

Unplanned urbanisation in South African cities: the emergence of urban environmental problems

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Abstract

The paper aims to assess the effective ways of planning for urbanisation process in order to resolve the manifestation of environmental challenges in urban areas. Globally, the proportion of rural-urban migration has resulted in the densification of urban population in the pursuit for better living standards, employment, better health services and better education. The densification has posed deleterious effects on the urban environment. In most South African cities, the environmental adversities happened without effective institutions to manage these problems, thus posing a serious threat to humanity. Hence, cities became homes to multifaceted environmental challenges such as high level of congestion (both traffic and population congestion), unsustainable consumption of scarce resources, mushrooming of informal settlements and climate variability. Urbanisation process then become a “good devil” (urbanisation has been instrumental in facilitating economic growth at the same time having profound negative effects on the environment). These paradoxes of cities make urbanisation a complex phenomenon to plan and manage. With regard to the continuous densification of urban population, the question is, what obscured urban planning to envisage these emerging urban challenges? These agreements signaled the end of fossil fuel era, and with the world rapidly moving away from the usage of coal, oil and gas to clean energy sources. The promotion of clean energy sources will reduce some of the environmental problems.

The paper argues that there is an agent need for effective planning and management of urbanisation to mitigate the brown environmental problems. The paper concludes that the collaboration between the municipalities and the urban residents holds the potential to mitigate the adverse effects of urbanisation on the environment.

Introduction

The global community has witnessed an unmatched increase in the proportion of urban population over the past decades (Roy, 2009; Shen and Zhou, 2014; Zhang, 2015; Cobbinah and Darkwah, 2016; Cobbinah and Nimminga-Beka, 2017). Globally, the proportion of rural-urban migration has resulted in the densification of urban population in pursuit for better living standards, employment, better health services and better education. An increased urban population has the capacity to pose deleterious effects the environment. It has been projected that by the year 2050 more than 75% of the world's population will be located in urban areas with more than 80% of the growth located in developing countries (Roy, 2009). These do not only pose serious demographic challenges in terms of housing the increasing urban population, but pose a serious question about the ability of the country to achieve sustainable development. This means that developing countries harbour the fastest growing cities in the world in terms of demography. Despite this projection, currently more than 50% of the world's population is located in urban areas (National Urban Development Framework (NUDF), 2009; Zhang, 2015). An increasing rate of urbanisation has increased the consumption of scarce resources. Further, high consumption of energy in cities has increased the use of fossil fuel for generating electricity in order to meet the demand, which has the potential to add to

various environmental issues such as climate change. Furthermore, urban areas are currently consuming more than 75% of the world's resources and are responsible for more than 75% of waste production (Roy, 2009). If the current consumption of resources is at 75% while the population is at 50% in the cities, then the projected population pose a blurry picture of urban inhabitation. This means that in the coming the years, the consumption of resources and the production of waste will substantially increase if the current institutions and legislative frameworks are not improved in order to effectively plan for and manage the process of urbanisation in both developing and developed countries. The densification of urban population and intensification of scarce resources consumption paints an unsustainable picture of urbanisation, particularly in developing countries such as South Africa. With regard to all these projections that have published, what is the role of local government or development planning in planning and management of urbanisation in order to circumvent this deleterious ramification on the environment?

The rising urban population density coupled with the increase in consumption and waste production provokes a dark and unsustainable side of urbanisation. While urban areas have waste management systems, the management practices do not cover all types of settlements around urban setting in which by definition informal settlements falls under. The lack of proper waste management practices within unplanned settlements continue to degrade the environment and thereby producing gases that are harmful to the atmosphere (Moriarty and Honnery, 2015; Shen, Ochoa, Zhang and Yi, 2013; Lawson, 2016; Meerow, Newell and Stults, 2016; Meerow and Newell, 2017). The environmental problems that South African cities are confronted with, demonstrate that urbanisation continue to overwhelm urban planning, and therefore fail to provide pragmatic solution to the contemporary urban challenges. This question is, why is urban planning or development planning failing to provide solutions to these emerging environmental problems? Can this be attributed to the lack of capacity or political will of the application of the notion "business as usual" type of attitude? The convolution of the benefits and challenges of urbanisation be it political, social, demographic and cultural dimension portrays its planning and management complexity. Despite the complex nature of urbanisation, it has been argued that the morphology and management of cities are controlled by the type of policy intervention employed. Local government's policy intervention provides an important tool to plan for and manage urbanisation in order to mitigate the adversities of environmental problems (NUDF, 2009; IUDF, 2014). This paper probes the following themes: the conceptualisation of urbanisation and its different forms in order to provide an understanding of the concept within a South African context, the South African context of the urbanising cities, exploration of the current praxis of planning for urbanisation process, urbanisation process and brown environment problems in South Africa. The paper will then go on to propose effective ways to enhance planning and management urbanisation to mitigate brown environmental problems, followed by concluding remarks.

Conceptualisation of Urbanisation

Urbanisation is arguably the most complex yet important socio-economic phenomenon in the 20th and 21st centuries (Allen, 2009; Zhang, 2015; Cobbinah and Darkwah, 2016; Cobbinah and Niminga-Beka, 2017). The complexity of urbanisation is rooted on the paradoxical nature of the concept. The densification of urban population is a result of the influx of people from rural to urban areas in search for economic activities and settlement, and this phenomenon is commonly referred to as urbanisation (Meerow *et al.*, 2016; Meerow and Newell, 2017). Other scholars define urbanisation as the increase in the proportion of people living in urban areas caused by rural-urban migration and immigration (Barber, 2000; Roy, 2009; Shen *et al.*, 2013; Zhang, 2014). Urbanisation is an important phenomenon in the improvement of the country's economic growth (Allen, 2009). The National Urban Development Framework (2009) states that urbanisation is an inevitable process and that there is no evidence of any country with high economic growth which is not urbanised. The idea of economic growth is important in unpacking urbanisation because of the intrinsic relation it has with

urbanisation. Another important characteristic of urbanisation is that the major proportion of the population manifests itself in cities of developing countries (Brand, 2000, Allen, 2009, Roy, 2009; Robbins and Culwick, 2015).

In most developed countries, urbanisation took place through rapid industrialisation and economic efficiency (Zhang, 2016). The same was true for most European countries during the 19th and the first half of 20th centuries (UN-Habitat, 2011; Wüstemann, Bonn, Albert, Bertram, Biber-Freudenberger, Dehnhardt, Döring, Elsasser, Hartje, Mehl and Kantelhardt, 2017). In developed countries, urbanisation has become one of the most profound forces to drive the global economy (Zhang, 2016). Huang, Huang, Lin, Chen, Gao and Cui (2017) posited that urbanisation in China was characterised by large scale construction activities. The resultant of these large scale construction in cities was the expansion of urban areas to accommodate urban population. As the city expands, many environmental problems arise (Meerow *et al.*, 2016; Huang *et al.*, 2017) such as pollution (air and water) and climate change. Therefore, one striking character of urbanisation is its potentiality to result in both economic growth and environmental problems in urban areas. Urban population in developing countries, portray an antagonistic character to that in developed countries. In developing countries like South Africa, Nigeria and Ghana, urbanisation has been characterised by economic inefficiency, infrastructure development and industrialisation. Therefore, this antagonistic character of urbanisation in developing and developed countries is profound in the expedition to understand the phenomenon. Thus, in order to understand urbanisation in developing countries, it is profound to probe in the South African context. Urbanisation can be defined as a process of increasing concentration of population in densely built-up areas such as cities which is characterised by industrialisation, economic growth and increasing job opportunity (Wikstrom and Dolmen, 2001). According to Cobbinah, Erdiaw-Kwasie and Amoateng (2015: 62) urbanisation can be understood as “a demographic, ecological, sociological, and economic phenomenon that concentrates population in urban areas and has the potential to either stimulate or retard growth and development of these areas - towns, cities, metropolis, mega cities, megalopolis - in both developed and developing countries”.

The South African Context

During the apartheid regime, government policies in urban areas controlled the movement of blacks, coloured and other designated groups residing in urban areas through the use of Groups Area Act of 1945. Therefore, blacks and all non-white South African population were forced to settle in the outskirts of the main cities called townships. With the apartheid government relaxing the urbanisation policy, South Africa was confronted with an unmatched deluge of people into the city (Steyn, 2007). Urban population was immediately confronted with various socio-economic challenges (Steyn, 2007) such as urban poverty, lack of housing, unemployment, lack of proper sanitation and congestion. The inability of the ruling party to house the ever-increasing urban population, resulted in many people opting for land invasion (Oelofse and Dodson, 1997). Consequently, the mushrooming of informal settlements became a new character of most South African cities. Thus, some of the environmental problems the country is facing now are as a result of the type of planning system practiced prior to 1994 in South Africa.

The South African cities are increasingly growing in both size and population, a phenomenon which presents a very serious and important dimension of the cities (IUDF, 2014; Robbins and Culwick, 2015). In 2003, almost 63% of South African population resided in urban areas from 43% in 1994 (IUDF, 2014). This evidence suggests that the level and the rate of resources consumption in South Africa will continue to rise. The rising level of resource consumption has the potential to increase GHG emissions which pose a serious threat to gaseous atmospheric balance, thereby resulting in climate change or variability (Wikstrom and Dolmen, 2001; Cobbinah *et al.*, 2015; de Almeida, Olímpio, Pantalena, de Almeida and Soares, 2016). Gauteng is the most populated province in South Africa with the population estimated to be 13 million, while in terms of size it is the smallest

in the country (Stats SA, 2014). With regard to the economic efficiency in Johannesburg, various environmental problems arise such as water and air pollution, climate change and heat wave. Furthermore, with the rising density of the population, Johannesburg is the most populated city in South Africa. As a result, it is confronted with various problems such as traffic congestion, air pollution, high GHG emissions and most importantly the changing weather patterns. The fact that many provinces are losing people to Gauteng province, some of the cities or towns are attracting migrants because of the creation of mining towns and various other growth points (NUDF, 2014). Thus, the increasing proportion of urban population resulted in high consumption of scarce resources such as land, water, energy and increasing production of waste (IUDF, 2014; Robbins and Culwick, 2015), thus producing high level of waste. Consequently, urban areas do not only grow in population, but equally in size. Thus, in order to cater to the densely populated urban centres, high levels of deforestation occur. Consequently, the level of deforestation increases the amount of GHG emissions into the atmosphere. Therefore, a thorough understanding of the notion of urbanisation presents local government with the potential to improve planning and management of the environment in urban areas.

Disintegration in Managing Environmental Problems in Urban Areas

South Africa is divided into three distinct hierarchies which are the national, provincial and local government, with each of them having its own Constitutional obligations (The Constitution of South Africa, 1996 henceforth referred to as the Constitution). The Constitution (1996) states that the national government holds the primary responsibility of making decisions regarding economy and environmental concerns (Robbins and Culwick, 2015). Although other spheres of government do not have constitutional influence in the decision making of economic and environmental concerns, the provincial sphere is constitutionally mandated to uphold the management of the environment (Robbins and Culwick, 2015). However, local government been the lowest level of government which holds implementation mandate remain excluded in the decision making about the environment. The lack of involvement of local and provincial governments in decision making, while the provinces have the obligation to manage the environment creates a certain level of disengagement in planning and management of the environment. South Africa has developed institutions to help with management of the environment. However, this institutional arrangement has demonstrated a very centralised or top-down approach to planning for and management of the environment (Cobbinah *et al.*, 2015; Cobbinah and Darkwah, 2016; Cobbinah, and Nimminga-Beka, 2017). Therefore, the application of multilevel governance in planning presents a new light in the management of the environment. This connotes that the national, provincial, local government, communities and other stakeholders to take central role in planning for and management of the environment.

The amalgamation of the notion of environmental management in urban planning and the promotion of green growth has permeated most provincial and local government regulations. These policies include the Ten-year Innovation Plan; the Integrated Resource Plan, 2010- 2030; The New Growth Path and also the National Climate Change Response White Paper, 2011. The policy responses were strengthened by the National Urban Development Framework (2009) and the Integrated Urban Development Framework (2014) in order to effectively plan and manage the urbanisation process. Thus, these legislative prescripts demonstrate the commitment of the South African government in the management of brown environmental problems. Although there are legislative prescripts that try to address the urban environmental problems, some of the South African cities remain populated and congested (Johannesburg, Cape Town, Durban, Pretoria and Polokwane). The densification of urban population poses deleterious challenges in the planning and management of urbanisation. The complexity of planning for and managing urbanisation provokes a notion of failing legislative prescripts to resolve urban challenges. Does South Africa have a problem with legislations or the implementation capacity or the institutional capacity to manage urbanisation. Policy intervention which have the potentiality to shape the city remain contested in South Africa.

Despite this commitment, cities continue to harbour vast amount of environmental problems. IUDF (2014: 19) identified various challenges that South African cities face in pursuit to resolve environmental problems as follows:

- The lack of capacity in policy implementation of policies;
- The environmental management;
- Inadequacy of institutional placement of disaster management function in the provincial departments and municipalities;
- Inadequate funding for proactive risk reduction planning and activities
- Lack of capacity to integrate disaster risk reduction into the day-to-day operation and planning or organs of state; and
- Limited technical expertise and capacity to promote integration particularly at the local government.

These challenges present a daunting picture of the environmental adversities urban areas continue to face on the day-to-day basis. This shows that South African cities like Johannesburg, Pretoria, Durban, Cape Town and others are facing a growing predicament of environmental self-distracted. With the influx of people into urban centres, proper management of this process is required. A multilevel governance approach to both planning for and management of urbanisation is urgently required. The application of multilevel governance has the potential to change the current planning praxis for urbanisation the continue to proof ineffective in the management of the environment in urban areas.

The Contemporary Planning Praxis for Urbanisation

During the apartheid regime in South Africa, development was centralised in the national government (Davids, Theron, Maphunye, 2009). The separate development practised during the apartheid regime (Davids *et al.*, 2009) made it difficult for most people to affect decision during planning process, thereby failing to provide an integrated and coherent approach to planning. However, as mentioned before, the relaxation of urbanisation policy has resulted in the unmatched rural-urban migration. The dawn of democracy was immediately confronted with a daunting challenge to address urban environmental problems. Consequently, the realisation of the negative environmental challenges posed by urbanisation forced the national government to promulgate various legislative frameworks as a plan to mitigate these adversities. Robbins and Culwick (2015) indicated that there is a plethora of legislative prescripts promulgated to manage the impact of urbanisation in various municipalities.

Globally, cities are the root cause in the promotion of economic growth in the countries. However, as mentioned above, the promotion of urbanisation in improving the economic growth has resulted in adverse environmental problems. Cities are pursuing a market oriented development framework (Vasilevska, Vranic and Morinkovic, 2014; King, D, King, Gurtner, Gurtner, Firdaus, Firdaus, Harwood, Harwood, Cottrell and Cottrell, 2016). This development ideology has resulted in land degradation and disappearance of urban open spaces (Vasilevska *et al.*, 2014). The market oriented development ideology is practised with no regard for the present and future social and environmental needs of the inhabitants. The current environmental status presents a daunting challenge in the quest to achieve sustainable development (Kings *et al.*, 2016). This is reflected in the inability to implement the legislative frameworks and policies promulgated to plan and manage the process of urbanisation. Thus, it can be stated that the promotion of urbanisation occurs at the expense of the environment. This is echoed by the IUDF (2014: 10) that "South African urban areas are profoundly resource intensive, highly polluted, and wasteful". Therefore, the conventional institutions that are put in place in order to plan and manage the environment are not adequately implemented in order to circumvent the emerging environmental adversities like climate change.

Robbins and Culwick (2015) stated that the national government is responsible for the environmental decision making while the provincial government is responsible for managing the environment. The environmental decision making and management are still rooted in the national and provincial governments. Despite the decentralisation of decision making from national to local government, the environmental planning and management remain centralised and top-down. The exclusion of various stakeholders like the communities, NGOs, industries and other departments that are affected by the environment demonstrate a planning system practiced prior the dawn of South African democracy. The manifestation of the top-down planning approach in urban areas failed to bear fruits in solving environmental problems concomitant with urbanisation processes. The dearth of institutional commitment and political will in integrating stakeholders in the management of urbanisation perpetuate the proliferation of environmental problems. Therefore, urban planning approaches in South Africa provide inefficient or rather inadequate methods to address urban environmental problems concomitant with urbanisation. Ogbazi (2013: 110) posited that the "unplanned rapid expansion" pose sustainable development challenges. This is echoed by the NUDF (2009), which points out that South African cities are resource intensive and highly polluted which threatens the achievement of sustainable development. Therefore, the inclusion of all stakeholders in planning for and management of the environment has the potential to reduce the current resource intensive attitude that people harbour.

For many years, South Africa has endured pain and discrimination due to the colonial planning systems (Steyn, 2007). The top-down planning approach was very instrumental in limiting the influx of people into urban centres (Ogbazi, 2013; Robbins and Culwick, 2015; Lawson, 2016). However, 24 years into democracy the fragments of the same planning remain the cornerstone of planning in South Africa. The application of top-down approach in the democratic era has however not yielded positive results (Lawson, 2016). The top-down approach ensured that the government is the sole decision maker in the management of and planning of urbanisation processes (Cobbinah, Erdiaw-Kwasie and Amoateng, 2015; Cobbinah and Darkwah, 2016; Cobbinah, and Nimminga-Beka, 2017). Therefore, it can be argued that the increased rate of urbanisation in South Africa took place without effective institutions to facilitate the process of planning and management of the complex process. Ogbazi (2013: 110) maintain that "the challenges of the recent rate of urbanisation are shown to have overwhelmed African cities' capacity to manage them using the inherited and unreformed planning system of the colonial era". South African government inherited a top-down planning system without having an unambiguous knowledge on to change and implement the new bottom-up approach. Despite the promulgation of legislation, the development of a new bottom-up approach only remain rhetoric without pragmatic evidence to supports it. Alongside the Ogbazi's (2013) notion of planning in the city, South Africa's planning for and management of urbanisation remains rooted in the colonial ideologies of urban planning. This was echoed by hierarchical planning and management approaches entrenched in the three spheres of government (Robbins and Culwick, 2015; Lawson, 2016). The colonial planning and management of urbanisation continue to demonstrate its inability to address urban environment issues. Thus, a call for bottom-up approach is important in planning and management of urbanisation in order to mitigate the adversities that cities face.

The integration of public opinion into planning and management is necessary in the quest to win the war against urban environmental problems. The lack of effective planning and management of urbanisation process causes environmental problems (Allen, 2009; Roy, 2009; Cobbinah *et al.*, 2015; Cobbinah and Darkwah, 2016; Zhang, 2016; Cobbinah, and Nimminga-Beka, 2017; Huang *et al.*, 2017). While most cities in South Africa have experienced increasing urban environmental problems, some have endured the harshest brunt of the changing urban weather. Thus, it becomes imperative to discuss the interface between urbanisation and urban environmental problems.

Unsustainable Urbanisation and Urban Environmental Problems

The United Nations Conference on Environment and Development (UNCED) in the early 1990s showed that sustainable development is not simply a new way to describe environmental protection, but a new concept of economic growth, which provides for fairness and opportunities for all people to live in the world without destroying the natural resources and further compromising the carrying capacity of the globe (Shen *et al.*, 2013). Urban planning is one of the few professions with specific remit to encompass these areas of need – economic, environment and social – thus should play a central role in the quest to strike a balance between these areas and find innovative ways to curb urban environmental problems (UN-Habitat, 2011). Thus, urban planning becomes very instrumental in finding new innovative ways in mitigating environmental challenges and integrating solutions to strive towards effective ways of planning for and management of urbanisation and its ramifications thereof. However, a closer scrutiny not just at the macro scale, but at the nature of contemporary population trends in the cities reveals that these do not simply imply that most of the population will be located in cities of developing countries, but that urbanisation does and will continue to have a profound significant impact on the carrying capacity of the earth (Allen, 2009). The increasing global population will dramatically increase the consumption of resources and the production of wastes (Roy, 2009; Wüstemann *et al.*, 2017). The current urban areas are consuming more than 75% of resource and producing over 75% of wastes. Therefore, the projected global population trends paint an unsustainable nature of urbanisation, particularly in developing countries. These profound impacts continue to urge urban planning to mitigate the impacts. Oghazi (2013) argued that the manifestation of adverse environmental problems in the cities confirms that the urban planning approach failed to plan and manage urbanisation.

Ogbazi (2013) posited that the conventional planning and management practices in cities has proved to be ineffective in the global South. The failure in planning for and management of urbanisation in mitigating the environmental problems in urban areas calls for a rethinking in the planning and management paradigm practised in the cities. The inability to plan for the ever-increasing urban population has resulted in traffic congestion, high emissions, air pollution, high production of waste and unsustainable level of consumptions (Brand, 2000; Allen, 2009; NUDEF, 2009; Moriarty and Honnery, 2015; Zhang, 2015). This unsustainable levels of resource consumption coupled with the current effects of climate change will continue to overwhelm development planning in urban areas. Currently, South Africa – western cape province – is facing the worst draught with dams having dried out and the province approaching “day zero” (zero provision of water if people do not use the scarce resource sparingly). Furthermore, the continued increase in the level of emission has affected the climate in a negative way (Mariarty and Honnery, 2015; Shen *et al.*, 2013). NUDEF (2009) and IUDEF (2014) have stated the effects urbanisation has caused the threat of the rising sea level, climate variability, increasing urban temperature and floods.

The increased urban temperature has been witnessed through a series of heat waves (NUDEF, 2009; Mariarty and Honnery, 2015; Morris, Chan, Salleh, Ooi, Oozer and Abakr, 2016). Thus, if certain countries experience the 2°C and the rise sea level, the countries will be wiped out from the face of the earth by water (Moriarty and Honnery, 2015, Morris *et al.*, 2016). Due to the fact that urbanisation is the contributing factor towards climate change, urban planning has a responsibility to manage and plan for urbanisation in order to mitigate challenges. The increasing temperature in the cities to date is responsible for various health problems that urban population faces (Mariarty and Honnery, 2015). Allen (2009) acknowledged that planning for and management of urbanisation remains a tricky and complex to comprehend and implement in the cities. Therefore, it has been argued that, if the fight against climate change is to be won, it will surely be won in the cities of developing countries (Allen, 2009; Moriarty and Honnery, 2015).

Despite the notion that most cities in South Africa are determined to promote green growth, brown agenda remains important in the operation of the city and in generating economic growth (Lawson, 2016). However, urban planning must integrate these two different sets of environmental agendas such as brown agenda and green agenda (Allen, 2009; Roy, 2009; Lawson, 2016). The brown agenda is essential for the city work, for a healthy and livable environment, and for creating human and economic opportunities that have driven the city throughout history. In the process of making the city operational, the brown agenda is converted to wastes. The increase of waste in the city and the waste generated from the ever-increasing population poses a serious threat in managing and ensuring environmental protection.

Thus, urbanisation continues to have a catastrophic impact on the environment. The current trends of urbanisation demonstrate it as unsustainable. Thus, urban planning failed to envisage catastrophic problems associated with urbanisation processes. Therefore, an inability for urban planning to envisage and plan for the current situation the country is facing with regard to the environmental problems paint a blurry future in its ability to plan for the projected population trends. This shows that if the notion of sustainable development is to be achieved in South Africa, there is a requirement to change the conventional planning and consumption praxis to a more inclusive and proactive planning system. Despite the important role urbanisation plays in the economic sphere, it remains a "good evil". Often, the wastes produced in urban areas are transported to distant locations for disposal. This means that the origin of food, energy and the destination of waste remain invisible amongst the urban population thus, resulting in the creation of dependencies that might not be ecological or geographically stable, secure and sustainable (Allen, 2009). Allen (2009) continued to point out that the problem is that the limits imposed by the expansion of the ecological footprint do not become evident until they are translated into local impacts, such as increased environmental diseases, energy price hike and food prices. Therefore, the environmentally induced challenges show that the increasing proportion of humanity in a defined location poses deleterious effects on their own lives. Humanity is currently posing serious threats on urban population and the environment.

Changing the Conventional Environmental Management Praxis within Local Government

The proliferation of environmental problems and the complexities in planning for and management of urbanisation demands a paradigm shift in urban planning. It has been argued that policy plays a profound role in shaping and managing the cities. IUDF (2014) and Robbins and Culwick (2015) posited that South Africa has an excellent legislative framework to planning for and management of adversities in the cities. However, Tsheola, Ramonyai and Segage (2014) stated that the notion of "goodness" must be based on the pragmatic evidence and tested on the ground. Despite the notion of "goodness" that the legislative prescripts hold theoretically, its pragmatism is yet to be realised on the ground. The fact that the urban environmental problems continue to manifest in South Africa - despite the excellent legislation that have the potential to shape towns and cities - calls for paradigm shift.

Urban planning is confronted with a complex phenomenon that continues to demonstrate paradoxical ramifications. The current role of urban planning in enhancing sustainable urbanisation require innovative approaches in solving the urban challenges. The application of top-down planning ideologies might be confronted with the problem of non-compliance, resistance and difficulty in the implementation of the plan. However, the involvement of the urban population in the decision making about matters that concern their environment might have a far reaching impact in the reduction of waste, pollution, changing consumption activities and the changing ideologies towards public transport usage in the expedition to reduce pollution. Thus, the participatory planning approach integrates the ideas of the communities and urban planning in finding innovative ways to plan for and manage urbanisation in mitigating its adverse effects. An international experience drawn from cities like Barcelona show that the participatory approach in the planning

and management of the adversities of urbanisation has yielded positive results (Shen, Ochoa, Shah and Zhang, 2011). The current resource consumption, waste production, energy use both within households and industrial offices can be attributed to lack of knowledge on the impact that climate change has on humanity. The promotion of sustainable urbanisation is profound in South African cities as it integrates social, economic, governance and environmental concerns into planning.

In South Africa, the purpose of National Development Plan (NDP) 2030 is to promote a livable city (sustainable urban development). However, NDP failed to acknowledge that the current trends of urbanisation are not sustainable. Therefore, unsustainable urbanisation will make it difficult to achieve the livable city. However, proper planning for and management of urbanisation is the most proactive measure in mitigating the adverse impact that cities continue to face. This participatory planning approach connotes that urban planning face a daunting challenge of learning from the community in pursuit to management of the environmental problems. This integration between the community and government can be done through administering a questionnaire distributed to the stakeholders within urban setting. Ogbazi (2013: 115) stated that “the contributing factors include strong government commitment, support of private and community organisations, information and education, a strong core of change agents and funding as a key factors to focus” in most South African cities.

Majority of urban population are in the dark with regards to the municipal operation in the management and planning for urbanisation and addressing the adverse impact on the environment. In urban areas, because of the lack of affordability problem, urban dwellers tend to use a lot of resources, electricity, a lot of water for swimming pools and heavy reliance on private transportation. These occurrences connote that majority of urban dwellers live their lavish lifestyle without thorough knowledge or consideration of the adverse impact the current consumption trends pose on the environment and subsequently the achievement of sustainable development. Without proper planning and management of urbanisation and the challenges associated with it, the concept of sustainable development will continue to evade most development and urban planning. Thus, back to basics approach connotes that there must be collaboration between urban planning, communities and all concerned stakeholders in order to effectively plan and manage urbanisation to mitigate the ramifications that come with it. The environmental concern remains that most important goal for urban planning.

Conclusion

The unprecedented influx of people into urban centres poses a serious threat to the environment. South African cities are increasingly becoming polluted and very urbanized. The manifestation of this unplanned and unmanaged process might pose catastrophic ramifications on humanity and polluting the environment beyond its assimilative capacity to cleanse itself. The previous top-down planning approach in the management of urbanisation has not yielded results in its capacity to resolve the environmental problems. Thus, the involvement of the urban population does not only promote good governance and improve the planning processes, again it serves as an awareness to the public about the impact of the urbanisation process on the environment. Adopting a bottom up planning approach will enable collaboration between urban planning and the residents, which should ease some of the problems created by urbanisation.

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