects participation. By stating this, it does not mean we ignore the fact that the converse is possible. As Hrast and Dekker (2009) put it, there is a continuous and dynamic interplay between social capital and participation and these two aspects are mutually reinforcing (Putnam, 1995). XiaoHu and Wan Wart (2007) for example, find that it is participation that enhances public trust especially when the outcome of participation produces what the public wants. However, the way in which trust influences participation is our main interest in this paper.

RESEARCH AIM

This paper aims to explore the influence of trust on civic action in urban planning. Results from this paper will enable the readers to understand the psycho-social aspects that may explain the participation behavior. This is essential as it provides a new and refreshing perspective on understanding the factors that may influence civic action in influencing decisions in urban planning.

METHODOLOGY

Case Study Design

Subang Jaya is chosen as the case study for this research. During the data collection stage of the study, Subang Jaya and USJ communities were yet to have their own local plan. The said local plan, called Draf Rancangan Tempatan MBSA, MPPJ and MPSJ 2003-2020 (previously known as Draf Rancangan Tempatan Daerah Petaling Dan Sebahagian Daerah Klang), were only approved and gazetted by the State Planning Committee in May 2010. Thus, since the establishment of the township until mid 2010, the guiding documents in used were the Rancangan Struktur Negeri Selangor 2007, and an outdated Rancangan Tempatan Daerah Petaling (1996) which was adopted by the Majlis Perbandaran Petaling Jaya (MPPJ), the previous local authority of Subang Jaya before the boundary realignment exercise in 1997 that placed Subang Jaya and its neighbouring areas to be under the newly formed Majlis Perbandaran Subang Jaya.

The selection of Subang Jaya in this study is based on the interesting and successful history of participation in the community. The communities of this suburb have an abundant stock of social capital and this fact is proven by the number of residents' alliances which had been working hand-in-hand in confronting the local council in various planning issues. In many cases, these alliances managed to stop or hold back many projects that had been discreetly approved by the local authority.

The fact that the study is conducted during the preparation of the Draft Local Plan for Subang Jaya gives the advantage to the researcher to study the pattern of participation in the whole planning context both in formal and informal processes.

The Survey

Using non-proportional quota sampling from three administrative zones of the Subang Jaya local authority, a cross-sectional household survey is carried out to identify the extent of residents' participation in planning, through both formal and informal channels. Each zone is represented by 115 respondents and the actual sample

size and the completed questionnaires are as below (**Table 1**).

Variables And Measurement Instrument

One of the primary investigations of this paper is to explore the extent of civic action in urban planning. Civic action in this research is not only confined to participation within formalized planning channels which is provided by the law but it includes other informal channels such as contacting community representatives and politicians, contacting the media or resorting to informal channels such as petition signing and street demonstration. To gauge the extent of civic action, the respondents were asked to tick all the actions they had made in the past three years to influence planning decisions. These items had an alpha reliability coefficient of .85, indicating their close correlation and a high internal consistency.

As shown in **Table 2**, more than half of the respondents had never done anything to influence planning decisions. This is not a surprising finding as it has been proven in many previous studies that many communities are made up of the non-participants (O'Riordan 1977; Schlozman *et al.* 1987; Florin *et al.*, 1987). Among all the actions listed in the survey form, it is observed that contacting local authorities and community representatives and attending meeting with fellow residents are the preferred choice of methods to be used for the respondents to voice out their grouses and complaints about planning issues and decisions. It is interesting to note that quite a number of respondents had experienced signing protest petition. The acts of communicating with the politicians and councillors appear to be lower and the findings do indicate that the respondents prefer to communicate with the JKP or communicate

Table 1: Total Survey Achieved and Used in the Analysis

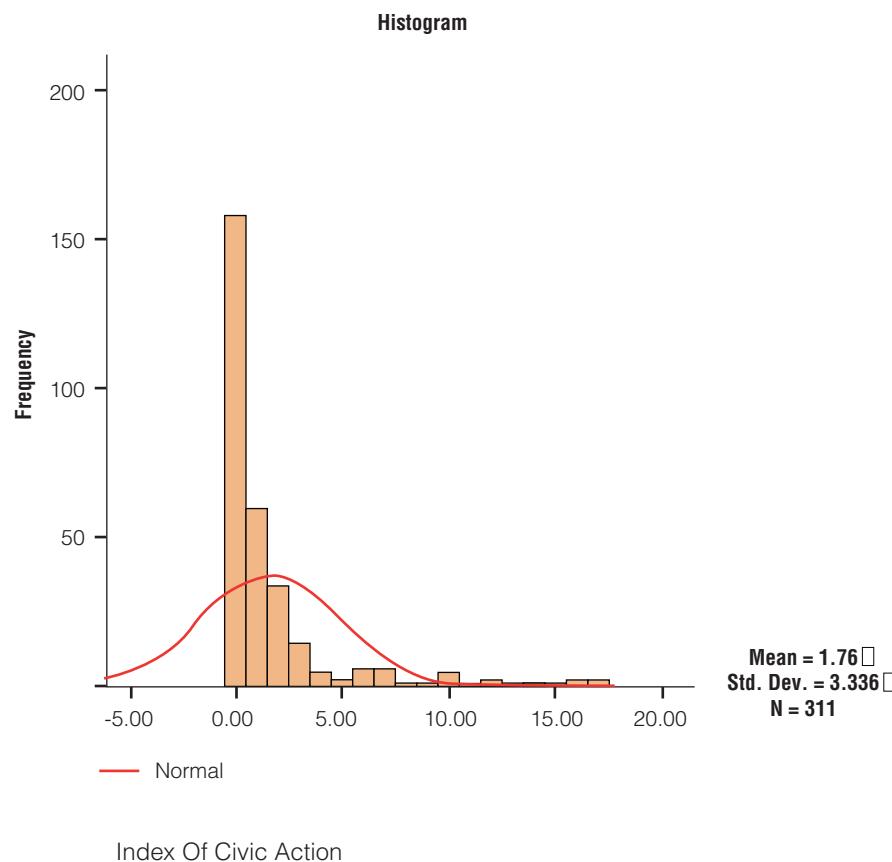
Zone	Number of population*	Sample Size	Completed Questionnaire
Zone 1	44 144	115	106
Zone 3	78 325	115	112
Zone 4	13 133	115	100
Total	135 602	345	319

* The total number of population in each zone were obtained from the Statistics Department for the year 2000

Table 2: Actions Done In The Last Three Years To Influence Planning Decisions

List of Actions	Frequency	%
Never done anything	195	58.7
Contacted local authority	58	17.5
Contacted community representatives	56	16.9
Attended meeting with fellow residents	54	16.3
Signed protest petition	50	15.1
Contacted non-governmental organization	33	9.9
Attended public hearing	33	9.9
Contacted State Assemblyman	28	9.4
Contacted local councillor	29	8.7
Discussed in community online forum	25	7.5
Took part in public protest and demonstration	19	5.7
Contacted Member of Parliament	18	5.4
Contacted mainstream newspaper	18	5.4
Contacted community newspaper	10	3.0

Source: Field Study, 2010

Figure 1: Distribution of Scores of Respondents' Civic Action to Influence Urban Planning**Table 3:** Descriptive Statistics of Respondents' Participation In Planning

N	Valid	311
	Missing	7
Mean		1.7621
Std. Deviation		3.33621
Variance		11.052
Skewness		2.864
Std. Error of Skewness		.138
Kurtosis		8.581
Std. Error of Kurtosis		.276
Minimum		.00
Maximum		18.00
Percentiles	3	.0000
	25	.0000
	33.33333333	.0000
	50	.0000
	66.66666667	1.0000
	75	2.0000

directly with the local authority. Contacting media such as mainstream newspapers, community bulletin and community forum appear to be the least preferred choice.

The distribution of the scores obtained is shown in **Figure 1**. A series of normality tests were carried out and showed that the distribution of the sample was not normal. The distribution is positively skewed and this indicates that the sample is largely made up of non-participants.

The next step of the analysis is to associate trust and participation. To achieve this, the residents are grouped according to their level of civic action based on the quartile scores obtained (**Table 3**). Residents with scores of 2 and above are classified as having a high level of participation (Active), those with scores of 1 are classified as having a medium level of participation (Mediocre), and those with 0 score are classified as having zero level of participation (Passive). The number of residents in the Active group is 91, the Mediocre group has 61 members and the Passive group has 159 members. These three groups of residents are then compared based on their characteristics and perceptions of the factors that may influence their level of participation in planning.

To measure trust among the respondents, the respondents are asked to complete a series of questions on their feeling of trust on three objects of trust: neighbours, community representatives (which include community leaders and politicians) and the local authority. The response options to these questions were constructed in 5-point Likert scales ranged from "strongly agree" to "strongly disagree". To compare the trust level between residents with different level of activeness in planning, the non-parametric statistical analysis Kruskal-Wallis ANOVA is used.

FINDINGS

The survey suggests that in general, the residents have a high level of trust in their fellow neighbours with more than 50 percent of the respondents showing agreement with the statement that "most people in my community can be trusted". However the level of trust they have in the community

	<p>representatives and the local authority appear to be lower as compared to trust in fellow residents (Table 4).</p> <p>Kruskal-Wallis ANOVA comparisons of the three groups of residents with different levels of participation were done to determine whether their perceptions of trust in residents, community representatives and the local authority differ from one group to another. The statement "most people in this area can be trusted" marked significant differences of agreement among the three groups ($\chi^2 (2, N=306) = 10.67, p < .0125$). It appears that those in the active group have a higher level of trust in their fellow neighbours, followed by the mediocre group (Table 5).</p> <p>Another two statements that mark significant differences of agreement among the three groups belong to the "trust in local authority" category. It is observed that those who belong to the active group have lower agreement with the statement that the council is transparent in its decision-making process ($\chi^2 (2, N=288) = 10.93, p < .0125$) and that it is not necessary for them to participate as the council knows better ($\chi^2 (2, N=303) = 13.67, p < .0125$). These findings may hint that it is actually the lack of trust in the local authority that encourages them to participate.</p>	<p>situations' where the local authority feels more open and ready in including the community which usually has low awareness in urban affairs.</p> <p>The key to build trust is by enhancing interaction among all the parties involved in the town making process. This can be done through more formal ways such as dialogues, survey and town hall meetings. In Subang Jaya, even though the initiatives were already in place, however, they were usually accompanied by suspicions of the public that the initiatives were done superficially without genuine intentions to really listen to public views. In this light, it is important for the local authority to work harder to gain people's trust by demonstrating their sincerity and positive attitude when dealing with the public.</p> <p>One way to gain people's trust is by providing continuous opportunities for the public to get involved in planning. In this light, the planners should not view participation as one public hearing to just hear things out, instead the opportunities to participate should be extended even after the plans or policies are already taking place. While the objective of the participation process done in the early stage is to gain input from the public, the participation process after the policies being implemented (or projects completed) should be done to share with the public the implications of the decisions or projects. By doing this, it will enhance the public knowledge on planning and it also creates a culture of collaboration and honest communication between the planners and the residents. This approach will create a culture of proactive participation as opposed to reactive participation. Reactive participation, as explained by Wallace (1999) may open up opportunities for the public to criticize and bash the plans without concrete objectives. It may create a more distant relationship between the planners and the residents, in what has been described by Vraneski (2002) as "after-the-storm" period where so much prejudice had been engraved among one another, misconception on the issue had been formed and misinformation had been disseminated.</p> <p>The local authority should also make it a priority to let their officers go to the ground and interact with people in informal ways. This can be done</p>
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Table 4: Actions Done In The Last Three Years To Influence Planning Decisions

	Agree to strongly agree		Neither agree nor disagree		Disagree to strongly disagree	
	n	%	n	%	n	%
Trust in neighbours						
Most people in my neighbourhood can be trusted	183	58.6	101	32.4	28	8.9
Trust in community representatives						
The community leaders here always take the initiatives to communicate with us about what's going on in the neighbourhood	121	39.8	107	35.2	76	25.0
The politicians in my community are doing their best in protecting our interests and needs when it comes to town planning	119	39.3	116	38.3	68	22.5
Trust in local authority						
The local authority has done its best in involving the residents in planning our neighbourhood	111	36.7	121	40.1	70	23.2
The local authority is transparent in its decision-making process when it comes to town planning	70	24.3	131	45.5	87	30.2
I don't think it's necessary for me to get involved in how the council wants to plan the neighbourhood as they should know what's best for the residents	67	22.1	102	33.7	134	44.2

Source: Field Study, 2010

Table 5: Mean Ranks of Perceptions On Trust By The Respondents of Different Participation Level

	Category of residents based on IPP	N	Mean Rank
Trust in neighbours			
*Most people in this area can be trusted	Passive Mediocre Active	156 60 90	138.84 166.81 170.03
	Total	306	
Trust in community representatives			
The community leaders here always take the initiatives in communicating with us about what's going on in the neighbourhoods	Passive Mediocre Active	153 60 91	149.08 161.62 152.25
	Total	304	
The politicians in my community are doing their best in protecting our interests and needs when it comes to town planning	Passive Mediocre Active	152 60 91	147.19 148.25 162.51
	Total	303	
Trust in local authority			
The local authority has done its best in involving the residents in planning our neighbourhood	Passive Mediocre Active	153 60 89	158.42 159.43 134.25
	Total	302	
* The local authority is transparent in its decision-making process when it comes to town planning	Passive Mediocre Active	144 57 87	152.86 158.44 121.52
	Total	288	
*I don't think it's necessary for me to get involved on how the council wants to plan the neighbourhood, they should know what's best for the residents	Passive Mediocre Active	154 60 89	169.45 136.95 131.94
	Total	303	

* indicates significant difference. Bonferroni correction for multiple (3) comparisons is $0.05/3=.0125$

Source: Field Study, 2010

through social programmes and community activities. Through such social and community activities, there are more opportunities for the lay people to meet the officers in casual and relaxed environments. Another important benefit that can be gained by having such activities is that it also creates opportunities for the residents to meet one another and interact and this may help in promoting social capital, which is found to have some profound impacts on making people to be more participative in planning.

CONCLUSION

Planning a town needs collaboration. For people to engage more effectively in planning, they need to work together to ensure that the outcome of their collective actions would benefit all spectrums of the communities. However, to be able to work together, there is a need to dissolve suspicions between one another and this can be done through a solid ground of trust and positive relationship between one another. This paper has demonstrated that there might be a link particularly between trust and participation. Future studies should be geared to examining how trust can influence motivation to participate in planning.

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INTEGRATION OF THE ATTRIBUTES OF DISASTER RESILIENCE IN DEVELOPMENT PLAN MAKING PROCESS: A CASE STUDY OF SHAH ALAM LOCAL PLAN

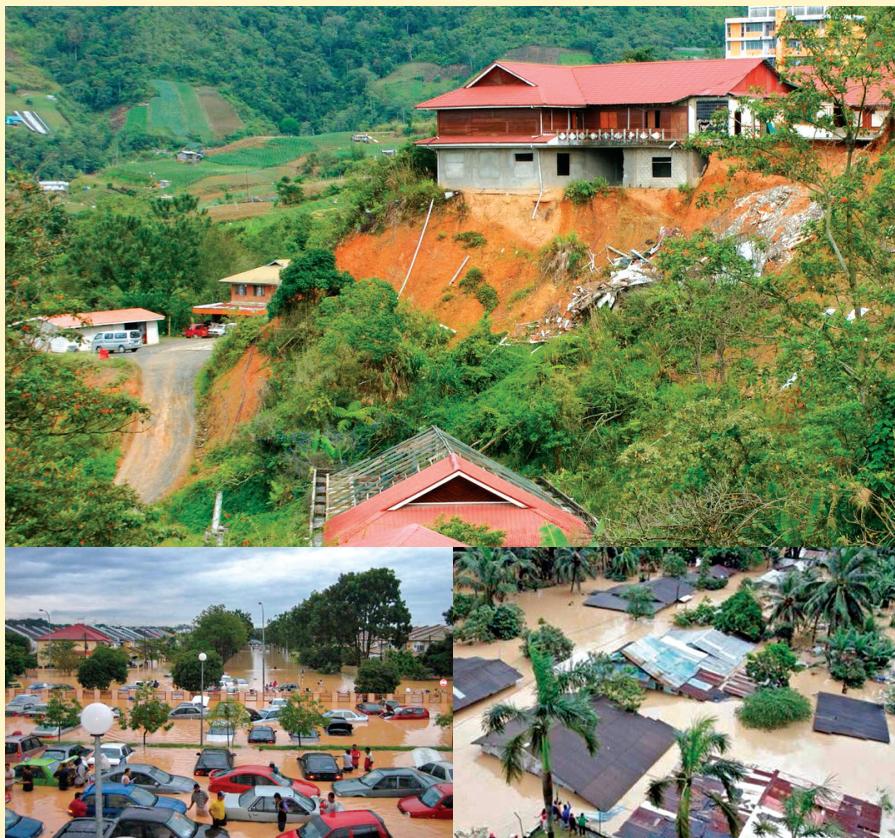
**ABSTRACT**

The threats of natural hazards in urban areas are typically addressed through land-use zoning and building regulations. Climate change phenomena compel town planners to devise comprehensive measures to adapt to more frequent and intense hazards. This paper argues for integration disaster resilience attributes in local development plans as an overarching adaptive measure. The aim of this paper is to assess the extent to which the local development planning system in Malaysia has responded to the vulnerability reduction and resilience improvement needs of the civil society in order to adapt to climate change related flooding. It is based on a social survey involving a purposive sample of 250 households to identify the adaptation needs of the civil society, and an analysis of the contents of the Shah Alam Local Plan to verify the response of the town planners to those needs. The findings indicate that the planners have been fairly sensitive to the flood risks faced by the population and incorporated policies and strategies in the Shah Alam Local Plan to minimize the impact of flood hazard and improve the adaptive capacity of the urban settlements. However, the sector based organization of the plan prepared by the town planners was found to be not adequately incorporating the indigenous knowledge of coping strategies. Therefore, this paper calls for strengthening the participatory planning and development capacity of the local authorities for more resolute disaster resilience integration for adaptation in local plans as reflected with the planning in 'multi-colors' of environments.

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Keywords: Climate Change, Disaster Resilience, Local Plan



INTRODUCTION

Urban local governments play a key institutional role in shaping the physical development of cities, towns and other urban settlements. The main instruments used for this purpose include statutory plans, structure plans, local plans and action area plans, depending on the urban-planning system in the respective country. Some countries use a hierarchy of development plans comprising a national physical plan, sub-national structural plans, district-level local plans and action area plans to guide urban development (Taib and Siong, 2008). Until recently, the focus of these plans was limited to development control through planning and building regulations (Madin and Ali, 2009). The most prominent development control measures are land-use and building-use regulations. The notion of development promotion was gradually introduced to these plans by incorporating incentive measures in parallel with regulatory measures (Berke *et al.*, 2006). In the latter part of the 20th century, sustainable urban development became the overarching goal of many development plans (Klein *et al.*, 2003; Campanella, 2006; Cutter *et al.*, 2008; UNDP, 2008; Davoudi *et al.*, 2010).

In the 21st century, also known as the 'century of the city', many scholars have begun to call for reforms in urban planning and development processes to address issues related to climate change that severely affect the sustainability of cities (Godschalk, 2003; Brooks and Adger, 2004; Campanella, 2006; Davoudi *et al.*, 2009). This is because urban areas are major sources of Greenhouse Gas (GHG) emissions that cause global warming and consequently climate change. The impact of climate change is more pronounced in urban areas due to the high concentration of population, infrastructure, assets and economy. The need to integrate disaster-risk reduction in development planning was also highlighted in the Hyogo Framework for Action (HFA) 2005-2015 (ISDR, 2005), which has been adopted by 168 nations and international organizations. Here, integration means, disaster preparedness become a part and parcel of development planning as exemplified by the first strategic goal of the HFA; which is "more effective integration of disaster risk considerations into sustainable development policies, planning and programming at all levels with a special emphasis on disaster prevention, mitigation, preparedness and

vulnerability reduction" (ISDR, 2005). In the context of climate change, scholars urge urban planners to take concerted actions against climate-induced disasters (Godschalk, 2003; Saavedra and Budd, 2009; Kithia and Dowling, 2010). Therefore, climate-change mitigation and adaptation are essential knowledge areas for urban development planners.

Climate change directly and indirectly affects almost all countries at all stages of development. According to UN-Habitat (2008), 3,351 cities are in the global Low Elevation Coastal Zone (LEZ) and 64 percent of them are located in developing countries. They are the most vulnerable to climate-change induced sea-level rise. The majority of these cities do not have adequate planning measures to cope with climate change-induced disasters (UN-Habitat 2008). Bosher *et al.* (2007) argue that appropriate urban-planning measures have the dual functions of mitigating GHGs that induce climate change and reducing the direct and indirect effects of climate change. Furthermore, well planned cities can significantly reduce both the causes and effects of climate change. Given the fact that many developing countries are not major emitters of GHGs, but are victims of climate change, attention tends to be focused on measures to adapt to climate change, rather than on measures to mitigate it (Phong and Shaw, 2007; Tierney *et al.*, 2007). Pelling (2006) explains that cities in developing countries are at particular risk of climate change-induced disasters due to their high population densities, lack of urban infrastructure capacity, ubiquitous informal settlements and urban sprawl to vulnerable areas. Godschalk (2003) points out that the increased frequency of climate change-induced disasters, coupled with rapid urbanization, places increased strain on the urban-planning and management capacity of local authorities when they attempt to respond to the vulnerability of their communities and assets.

For the local authorities that respond to disasters, incorporating proactive measures against climate change-induced disasters into urban-planning strategies is a challenging task (Shaw, 2008; ADPC, 2008). These authorities require a clear understanding of the relationship between the vulnerability

of local government areas to climate change-induced disasters and the resilience of these areas against the forces of such disasters (Godschalk, 2003; Campanella, 2006; Kithia and Dowling, 2010). In other words, understanding the issues of vulnerability and resilience is a key requirement for contemporary urban planners and managers. However, the ambiguity of the concepts such as risk, vulnerability and resilience, and insufficient knowledge about processing pertinent data, and the technical complexity of scientific research, have deterred urban planners and managers from addressing the factors that contribute to climate change and safeguarding vulnerable communities through urban-planning measures and decision-making processes (Bosher *et al.*, 2007; Cutter *et al.*, 2009).

Urban planning is a multi-faceted process leading to overall urban development. One of its products, the 'local plan', is the primary instrument used to guide physical development at the local-authority level (Madin & Ali, 2009). Contemporary urban-planning practices are becoming more participatory, as they involve stakeholders in decision-making. Saavedra and Budd (2009) have emphasized the importance of understanding the inherent resilience of local areas and enhancing this resilience through strategic interventions involving stakeholders. Inherent resilience is the natural capacity of people, communities and habitats to cope with and adapt to disastrous events (Satterthwaite *et al.*, 2007; Ernstson *et al.*, 2010). For example, inherent resilience exists when people are sensitive to their vulnerability to hazards, minimize their exposure to hazards by physical or other means, and strengthen community organizations to face recurrent hazards.

The civil society's indigenous knowledge on the nature of hazard and coping mechanism to live with it also indicate inherent resilience (Cutter *et al.*, 2008; Smit and Wandell, 2006). According to Klein *et al.*, (2003), in the face of a range of potential environmental stresses including climate change induced hazards, the inherent resilience of the civil society and its adaptive capacity form the first line of defense. In other words, when

the civil society and its organizations become adequately sensitive about their vulnerability to hazards and minimize their exposure and strengthen their capacity to face the hazards, which means they are more resilient to environmental stresses. Therefore, Godschalk (2003), Wamsler (2005), Campanella (2006) and Ernstson *et al.* (2010) have pointed out the importance of a participatory approach in urban planning and the utilization of indigenous knowledge of inherent resilience in formulating urban planning strategies to adapt to climate change. However, little empirical evidences exists on the extent to which urban-planning practices and products (i.e., plans) have incorporated inherent resilience or have improved resilience through strategic interventions derived from a participatory urban-planning process. Therefore, the central research question addressed by this article is to what extent local development plans have incorporated the attributes of resilience, in consultation with local stakeholders to adapt to climate change-related disasters. Here local stakeholders include civil society in general, which represents the demand side of disaster-risk reduction. The urban authorities, in general, and the urban planners and managers, in particular, represent the supply side. Accordingly, the overall objective of this article is to develop an understanding of the civil society's needs to enhance the resilience of urban areas. This article also aims to analyze the extent to which urban authorities have responded to those needs in their planning and development instruments. The next section identifies the attributes of disaster-resilience that should be integrated into development plans for adaptation to climate change.

DEVELOPMENT PLANNING HIERARCHY AND THE REFERENCES TO DISASTER RESILIENCE

The literature provides several perspectives and interpretations of resilience that tend to relate the resilience of a city to its physical, ecological, social, infrastructure, and economic systems (Cutter *et al.*, 2009). International Strategy for Disaster Reduction (ISDR) defines resilience as 'the capacity of a system, community or society that is potentially exposed to a hazard to adapt to it by resisting or

changing so that it reach and maintain an acceptable level of functioning and structure' (ISDR, 2002). For instance community resilience is measured by the degree to which the social system is capable of organizing itself to increase its capacity to learn from past disasters for future protection and improves risk-reduction measures. Godschalk (2003) defines resilient city as a sustainable network of physical systems and human communities that are capable of adjusting to hazards with minimum disturbances. The physical systems (including roads, buildings, infrastructure, communication, waterways, topography, soil, etc.) must be able to survive and function under extreme stress; and without that capability, a city will be extremely vulnerable to hazards. Saavedra and Budd (2009) argue that building resilient cities and communities requires long-term vision in development planning. They see development plans as the appropriate means for transforming scientific information regarding hazards into long-term planning for disaster preparedness.

The preparation of a local plan is generally the responsibility of a planning authority; however its implementation is usually entrusted to the relevant local authorities. The main function of a local plan is to translate and implement the development policies and strategies of a structure plan in line with the social-development, economic-development and environmental needs of the respective planning area. For example a local plan provides an important basis for approving land-use conversion proposals (Berke *et al.*, 2006). In the context of local development, a local plan is considered as providing guidelines for altering land use and thereby neutralizing any undesirable pressures from the real estate market for land-use conversion (Ibrahim *et al.*, 2009). However, in more developed planning systems, structure plans and local plans are treated as primary guides in clearing (i.e., approving) development proposals (Taib & Siong, 2008). Planning clearance is a procedural step taken by planning authorities to facilitate development proposals according to development plans and to control the use of land and property in disaster-prone and ecologically sensitive areas. Therefore,

it is particularly important that the local plans consist of appropriate land-use regulations and building codes to control new developments in disaster-prone areas (ISDR, 2005; ADPC, 2008).

As a proactive strategy disaster preparedness may be incorporated into local plans. However, it is not clear whether the inherent resilience of local areas and actions for improving this resilience are specifically addressed in such planning documents. The attributes of resilience are understood to be essential qualities of a human settlements system that includes cities, towns, neighborhoods and communities. In the face of a range of potential stresses, including climate change-induced hazards, the inherent resilience of a human settlement system as a whole is the first line of defense (Klein *et al.*, 2003). Cutter *et al.* (2008) indicate that socio-physical dimensions of resilience include sensitizing people about their vulnerability, minimizing their exposure to hazard and strengthening their adaptive capacity against vulnerability. Scholars have highlighted several dimensions of resilience of an area including socio-economic resilience of people and their communities, the psychological resilience of people, the physical resilience of buildings and infrastructure, and the ecological resilience of the entire urban ecosystem (Godschalk, 2003; Cutter *et al.*, 2008; Saavedra & Budd, 2009).

This paper argues that local plans can demonstrate the sensitivity to hazards, minimize exposure to hazards and improve the adaptive capacity against vulnerability in response to climate change-induced disasters. Enhancing the effectiveness of local plans for adaptation to climate change-induced disasters would be a desirable policy and management goal (ACCRN, 2009; ADPC, 2008; Bam *et al.*, 2009). This goal requires the integration and mainstreaming of disaster-resilience in the policy and planning documents of the relevant authorities. In other words, the risks emanating from natural hazards must be addressed by the urban development policies, plans, programs and strategies to reduce risks before an event occurs. Moreover, local plans and their implementation must be flexible enough to recover from disastrous events in a timely and efficient manner. This article examines

Malaysia, one of the most progressive developing countries in South East Asia, and its efforts to respond to the climate change-induced disasters using urban-planning mechanisms.

THE INTEGRATION OF DISASTER RESILIENCE IN LOCAL PLAN MAKING PROCESS IN MALAYSIA

Malaysia follows the "precautionary principle" and "no regret policy" for mitigation and adaptation to climate change (NRE, 2005). The National Climate committee was formed in January 1995 with members from government ministries and agencies as well as stakeholders from business and civil society groups. The National Policy on Climate Change was declared in 2009 (NRE, 2010). The overarching policy of the climate policy is sustainable development that was already embodied in the national development planning framework since Third Malaysia Plan (1976-1980). The main strategies adopted by Malaysia to address climate change under the National Policy on Climate Change are:

- identifying the energy sector as a major contributor of GHGs to the atmosphere;
- promotion of energy efficiency among industries, buildings and transport sector;
- implementation of public awareness programs to promote energy efficiency, recycling and the use of public transport;
- maintenance of an effective forest management and conservation program to preserve biodiversity and sinks for GHGs;
- ensuring food sufficiency by obtaining detailed information on the supply and demand gaps in food production and supported by research projects; and
- formulating a coastal vulnerability index (CVI) that could serve as the basis for recommending proactive measures on sea level rise.

These strategies indicate that more attention is on mitigation strategies than adaptation strategies. They are more sector-based and any reference to the physical, spatial and the administration levels are not very explicit. The establishment of the National Physical Planning Council in

2001, chaired by the prime minister of Malaysia, is expected to coordinate urban development planning efforts throughout the country, from the national level to the urban local authority level. The council with the assistance of the director-general of the Federal Department of Town and Country Planning, Peninsular Malaysia (FDTCP) is expected to strengthen the town and country planning process to achieve sustainable urban development. However, climate change-induced disasters are not adequately recognized as a threat to sustainable urban development. The council's reference to disasters is limited to the 'strict controlling of land development in highlands to safeguard human safety and environmental quality,' as elaborated in policy number 21 (FDTCP, 2005). This is an apparent response to landslides and flashfloods. There is no reference to the safety of the human settlements in valleys and coastal areas. The broader policy statement in the national physical plan is not adequate to guide disaster-preparedness strategies in the human settlements in different locations. Therefore, it is worthwhile to investigate how the local plans are and should be utilized by local authorities to improve resilience of urban areas against climate change-induced disasters. Such an investigation provides useful feedback for the Malaysian planning system on mainstreaming disaster resilience.

The planning system in Malaysia is regulated by the Town and Country Planning Act of 1976 (Act 172). This act provides the legal basis for the formulation and promulgation of development plans, including the national physical plan, state structure plans, district local plans and action area plans (**Figure 1**). The development plans prepared under the Act 172 provide the legal basis for regulating and controlling the use and development of land within the plans' area of jurisdiction. According to the Act 172, district local plans must be prepared in accordance with the recommendations of the state structure plan. The task of preparing for disasters is generally included in district local plans and action area plans.

Development guidelines and development control through district local plans are acutely needed in

rapidly urbanizing areas like Kuala Lumpur Federal Territory and the Petaling District where the cities of Shah Alam and Petaling Jaya are located. All of these areas are located in the Klang Valley, which is prone to natural hazards, especially climate change-induced floods (FDTCP, 2005). According to Khir (2009), Malaysia has attempted to implement district local plans in line with the principles proposed by the HFA 2005 – 2015, although no direct reference to disaster preparedness has been incorporated into the National Physical Plan. The HFA has influenced the vision on sustainable development and the implementation of development policies and planning strategies pertaining to risk reduction at the local level, including multi-hazard scenarios in planning areas (ISDR, 2005).

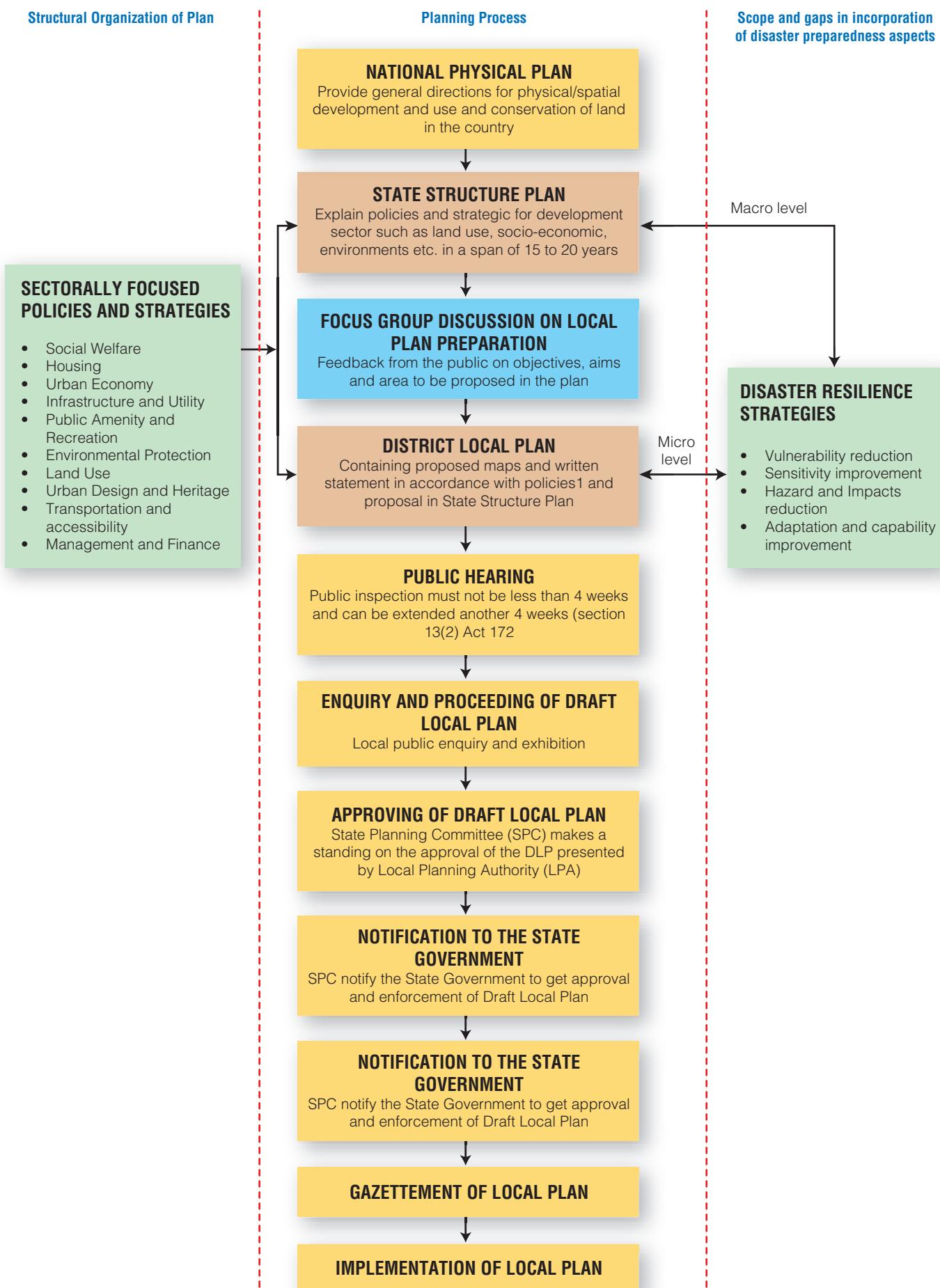
Existing procedures for the preparation of district local plans emphasize sector policies and strategies pertaining to socio-economic development, housing, infrastructure, transportation, and amenities among other sectors of development. There is no explicit set of strategies for public security and safety, although improving the citizens' quality of life is the overall goal (SACC, 2005). The lack of reference to security and safety is a crucial gap in the context of climate change. They are major sustainability issues in urban areas. This omission is due to the sector-based format used to propose the strategies in district local plans. Because the state structure plan is organized according to the development sectors of the state, the same format is used to organize the district local plans, which are designed to implement the policies and strategies of the state structure plan.

As a result, cross-cutting issues, such as security and safety in local areas and the reduction of vulnerability to multiple hazards, have not been explicitly included among the strategies in the district local plans. In fact, disaster risk reduction should be a major strategy that needs special consideration at the local level. There are institutional, procedural and human resource barriers to overcome when mainstreaming disaster preparedness into urban development policy planning and implementation. According to Gurmit (2008), Malaysia is overdue for implementing the climate change policy through action

plans at the local level. Integration disaster-resilient attributes in a district local plan can be a first step in mainstreaming disaster preparedness in the planning process. The current need is not simply to be prepared for a particular disaster but to prepare for multiple disasters induced by climate change. The most appropriate level of intervention for improving preparedness for climate change-induced disasters is local planning because the impacts of disasters are felt most strongly at the local level. It is first necessary to understand how a district local plan can influence the resilience of a local area. A local plan serves as a tool to communicate land- and resource-use promotion, prevention, and conservation in a local area. In this regard, the local plan can identify the areas vulnerable to climate-induced disasters and can prevent or control development in such areas. Similarly, the attributes that provide inherent resilience can be conserved (e.g., mangrove forests) and areas with inherent resilience, such as firm ground above the high flood level, can be allocated and promoted for human settlements. A district local plan also provides the basis for local governance under the decentralized administrative system of Malaysia and is therefore the most appropriate level of intervention to introduce adaptation strategies for climate change-induced disasters.

There are several arguments regarding integration in the process of preparing district local plans in which the people would participate, decide and plan the area based on their needs and resources. Khir (2008) points out that for every local plan the residents have their own objectives for how they want the plan to develop in addition to the evidence and analysis necessary to inform and justify an integrated physical- and resource-planning approach. For example, in the rebuilt city of Kobe in Japan, community settlements were able to absorb the damage and adapt after the earthquake disaster in 1995 because of the communities' desire to live in structures that complied with building codes and that were served by extensive infrastructure and service systems as well as in informal residential settlements on flood plains or steep slopes (Pelling, 2006; Cutter *et al.*, 2008; Klein *et al.*, 2003). In Smit and Wandel's (2006) words, people are sensitive to their vulnerability, take

Figure 1: Planning process in Malaysia and its gaps in mainstreaming disaster resilience in the state structure plan and district local plan



measures to minimize their exposure to hazard and strengthen their adaptive capacity to live with inevitable hazards.

The above discussion demonstrates that the existing process of local plan preparation in Malaysia lacks adequate consideration of the socio-physical dimension of people's resilience or the incorporation of resilient qualities in plans to encourage these qualities in newly developed urban areas. In the absence of such a systematic approach, new settlements continue to expand toward disaster prone areas or even to increase the vulnerability of other areas due to rapid land use changes that affect the qualities of inherent resilience. It is argued that integration disaster resilience in the district local plan can direct disaster-risk-reduction efforts in development planning processes. Thus, it is important that every town planner at local level understands the socio-physical dimensions of disaster resilience {i.e., public sensitivity, minimized exposure, and adaptive capacity (Cutter *et al.*, 2008)} and responds to the needs of the civil society through planning interventions. The next section explains the method used to study people's vulnerability and resilience against disasters and to assess the response of the town planners as reflected in the contents of the local plan.

RESEARCH METHODOLOGY

For the social survey, the area based non-proportional stratified random sampling technique (Messick, 1995; Castillo, 2009) with the type of settlements as unit of analysis was

used due to the budget of the research and a big and heterogeneous city like Shah Alam. The questionnaire was distributed among 250 respondents randomly selected among household heads in each settlements registered at the Department of Property Evaluation and Management at the Shah Alam City Council (**Table 1**). The questionnaire addressed not only the vulnerability of the respondents and their houses and property to flood hazards but also the respondents' expectations of the urban authorities for reducing vulnerability and improving resilience of their settlements.

Although it is not possible for every respondent to be familiar with the content of the district local plans, they were asked about their perceptions and suggestions for planning interventions to make their settlements more safe and resilient from floods. The responses from the social survey were used to prioritize the most prominently cited factors of vulnerability as well as the socio-physical dimensions related to community resilience. The findings were considered to represent the demand side of disaster preparedness in Shah Alam. The content analysis technique was used to analyze the "Shah Alam Local Plan 2020" (SALP 2020) to assess whether the planning authorities addressed the disaster preparedness needs of civil society.

The content analysis was conducted using a matrix of socio-physical dimensions of disaster resilience, representing people's needs, against the attributes of disaster resilience as addressed by the authorities in the local district plan, representing the

planners' responses. In other words the study investigated the extent that policies and strategies on disaster-resilience have been considered in the local development plan.

RESULTS OF ANALYSIS

The data analysis presented in this section includes: (i) vulnerability of people and their settlements; (ii) socio-physical resilience in the study area; and (iii) planners' responses to disaster-preparedness needs of people as reflected in the planning interventions.

Respondents' Perceptions About The Vulnerability of People And Their Settlements

Identifying vulnerability is an important step to enhance the disaster resilience of human settlements. However, this paper does not present an analysis of the vulnerability of people and communities to flood hazards. Instead, it presents the most compelling reasons that prompt people to leave the study area unless authorities take actions to reduce the people's vulnerability. This indicator is used as a proxy for the severity of vulnerability. During the household survey, respondents were shown possible reasons for seeking relocation in a safer place. The selections of the possible reasons for relocation were identified from literature (Cutter *et al.* (2008); Smit and Wandel (2006); Godschalk (2003); and, Tierney and Bruneu (2007)). **Table 2** shows the most cited reasons by the respondents for a multiple-choice question.

The responses were weighted using five qualitative indicators from Likert scale (strongly agree to strongly disagree). According to the findings, the most compelling reason for people to seek relocation is the difficulty of living in the community due to the disruption of roads, public transportation services and private means of transport during flooding. About 75% of the respondents reported that it was very difficult to access even basic needs like food and clean drinking water during floods. Their mobility for accessing daily needs is hampered by the disruption of transport infrastructure and facilities. For this reason the weighted mean score (WMS) for reason No.1 is 0.84



Study area in Kampung Kebun Bunga of Shah Alam City during 2006 floods

Table 1: Distribution of sample for the households head survey

Study Area	Type of Settlement	No. of Households	No. of Sample	Sampling Fraction
1. Kampung Kubu Gajah	Traditional Village	350	18	5.1
2. Kampung Melayu Subang*	Traditional Village	376	36	9.6
3. Kampung Kebun Bunga*	Traditional Village	280	27	9.6
4. Division 18 – Taman Alam Megah	Planned Housing Scheme	450	21	4.7
5. Division 27 Taman Sri Muda	Planned Housing Scheme	560	26	4.7
6. Taman Tun Dr. Ismail Jaya (TTDI Jaya)*	Planned Housing Scheme	650	62	9.5
7. U1 HICOM*	Mixed Industrial & Residential Area	290	27	9.3
8. Division 14 - Shah Alam City Center*	Mixed residential & commercial area	358	33	9.2
Total		3314	250	7.5

Table 2: Vulnerability To Flood Hazards And The Reasons For Seeking Relocation

No.	Reasons for relocating in a safer area	Responses (N = 250 = 100%)					Weighted Mean Score (WMS)
		Strongly agree (1)	Agree (0.75)	Neutral (0.50)	Disagree (0.25)	Strongly Disagree (0)	
1.	Disruption of infrastructures and utility services	183 (73.2%)	3 (1.2%)	42 (16.2%)	11 (4.4%)	10 (4.0%)	0.84
2.	Severe inundation of living, working, recreational areas	132 (52.8%)	95 (38.0%)	3 (1.2%)	8 (3.2%)	11 (4.4%)	0.83
3.	Disruption of public and private transportation	98 (39.2%)	137 (54.8%)	2 (0.8%)	7 (2.8 %)	4 (1.6%)	0.82
4.	Loss/loss of value of property and assets	95 (38.0%)	124 (49.6%)	8 (3.2%)	15 (6.0%)	6 (2.4%)	0.79
5.	Reduced sense of safe and healthy environments	79 (31.6%)	48 (19.2%)	75 (30.0)	25 (10.0%)	9 (3.6%)	0.67
6.	Disruption of income earning opportunities	37 (14.8%)	46 (18.4%)	63 (25.2%)	72 (28.8%)	15 (6%)	0.52
7.	Fear for loss of life	35 (14%)	44 (17.6%)	61 (24.4%)	78 (31.2%)	17 (6.8%)	0.50
8.	Reduced productivity of land	29 (11.6%)	37 (14.8%)	72 (28.8%)	86 (34.4%)	15 (6.0%)	0.48

Note:

1. Percentage of responses were weighted as (100% agreement = 1, 75% = 0.75, 50% = 0.50, 25% = 0.25, and 0% = 0 respectively).
2. WMS was calculated using the equation: $\sum Wi/n$ for individual weighted score (either of 1, 0.75, 0.50, 0.25, and 0) for each question, n = number of question) and $\sum Wi/\sum fi$ for weighted means score where Wi = individual weighted score for each question and fi = frequency of the particular score.

points which demonstrate that most respondents will decide to move to a new area if the local authorities do not address the increasing frequency and intensity of flood hazards and their impact on human settlements.

The weighted mean scores also indicate the priority actions that respondents needed from the authorities. A WMS above 0.75 indicates that authorities need to safeguard (i) infrastructure and utility services, (ii) living, working and recreational areas, and (iii) public

and private means of transport, as main priorities in their planning and development interventions. The disruption of income-earning opportunities was not a major reason for people to relocate. This reason was indicated in the questionnaire but was not featured among the top five reasons for people to move. Instead, the diminished sense of a safe and healthy environment was a more compelling reason for people to relocate as indicated by over 30% of the respondents. This means the impact on the quality of life will

persuade people to seek relocation. This was not an unexpected critical reason considering the relatively high quality of life in the Shah Alam City as indicated by the national per capita income of USD 9,000 (NST, 2012). People can afford and possess means to relocate if they are no longer happy with their quality of life in the present place of residence. Therefore, the authorities have a responsibility to maintain the confidence of civil society by making every effort to make Shah Alam a safe, secure and healthy place or in other words a livable city.

Table 2 also shows that respondents were more concerned about the physical aspects of vulnerability. Only one psychological aspect featured among the top five reasons to relocate, and other aspects, such as fear of loss of lives and reduced land productivity ranked lower. This finding indicates that people have confidence in the city's social welfare and insurance systems but not necessarily in the physical safety of the city in general. The respondents seem to perceive that the vulnerability of their settlements is largely related to the weaknesses of physical planning of the city. They are fully aware that their settlements are located in a flood prone area but they hope that the local authorities will take necessary actions to make the city a safe place to live. Therefore, adaptation to disasters should focus on safeguarding the vulnerable areas and elements of the city. This finding may differ in a country with lower socio-economic development than that of Malaysia. Apparently people in Shah Alam are confident in their ability to withstand the socio-economic and psychological impacts of vulnerability but not the physical impacts of vulnerability, which is beyond their control. Therefore, urban authorities need to concentrate on physical adaptations to reduce the vulnerability of settlements through planning and development interventions. At the same time urban authorities need to strengthen the resilience of people and their settlements against flood disasters.

Analysis of The Socio-Physical Dimensions of Resilience

The social survey sought respondents' perceptions regarding their resilience-improvement needs through planning and development interventions. Although people may have many resilience-improvement needs, only the aspects under the purview of urban planners were considered in the analysis. For example, providing disaster awareness programs for the public was considered as a direct responsibility of the urban management authority, not the planners. Therefore, needs like that were excluded from the analysis. In **Table 3**, the findings are grouped under the three socio-physical dimensions of resilience: sensitivity to risk, minimization of exposure and maximization of adaptive capacity.

Sensitivity to Flood Risks

According to Table 3, 70% of the respondents want planners to be sensitive to the needs of a citywide emergency rescue and evacuation route system as their first priority. Presently, Shah Alam has only a civil defense department and a fire brigade to conduct rescue operations at the time of emergencies. This finding indicates that the respondents expect a more comprehensive system consisting of clearly marked emergency routes and transportation facilities.

Moreover, this finding corresponds with the finding in Table 2 in which accessibility and transportation systems were described as the most vulnerable aspects during a flood disaster. The respondents also want authorities to be more sensitive to risk-reduction needs in every major element of the city including housing, infrastructure and utility systems and to regulate land development according to the level of risk in each area. Although urban authorities including planners should be sensitive to these needs, the survey findings indicate that people are not fully satisfied with the efforts made so far by the authorities to reduce disaster risks in Shah Alam. The dissatisfaction is indicated by a WMS of more than 0.66. The descending order of the sensitivity-needs hierarchy also indicates that people prioritize risk-reduction needs related to housing, transportation, infrastructure and utilities through practical interventions over the

integration of risk reduction into the goal setting and implementation of the development plan.

Minimize Exposure To Flood Hazard And Impacts

The second resilience dimension investigated was the minimization of exposure to flood hazards by people and their settlements. The respondents cited the provision of community facilities such as evacuation centers and temporary shelters as the most important needs to which urban planners must respond in order to minimize residents' exposure to flood hazards (see the middle section of Table 3). Public schools are typically used as evacuation grounds and temporary shelters during a disaster. Victims encounter many problems in schools due to the inadequacy of water and sanitary facilities. Public schools provide adequate space for temporary shelter, but they are short of facilities for civic purposes. This finding indicates that the respondents need facilities to be built for community purposes, such as multi-purpose halls or gymnasiums that can be used more efficiently during disaster events without disrupting children's education.

This finding also supports the finding in Table 2 in which the inundation of living and working areas was identified as one of the major aspects of the residents' vulnerability to flood hazards. Therefore, residents seek more practical solutions to minimize their exposure to the hazard. The prevalence of the needs with



Evacuation centers cum temporary shelter during Shah Alam flood in 2006.

Table 3: Respondents' Needs of Resilience Improvement

Need No.	Sensitivity of planners to the flood risks faced by people	Responses (N = 250 = 100%)					Weighted Mean Score (WMS)
		Strong- ly need (1)	Need (0.75)	Neutral (0.50)	No Need (0.25)	No Need at all (0)	
1.	Need of a citywide emergency rescue and evacuation route system	115 (46%)	60 (24%)	12 (4.8%)	43 (17.2%)	15 (6.0%)	0.72
2.	Need of risk reduction measures for housing, transportation, infrastructure and utilities	89 (35.6%)	61 (24.4%)	37 (14.8%)	44 (17.6%)	13 (5.2%)	0.67
3.	Prioritize 'safer and secure environments' as a development goal of the local plan.	68 (27.2%)	61 (24.4%)	42 (16.8%)	31 (12.4%)	22 (8.8%)	0.64
4.	Need to regulate land developments according to the level of risks.	74 (29.6%)	56 (22.4%)	23 (9.2%)	52 (20.8%)	30 (12.0%)	0.60
Need No. Minimize exposure to flood hazard through planning and development interventions							
5.	Providing community facilities to use as evacuation centers and temporary shelter	95 (38.0%)	70 (28.0%)	46 (18.4%)	21 (8.4%)	10 (4.0%)	0.73
6.	Limit construction of residential, industrial and commercial buildings to safer areas	79 (31.6%)	74 (29.6%)	43 (17.2%)	16 (6.4%)	14 (5.6%)	0.71
7.	Regular maintenance of drainage, channels and embankments	87 (34.8%)	64 (25.6%)	39 (15.6%)	17 (6.8%)	16 (6.4%)	0.71
8.	Construction of new flood embankment and water retention ponds	73 (29.2%)	75 (30%)	43 (17.2%)	21 (8.4%)	14 (5.6%)	0.69
9.	Recommend flood protection measures for property and buildings	85 (34.0%)	62 (24.8%)	39 (15.6%)	47 (18.8%)	6 (2.4%)	0.68
10.	Protection of natural slopes, water bodies and mangrove forests.	77 (30.8%)	58 (23.2%)	51 (20.4%)	29 (11.6%)	13 (5.2%)	0.67
Need No. Improve adaptive capacity of settlements through planning and development interventions							
11.	Allocation of land for public purposes to use at time of emergency	112 (44.8%)	50 (20.0%)	28 (11.2%)	33 (13.2%)	18 (7.2%)	0.71
12.	Indicating risks ranking measures in the zoning plan (disaster awareness)	87 (34.8%)	55 (22.0%)	58 (23.2%)	17 (6.8%)	11 (4.4%)	0.71
13.	Enhancing accessibility for doing daily activities (work, school, business and social functions)	93 (37.2%)	42 (16.8%)	61 (24.4%)	29 (11.6%)	10 (4.0%)	0.69
14.	Improving infrastructure and utilities network for disaster resistance	83 (33.2%)	58 (23.2%)	52 (20.8%)	21 (8.4%)	19 (7.6%)	0.68
15.	Establishing law and regulations on disaster preparedness and mitigation	93 (37.2%)	52 (20.8%)	27 (10.8%)	55 (22.0%)	12 (4.8%)	0.67
16.	Incorporating indigenous knowledge of coping strategies in the local plan	77 (30.8%)	60 (24.0%)	57 (22.8%)	23 (9.2%)	24 (9.6%)	0.65

Note:

1. Percentage of responses were weighted as (100% agreement = 1, 75% = 0.75, 50% = 0.50, 25% = 0.25, and 0% = 0 respectively).
2. WMS was calculated using the equation: $\sum Wi/n$ for individual weighted score (either of 1, 0.75, 0.50, 0.25, and 0) for each question, n = number of question) and $\sum Wi/\sum fi$ for weighted means score where Wi = individual weighted score for each question and fi = frequency of the particular score.



Floods vulnerability and exposure in Shah Alam areas

WMS greater than 0.66 reveals that respondents are generally not satisfied with the existing structural and non-structural measures to minimize exposure to flood hazards and they expect additional physical interventions. In other words, the local planning authority is expected to take more stringent measures to limit construction in flood prone areas and to strengthen defenses through new embankments and drainage channels. An interesting finding is the residents' expectation that planners should recommend appropriate measures to safeguard property and buildings. This could be a reaction to actions of some people such as raising the ground or constructing protective walls that increase their neighbors' vulnerability. The implication of this finding is that planners need to disseminate appropriate building techniques and retrofitting measures to help residents adapt to climate change-induced flooding in the future.

Maximize Adaptive Capacity of Settlements

The third investigated dimension of resilience was the adaptive capacity of the urban settlements. As in the case of minimizing exposure discussed above, the respondents identify the need for 'allocation of land for public purposes to use at the time of emergency' as the first priority that they expect from urban planners. Although urban plans are expected

to allocate a sufficient percentage of land for open spaces and public places, this finding indicates that Shah Alam's existing land-use distribution does not meet that public need. Moreover, the respondents expect a clear indication of city areas according to their level of risk in the zoning plan. This requirement is fundamental to disaster-preparedness planning at the local level, but the existing land use/development plan does not indicate the vulnerable areas for even a normal flooding scenario. Therefore, risk assessment of the city's areas and zoning according to vulnerability is a priority to adapt to the climate change-induced floods.

Other adaptive capacity improvement needs, confirmed by a WMS of more than 0.66 include enhancing the accessibility and improving the flood resistance of infrastructure and utility services. These are obvious adaptive measures required to guard against climate change-induced flooding, but they have yet to be addressed by the planners of Shah Alam. It is interesting to note that respondents are supportive of introducing specific laws and regulations for disaster preparedness, as indicated by a WMS of 0.67. People are usually not in favour of imposing laws and regulations, but this finding indicates that too many individual adaptation actions are taking place that jeopardize the safety of neighbors' as well as the community.

Therefore the responses suggest that enforcing strict command and control measures is the way to thwart selfish individual acts. Lastly, the respondents want planners to be familiar with local wisdom and indigenous knowledge about how best to cope with disasters and to utilize these forms of knowledge in the preparation of future plans.

Content Analysis of Local Development Plan Regarding Hazard Sensitivity, Exposure Minimization And Adaptive Capacity Maximization

The SALP 2020 is used as the main document to guide physical, social, economic and environmental development in the SACC's area of jurisdiction until 2020. The SACC has claimed that the city planning and development approach underwent changes in terms of its planning goals. The Shah Alam planning has evolved from a garden city concept in the early 1980's to a sustainable urban development concept in the 1995-2020 Plan. Climate-change mitigation and adaptation are claimed to be central to the new plan, although climate change, as a factor that influence sustainable urban development was not discussed among planning professionals and scholars until the early 2000's. These claims will be assessed in this section with reference to the residents' needs for vulnerability reduction and resilience improvement (i.e., 16 critical needs as listed in Table 3). The content analysis technique is used for this purpose.

The use of content analysis technique was limited to analyzing the policies and strategies in the local development plan with respect to resilience improvement. If the plan has no reference to a particular resilience need, a content score of '0' was given. A minor reference without elaboration was assigned a score of 0.5. If a policy direction to address the resilience need was indicated in the plan a content score of '1' was given. A score of '1.5' was given if one or more specific strategies proposed for the resilience need, and '2' was given if the strategy was followed by an implementation idea, such as an action plan. The primary reason for using such a scoring system was to assess the qualitative nature of disaster-resilient attributes in the local development plan. The content analysis was conducted by the

authors and the content scoring was authenticated by an urban-planning expert. A summary of the content scores categorized under the socio-physical dimensions of resilience are shown in **Table 4**. It is interesting to note that the development goal of a 'safer and secure environment' and the implementation mechanism for this goal are already provided in the SALP 2020. Moreover, regulation to control land development according to the level of risk in city areas have already been promulgated, although the enforcement mechanism is not clearly stated in the plan. This means that 'disaster preparedness' as a planning goal is more or less mainstreamed in the local development plan of Shah Alam. However, the local planners have not been sufficiently sensitive to the emergency rescue and evacuation needs of people, as reflected in a low content score of 0.5. Planners must identify and implement an appropriate system for climate change-adaptation measures on a priority basis to respond to one of the highest priorities among the residents' of Shah Alam. Similarly, the policy direction on risk-reduction measures for housing, transportation, infrastructure and utilities must be translated to strategic actions to cater to residents' priority needs.

The content ratio of 4.5/8.0 (see top part of Table 4) shows that the SALP 2020 is only moderately sensitive to the resilience related needs of people. Content analysis of the SALP 2020 regarding exposure minimization revealed that only two needs of the residents are satisfactorily addressed by the plan.

They are: (i) limiting construction of residential, industrial and commercial buildings to safer areas; and (ii) protection of natural slopes, water bodies and mangrove forests (see the middle section of Table 3). The other exposure minimization needs are either briefly addressed or limited only to a policy direction. It was found that the plan has no strategies for the protection of properties and buildings. Further investigations at the Town Planning Department of the Shah Alam City Council revealed that no specific document has emanated from the SALP 2020 to recommend adaptation and retrofitting measures for properties and buildings. Overall, the content ratio of 6.5/12.0 shows that the SALP 2020

has only moderately addressed the exposure minimization needs of the residents.

In contrast, it was found that the SALP 2020 was better in responding to the adaptive capacity needs of residents as indicated by the content ratio of 7.5/12.0. The SALP 2020 has been particularly responsive to two of the residents' needs: (i) the allocation of land for public purposes; and (ii) enhancing accessibility to necessary facilities at the time of a disaster. All of the adaptive capacity needs of residents' were found to be somewhat addressed in the plan. It was noted that laws and regulations on disaster preparedness and mitigation have already been promulgated in the plan. The above findings indicate that the planners who prepared SALP 2020 have been concerned with improving the adaptive capacity of the settlements in Shah Alam. This is a positive direction in mainstreaming disaster resilience in local development planning.

POLICY IMPLICATIONS OF INTEGRATING DISASTER RESILIENCE IN LOCAL PLANS

The synthesis of findings from the social survey and the content analysis revealed three important relationships. Firstly, from the short list of 16 critical needs of resilience, 12 were found to be reflected in the local development plan at least as a policy direction. Among them 7 needs are reflected in the strategies for achieving the overall objective of making Shah Alam a safer city to live. This is a positive sign in terms of integration of disaster resilience attributes in local development plans. Secondly, the sectorally organized policies and strategies of the local development plan were found to be a drawback in incorporating the physical attributes of resilience. This drawback is demonstrated by the four critical needs of people which are not adequately reflected in the local development plan (see Table 4). All of them have connotations for physical interventions whereas the sectorally organized plan mostly contains strategies for social, environmental and economic development of Shah Alam City.

Thirdly, an inconsistency between the overall goal of the plan and the

detailed area planning was revealed. The SALP 2020 aims to make the whole area of Shah Alam to be free from flood disasters by the end of its full implementation but the strategies of the plan are mostly focused on making the inner city area a safe and a secure place. Although the analysis did not distinguish this, planned housing areas are mostly situated in the inner city area while the traditional villages (*kampung*) are mostly located in the urban fringe. It means that people who live in the planned housing areas will have more resilience against climate induced flood disasters in future. The findings from the social survey and the content analysis reveal this mismatch. It is noted here that the purposive sample of households drawn for the social survey consisted of a 1:1 ratio of respondents from the inner city and fringe areas.

Analysis of the socio-physical dimensions of resilience and the content analysis of SALP 2020 demonstrated that there are some critical needs of people that the planning authority has overlooked in preparing the local development plan. It was surprising to find that planners have not shown adequate sensitivity to the flood hazard when contents of the plan were matched against the critical resilience needs such as; demarcating rescue and evacuation routes, and implementing risk reduction measures for housing, transportation, infrastructure and utilities. Recommending flood protection measures for individual property and building is another critical need of people that the planners have overlooked. On the other hand planners have been more effective in their conventional scope of planning measures such as setting a planning goal (focused on the idea of "safer city"), restricting buildings in vulnerable areas/zones, protection of natural lines of defense and identification of safer land for use at emergencies (see Table 4). Usually development plans for local level in Malaysia are prepared by the FDTCP, while the plan implementation is done by respective local authorities.

The above findings imply that planners at the FDTCP should transcend from their conventional scope of passive planning measures to active physical planning interventions for mainstreaming disaster resilience in the local plans for the adaptation

Table 4: Content Analysis Scores On Social Physical Dimensions Of Resilience For The Shah Alam Local Plan 2020

Socio-physical dimensions of resilient	Critical Needs of Respondents to reduce Their Vulnerability and Improve Resilience	Local Plan's Contents Score					Content Ratio
		(a) (0)	(b) (0.5)	(c) (1.0)	(d) (1.5)	(e) (2.0)	
Sensitivity to Hazard	1. Need of a citywide emergency rescue and evacuation route system	-	0.5	-	-	-	-
	2. Need of risk reduction measures for housing, transportation, infrastructure and utilities	-	-	1.0	-	-	-
	3. Prioritize 'safer and secure environments' as a development goal of the local plan.	-	-	-	-	2.0	-
	4. Need to regulate land developments according to the level of risks.	-	-	-	1.5	-	-
Assessed Content Score		0.0	0.5	1	1	2.0	4.5/8.0
Exposure Minimization	5. Providing community facilities to use as evacuation centers and temporary shelter	-	0.5	-	-	-	-
	6. Limit construction of residential, industrial and commercial buildings to safer areas	-	-	-	-	2.0	-
	7. Regular maintenance of drainage, channels and embankments	-	0.5	-	-	-	-
	8. Construction of new flood embankment and water retention ponds	-	-	1.0	-	-	-
	9. Recommend flood protection measures for property and buildings	-	0.5	-	-	-	-
	10. Protection of natural slopes, water bodies and mangrove forests.	-	-	-	-	2.0	-
Assessed Content Score		0.0	1.5	1.0	-	4.0	6.5/12.0
Adaptive Capacity Improvement	11. Allocation of land for public purposes to use at time of emergency	-	-	-	-	2.0	-
	12. Indicating risks ranking measures in the zoning plan (disaster awareness)	-	-	1.0	-	-	-
	13. Enhancing accessibility for doing daily activities (work, school, business and social functions)	-	-	-	-	2.0	-
	14. Improving infrastructure and utilities network for disaster resistance	-	-	1.0	-	-	-
	15. Establishing law and regulation on disaster preparedness and mitigation	-	-	-	1.5	-	-
	16. Incorporating indigenous knowledge of coping strategies in the local plan	-	-	-	-	-	-
Assessed Content Score		0.0	0	2.0	1.5	4.0	7.5/12.0

Notes: Contents scores are assigned as:

- (a) No reference at all in the plan, (b) Small reference in the plan = 0.5, (c) Policy direction indicated in the plan = 1, (d) Specific strategy proposed in the plan = 1.5, and (e) Implementation of strategy outlined in the plan = 2
- Content ratio means total content score for the plan: Maximum possible content score (No. of content statement X Total content score)

to climate change disasters. This require FDTCP to prepare local development plans in collaboration with the State Department of Public Works and the State Department of Irrigation and Drainage to implement the plan in close collaboration with the planning and public works divisions of respective local authorities.

The “incorporation of indigenous knowledge of coping strategies in the local plan” is the only resilience need of people which is not reflected at all in the SALP 2020 (see No.16 in Table 4). Table 3 indicates that more than 50% of the respondents consider indigenous knowledge on disaster preparedness as an important factor to be considered in development plans. Apparently the professional town planners have totally disregarded the indigenous knowledge when making the plan. This finding is related to a major lapse in following the participatory planning process involving local stakeholders. It might be a result of inadequate coordination between the federal level planners and local stakeholders. Otherwise Malaysia has gradually shifted from the prescriptive planning process to participatory planning process since 2008 (FDTCP, 2010). It is difficult to overcome this lapse until the plan making and implementation capacity of the local authorities are strengthened so that local authorities can prepare the local development plans in consultation with local stakeholders. Local level adaptation to climate

change induced disasters requires utilization of indigenous knowledge.

CONCLUSION

Adaptation to global climate change requires locally relevant and effective actions. Climate change adaptation measures should not be discrete, stand-alone, and exclusive actions. Instead, the local adaptation measures need to be modifications of existing measures for disaster preparedness in general. When adaptation to climate change become part and parcel of the general disaster preparedness measures in a local development planning process it is mainstreamed into the development plan automatically (Huq and Burton, 2003; Huq and Reid, 2004). The sectorally structured development plans tend to overlook cross-cutting issues like disaster preparedness and climate change adaptation or compartmentalize them into specific development sectors such as housing and social welfare. The study found the sectorally organized development plan as the main reason for the absence of socio-physical attributes of resilience in the existing local development plan. Therefore, the paper recommends that the local development plans need to be prepared based on the critical issues faced by the civil society in the respective local area. Indigenous knowledge need to be the basis of such local development plans.

The study shares the argument of Pickett *et al.*, (2004) and Smit and Wandel (2006), who urge that there is a need to integrate disaster resilience into local planning practices since vulnerability reduction and adaptation cannot be undertaken with respect to climate change alone. Vulnerability reduction appears to be the most effective measure if undertaken in combination with other planning strategies at the local level. In terms of contribution to the urban planning practices in response to climate change, the study in Shah Alam strengthens the argument that urban planning measures have to be tailored to suit the needs of local people in developing countries instead of expecting the macro-level physical plans or meso-level structure plans to guide the actions at the local level. The study revealed that the local development plan prepared by the federal level planners was not adequately effective to reduce the vulnerability and improve resilience of the local people in Shah Alam. A local plan devoid of the stakeholder participation and indigenous knowledge is bound to be not very effective. Therefore, the paper calls for strengthening the participatory planning and development capacity of the local authorities since disaster is a part of city and rural life. The roles of urban authorities and town planners with regard to this should be anticipated and there should be more resolute undertaking to integrate disaster resilience in local development plans.



Community based interventions: (a) school building as the new flood shelter; (b) raised latrine as sanitation measure; (c) change agent providing training on climate change issues; and (d) mass organization leaders discussing common issues.

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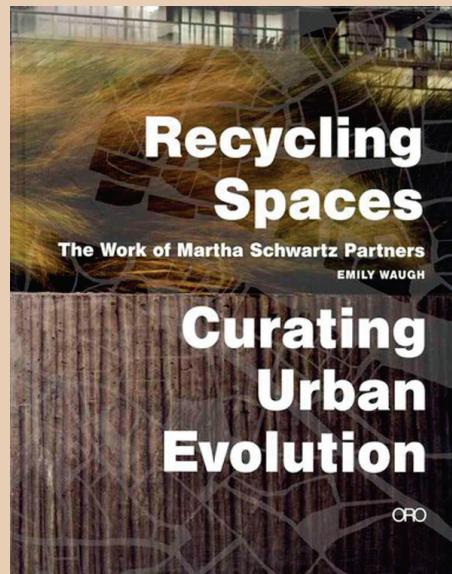
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BOOKS: Editor's Choice

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RECYCLING SPACES: CURATING URBAN EVOLUTION

THE WORK OF MARTHA SCHWARTZ PARTNERS

Author: Emily Waugh
Publisher: Gordon Goff
Place of Publication: USA
Year of Publication: 2011
Pages: 300
ISBN: 978-1-9359350-3-2

This book presents the recent work of Martha Schwartz Partners, the landscape architecture firm, on how to transform spaces, neighborhoods, cities and regions towards a healthy and sustainable future. Their works generate clear urban identities, attract new populations, integrate diverse user groups and create excitement about urban areas that were previously seen as derelict, dangerous or negative places. Each of these phases of evolution is explored through twelve recent projects of Martha Schwartz Partners. Through illustrations, photographs and personal stories from stakeholders, designers, collaborators, neighborhood residents and Martha Schwartz herself, each of the projects tells a different story about the evolution of a neighborhood, a city or a region.

This book has identified four critical expressions of urban evolution in cities around the world today: dying city centers, depleted resources, shifting populations and non-existent urbanism.

Chapter 1 - Dying City Centre, explores the real urban redevelopment projects in brownfield areas, for example, industrial areas which can no longer rely on primary industry to survive, abandoned mining land and downtown that has lost its vitality. They will be developed towards a vibrant city life. Redevelopment projects create a sense of excitement with the development of, among others, public spaces and waterfront plazas, generating economic activities, providing integrated public transport and housing, which all make the city livable.

Chapter 2 - Depleted Resource, tells readers that once the last trace of gold, coal, oil or gas is extracted, the value of land disappears. It would be a bad landscape, a dump place and a criminal site that portrays an eerie image. Populations are forced to either move away or live in the ruins of the past. This chapter concentrates on how these ex-mining lands can be reconstructed to bring new life, new purpose and new identity.

Chapter 3 - *The Shift of Population*, will tell the readers the experience of diverting people from dense neighborhoods to less populated neighborhoods, via mixed-use development and providing more quality open spaces and amenities. Small towns lost population due to lack of attraction and at the same time the big cities are unable to accommodate incoming mass immigrants. This chapter tells how to create a compact city for work, life and play. New neighborhoods or cities will be developed with residential and public facilities such as schools, offices, shops, restaurants and public transport. Development of public parks will be the connecting element between the residents and public facilities.

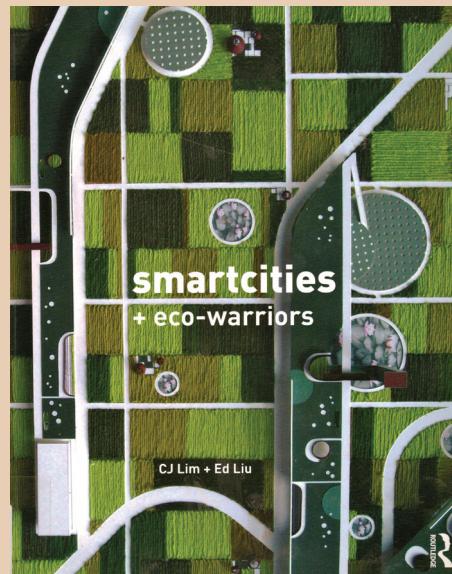
Chapter 4 - *Non Existent Urbanism* focuses on how to activate vital cities where there are no urban activities and no urban population. In this case, urban activity must be generated. Destinations must be created and the sense of place intensified to introduce urban life where it previously did not exist. The city center does not have an identity and an attractive destination and this makes it an unattractive place to start a business. This chapter clarifies the ways to create a new urban center that has never been developed by others.

There are four important lessons that can be learnt from this book - how to breathe new life into a dying city; how to create the perfect neighborhood; how to increase economic and social value in areas with depleting resources; and how to create a sustainable evolution of the city center. This book is an essential read for town planners and local authority managers to get some ideas on how to achieve sustainable development and livable urban areas.

BOOKS: Editor's Choice

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SMARTCITIES AND ECO-WARRIORS

Author: CJ Lim and Ed Liu

Publisher: Routledge

Place of Publication: Oxfordshire

Year of Publication: 2010

Pages: 253

ISBN: 9780415571227

This book begins with the story of urban utopias and the Smartcity, addressing the issues faced by some 3.3 billion people living in urban areas all over the world. The Global food crisis, high consumption levels of finite energy resources, extreme socio-economic differentiation, global famine, a poisoned earth, and social collapse are all leading us towards dystopia rather than utopia. The book suggests the responsibility of Smartcity as an evolution of long-standing sustainable principles that intertwine with contemporary desires for a healthier physical, mental and social existence in an increasingly alienating world. Smartcity is an integrated holistic vision, not an appendix of a collection of unrelated ideas.

The book lists the significant manifesto concerning the perpetual motion machine, the rise of eco-warriors, scenic positions and cultivating community. It states a clear ambition for the future cities with a pledge based upon social and environmental concerns. At the forefront of the smartcity manifesto is urban agriculture, focusing on the role of farmers as pivotal players of eco-warriors. Including the colorful pictorial essay of urban farming in Istanbul, Taipei, Shenzhen and London, it rightly pictures the concept of multicolor.

This book is structured around a series of international case studies, some commissioned by government organizations, others speculative and polemic. Reframing the way people think about urban green space and the evolution of cities, the authors explore how the reintegration of agriculture in urban environments can cultivate new spatial practices and social cohesion in addition to food for our tables.

Combining place and fiction in an imaginative interpretation, the middle part of the book lavishly illustrates revolutionary concepts of Smartcity in 12 cities in South Korea, Denmark, United Kingdom, China and United States of America as case study. This book provides a series of imaginative and inventive projects proposed

as innovative scenarios for the future Smartcity. Social and agricultural sustainability being used to drive the design presents an optimistic vision for our future environment.

This book explores the relationship between city and region in an age of rapid urbanization. Much of the work explores the idea that farming should be seen as much a part of a city's infrastructure as its buildings, public spaces, roads, utilities and cultural amenities. Proposed are unique components like lychee orchards as natural pollution filters, sustainable food production city, agricultural carpet, inhabitable glass well, biogas-powered skybus, the tomato exchange and the sound gardens.

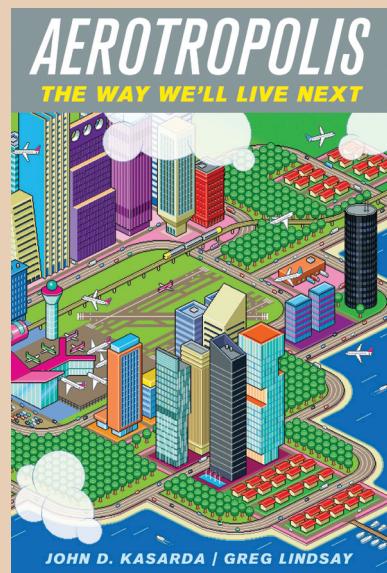
The Authors, CJ Lim and Ed Liu, were awarded The Royal Institute of British Architects (RIBA) President's award for Outstanding Professional Practice-located Research for their project on smart-cities + eco-warriors. The judges agreed that they set out an innovative vision for an urban future from an architectural perspective as opposed to a planning or environmental engineering one. With a focus on urban agriculture and self-perpetuating circular economies, it offers a refreshing departure from the majority of approaches to sustainable urban development.

This book represents an emerging architectural voice in the argument of environmental and social sustainability, which pictures an ecological symbiosis between nature, society and the built form. It is an intelligent and imaginative publication on the use of agriculture in planning and urban architecture, in addition to improving food security. The book concludes with a series of essays written by experts representing different positions such as food urbanist and architectural historian. It is indispensable reading for practitioners and students in the fields of urban planning, architecture, environmental engineering, landscape design, agriculture and sociology. It is an inspiration to government agencies and NGOs dealing with climate change and anyone concerned about cities, energy conservation and the future of food production. Written in accessible language for a global audience, it is a must read for any potential eco-warrior and eco-warriors alike.

BOOKS: Editor's Choice

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AEROTROPOLIS: THE WAY WE'LL LIVE NEXT

Author: John D. Kasarda and Greg Lindsay

Publisher: FSG

Place of Publication: USA

Year of Publication: 2011

Pages: 466

ISBN: 978-0-374-10019-3

Over the past two millennia, economic vitality has moved from ocean harbours to river ports to railroad hubs to highway interchanges and, now, to airports. "Transportation is destiny". Not so long ago, airports were built near cities, and roads connected the one to the other. This pattern, the city in the centre, the airport on the periphery, shaped life in the twentieth century, from the central city to exurban sprawl.

Today, the ubiquity of jet travel, round-the-clock workdays, overnight shipping, and global business networks has turned the pattern inside out. Soon the airport will be at the centre and the city will be built around it, the better to keep workers, suppliers, executives, and goods in touch with the global market. Airports are, in effect, routers for goods and people or, as the authors put it, "factories for connectivity." This is the aerotropolis - a combination of giant airport, planned city, shipping facility and business hub. The *aerotropolis* approach to urban living is now reshaping life in Seoul, Amsterdam, Dallas, Washington D.C, China and India. The *aerotropolis* is the frontier of the next phase of globalization.

The phenomenon and aspiration of *aerotropolis* was illustrated by John D. Kasarda and Greg Lindsay, in eleven chapters of their book, 'Aerotropolis: The Way We'll Live Next'. The book explores how air travel and transportation are largely responsible for the shape and scope, winners and losers of globalization. The initial chapter of *Aerotropolis* (the book) focuses on LAX and Washington DC's Dulles. It also examines how cities such as Hong Kong, Dallas, Detroit and Dubai are changing (or being built anew) to reflect the interests of corporations that effectively scattered pieces of themselves across the world, relying on the internet and Airbus planes to tie themselves together. The best parts of *Aerotropolis* are those chapters that describe the incredible machinations of globalization as they play out in every corner of the globe. The authors connect the rose plantations of Kenya with the flower markets of Amsterdam. It explains why Dubai is ideally situated to be the Constantinople of the future, with 3 billion of the world's most ambitious people in range of a single hop on a 777. It also explains how FedEx

and UPS orders go from warehouse, to their respective mega-hubs in Memphis and Louisville, to our house.

The glaring problem with *Aerotropolis* is that the authors never really explain what “an *aerotropolis*” is supposed to look like. Is it literally a city built up around an airport? It is just an idea, like ‘creative city’? Should it include certain uses and take certain forms? And what comes first, the airport or the city? It is hard for planners, for instance, to know what to do about their *aerotropolis* ambitions. At some moments, they dub every city with an airport economy to be an *aerotropolis*, in one way or another. At other times, they imply that there is some ideal *aerotropolis* out there, such as the new city of Songdo in South Korea that perfectly, seamlessly merges the advantages of urban agglomeration with those of cheap, fast jet travel. Sometimes, it seems as though the *aerotropolis* is just an idea that hangs over the formal relationship between airport and city, especially when dispensing useless pretentiousness, such as “the city is the airport”. This fundamental question of whether ‘*the airport becomes a city*’, ‘*the city follows the airport*’ or ‘*the airport leaves the city*’, as addressed in initial chapter of the book, was left unanswered by the author.

The most compelling part of the book comes at the end where author takes on the orthodoxy of high-speed rail directly. At the end of the day, aviation probably produces more economic value per ton of carbon emissions than any other human activity. That’s not something that we should readily ignore. It is hard, yet, to find a true aerotropolis, a thriving, rich city formed around an airport, outside the promotional spiels that promise New Songdo will be “A cool city! A smart city!” The less spectacular truth is that cities have always relied on transport, but not on transport alone. Airports are a powerful force among others, and it is the interaction of these forces that makes cities interesting.

This book can be considered as an essential reference for the urban planners in Malaysia to complement the needs of the business expansion in the twenty-first century. The expansion of the second Kuala Lumpur International Airport is seen as an opportunity for urban planners to create a better business environment as described in the book.

PLANNING EVENTS

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Research and Development Division
Federal Department of
Town and Country Planning
Peninsular Malaysia

MAY 2012

1. Smart Cities for Sustainable Growth Conference

Date : **3 May 2012**
Venue : **Museu Da Electricidade, Lisbon**
Organisers : **INTELI, FLAD and Ecologic Institute**
Websites : <http://www.smartcities2012.org>

2. The 2nd National Conference on GREATER KL

Date : **3 May 2012**
Venue : **Sunway Putra Hotel, Kuala Lumpur**
Organisers : **Asian Strategy & Leadership Institute**
Websites : <http://www.asli.com.my/?p=past-events/2nd-national-conference-on-greater-kl>
Theme : Towards a World Class Sustainable Smart City

3. 7th International Conference on Urban Regeneration and Sustainability

Date : **7 – 9 May 2012**
Venue : **Ancona, Italy**
Organisers : **Marche Polytechnic University, Italy and Wessex Institute of Technology, UK**
Websites : <http://www.wessex.ac.uk/12-conferences/sustainable-city-2012.html>

4. 18th International Conference on Urban Transport and the Environment

Date : **15 – 17 May 2012**
Venue : **A Coruña, Spain**
Organiser : **Wessex Institute of Technology, UK**
Websites : <http://www.wessex.ac.uk/12-conferences/urban-transport-2012.html>

JUNE 2012

5. The Planning Convention UK

Date : **27 June 2012**
Venue : **One Wimpole Street, London**
Organiser : **Royal Town Planning Institute UK**
Websites : <http://www.theplanningconvention.co.uk>
Theme : Planning 2012: Making it Work!

6. World Cities Summit 2012

Date : **1 – 5 July 2012**
Venue : **Marina Bay Sands, Singapore**
Organiser : **Centre for Liveable Cities, Singapore**
Websites : <http://www.worldcities.com.sg/index.php>
Theme : Liveable and Sustainable Cities – Integrated Urban Solutions

SEPTEMBER 2012**7. World Urban Forum 6**

Date : **1 – 7 September 2012**
 Venue : **Naples, Italy**
 Organiser : **United Nations Human Settlements Programme (UN-Habitat) 2012**
 Websites : <http://www.unhabitat.org/wuf>
 Theme : The Urban Future

8. International conference on Tourism, Climate Change and Sustainability Bournemouth, UK

Date : **13 – 14 September 2012**
 Venue : **Bournemouth University, UK**
 Organiser : **The International Centre for Tourism and Hospitality Research (ICTHR), Bournemouth University**
 Websites : <http://www.bournemouth.ac.uk/tourism/news-and-events/events/conferences/climate-change-2012.html>
 Theme : Tourism, Climate Change and Sustainability

9. 56th IFHP World Congress Gothenburg 2012

Date : **16 – 19 September 2012**
 Venue : **Gothenburg, Sweden**
 Organiser : **City of Gothenburg, Sweden and International Federation for Housing and Planning (IFHP)**
 Websites : <http://www.ifhp2012goteborg.se/> or <http://www.ifhp.org/event/ifhp-world-congress-2012>
 Theme : The Inclusive Cities in a Global World

10. 4th International Conference on World Sustainable Cities 2012

Date : **25 September 2012**
 Venue : **JW Marriott Hotel, Kuala Lumpur**
 Organisers : **MIP, REHDA & PAM**
 Websites : <http://www.mip.org.my>
 Theme : Cities For People

OCTOBER 2012**11. 23rd EAROPH World Congress**

Date : **17 - 19 October 2012**
 Venue : **Daegu, Republic of Korea**
 Organisers : **Daegu Metropolitan City and EAROPH Korea**
 Websites : <http://www.earoph2012.or.kr/>
 Theme : Green City For Human Betterment

12. 5th Asian Ministerial Conference On Disaster Risk Reduction

Date : **22 – 25 October 2012**
Venue : **Jogja Expo Center, Yogyakarta, Indonesia**
Organisers : **Badan Nasional Pemanggulangan Bencana (BNPB) and UNISDR**
Websites : **<http://5thamcdrr-indonesia.net/>**
Theme : Strengthening Local Capacity for Disaster Risk Reduction

13. 48th ISOCARP Congress

Date : **10 – 13 September 2012**
Venue : **Perm, Russia**
Organiser : **The City of Perm, Russia**
Websites : **<http://www.isocarp.org/subsites/isocarp-congress-2012/home/>**
Theme : Fast Forward : Planning in a (Hyper) Dynamic Urban Context

NOVEMBER 2012**14. Smart City Expo World Congress**

Date : **13 – 15 November 2012**
Venue : **Gran Via Venue, Barcelona**
Organiser : **Fira Barcelona**
Websites : **<http://www.smartcityexpo.com/en/home>**
Theme : Smart Society and Collaborative City

15. World Town Planning Day Seminar 2012

Date : **7 November 2012**
Venue : **Renaissance Hotel, Kuala Lumpur**
Organiser : **Federal Department of Town and Country Planning, Peninsular Malaysia**
Websites : **<http://www.townplan.gov.my>**
Theme : Green Cities, Happy Communities

16. Conference On Urban Planning & Management in Malaysia

Date : **8 November 2012**
Venue : **Renaissance Hotel, Kuala Lumpur**
Organisers : **MIP, UiTM, UTM, USM, UIAM and UM**
Websites : **<http://www.mip.org.my/>**
Theme : Accomplishments, Challenges and Way Forward

THE RACE-COURSE OF AMPANG ROAD IN 1910 – REMEMBERED AS SITE FOR HORSE RACING SINCE 1896, THE COURSE IS NOW MARKED AS PART OF THE HISTORY OF KUALA LUMPUR. BEGINNING IN 1993, THE SITE WAS DRAMATICALLY TRANSFORMED BY THE CONSTRUCTION OF KUALA LUMPUR CITY CENTRE THAT HOSTS PETRONAS TWIN TOWERS, THE TALLEST TWIN BUILDINGS IN THE WORLD.



DESIGNED TO BE A CITY WITHIN A CITY, THE KLCC CONSISTS OF MIXED LANDUSE AND VARIOUS URBAN ACTIVITIES COMPRISING OFFICE BUILDINGS, SHOPPING MALL, HOTEL, RESIDENTIAL, CONVENTION CENTRE AND A BEAUTIFUL PUBLIC PARK.

KLCC, SHIFTING THE HISTORY, FROM 'ONE COLOUR' (RACE COURSE) TO 'MULTI-COLOUR' OF DEVELOPMENT, TO BE THE LANDMARK OF KUALA LUMPUR... THE PRIDE OF ALL MALAYSIANS.





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