Sustainability in South Asian city

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Abstract

City brings about the most complex interplay of social, cultural, and political dimensions of space. It will have to accommodate around one billion humans only in South Asia by the year 2030. Therefore it needs to be prepared to absorb huge increases in urban population and resulting pressure on basic infrastructure and livelihood opportunities. In order to secure a better future and to improve the quality of life of all the citizens, city needs to be reinvented, by incorporating creativity and innovation with the approaches, we use in its planning. Here we present an overview of the progress, challenges and some key interventions to reinvent the city in South Asian region as well as in the developing world, with the examples of the most populous countries in the region: India, Pakistan and Bangladesh. Planning transforms geometric space in city into lived space. City planning in South Asia is as old as the human settlement itself, but the current situation is well below the level to be admired. Most of the city plans have been faulty with poor economic base and implementability, and fostered unintended city within the city, whose growth rate shadows the growth rate of the city itself. City in the developing world desperately needs to follow a sustainable development pattern which satisfies the requirement for equity; meets basic human needs; allows social and ethnic self-determination; promotes environmental awareness, integrity and inter-linkages between various living beings across time and space. It requires a combination of strategic policy making, supported by a system that combines personal opinion with scientific knowledge. It needs to reset the basis for the articulation of the initiatives of all relevant stakeholders to seek synergies for its development.

Keywords: South Asian City; Sustainable Urbanisation; Sustainable City; Strategic Urban Planning

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Introduction

Planning is the design of a desired future and of effective ways of bringing it about, by developing a set of purposeful and linear connections across time (Madanipour, 2010). It transforms geometric space into lived space by including values and social and cultural meaning (Arefi and Triantafillou, 2005). In order to secure a better future and to improve the quality of life in the city, lived space needs to be reinvented. Spatial problems and challenges can only be tackled adequately by incorporating creativity and innovation with the approaches, the concepts and the techniques we use (Albrechts, 2010). City brings about the most complex interplay of social, cultural, and political dimensions of space. It also consumes more energy, materials and ecosystem services (Atash, 2007; Ooi, 2009; Watson, 2009). Covering only 2% of the earth's surface, cities consume 75% of all resources and produce 75% of all waste (Ahmed Obaid, 2007). Cities will accommodate 61% of global population by 2030 (Ahmed Obaid, 2007). Here we will give an overview of the progress, challenges and some key interventions for city planning in South Asian region, with special emphasis on the most populous countries in the region: India, Pakistan and Bangladesh.

Urbanisation in South Asia

In the definition adopted by the United Nations geographical region classification (United Nations geoscheme), South Asia is the region that includes nine countries: Afghanistan, Bangladesh, Bhutan, India, Iran, Maldives, Nepal, Pakistan, and Sri Lanka, which together occupy an area of 6.8 million km^2 and has a population of 1.6 billion persons with average population density of 235 persons km^{-2} (Jamal, 2009). Region has the countries with more than 100 million inhabitants (India, Pakistan and Bangladesh; more than a billion in India alone) and less than one million inhabitants (Maldives and Bhutan). Bangladesh is the most densely populated country in the region with a density of 1,083 persons km^{-2} (Jamal, 2009). During the 1980s, urban population in the region grew at the rate of 3.0 to 6.5% per annum (Fig 1), which was the second fastest urban growth rate in the world after Africa. Currently, 28.33% of the South Asian population lives in urban areas. Current annual growth rate is estimated to be 2.92% in a span of five years, and growth rate in some countries is expected to decline (Fig 1). South Asia's urban population is expected to reach the figure of close to one billion by the year 2030 (Jamal, 2009). The cities in the region will thus have to be

prepared to absorb sharp increases in urban population and resulting pressure on basic infrastructure and livelihood opportunities (Jamal, 2009).
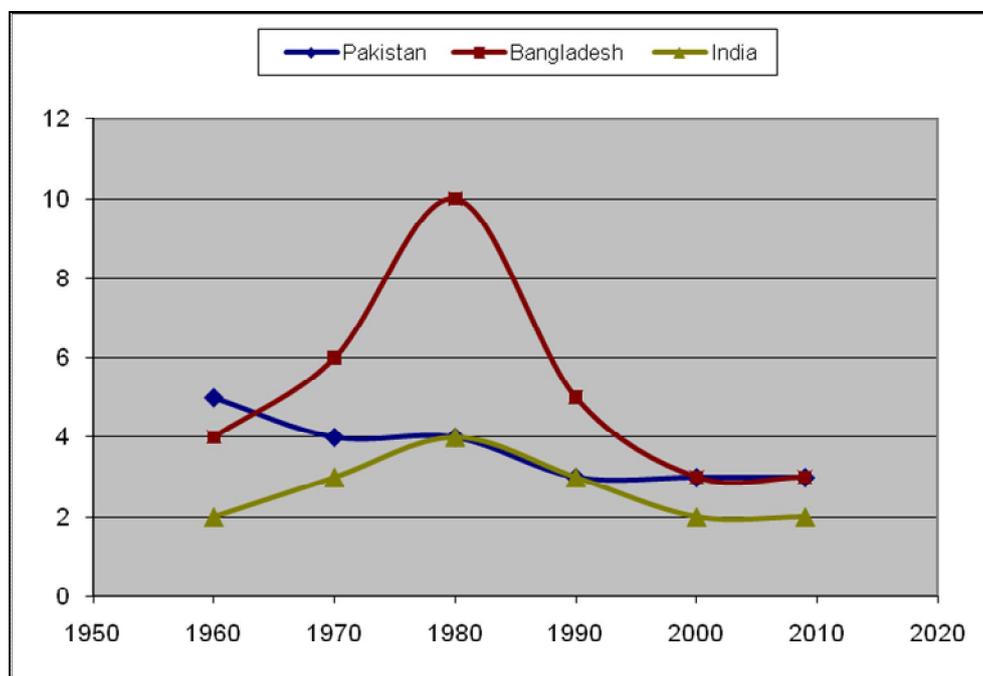
Fig 1: Growth rate of urban population in the most populous countries in South Asian region.

If we look around 5000 years back in time, we can see the art of city building in its nascent form in the river valleys of South Asia (Jamal, 2009; Mumford, 1961). Archaeological remains of two towns namely, Mohenjo-Daro and Harappa in the Indus Valley Region (now in Pakistan) preserved beautifully the features such as the hierarchical and rectangular street plans, separate quarters for residential, commercial and recreational uses, and an elaborate network of drainage and good sanitary conditions in houses (Jamal, 2009). In India, Pakistan and Bangladesh we see a fabulous heritage of city building left by Moguls and other ruling dynasties who ruled in this part of South Asia before European colonization (Jamal, 2009). Moguls beautifully integrated the Gardens of ancient Persia with the existing cities such as Lahore, Delhi and Srinagar (Jamal, 2009). Then the western colonizers replaced them, mainly the British, who imported many planning practices from England and focused on instituting a kind of urban governance system that suited their own imperial objectives (Ansari, 1977).

Currently, one of the key element which is expanding the cities in the region is urban sprawl, a term used to indicate low-density, discontinuous, automobile-dependent and inadequately planned urban development (Ewing, 2008). Because of low density, these settlements are

inefficient, costly to build and service, environmentally destructive and are alleged to be not good for the community (Delbecq and Florax, 2010). Densification of rural areas under the population pressure is another unrecognized process which creates challenges for the planners. Villages coalesce together to form bands of linear settlements with densities reaching to 400 persons km^{-2}, creating Ruralopolises (Qadeer, 2004). The physical expansion of metropolitan areas, to the extent that growth occurs outside the official administrative boundaries, is also ignored in the third world countries (Cohen, 2006; Jones, 2002). Then comes the rural to urban migration which is driven by the availability of employment opportunities, relatively higher wages, better educational opportunities, better availability of transportation and infrastructure etc. (Andrienko and Guriev, 2004; Pekkala and Tervo, 2002). This is seriously affecting the environment, and creating strong challenges to governments in terms of infrastructure and services that need to be developed to meet the growing needs of the population as well as concentration of businesses and people in cities. Urban poverty remains unquestionably most demanding of the challenges faced by policy makers (Jamal, 2009).This region is home to 40% of the world's poor (World Bank, 2000). Proportion of urban population considered as poor in India, Pakistan and Bangladesh is as much as 24.7%, 24.2% and 36.6%, respectively (Jamal, 2009). The globalization phenomenon that is unfolding now across the world appears to be exacerbating the problems of marginalization of the poor (Jamal, 2009). Many of the South Asia's largest cities such as Kolkata, Mumbai, Chennai, Dhaka, and Karachi are located in delta region or near the coast, and are vulnerable to disasters and floods (Jamal, 2009).

The scale of the world's urban population is strongly influenced by the urban criteria used within the largest population nations (Satterthwaite, 2010). In India both civic status as well as demographic aspect is taken as criteria for declaring a settlement as urban. In the recent census of India, all places with a municipality, corporation, cantonment board or notified town area committee were defined as urban. All other places with minimum population of 5000, at least 75% of male working population engaged in non-agricultural pursuits and a density of population of at least 400 persons km^{-2} were considered as urban (Census of India 1991) (Bhagat, 2001). In Bangladesh places having a municipality (*Pourashava*), a town committee (*Shahar Committee*) or cantonment board are defined as urban. In Pakistan places with municipal corporation, town committee or cantonment are declared urban (Bhagat, 2001). Here we will give a brief overview of urbanisation and city building in Banglasesh, India and Pakistan.

Bangladesh

During the late 1960s and especially since independence in 1971, Bangladesh has undergone rapid urbanisation (Islam and Azad, 2007). In 1951, only 4.3% of the population was living in cities (Islam and Azad, 2007), in 1974, it reached 8.8% and by 2001, 23.4% of the total population was living in the cities (Fig 2). Now it is over 25% and growth rate is more than 3.5% per year (Khan, 2008). By 2030 the urban population in Bangladesh will be 40% of the total (Khan, 2008). There are only three planning schools in Bangladesh (Jamal, 2009). In recent years most of the cities in Bangladesh have experienced rapid, but unplanned urbanisation (Islam and Azad, 2007). Rural poverty, river erosion and better employment opportunities in urban areas are the main reasons for this rapid urbanisation. Dhaka, the capital city, is one of the fastest growing cities in the world and contains one-third of the urban population of Bangladesh (Islam and Azad, 2007). In 2006 it ranked 11th among the world's megacities with an estimated population of 12.4 million (United Nations, 2006). The urban core of Dhaka is already congested and badly polluted; therefore new development will take place in the fringe areas, which are prone to flooding and also contain highly productive farmland (Roy, 2009). Urban poverty has been on the increase in Bangladesh and remains a major challenge for the planners (Davis, 2007). Nearly 45% of the urban population in Bangladesh is living in poverty, resulting in the growth of a massive number of slums (Osman, 2009). The slum population in Dhaka increased from 1.5 million to 3.4 million between 1996 and 2005, and currently around 35.2% of the total population of six cities in Bangladesh is living in slums (Khan, 2008; Osman, 2009). Bangladesh faces exceptional challenges with regards to growth, infrastructure, employment, poverty reduction and well-being in terms of capabilities and functioning of the population both in urban and rural areas (Khan, 2008). Solid waste management has deteriorated in most cities. In Dhaka City, it is estimated that only half of the solid waste produced everyday is collected and disposed of (Siddiqui and Ahmad, 2004). The system of urban governance in Bangladesh provides less opportunities for community participation in decision making and has gone through very little devolution of power (Jamal, 2009).

Overall, planning problems in South Asia are manifested in the form of lopsided urbanisation and faulty plans with poor economic base. Particularly, the City Master Plans have very poor implementability. One of the key planning instruments, the master plan, incorporate such unrealistic norms and standards, largely copied from the western examples, that they are hardly ever implemented (Jenkins et al., 2007). The development authorities

often do not have the necessary managerial and financial resources to carry out these plans (Jamal, 2009). Perhaps the master plans have aided and abetted the formation of the unintended city; the city that was never part of the formal master plan (Mahadevia and Joshi, 2009). It results in the growing number of poor housed in slums and streets, who provide the cheap labour and services without which the official city could not survive (Prakash, 2002). National elites also tend to favour the national capitals or the larger cities where they live (Davis and Henderson, 2003). Shockingly, slum growth rate (2.2%) is almost equal to urban growth rate (2.89%) (You, 2007). As a manifestation of social injustice and the social divide, slums exclude the poor from accessing the basic amenities (Habitat, 2006). The scale and depth of urban deprivation in slums undermines productivity as well as the effectiveness of national development plans (You, 2007). In 2002, 44% of the world's urban poor by the $1 a day line were found in South Asia, and 35% were found in sub-Saharan Africa (Ravallion et al., 2007).

India

Number of urban agglomerations in India has grown from 1827 in 1901 to 5161 in 2001. Population residing in urban areas has increased from 25.8 million in 1901 to 285.3 million (28% of population) in 2001 (Fig 2) (Mukherji, 1995). There has been a significant increase in migration to urban areas both among males and females during 1991-2001. This is because of the rapid growth of urban informal sectors, which comprises about 93% of total employment in the economy (Parida and Madheswaran, 2010). Because of globalization, the cost of living has gone up and number of poor households has grown especially in cities (UNCHS, 2001). Urban poverty and slums remain the major challenges for the planners and government, where people live in environmentally degraded conditions (UN-Habitat, 2003). Around 54.1% of Mumbai's population within the city's municipal limits lived in slums in the year 2001. In Kolkata, roughly 32.5% of the city's population lives in slums (Mukherji, 1995), and around a third of Delhi's 14 million people reside in squatter settlements (Jamal, 2009). Big cities in India have attained exceedingly large population size leading to virtual collapse in the urban services and followed by basic problems in the field of housing, water, infrastructure and quality of life (Mukherji, 1995).

With around 75% of the region's population, there are total 15 planning schools in India. The 300 planners that qualify from existing planning schools are too few in number (Jamal, 2009). Due to lack of professionals, planning in India has been changing since independence

with alterations in the paradigms of development. First plans like the Madras, Calcutta and Mumbai City Development Plans were more focused on the physical intervention in the existing system with main emphasis on shelter. The second-generation plans initiated the concept of financial intermediary and involvement of private sector in the urban processes. The third generation projects not only promoted private sector participation but also added certain components like capacity building with the help of institutional strengthening (Mahadevia and Joshi, 2009). It has been pointed out that the Master Plans for city building in the first few decades in India were too high in standards and had no place for the informal sector (Sarin, 1982), due to the exclusions, marginalization, and reduced rates of absolute poverty reduction (Mahadevia and Joshi, 2009). It promoted a paradigm of top-down approach, with no effective mechanism for the participation of stakeholders in the entire process (Ansari, 2004; Mahadevia and Joshi, 2009). Pro-poor government policies are usually subverted in favour of the vested interests (Mahadevia and Joshi, 2009). One of the new initiatives taken by the government is the Jawaharlal Nehru National Urban Renewal Mission. It will help to formulate plans and prioritize them in relation to the community development programmes prepared for each city covered under the mission with a participatory process involving several stakeholders (Jamal, 2009). Other major changes include the reforms to strengthen representative character of local bodies by encouraging decentralized decision-making, by the elected representatives to run the municipalities (Jamal, 2009). Efforts are also being made to reduce air pollution. In some cities like Mumbai, civil society organizations seem to proliferate both in number and advocacy efforts for good governance in the city (Siddiqui and Ahmad, 2004). To remain competitive in the global economy, policy makers in India are promoting the concept of `World Class City' (Jamal, 2009; Mahadevia, 2008). Special economic zones (SEZ) are being development at a rapid pace (Jamal, 2009). Many exclusive high tech enterprises zones such as software technology parks, bio-technology parks and high tech cities have been established (e.g. Bangalore) (Jamal, 2009).

Pakistan

In 1951, the urban population of Pakistan was 17.8% of the total population. In 1998, it reached 32.51% (Arif and Hamid, 2009; Hasan, 2002). The estimated data for 2005 shows the level of urbanisation as 35% (Fig 2). It has been projected that about half of Pakistan's population will be living in cities by the year 2030 (Arif and Hamid, 2009). According to

population, Karachi is the first largest city of Pakistan and 9th largest in the world. During 1947 to 2008, both urban population and urban area increased to 1500% (Sajjad et al., 2010). In 1998, seven largest cities of the country (Karachi, Lahore, Faisalabad, Rawalpindi, Multan, Hyderabad and Gujranwala) had more than 1 million people living in each city.
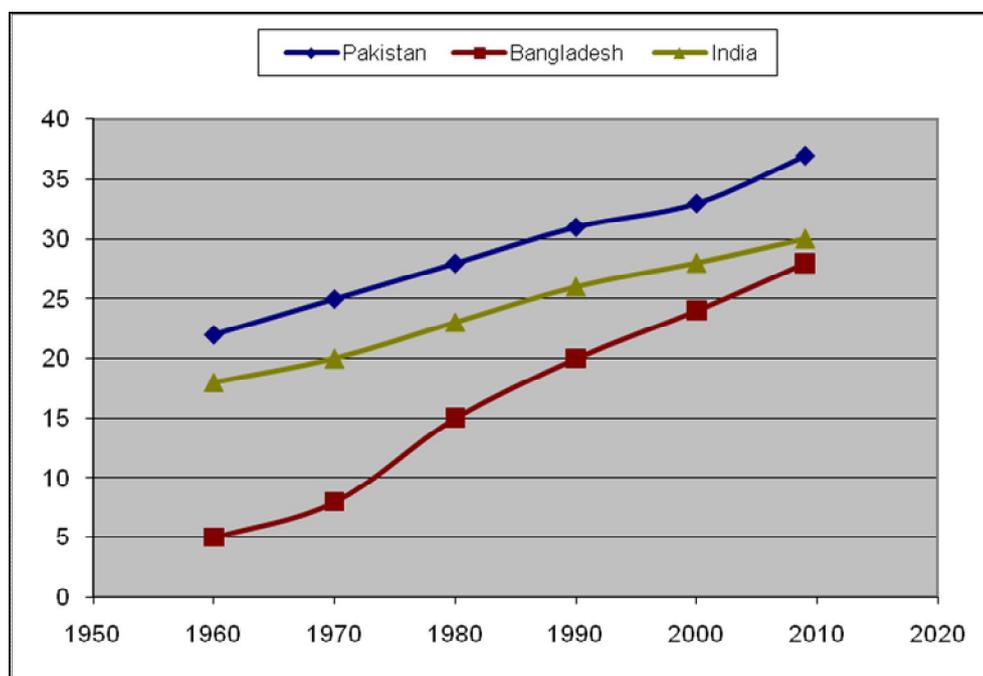
Fig 2: Urban population (% age of total population) in India, Pakistan and Bangladesh

Migration has played a major role in the rapid growth of these large cities (Arif and Hamid, 2009).Urban growth in Pakistan has not limited itself to these urban agglomerations. Medium and small sized cities, which are many in number, have grown even at a higher rate (Arif and Hamid, 2009). There are only two planning schools in Pakistan, which is certainly affecting city building in the country (Jamal, 2009). Urban poverty and slums are also the main challenges for the planners. According to conservative estimates about 58% of Pakistan's urban population lives in informal settlements (Hasan, 2002), provides employment to most migrants and they gravitate to squatter colonies. These settlements are generally characterized by the absence or severe lack of basic amenities. In Karachi, slum population increased from 3.4 to 5 million between 1988 and 2000. Currently around half of Karachi lives in *Katchi Abadis* (UN-Habitat, 2003; Jamal, 2009). Most of the waste in the cities is not disposed of properly, which creates dangerous health concerns (Siddiqui and Siddiqui, 2004). SEZs are being set up on a much smaller scale as compared to India (Jamal, 2009).

Rapid urbanization process has directly affected the quality of environment (Jamal, 2009). In some cities, efforts have been made to reduce air pollution (Jamal, 2009). Local Government Plan 2000 (Government of Pakistan, 2000) has been instrumental in carrying out local government reforms. Urban local bodies in the country acquired a constitutional status to function truly as the third tier of government, State and Centre being the other two (Jamal, 2009). Regarding community participation, some of NGOs in Pakistan such as Orangi Pilot Project Group and the Edhi Foundation have made admirable contributions to city life, even though they have not yet been able to emerge as a major factor in the city's decision-making process (Siddiqui and Siddiqui, 2004).
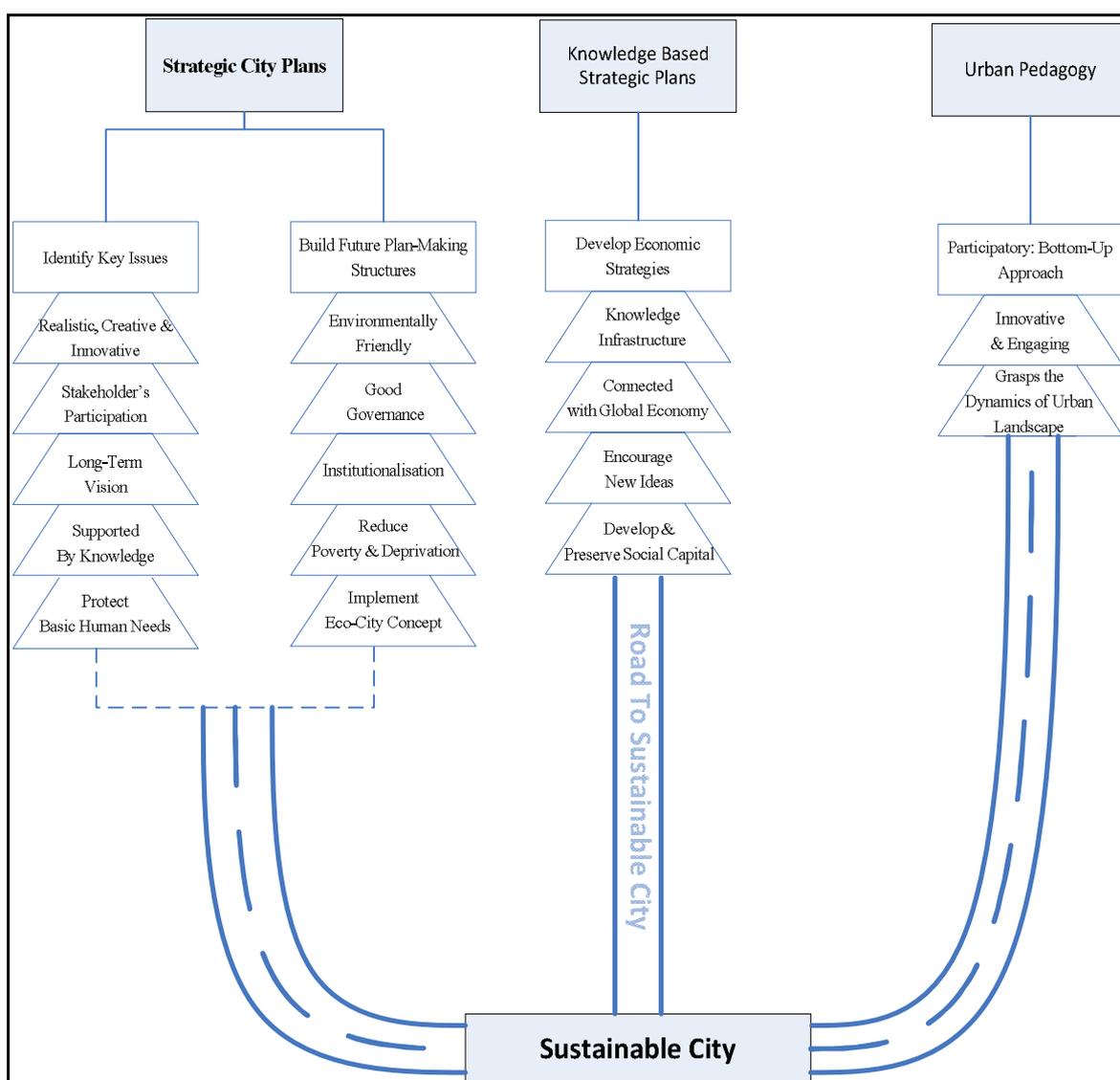
Road to Sustainable City

The scale and pace of chaotic urbanisation needs urgent action at the local, national and international levels with the involvement of all concerned actors and stakeholders to transform cities for their roles in the future. Based on the literature related with sustainable city building, here we will briefly describe some of the main milestones on the road which goes to the sustainable city (also summarized in Fig 3).

Strategic City Planning

Sustainable city follows a development pattern that satisfies the requirement for equity, social justice, and human rights; meets basic human needs; allows social and ethnic self-determination; promotes environmental awareness, integrity and inter-linkages between various living beings across time and space (Choguill, 1993; Drakakis-Smith, 1996; Ooi, 2009). It requires a combination of strategic policy making, supported by a system that combines personal opinion with scientific knowledge (Jepson Jr, 2001). To integrate a number of planning concepts like compact cities, liveable cities, creative cities, multi-cultural cities, fair cities, it adopts a more entrepreneurial style of planning instead of hard physical planning. Moreover, it emphasises to replace the bureaucratic approaches, traditional land use regulations, urban maintenance, production and management of services, with strategic city planning.

Strategic planning sets the basis for the articulation of the initiatives of all relevant stakeholders to seek synergies for the development of the city (Albrechts, 2004; Kunzmann, 2000; Steinberg, 2005). In a socioeconomic and environmental context, it identifies a long-term vision and competitive advantages; by concentrating on critical issues, it establishes an

integrated strategy for the urban reality; and with flexibility in decision making and a new culture of urban management, it strictly focuses on action with a will to create a particular future (Albrechts, 2004; Steinberg, 2005). This willing involves valuation, judgement and the making of decisions to create places with virtue and prime qualities like diversity, sustainability, equity, inclusiveness and accountability (Albrechts, 2010). One of the main objectives of strategic spatial planning is to create a more open, multi-level type of governance, working together in partnership with actors in diverse positions in the economy

Fig 3: Road to Sustainable City

and civil society (Albrechts, 2010). It creates a transformative shift to develop openness to new ideas and to understand and accept the need and opportunity for change. Strategic planning opposes a blind operation of the market forces and emphasizes to construct desired

answers to the structural problems of our society (Albrechts, 2010). It continues to search for new scales of policy articulation and new policy concepts and to widen the range of actors involved in policy processes (Albrechts, 2003).

Strategic spatial planning takes a critical view of the environment in terms of determining strengths and weaknesses in the context of opportunities and threats (Albrechts, 2010; Halla, 2007). It focuses on place-specific qualities and assets (social, cultural, intellectual, qualities of the urban tissue, both physical and social) in a global context. It studies the external trends, forces and resources available, which makes clear that which issues affect values, stakeholders, costs, or financing of the plan and require strategic decisions (Bruton et al., 2005; de Graaf and Dewulf, 2010; Halla, 2007). Strategic planning stresses the need for stakeholder participation through an interactive process in which they are involved at the crucial steps of the plan, in order to address critical environmental and developmental issues (Halla, 2007; Ogu, 2000). It tries to balance the equation of goals and ambitions with means and practical feasibility and strives to bind the commitments of key stakeholders with the implementation and success of the plan (de Graaf and Dewulf, 2010; Steinberg, 2005; Wong et al., 2006). It lays the foundations for long-term visions and strategies at different levels, to design plan-making structures in the future. It generates ways of understanding, ways of building agreements and ways of organising and mobilising for the purpose of exerting influence in different arenas. And most importantly, for institutionalised mechanisms and rules for permanent citizen participation, strategic urban planning brings about changes in the institutional context, which is a determining factor for monitoring, feedback and supervising the results of the Plan (Albrechts, 2010; Halla, 2007; Steinberg, 2005).

Knowledge Based Strategic Planning

Knowledge production is dominantly an urban phenomena and 21st century is the "Century of knowledge cities". Knowledge-based strategic planning; is a planning and implementation instrument of knowledge-based urban development. It is a powerful strategy for sustainable economic, social and urban growth (Yigitcanlar and Velibeyoglu, 2008). It works with an economic development strategy (Lever, 2002), with special focus to increase the skills and knowledge of residents as a means for human and social development (Ovalle et al., 2004). It builds a strong spatial relationship among urban development clusters to augment the knowledge spill-over effect that contributes significantly to the engineering of creative urban regions (Yigitcanlar et al., 2008). Knowledge infrastructure e.g. universities and research and

development institutes are necessary for the concentration of well-educated people; technological infrastructure; and connections to global economy for trade and investment, are pre-requisite to compete at national as well as international level (Yigitcanlar, 2009). Knowledge based strategic planning establishes the rule of ideas for the infinite recipes for innovation and wealth creation (Yigitcanlar, 2009). To establish sustainable communities, social and human development programmes focus to develop intangible assets in the community such as inclusion, tolerance, public participation, and democratic governance, which do not depreciate through use but rather become more valuable the more they are used (Laszlo and Laszlo, 2007; Yigitcanlar, 2009). Knowledge based urban planning creates high value-added products for the economic strength of the city by using research, technology, and brainpower. Its social benefits extend beyond aggregate economic growth. It creates a resilient form of urban development secured in a network of connections anchored at local, regional, national and global coordinates. And it generates a quality of life and place, distinct not only in the level of public services but also by the conservation and development of the cultural, aesthetic and ecological values (Yigitcanlar, 2009). Now creative urban regions are becoming the localities of key knowledge community precincts and knowledge clusters across the globe (e.g. Silicon Valley and DNA Valley) (Yigitcanlar, 2009). Knowledge-based strategic planning still needs to be further developed as a strategic decision-making mechanism to allow creativity and knowledge that appreciates the value of spontaneity and resilience among the main drivers of urban governance, management and change (Yigitcanlar and Velibeyoglu, 2008).

Urban Pedagogy

Place matters in different ways, which have yet to be fully appreciated and incorporated into how planners teach place. For a broader understanding of towns, cities and regions, current planning pedagogy combines two major streams of knowledge: an extension of architecture, with the major focus on physical and land use planning and stream of knowledge drawn from economics in particular and from social sciences in general (Mahadevia and Joshi, 2009). So contemporary planning education is driven by the markets and it moves away from critical discourse, focusing on the relevance of policies, efficiency of tools or exclusions in the implementation process. But it needs to directly adopt the Bottom-up Approach to provide answers to the processes of subversions and marginalizations going on in the cities of the developing countries. More participatory methodologies need to be adopted, while taking

decisions about urban space (Mahadevia and Joshi, 2009). Active learning environments enhance the educational experience through innovative and engaging pedagogy that stress inquiry from students' own questions and inquisitive nature rather than top-down transmission of knowledge by authority figures (Corey, 2010). The increasing intractability of the conditions that result in the growth or decline of the city and the sensory nature of the urban experience call for the adoption of appropriate teaching procedures that help capture the dynamics of the urban landscape (Arefi and Triantafillou, 2005).

Future perspectives

The rigid and time consuming master plan approach needs to be replaced by a workable alternative. Master plans should be able to show what integration and forethought can they achieve in terms of resolving urgent needs of the city, while economizing on limited funds and mobilizing resources through partnerships (Jamal, 2009). The role of governments in city development should be of an enabler and catalyst and it should lay down broad parameters and regulations for land development and formulate important mechanisms (Ansari, 2000). The quality of urban governance should be improved with the increase in participation of people through their elected representatives at all tiers of government and more so at the grassroots level (Ansari, 2001). Participation of community, academia, service providers, community groups and civil society makes a marked difference in the improvement of human conditions (Ompad et al., 2007). Stakeholders and the community are the heart of any local development effort. Therefore urban planners have the responsibility of giving stakeholders sufficient access to decision-making and have to consider their interests (Forester, 1999; Innes, 1995). Concerted government efforts with long-term commitment at the highest political levels are required to reduce poverty and deprivation in the city. With the combinations of tools and innovative methods, productive employment opportunities need to be created in rural areas in order to combat an unsustainable migration from rural to urban centres. Socially equitable investment in health and education, land ownership, and income opportunities enable low-income groups to improve their standard of living. Housing finance instruments are needed for the urban poor which better suits their financial realities. More investment in the social capital of the city would open the doors for scaling up existing interventions and potential new interventions. A land information system is desperately needed to facilitate the generation and exchange of information between users and providers. Simplifications and rationalization of the complex

web of laws, institutions and procedures governing tenure rights, transaction and registration procedures, regulatory mechanisms, and development of land for urban uses can make a lot of things very easy. Solid steps should be taken for monitoring, evaluation and research on urban development and management.

The future of urban sustainability can only succeed when there is integration of environmental thinking into mainstream economic and development decisions (Ooi, 2009). less paved areas should be encouraged, with work on urban landscape, revitalization of urban watersheds, restoration of wetlands, brown field sites and abandoned waterfronts (Jamal, 2009). Urbanisation should not replace the best agricultural land. The concept of integrated land-use planning should be integrated with the mainstream city planning (Roy, 2009). Eco-technology, eco-cities and bio-architecture concept need to be implemented more earnestly (Jamal, 2009).

At present there is a need to ponder over the poor state of the planning profession and education in South Asia as well as all the developing world (Jamal, 2009), and above all, changes should be brought about in the nature of planning education. Urban Planning is for public good, so planning education needs to reflect these values in the society; decided by the society organized on the principles of democracy and justice (Mahadevia and Joshi, 2009). Knowledge based urban planning could potentially, bring both economic prosperity and sustainable socio-spatial order to the contemporary city. It needs a broad intellectual team with expertise in urban development, urban studies, planning and management, socio-economic development, models of intellectual capital and knowledge management (Yigitcanlar, 2009).

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