Social Infrastructure Planning and Sustainable Communities: Example from South East Queensland, Australia

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From its early birth through to the twenty-first century, the planning for social infrastructure has been viewed as a crucial element in promoting the development of healthy communities. The existence of good social infrastructure in every level of human settlement (i.e. neighbourhoods, districts, regions etc.) is vital because it is considered to be an element that impacts positively and meaningfully on the quality of life for members of the targeted community. The increasing importance of the sustainable development agenda in human settlements has prompted concerns over the cost of the government's failure to provide for adequate social infrastructure for their communities. Part of this failure is attributed to the inconsistent outcome from the use of traditional planning standards that are based on population-to-facility ratios. This paper explores the literature discussion on social infrastructure for sustainable communities. It examines how a participation-oriented, need-sensitive approach in the planning and provision of social infrastructure is used as an alternative to the traditional standards that are based on population-to-facility ratios. It does this by giving an overview of its application in the planning and provision of social infrastructure for Australia's fastest growing region of South-East Queensland.

Keywords: social infrastructure, sustainable communities, sustainable development

Field of Research: Social Environment/Urban Development

1. Introduction

Social infrastructure planning gained its prominence at the beginning of the industrial revolution when people began to move from the countryside into towns and cities in search of better life opportunities. At that time, Planning by public authorities was directed at improving the health of these working class people by providing housing, clean water and sanitation. From this early public health exercise, planning has now evolved tremendously and transformed neighbourhoods, towns and cities with detailed spatial arrangements (Choguill, 2008), including social elements, such as education, recreation and community services. In the twenty-first century, social infrastructure planning is widely considered as an integral part to creating sustainable communities [OUM 2007]. This is not surprising, given that one of the main goals of sustainable communities is to provide facilities and services, including that of social infrastructure, that meet residents' needs and expectations. In addition, besides the economic benefits, social infrastructure investment has far-reaching social advantages and presents a genuine reason to include its provision in development plans and proposals (Casey, 2005: p4).

The wealth of literature on sustainability increasingly points to the importance of developing sustainable communities as the preferred option in spatial and urban policy in Australia and Europe (Raco, 2007). This option is increasingly popular

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because human settlements not only occupy an increasing percentage of urban land uses, they are also being seen as the building blocks for nurturing a sustainable setting for living environments [Chougill, 1999; 2007]. It is also a central element that Edwards (2000, p. 12) describes as 'the agent that cements communities' by linking together economic development, environment and social welfare. Planning for sustainable communities generally is a continuous process involving resource exploitation, integration of economic development, social concerns and environmental protection in a mutually reinforcing manner. In this regard, one important element that must exist in the process of building sustainable communities is the adequate provision of social infrastructure.

This article presents a literature review on the understanding of social infrastructure from the perspective of local, neighbourhood community levels and explores the relationship between social infrastructure and the neighbourhood within the context of sustainable communities. The review explains how investment in social infrastructure is being viewed both in economic and social terms and how social infrastructure investment can contribute to quality of life and the overall sustainability and liveability of the communities. The review also includes an example of how participation-oriented, need-sensitive Integrated Social Infrastructure Planning Guidelines are utilised in the planning and provision of social infrastructure within South-East Queensland, Australia's fastest growing region. The article concludes with a brief discussion on the potential factors impacting the successful implementation of these guidelines.

2. Social Infrastructure and Sustainable Communities

Economists and politicians have the tendency to implicitly refer to social infrastructure as investment in human capital through the provision of physical elements that help in the provision of human services (SACOSS, 2009; Chin, 2004). Within an urban planning context, however, social infrastructure can be divided into two categories, namely physical or hard infrastructure and soft infrastructure (SACOSS, 2009). Hard infrastructure refers to physical elements that help in the provision of human services, such as housing, health and education facilities (Choguill, 1996; Bigotte & Antunes, 2007). The Australian Office of Urban Management (OUM) classifies these elements as community facilities (buildings that house a range of services), such as community centres, places of worship, hospitals and health centres, and supporting physical facilities (urban elements that promote the well-being, lifestyles and enjoyment of the community), such as pedestrian and cycling networks and facilities, special needs facilities, sports and recreation facilities, and shopping facilities (OUM, 2007).Soft infrastructure on the other hand refers to the social environment, services and programs that support the accumulation and enhancement of human capital (Williams & Pocock, 2010; Casey, 2005). Examples include health, education, employment and training, and public safety. The OUM (2007) refers to this type of soft infrastructure as community services, which refer to programmes that benefit the community, such as schools and day care, library services, skills development, recreation and sporting programmes.

The term 'community' usually refers to two forms of arrangements: a group of individuals from a common physical location, such as a neighbourhood (Volker et al., 2007), or people from a common social background, such as pensioners (whether from single or different neighbourhoods)who would normally interact with each other

or do things together and, in doing so, derive important personal benefits for their well-being (Volker et al., 2007).The neighbourhood in this respect includes a district, representing an area where people live, and a community, representing the people themselves who live in that particular area (Jenks and Dempsey, 2007). More specifically, neighbourhoods can also refer to 'an area of dwellings, employment, retail, and civic places and their immediate environment that residents and/or employees identify with in terms of social and economic attitudes, lifestyles, and institutions' (USGBC, 2009, p. xvi).Thus, a community can simply be classified as people who are actually sharing either a common area or practising a common value among themselves.

Sustainability has always been closely associated with a place and the communities living or operating within that place. Hempel (1999) argues that it is always challenging when it comes to defining sustainable communities because it is relative and therefore, there is no 'one size fits all' definition. The Office of Development and Planning (ODPM) defines sustainable communities as 'places where people want to live and work, now and in the future. They meet the diverse needs of existing and future residents, are sensitive to the environment, and contribute to a high quality of life. They are safe and inclusive, well planned, built and run, and offer equality of opportunity and good services for all.' (ODPM, 2005, p. 7).

Sustainable community is about maintaining and enhancing the quality of life (Barton et al., 2010), the community's interests, needs and culture, through addressing issues pertaining to economic, environmental and social health. The concept, as shown in Figure 1, is built upon a strong, long-term integration and interdependency between these three pillars. Economic vitality, for example, contributes to sustainable communities by converting natural resources into products in an ecologically sustainable manner for society consumption. The availability of these numerous products and services provides arrange of options to the community, and such opportunities help promote abetter quality of life. Another important aspect inherent in this three-pillar relationship is fostering a strong sense of belonging within the community, which is argued to be the key element in creating healthy and sustainable communities (Urban Task Force, 1999).

Figure 1: Sustainable community (adapted from Barton et al., 2010)
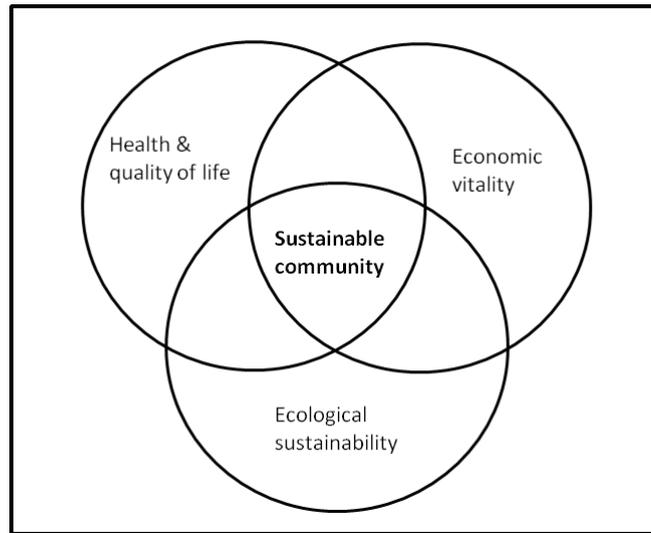
Planning for sustainable community is, therefore, not an ad-hoc or unique occurence; it is a continuous process involving resource exploitation (WCED, 1987) that must encompass the integration of economic development, social concerns and environmental protection in a mutually reinforcing manner.Also, it must not advance at the expense of others (Cobb et al., 1995). This is important because, within sustainable communities, people are expected to be able to live, work and enjoy quality time in a safe environment and utilise all available social infrastructure and facilities for their well-being. Efficiency, especially of spatial distribution, and adequacy of the facilities and services provided are of paramount concern especially within a local council area because communities at this level remain the largest users of social infrastructure. In order to accommodate these requirements, the existence of good social infrastructure is, therefore, very critical to achieving functional, strong and sustainable communities (GCCC, 2007).

3. Conflicts in Social Infrastructure Provision

The existence of good social infrastructure in every level of human settlement (neighbourhoods, districts, regions etc.) is vital because it is considered to be an element that impacts positively and meaningfully on the quality of life for members of the targeted community (GCCC, 2007). From a social point of view, the existence of adequate social infrastructure has been known to enhance quality of life and create strong communities. It also acts as a strong attraction to external investment and induces growth. However, governments across the developed world are increasingly concerned with the cost of failing to provide for adequate social infrastructure within their communities. These failures have left the communities in a state of disadvantage with the governments having to address complex social problems and costly remedial measures due to past failure to invest in social infrastructure.

The determination and provision of social infrastructure, in both developed and developing countries, generally follow traditional planning standards that are based on population-to-facility ratios. This method of forecasting such facilities, although less comprehensive, is still very much in practice and is preferred for legitimate

reasons: it represents a fair distribution of state or local funding based on demonstrable need. This type of straight forward and easily quantifiable standards, based on quantitative analysis and forecasting of demographic profiles, also present clear guidance for the funding agencies to oversee funds budgeting and allocations. One drawback of such an approach, however, is the fact that the demonstrated needs requirement might not reflect the actual severity of actual needs for that particular area or neighbourhood. Examples include physical or psychological barriers, such as highway and railway lines that prohibit access to services and facilities and the differing levels of social and physical resource bases or cultural traditions between different communities.

These shortfalls not only are politically indefensible, they can also adversely impact the quality of life for other communities, where such need is genuinely required but was understated due to the low population-to-facility ratio estimation. In order to take cognisance of these variations and to ensure efficient provision of social infrastructure facilities, countries, such as Australia, the United Kingdom, Canada and more recently New Zealand, are introducing social infrastructure planning alongside other infrastructure planning as part of their spatial regional development plan (WBOP, 2009). The following section highlights an application of social infrastructure planning in South-East Queensland (SEQ), the fastest growing region in Australia in terms of economic and spatial development.

4. Social Infrastructure Planning in Australia: The SEQ Experience

Urban planning in Australia has become more organised through government and policy reforms during the late 1990s with the introduction of more orderly and streamlined planning systems. Following these reforms, the Queensland Government introduced the Integrated Planning Act, resulting in a more streamlined planning system for the country, including the South-East Queensland (SEQ) region. The incorporation of Social infrastructure planning into the SEQ Infrastructure Plan and Programme is one of the highlights from this revamped planning system. Queensland, in particular, has introduced the Integrated Planning Act 1997 (IPA) as a primary legislation guiding the state's planning and development mechanism. Within this framework, the Office of Urban Management (OUM) has produced the South-East Queensland Regional Plan 2009–2031(SEQ Plan) and the South-East Queensland Infrastructure Plan and Program 2006–2026 (SIP Plan) to manage growth in the region and, in particular, to co-ordinate a sustainable approach to planning, development and infrastructure provision, which includes social infrastructure supporting urban growth in SEQ. This outcome is in response to the fact that SEQ is currently Australia's fastest-growing metropolitan region (Figure 2)with a population of 2.7 million and a forecast to grow significantly to 3.7 million by 2031(OUM, 2007).

Figure 2: Fastest growing South-East Queensland region (adapted from http://www.sunshinecoast-australia.com)
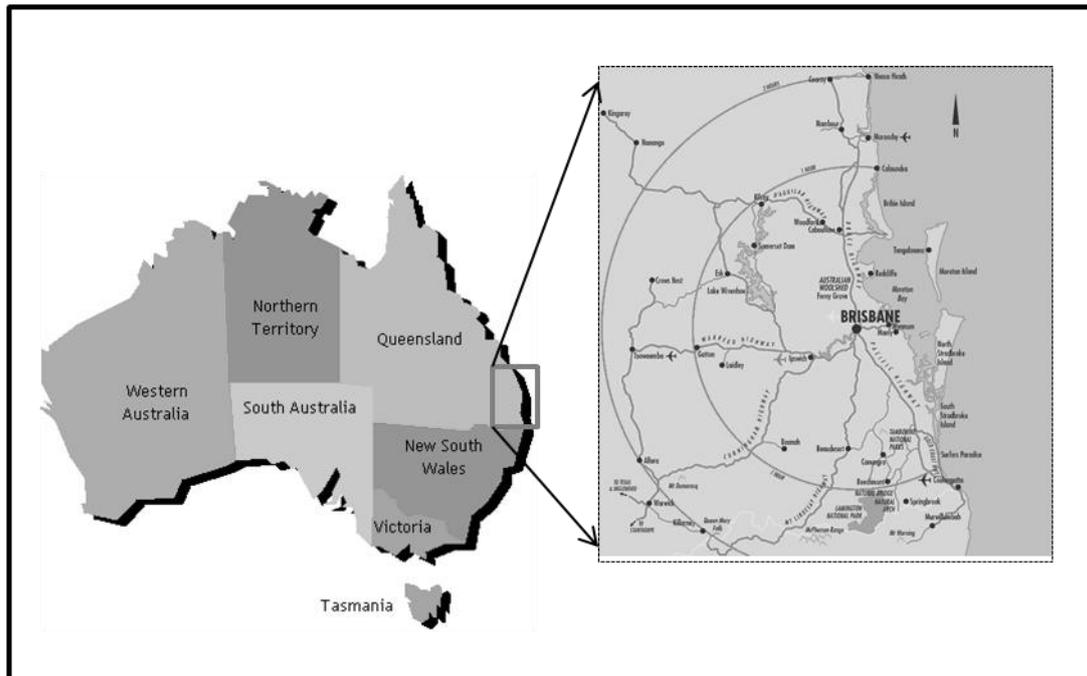

Deliveries of social infrastructure in Australia are borne by the local councils, state government and the federal agencies with increasing participation from developers and private sectors. With intense physical development taking place in the SEQ region, local councils, in particular, are under immense pressure to provide adequate social and community facilities for their residents. To assist these implementing agencies, the OUM produced the SEQ Plan Implementation Guideline No 5: Social Infrastructure Planning (SIP) (OUM, 2007), which has won the Planning Institute of Australia's National Award for Planning Excellence in Social and Community Based Planning, 2007. This guideline acknowledges the SEQ Plan's desire for a strong communities outcome with 'cohesive, inclusive and healthy communities with a strong sense of identity and place and access to a full range of facilities and services that meet diverse community needs,… maximising access to appropriate social infrastructure' (OUM, 2007, p. 51).

The SIP Guidelines specifically act as a tool to 'support efficiency in infrastructure planning delivery' (OUM, 2007,p8) by providing a generic process for social infrastructure planning in a four-stage process involving profiling, analysis and assessment, solution identification, and implementation and monitoring (Figure 3).This process can be tailored according to the strategic planning framework and management structure of individual councils within the SEQ region. The generic nature of this process allows it to be used on different hierarchies of facility catchment sizes. These include a neighbourhood level of up to 3,000 people, a local level between 5,000 and 10,000 people, a district level of between 20,000 and 30,000 people or an even higher order hierarchy of local government areas and sub-regional levels.

Figure 3: Social Infrastructure Planning Process (adapted from OUM, 2009; WBOP 2009)
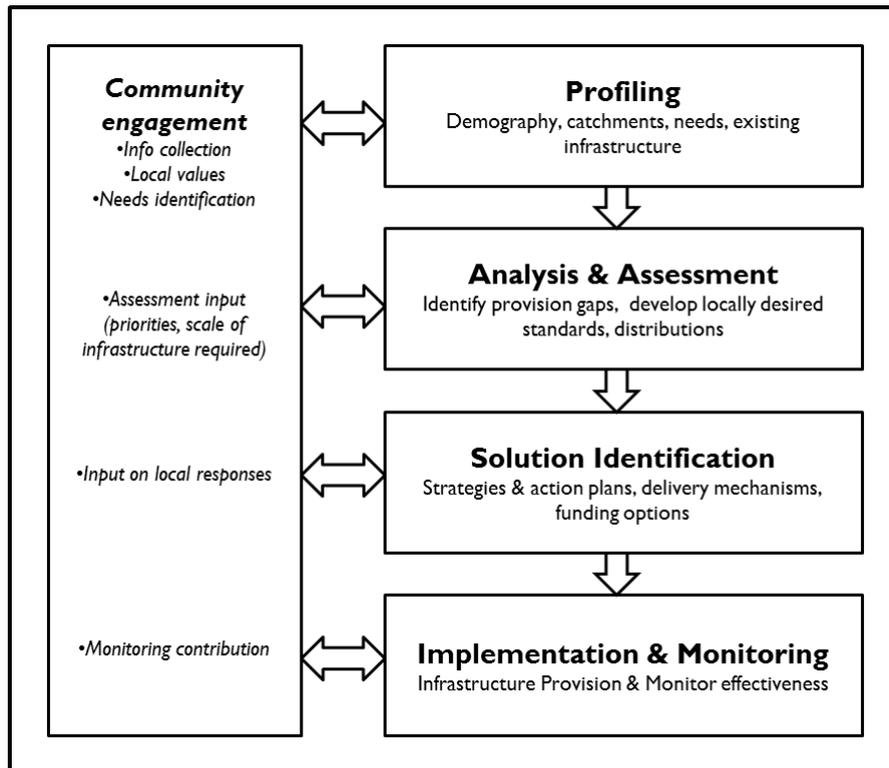
The SIP Guidelines adopt the capacity building approach towards the implementation process by including the all important aspect of public participation. Here, stakeholders were given the opportunity to contribute and influence planning processes and outcomes. In this approach, stakeholder participation forms the backbone of any successful integrated planning from their invaluable input into the whole social infrastructure planning and implementation processes. These stakeholders 'help[s] planners to draw on local knowledge and reflect local values' (OUM, 2007,p25), which is an invaluable source of data when aiming to provide a solution that best fits the local context. Within this context, such a bottom-up empowerment strategy is becoming a key component of creating a healthy social infrastructure or investing in social capital that meets local needs and conditions (Parr, 2008).

As summarised in Figure 3, the SIP Guidelines begin with the profiling stage, which involves gathering information about the community, including its demographic characteristics, needs, existing social infrastructure, settlement patterns, catchments and anticipated future population characteristics. Community engagement in this stage includes providing required information to help identify local priorities and needs. The second stage of the process involves collating and analysing the collected data and performing spatial analysis to identify settlement patterns, likely catchment areas, and likely current and future gaps in provision (including planning considerations for identified target groups and needs) and validate these with the affected community. Participation in this stage includes providing input to the assessment and types of infrastructure required. The third stage involves identifying and assessing options and responsibilities for addressing issues and gaps. Here the community participates by reviewing findings and suggesting potential strategies for

implementation. The final stage refers to implementing the plans, which include funding options and monitoring framework. Community participation includes contributing towards the monitoring exercise.

5. Conclusion

Successful communities would normally treasure their social infrastructure (Parr, 2008) because these are places and programmes that citizen and associations collectively use and utilise to build healthy, sustainable communities. Planning for sustainable communities is a continuous process and requires a strong integration of social infrastructure as a key success factor in maintaining and enhancing community satisfaction and wellbeing. When attaining community satisfaction has always been the ultimate goal for pursuing sustainable communities, addressing these needs through social infrastructure provision is, therefore, considered as one way to achieve such a goal.

The Integrated Planning Act1997 recognises the importance of infrastructure planning, which includes social infrastructure planning as fundamental to land use planning and preparation of development schemes. The existence of SIP Guidelines not only acknowledges this recognition but also highlights the importance of infrastructure investment, including social infrastructure for the well-being and economic prosperity of communities. In addition, it also highlights Council's commitment towards providing a strong and integrated approach to all aspects of infrastructure planning. As a key provider of this social infrastructure, and complemented by developers and other sectors, local councils are in a critical position to guide the overall infrastructure planning framework for the community.

However, being a non-statutory guideline, theimplementation success of the SIP Guidelines will depend on a variety of factors, including stakeholders support. The council's stand on the importance and appropriateness of such guidelines for their local area, competition with other mainstream infrastructure projects for council resources, funding commitment from responsible implementing agencies (including developers) and also public commitment during the participation process all form critical factors for achieving success. For smaller councils, the difficulties include: being a relatively small player in the overall provision of community services and facilities and being unused to taking a coordinating role in this area. Nevertheless, the guidelines definitely present a welcoming tool that will guide Councils, developers and other service providers and also provide a strong advocate for communities to have sufficient resources for creating sustainable communities. This is important because, within sustainable communities, people are expected to be able to live, work and enjoy quality time in a safe environment.

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