South African CitiesNetwork

Series of Papers on Rural-Urban Linkages:

Planning and Governance Challenges of Cities with Extensive Rural Geographies

CONTENTS

1. Background

This report is submitted in response to the Terms of Reference issued by South African Cities Network (SACN) for a Service Provider to undertake a consolidation of a study on rural-urban linkages which is focussed on South African metropolitan areas with vast rural geographies. The context for this investigation is that the boundaries of certain South African metropolitan areas now incorporate vast rural spaces which pose particular issues for planning and governance. Both Giraut and Maharaj (2002) and Chirisa (2010) draw attention to the contested nature of territorial restructuring which occurred in South Africa with many cities opposed to the spatial extension of their boundaries because of the costs of extending services and infrastructure to the deprived margins. Nevertheless, the demarcation of the boundaries of South African municipalities which occurred in 2000 resulted in several of the country's metropolitan areas containing extensive rural geographies.

The importance for SACN of understanding and planning for rural-urban interdependencies within South African metropolitan areas is reflected in the commissioning of evidenced-based research on three metropolitan municipalities, namely Buffalo City, eThekwini and Tshwane. Each of these three metropolitan municipalities are characterised by extensive rural geographies. It is observed, for example, that Ethekwini's spatial footprint is approximately 67 percent 'rural' (Roberts and O'Donoghue, 2013). This area which spans 1500 square kilometres and with a population of at least 600 000 poses a set of highly distinct challenges for "urban" planning. Tshwane and Buffalo City are two other South African metropolitan areas that incorporate extended rural spaces. In the case of Tshwane approximately 35 percent of its land area is considered as rural; in Buffalo City it is estimated by metropolitan stakeholders that almost two-thirds of its spatial area is rural in character. The core aim of this project is to consolidate the preliminary findings that have emerged from these investigations and formed an incomplete report on rural-urban interdependencies within South African metropolitan areas. Further, the aim is to bring fresh insight in terms of new analysis that might be used to develop a set of findings and planning recommendations to take forward. This report is based upon the following methodological approach. The core approach is to address the absence in the earlier SACN investigations of any broad context of rural-urban linkages within metropolitan areas through a desk top analysis of international research which the existing study has not tapped into.

At the international scale it must be recognised that South African cities are not alone in the global South in terms of having to govern and plan for changing rural spaces. Currently, there are several Asian, African as well as Latin American cities which are confronting the challenges of planning and governance issues in respect of incorporating considerable expanses of rural areas. By undertaking an international and local scan of literature a range of issues emerge in relation to rural-urban linkages within metropolitan areas. The approach to this consolidated study is therefore to provide a broadened perspective on questions of rural-urban linkages as a basis for threading in the findings from the SACN empirical city case studies. Overall the SACN material on infrastructural provision is situated so as to represent one facet of a much larger range of issues facing South African metropolitan municipalities which are characterised by extensive rural geographies.

The organization of this report is as follows:

- Section two draws from international literature on essential definitional issues around the urban-rural dichotomy and directs attention in particular to the characteristics of the critical zone known as the peri-urban interface which embodies a complex of planning challenges for cities that contain extensive rural geographies.

- Section three offers a desk-top review of the international debates concerning planning challenges about the peri-urban interface in so-termed 'extended cities' or 'extended metropolitan areas' in the global South.

- Section four turns to examine existing available South African material on the planning and governance challenges of cities with extensive rural geographies. This section of the report draws upon inter alia, a mix of planning reports accessed through metropolitan municipalities, the empirical investigations produced for SACN on infrastructural challenges in Buffalo City, eThekwini and Tshwane and additional key stakeholder interviews conducted for this report with officials in both eThekwini and Tshwane metropolitan areas.

- Based upon the body of reviewed local and international evidence Section Five provides a set of concluding reflections and recommendations concerning the governance and planning challenges for cities that incorporate extensive rural spaces.

2. The Peri-Urban Interface: A Critical Zone for Cities with Extensive Rural Geographies

Among others Simon (2008: 167) argues that conventionally social scientists and policy-makers concerned with the nexus between urban areas and their rural hinterlands relied on a simple urban-rural dichotomy. It is contended that implicit in this urban-rural dichotomization of space is "the idea that urban and rural areas were characterized by very different land-use patterns and human behaviors and that the boundaries between these spaces and places were easily discernible and clear-cut" (Simon, 2008: 167). Usually distinctions are made between urban and rural spaces which "assume reducibility of the livelihoods or their inhabitants to two main categories agriculture-based in rural areas, and manufacture and services in urban centres" (Allen, 2010: 32).

The recent urbanization experiences of much of Asia and Latin America, however, does not support this neat categorization. The complex dynamics of urbanization in these areas are such that 'rural' and 'agricultural' do not necessarily overlap and that the conflation between urban and industrial is challenged by the increased mixing of farming and non-farming activities amongst both the urban and rural poor. Arguably, therefore, the urbanization process in the global South is being re-examined and re-conceptualised in light of new "emerging landscapes that challenge conventional definitions and perceptions of the city and countryside regarding location, physical structure, functional relation, institutional context and cultural outlook" (Allen, 2010: 32).

In groundbreaking research undertaken in the 1990s McGee (1991), McGee and Greenberg (1992) and Ginsburg et al. (1991) observed the rise of the so-termed 'extended metropolitan regions' or desakota regions of Asia. The latter is a Bhasha Indonesian term which means village-town (Moench and Gyawali, 2008). These areas are characterized by rapid growth and the spreading of urban activities into rural areas. Such areas are "regions in between" and refer to "closely interlinked rural/urban livelihoods, communication, transport and economic systems" (Moench and Gyawali, 2008: 2). Typically they consist of households where working members may be engaged in both rural agriculture as well as jobs, services, retail and manufacturing activities "that have historically been seen as more 'urban' occupations" (Moench and Gyawali, 2008: 2). This creates, as Simon (2008) observes, complex mosaics of juxtaposed activities which formerly were regarded as incompatible such as leisure-oriented golf courses proximate to rural villages. A number of writers have observed the desakota phenomenon in fast expanding metropolitan areas of Asia, such as Bangkok, Jakarta, Bandung or Manila (McGee and Greenberg, 1992; Firman and Dhatmapatni, 1995; Kelly, 1999; Rustiadi et al., 2015). As Woltjer (2014: 2) argues, this kind of physical phenomenon – namely the mixing of agricultural and non-agricultural activities - now is "also common to urban regions in China". Indeed, the World Bank's (2014) recent interrogation of the potential for inclusive and sustainable urbanization in China confirms the existence there of extended metropolitan regions. Lin (2001) on the Pearl River Delta, Sui and Zeng (2001) on Shenzhen, and Sun's (2012) analysis of Tianjin afford further evidence of the nature, existence and impacts of such extended metropolitan regions in China.

Moench and Gywalai (2008: 4) go so far as to assert that the desakota phenomenon "now dominates most of South Asia and many other parts of the less industrialized world". In the case of Latin American metropolitan areas Fadda et al (2000: 1) highlight the observed "extended city" of Santiago, Chile. From Latin America historical parallels have been drawn between writings about sustainable cities and the distinctive type of low-density urbanism in ancient Meso-America which include the practice of intensive agricultural cultivation within urban settlements (Isendahl and Smith, 2013). In addition, both Simon (2008) and Allen (2010) draw attention to a long history of intense integration of urban Latin America into the global economy which has produced comparable forms of "urban archipelago" to desakota regions and which are denoted by diffuse boundaries

and weakened official controls. Within Africa the work of Chirisa (2010) is especially notable for highlighting the significance of economically and socially marginal peri-urban zones which sometimes are de-coupled from economic development and thus scarred as places of potential disease outbreaks.

Several authors point out that basing planning and policy-making on the rural-urban dichotomy is increasingly "inadequate" (Marshall et al., 2009: 10). Allen (2010: 31) maintains that in the global South a dramatic urban transition is under way albeit "not necessarily a transition to full urban status in which urbanization spreads transforming the countryside"; rather what is occurring is best described as "a process of intensification of mutual rural-urban interactions leading to a still poorly understood spatial, socio-cultural, demographic, economic and environmental realities". Accordingly, the rural-urban dichotomy appears unable to account for emerging territorial landscapes in the global South "where the geographical borders of rural and urban intermingle to such a degree that distinguishing between them is difficult" (Allen, 2010: 31). Among development professionals and policymakers there is a growing recognition of the fact that rural and urban features tend to increasingly coexist within cities and that the urban-rural dichotomy which is so deeply ingrained in most planning systems is unable to deal with processes of contemporary urban change (Allen et al., 2006a: 20).

In seeking to address conceptually the new emerging landscapes of urban development across much of the global South there is an increasing focus on the notion of "peri-urban" as the best descriptor for areas that have mixed urban and rural features. Notwithstanding that the term peri-urban is contested and subject to different interpretations and meanings Woltjer (2014) considers that the terminology of 'peri-urban' areas captures the challenges of where urban and rural life meets. Nevertheless, Marshall et al. (2009: 3) assert that defining the 'peri-urban is fraught with conceptual difficulties' as it variously has been applied to designate a place, a concept and a process. Indeed, Allen (2003: 136) maintains that the peri-urban interface constitutes an "uneasy phenomenon" which is usually marked by either the loss 'rural' aspects (loss of fertile soil, agricultural land, natural landscape etc) or the absence of 'urban' attributes. Peri-urban communities exhibit a "dual urban-rural orientation" in social and economic terms and predominantly are undergoing rapid social change (Allen et al., 1999: 4).

At its heart the peri-urban is conceptualized as a heterogenous mix of urban and rural features. According to one group of scholars the peri-urban "is characterized by high and often increasing, population density, small landholdings, rich countryside homes, poor slums, diverse sources of income, a lack of regulation, contested land tenure rights, uncoordinated conversion of farmland to housing, pollution, environmental problems, intensified resource exploitation, considerable economic dynamism and a severe lack of service provision" (Marshall et al., 2009: 3). Elsewhere, Simon (2008: 167) views peri-urban zones as transitional zones between distinctly urban and clearly rural areas and argues that their significance lies in the fact that "their dynamic mix of functions and land uses; increasing population densities; growing significance as sources of urban food, construction materials, and other resources; as urban waste disposal or treatment sites; and as recreational zones". Overall, Allen (2010: 35) writes of the peri-urban interface as neither urban nor rural and from an ecological perspective represents "an interface or heterogeneous mosaic of natural, productive or agro-ecosystems and urban ecosystems, affected by material and energy flows demanded by urban and rural systems". This zone is particularly distinctive for the multiple challenges it poses for planning and governance "because of its ecological features, socio-economic heterogeneity and fragmented institutional context". In socio-economic terms the interface is mixed, fluid and subject to rapid change with the co-existence potentially of informal households, industrial entrepreneurs, and new migrants all with different and competing interests/perceptions within an institutional context of the absence of structures capable of addressing the linkages between so-termed urban and rural activities (Allen et al., 2006a; Allen, 2010). Among others both Marshall et al. (2009: 4) and Allen (2010) highlight the dynamic and shifting nature of the peri-urban phenomenon.

For cities in the global South with extended territorial boundaries that incorporate rural spaces the planning challenges related to peri-urban development are vital for urban management. In particular, what Allen (2010: 35) calls, the "shifting nature" of the peri-urban interface offers a suite of planning challenges which must necessarily be addressed also in the context of South Africa's 'éxtended cities'. The next section turns to

review the international literature and debates around the planning and governance challenges posed by the peri-urban interface.

3. Planning Challenges around the Peri-Urban Interface: International Debates

At the outset it must be acknowledged with Simon (2008) that peri-urban interface zones are not independent or isolated zones; rather they must be comprehended as dynamic and fluid interfaces between urban and rural relations. It is evident from a wide range of international scholarship that the peri-urban zone represents "a highly dynamic and complex system of land use", which exhibit the characteristics of an ecological and socio-economic interface (Allen et al., 1999). This said it is clear, as stressed by Thapa et al. (2010: 29) from a review of the international record, that the "dynamics of the peri-urban interface are not well understood, and there is a lack of analytical and management approaches to address key problems".

In one recent study conducted on peri-urban zones in China Sun (2012) maintains that international scholarship on peri-urban zones is focused on two major issues, namely socio-economic issues around poverty and environmental issues around pollution and land degradation. In addition, it is highlighted that the "problem of institutional fragmentation is also considered as relevant for understanding the emergence of social and environmental problems in the peri-urban interface" (Sun, 2012: 24).

3.1. Key Features and Policy Challenges

As a starting point, a listing of key features of this interface between urban and rural worlds can be drawn from the international literature. In total 15 sets of key features and their associated planning and governance challenges have been identified.

First, is that the peri-urban interface is a space that is impacted by urban expansion which can result in new economic opportunities, such as land speculation, but often at high environmental costs because of the lessening of essential ecological functions such as recycling of nutrients or replenishment of aquifers (Allen et al., 1999). Sun (2012: 27) makes the important observation that in many cases environmentally-protected areas, such as watersheds, can be severely impacted by the character of urban expansion such that "the loss of singular and habitat and biodiversity in these areas is often irreparable". Second, in these areas the management of natural resources is crucial as the peri-urban interface "plays an essential role in the provision of water to nearby urban and rural areas" not least because the interface is often the location of water supply facilities such as reservoirs (Allen et al., 2006a: 21). The mismanagement of water resources is a significant underpinning of ecological, economic and social problems around the use of water for economic or household purposes (Allen et al., 1999: 17).

Three, there is often an added pressure on existing ecosystems and hydrological regimes with, for example, the replacement of natural soil and vegetation by artificial impermeable surfaces (Allen et al., 1999). Four, conflicts emerge between numerous stakeholders over land and access to environmental resources. Land conversion from fields to urban housing may have severe consequences for poorer inhabitants (Simon, 2008). It is suggested even that in certain circumstances rapid land use changes witnessed in the peri-urban interface may precipitate an actual scarcity of land and a "dearth of agricultural by-products such as fuel and fodder making them less available to the peri-urban poor" (Allen et al., 2006a: 22). According to Simon (2008) the process by which land conversion occurs at the peri-urban interface is impacted by local institutional structures, land tenure systems and especially by the relative power of key stakeholders. In the context of Africa as well as parts of Asia peri-urban land often falls under the aegis of communal tenure and traditional structures. Around the peri-urban interface the dynamics of land use changes are driven by external decisions

such as the construction of new roads, dams or commercial property developments (Allen et al., 1999). In particular, in the context of the extended metropolitan regions of Asia Woltjer (2014) highlights the role of global capital and of foreign direct investment as a driving force in the dynamics of peri-urbanisation and peri-urban spaces.

Five, land values and ownership commonly are impacted by rapid changes often resulting in growing numbers of landless people as well as clashes between customary land management systems and market-driven land systems. Indeed, Thapa et al. (2010) draw attention to accompanying issues of increased social exclusion. Six, often so-termed traditional natural management systems are disrupted as extractive activities (such as brickmaking) are intensified and deforestation may be evidenced. Allen et al (1999: 20) identify the peri-urban interface as ""the prime area subjected to extraction of construction materials, which results in increasing natural resource depletion". Within the desakota regions of Asia traditional systems for forest, water and other natural resource management are under stress and in many cases are breaking down (Moench and Gyawalai, 2008: 5). Environmental degradation is a commonly observed phenomenon of the peri-urban interface (Thapa et al., 2010). In particular Simon (2008) draws attention to the fact that environmental issues figure prominently in the process of peri-urbanization and of the planning challenges of the peri-urban interface across the global South. Allen et al (1999: 21) assert that "usually urban wastes are legally or illegally disposed of in the peri-urban interface, often surpassing the absorptive capacity of these areas and having severe impacts on the health of the ecosystems and the population". The widespread location of polluting infrastructure is highlighted also by Simon (2008) as resulting in negative externalities for local communities in peri-urban areas. The march of environmental degradation is viewed as severe and even recognized as unsustainable in several countries (Simon, 2008).

Seven, in parallel with the above, it is often the case that traditional productive activities are eroded and wiped out which again impacts negatively upon livelihoods especially of the poor (Allen et al., 1999). For Simon (2008) land use conflicts in the peri-urban environment and accompanying changes in traditional livelihoods are viewed as almost inevitable. Eight, as a consequence, livelihood strategies necessarily tend to be denoted by a mixture of natural and non-nature based activities (Allen et al., 1999). As compared to the urban or rural poor the livelihoods of the peri-urban poor are more likely to hinge on both natural and non-nature and resources-based productive activities (Allen, 2003: 345). Within the distinctive setting of the desakota regions of Asia McGee (1991) and Moench and Gyawali (2008) show that large sections of the population operate a mixed household economy that straddles formal and informal sectors. In the context of sub-Saharan Africa Potts (2013) draws attention to the particular significance of natural-resource based livelihoods in these areas.

Nine, agriculture is a vital source of livelihood at the peri-urban interface of cities in the global South (Simon, 2008; Thapa and Murayama, 2008; Torres-Lima et al., 2010). Peri-urban agriculturalists confront a multitude of challenges in adapting their production systems to a context of environmental degradation (Losada et al., 1998). More particularly the activity of peri-urban cultivation becomes precarious when the likelihood of land sale and conversion to urban development is heightened (Torres-Lima et al., 2010). Peri-urban cultivators face further difficulties from land degradation and environmental deterioration which can impact upon quality of water resources used in irrigation. As argued by Cofie et al. (2003: 9) whereas peri-urban agriculture "could play a positive role in the urban ecological system, it is most exposed to the urban footprint and environmental pollution, compared with other farming systems". A significant challenge relates to the negative impact on food contamination as it has been documented for sub-Saharan Africa that vegetables produced at the peri-urban interface often are highly contaminated with pathogens because of the utilisation of polluted streams and drain water for irrigation purposes (Cofie et al., 2003).

Ten, these areas are commonly the location for the emergence of unregulated or 'informal' activities which can include, inter alia, the application of raw organic wastes in cultivation of certain crops (especially vegetables), the proliferation of extractive activities for producing construction materials, the deposition of toxic wastes and open site dumping and even the establishment of unregulated abattoirs (Allen et al., 2006a).

Eleven, the peri-urban interface is usually characterized by inadequate provision of services and infrastructure, including water supplies, sanitation, electricity, drainage, paved roads and refuse systems

(Allen et al., 2006b; Aguilar and Lopez, 2009; Hoffmann, 2011). In a multi-country investigation Allen et al. (2004, 2006a, 2006b) highlight the water and sanitation needs of the peri-urban water poor. It is stressed that their needs "are not being met either by conventional approaches such as the expansion of networked public utilities nor through formal large-scale private sector companies" (Allen et al., 2006b: 334). Instead, they maintain that the needs of the peri-urban poor are addressed "through a dizzying array of non-conventional and often officially unrecognized means such as informal operators, privately operated wells, gifts from neighbours, rainwater harvesting and clandestine connections" (Allen et al., 2006b: 334).

Twelve, as a byproduct of infrastructural shortcomings as well as environmental degradation and inadequate regulation, the peri-urban interface often is vulnerable and susceptible to disease and contamination (Sun, 2012). Allen et al. (2004: 18) flag that in light of the poor infrastructural services that "these areas are affected by a number of water and sanitation related diseases including diarrhea, intestinal worms, typhoid, cholera and dysentery, with the poor being most exposed and disadvantaged". In particular the work of Chirisa (2010: 16) is relevant for highlighting that "peri-urban interfaces in almost all the developing countries are places of possible disease outbreaks". In the context of sub-Saharan Africa in particular attention is drawn to several peri-urban spaces which "experience high incidences of waterborne, airborne and other pandemic diseases" (Chirisa, 2010: 25). Woltjer (2014: 7) confirms that in sub-Saharan Africa "peri-urban zones are prospective places for disease and other social hazards due to their general lack of planning and institutional integration".

Thirteen, the deficit in infrastructural facilities at the peri-urban interface is not simply in terms of water and sanitation, refuse removal or electricity which have attracted greatest attention. Among others Chirisa (2010: 17) underscores the absence in these areas of an appropriate social infrastructure in terms of community facilities such as halls, libraries or sports grounds the availability of which it is said might mitigate the effects of the "cultural rupture" as observed in peri-urban environments.

Fourteen, Allen et al (1999: 6) point to another distinguishing dimension of the peri-urban interface is the absence "of institutions capable of addressing the links between urban and rural activities". Woltjer (2014: 9) describes government capacity for dealing with issues around peri-urban development, both in terms of financial and human capital, as "generally deficient". Poor management of these areas is attributed to "the convergence of sectoral and overlapping institutions with different remits" (Allen et al., 1999: 6) with the absence of institutional structures that bridge urban and rural areas and address specifically the particular challenges of peri-urban spaces. For Chirisa (2010: 18) the administration of peri-urban interface "is often chaotic hence synonymous with disharmony, duality and conflict". It is observed that across the experience of the global South as a whole governance in the peri-urban interface tends to be severely fragmented, with a multitude of actors and no single organization providing guidance or leadership (Allen et al., 2006a). An unfortunate consequence as is noted by Chirisa (2010: 21) often is that peri-urban areas become characterized by "administrative impasses and in this situation the poor are caught up in the crossfire when local authorities are reluctant to account or take pro-poor initiatives".

Fifteen, above all, the peri-urban interface confronts challenges which relate to questions of sustainability (Marshall et al., 2009). Allen et al. (2006a) highlight the problematic of the existence of a mosaic of environmental and productive systems which necessarily must function amidst competing interests between different groups or classes of people. In particular, this heterogeneous mosaic of ecosystems is strongly influenced by the material and energy flows demanded particularly by the urban system (Allen, 2003: 137).

In relation to sustainability one often overlooked issue relates to the broader role assumed by green spaces within urban socio-ecological systems to ameliorate the problems of rapid urban development (Singh et al., 2010; Mensah, 2014). The loss of natural vegetation and forests in peri-urban areas undermines the potential valuable role that these areas can assume in respect of preservation of biodiversity, carbon storage as well as offering potential recreational spaces. For the global South these issues are explored in a number of recent contributions (Jim and Chen, 2006a, 2006b; Budrick et al., 2009; Singh et al., 2010; Krellenberg et al., 2014), including most recently for sub-Saharan Africa (Mensah, 2014). Overall, it is argued that sustainable cities cannot be designed without green spaces and a recognition of their critical multiple roles in urban-regional ecological systems. Among these roles the most important concern "climate change mitigation, pollution

abatement, biodiversity conservation and provisioning of the ecosystem goods and services to urban inhabitants" (Singh et al., 2010: 6).

3.2. Planning and Governance Challenges and Responses

Across several investigations the planning implications of the plight of the very poorest households at the peri-urban interface is profiled as at the heart of planning (Allen, 2003; Simon, 2008; Chirisa, 2010). Allen (2003: 344) contends that as compared to the urban or rural poor the peri-urban poor "may live in the 'worst of both worlds', as they are often exposed to a combination of rural and urban health hazards". One condition that clearly sets apart the peri-urban poor from their urban or rural counterparts is, according to Allen (2010: 41), that "their living environments tend to be closely associated with marginal environments sited in and/or around negative externalities". Elsewhere it is confirmed that the poorest households experience high insecurity, limited incomes, insecure tenure and yet reduced access to environmental resources upon which often livelihoods and survival are dependent (Allen et al., 2006b). The conditions of the very poorest "are compounded by extremely inadequate water and sanitation arrangements, overcrowding, exposure to biological and chemical threats and a lack of access to health services" (Marshall et al., 2009: 11). This situation underlines for Thapa et al (2010) the rationale to build a suite of initiatives in order to support resilience in a context of high natural capital which is combined with high levels and often worsening poverty.

The particular call is made for new restructured planning and management frameworks "that will tackle poverty alleviation and social justice alongside environmental integrity" (Sun, 2012: 27). Simon (2008) avers that the planning and governance challenges of the peri-urban interface need to be approached from the perspective that these areas form an integral part of the functional urban area and the ecological footprint. Likewise, Allen et al (1999: 38) suggest that the environmental problems of the poor in the peri-urban interface cannot be dealt with in a localized solution but instead must be viewed in consideration of the sustainability of the broader "urban bioregion". In Asia attention has been given to encouraging the development and penetration of "environmentally benign" energy systems as a key avenue for alleviating poverty and of addressing certain of the negative effects of current trajectories of development upon local ecosystems (Moench and Gyawali, 2008: 24). Within the setting of Africa given the dangers associated with peri-urban zones and disaster outbreaks it has been argued that planning and governance potentially needs to be framed within the discourse of sustainable development and of sustainable healthy cities (Chirisa, 2010).

In terms of transcending the observed inadequacies of the rural-urban dichotomy, it is argued that planning and governance systems necessarily must adjust to the problems which are experienced at the peri-urban interface (Simon, 2008). Arguably, according to Marshall et al (2009: 50) the "dominant planning and formal management decisions are often based on particular framings, inadequate information and limited recognition of peri-urban dynamics". For Chirisa (2010: 16) this demands that "policymakers, projects' implementers, planners and communities therein change their perceptions and attitudes about peri-urban interfaces". Allen (2003: 135) avers that "environmental planning and management in the peri-urban interface cannot simply be based on the extrapolation of planning approaches and tools applied in rural and urban areas". Rather, as Marshall et al. (2009: 10) contend, peri-urban planning demands "a unique approach which draws together elements of rural, regional and urban planning". Arguably, there is consensus that peri-urban areas should not be allowed to develop spontaneously or in haphazard fashion and that instead a "pro-active mind" is needed (Chirisa, 2010: 16).

The limits of conventional urban planning approaches are forwarded by Allen (2003). It is pointed out that urban planning generally focuses on integrating the peri-urban into the urban variously through infrastructural provision (water, electricity, roads, sanitation), the implementation of development projects which might include micro-finance, and through participatory approaches. The results of such interventions are critiqued as being outside of mainstream decision-making by governments with the consequence that the results are "marginal" for development, not least because of power relations and the tendency for urban policy to prioritise the interests of the urban elite over the poor. Correspondingly, the limitations of a rural environmental planning focus are exposed (Marshall et al., 2009). It is stressed that often such approaches are targeted to enhance rural lives and infrastructure by addressing localized problems. Nevertheless, what this approach

fails to do is to take on board a longer-term perspective which would consider regional and urban environmental planning dimensions.

The approach of regional planning is viewed as preferable as it encourages "a shared understanding of rural and urban issues and to move away from the very localized rural planning approach by developing and supporting networks and relationships between rural and urban areas" (Marshall et al., 2009: 10). The need for greater regional planning is given further credence also in work by Chirisa (2010) in the context of sub-Saharan Africa. Arguably, it is stated that "should regional planning be esteemed and practiced in Africa a host of the peri-urban challenges could have been avoided" (Chirisa, 2010: 24).

Attention is drawn to the observed situation across the global South that many urban mayors and their administrations exhibit little if any commitment to addressing the fundamental challenges of the peri-urban zones and its residents. This lack of political will is viewed as the result of an "urban orientation" or bias. Marshall et al (2009: 50) concur that priorities "are set largely on the basis of economic growth parameters and under the influence of a limited number of powerful urban interest groups". Correspondingly, alternative planning perspectives based on practices on the ground, entitlements or resource conflicts within rapidly changing environments are generally ignored. Accordingly, for Simon (2008) the need for changing the mindset of senior administrators and decision-makers is necessary and this potentially can be most effectively achieved by demonstrating through evidence-based research the web of interrelationships that bind together the environmental and socio-economic fortunes of the core urban with the peri-urban interface.

It is recommended by Allen (2003: 142) that management of peri-urban areas and especially environmental planning "requires a combination of methods that strike a balance between local planning (paying particular attention to the heterogeneity of and power relations within peri-urban communities) and the broader dimension of urban regional planning". In terms of thinking and acting strategically with respect to the challenges of the peri-urban interface Allen (2003: 142) suggests that management and environmental planning must search "to create a balance between the formulation of long-term, cross-sectoral and dynamic strategies and short-term interventions". It is added this differs from other approaches to urban planning and management "in so far as it does not attempt to intervene on all issues but focuses on interventions with synergetic potential" (Allen, 2003: 142). For Marshall et al (2009) this requires that environmental planning should be inclusory and participatory to the extent that it engages with a broad range of actors/stakeholders whose mandate might focus on rural, urban, regional or even national level initiatives.

Further it is recommended both by Marshall et al (2009) and Allen (2003) that planning should be centred on natural ecosystems that cross urban and rural spaces and seek to build new forms of collaborative relationship between the rural and the urban. Allen et al (1999: 38) caution that in the absence of the setting up of specific institutional fora "neither the brown agenda priorities of peri-urban communities, nor the longer term issues affecting the sustainability of the city region are likely to be addressed by municipal authorities". Questions of social justice and notions of sustainability are viewed as generally missing from peri-urban planning yet must be inserted in such a fashion that pro-poor initiatives can be coupled with pro-environment initiatives (Marshall et al., 2009: 50).

Overall, in order to evolve policy and management systems for peri-urban zones Marshall et al. (2009: 10-11) maintain that "it is necessary for local, environmental, urban and regional planning needs to be addressed and balanced against each other". Of necessity this balancing act requires an acknowledgement of structural power relationships and careful consideration of how different ecological processes play out and in final analysis would require, as observed by Marshall et al. (2009:11), the making of "broader inter-sectoral and more plural scales of governance". However, Simon (2008) concludes by offering a different set of perspectives for planning and governance. First, it is highlighted that effective planning for extended metropolitan regions with rural geographies requires adequate and appropriate levels of local authority and metropolitan capacity as well as resources which in much of the global South is in short supply. Second, it is recognized that the dynamic nature of the peri-urban interface demands a flexibility of planning mechanisms and institutions and that a different balance between permissive and restrictive forms of planning may be required. This said, it is emphasized by other scholars a critical planning issue that must not be overlooked is

the participation of the poor themselves both in the identification of planning priorities and in decision-making. For Allen et al. (1999: 39) the latter represents "a central element in the relationship between sustainability, poverty, environment and health".

Finally, it is essential to reiterate the glaring knowledge deficit that surrounds livelihoods and the dynamics of communities at the peri-urban interface. Among others Allen et al. (1999) stress the urgent need for further evidenced-based research in order to inform policymaking. In particular, the scholarship imperative is to unpack and comprehend the dynamism of the peri-urban interface and its relationships with the wider urban landscape and system (Marshall et al., 2009). More especially, it is contended that peri-urban interfaces "must be disaggregated and livelihood strategies must be researched" in order to evolve a pro-poor strategic environmental management plan (Allen et al., 1999: 39).

4. South African Research and Debates

The existence of several South African metropolitan areas which encompass extensive so-called rural spaces must be understood in relation to the restructuring of local government and of territorial boundaries following the democratic transition. A central aspect of the process of restructuring local government in the post-apartheid transition related to "spatial reorganization through boundary delimitation" (Giraut and Maharaj, 2002: 39). One outcome was territorial contestation in particular concerning the incorporation of rural areas under traditional leadership into urban areas. Of immediate concern was whether municipalities could practically supply services to these areas given sometimes their remoteness and relative inaccessibility as well as questions about the willingness or ability to pay for services of poor communities. In addition, "traditional leaders believed that their territorial jurisdiction and authority were being undermined as the administrative geography was radically redefined by the Municipal Demarcation Board" (Giraut and Maharaj, 2002: 46). Recent concern is expressed by the metropolitan authorities that national and/or provincial government are using the demarcation system of restructuring as a guise for 'dumping' mismanaged municipalities upon the metropolitan areas. This said, the redrawing of boundaries produced a situation that at least three metropolitan authorities in South Africa – eThekwini, Tshwane and Buffalo City – confront multiple challenges of planning for an extended metropolitan region.

This section reviews the limited available research and debates concerning the characteristics and planning challenges of South Africa's extended metropolitan regions. The material here draws from the following sources:

- A small group of published research studies which cover issues around urban-rural interdependencies in these regions;
- A series of detailed (unpublished) planning and consultancy reports which were prepared for municipalities to offer baseline studies and guidelines for planning;
- Interviews undertaken for this study with key municipal stakeholders in eThekwini and Tshwane, the two largest metropolitan regions which incorporate rural spaces; and
- Three unpublished reports commissioned by SACN on Tshwane, Buffalo City and eThekwini which mainly deal with infrastructural issues around water and electricity provision (Smorfitt, 2014a, 2014b, 2014c).

Two sub-sections of material are given. The first section summarises the key findings from the SACN research reports on Tshwane, Buffalo City and eThekwini. The second section draws from a range of different sources – including primary and secondary – to provide a wider perspective on the character and challenges of these extended metropolitan regions in South Africa.

4.1 Key Findings from SACN Commissioned Case Study Research

The SACN reports were targeted specifically at identifying and analysing potential challenges relating to the provision of electricity and water from a governance perspective as well as the broader governance issues as they relate to rural and agricultural development (Smorfitt, 2013a, 2013b, 2013c). The analysis was based upon a total of 11 detailed interviews which were conducted with senior management in the three metropolitan areas of eThekwini, Buffalo City and Tshwane. Special attention was accorded to the provision of water and electricity services albeit it is acknowledged that local development relating to 'rural spaces' is much broader in scope than simply the provision of these two sets of infrastructural services. This said an important finding in the research is that the so-termed rural-urban divide is undergoing fundamental change as a result of dynamic change occurring at the peri-urban interface.

The SACN investigations revealed a number of key issues relating to planning and governance. In particular, ten critical sets of issues can be isolated as emerging from the SACN research conducted in these three municipalities.

a. It was revealed in the three case studies that, as a result of the incorporation of rural spaces, the metropolitan authorities necessarily have had to establish new departments, and develop skills capacity in areas never previously required in municipalities. These include rural development, rural road maintenance, rural fire prevention, rural planning, rural local economic development and most importantly agricultural development. Indeed, a critical challenge is for the metropolitan areas to gain capacity and an understanding of rural and agricultural development, albeit that this was not a traditional skill set found in municipal management. The research suggests that potentially there are 'missed opportunities' for local economic development because of the absence of capacity and skills in municipalities to deal with the particular issues around rural development as a whole and agriculture in particular.

b. It was highlighted that the governance landscape within municipalities is complex. The metropolitan municipalities have to cope with geographic areas that are expanded from time to time by the demarcation board and often include the incorporation of poorly performing municipalities. This situation results in the metropolitan authorities facing ever-growing maintenance and new infrastructure backlogs. The financial implications of these backlogs are of sufficient quantum as to impact on the management of the assets under their control.

c. The metros are also faced with insufficient funding and an inability to raise additional capital due to legislative constraints. National and provincial government offer a number of funding opportunities from a variety of sources both within and external to government. Each creates different demands on these municipalities, and correspondingly may complicate the governance issues surrounding municipal finance. Overall, what emerged from the three case studies is that the municipalities can be at times overwhelmed by the complex governance environment in which they are required to operate within.

d. The three case studies of eThekwini, Tshwane, and Buffalo City, revealed a number of issues relating to water provision which need addressing. Some of those issues are unique to each Metro, while others hold true across all three of them. The effective, sustainable, and equitable provision of water and electricity by the metros is of paramount importance, and forms a priority objective. All three Metro's include water and sanitation within the same department. It was observed that the service delivery issues related to water and sanitation are more acute as in the case of electricity in respect of rural communities, the responsibility falls to Eskom.

e. The research disclosed a lack of conformity between municipalities. Although this has both positive and negative connotations, importantly it makes it difficult to undertake impact assessments and carry out benchmarking across municipalities and thereby to identify elements of good practice. Overall, it was concluded that despite the complex governance environment and the challenges they face, the three metropolitan municipalities are each carving out their own pathway through the governance jungle and succeeding in certain respects. This said, it is clear that there is still a fair amount of room for interpretation by the management teams. This in itself is not necessarily a bad thing, as it allows

for innovation to still occur. However, when standards are required it is important that a national standard be set.

f. One interesting experiment in governance is that of the eThekwini Metro where 40% of the area is considered urban and 60% rural. Here, the so-termed rural areas include both residential small holdings and commercial farming; importantly of the 60% land which is considered as rural, 51% is tribal land owned by the Ngonyama Trust. In eThekwini the European Union became aware of this situation and piloted a new approach to managing the rural component of the eThekwini Metro for an initial three year period and later extended by a further two years. The decision was made to establish Area Based Management (ABM) teams. The ABM concept was born out of the original Cato Manor Development Association. The ABMs were intended to be a local development agency which was established for each region. Problems emerged administratively, however, as the ABMs did not fit into the standard Metro organogram, and consequently confusion arose with a lack of certainty as to the exact role which they were meant to play. One unfortunate consequence was this led to little effort being made by line departments to cooperate with the ABMs.

g. A mixed evaluation is offered of the governance experiment of ABMs. The research revealed that in certain respects the experience of the ABMs in eThekwini is considered positively. Further, it was disclosed that ABMs were viewed successful in the rural areas in which they operated, and made a significant impact on these communities. The ABMs commissioned their own research which disclosed the need for assistance to be provided to the agricultural sector. As a result this led to the preparation and establishment of a Metropolitan Agricultural Policy and the consequent launch of support to the agricultural sector. This includes agricultural extension services to the agricultural community in the Metro. The ABMs used a variety of Department of Environmental Affairs programmes and associated funding to assist the rural and agricultural areas. The ABMs also established a pilot Farmers Support Centre (Agric-Hub). The Rural ABM established a Rural Agricultural Policy which later became the eThekwini Agricultural Policy when it incorporated the urban areas to deal with urban agriculture. In addition a separate Rural Development Framework Plan was established at the inception of the rural ABM which guided all interventions by the rural ABM. The ABMs thus emerged as a source of many new ideas and innovation.

Overall, the interviews confirmed that the ABMs were a success making a large impact both on rural communities and the Metro itself. Much of the success of the ABMs were attributed to their flexible organizational structure which was outside of normal municipal operational procedures. A key ingredient in the success of the ABMs was their independence in decision-making and their ability to essentially bypass lengthy procurement processes. This enabled them to respond quickly to needs detected in the rural and agricultural communities. This ability to fast track is a key factor in their success. The ABMs, however, did not 'fit' into a traditional municipal organisational structure. They addressed all the non-standard issues that arose within the rural areas in a non-standard manner. They were also structured around a small team of professionals in a flat organisational structure, again unlike any municipal entity. No effort was made to find a way to integrate these different organisational structures. The fact that they were also largely financially independent of the Metro added a further dimension of difficulty in respect of integrating the two structures. The SACN research considers that these local development agencies effectively functioned in the manner of a private sector business which allowed them to be flexible and to respond immediately with action. This flexibility and nimbleness in terms of policy action is viewed as difficult to attain within the traditional structures of municipal administration.

h. The ending of five year period of support for the ABMs exposed a set of issues about the sustainability of municipal attempts to assist and support rural and agricultural development. After 5 years, once EU funding dried up the eThekwini Metro allowed the ABMs to collapse as it standardised Departments. The Deputy City Managers (DCM) to whom the ABMs reported were faced with managing two different budgets; the first was their traditional budgets and the second was a separate ABM budgets, which smaller was more complex in sourcing and utilisation. The DCMs forced traditional municipal standards onto the ABMs which caused their demise. Subsequently, the ABMs

were absorbed into the Project Management Unit which manages the Metro's Extended Public Works Programmes (EPWP) and the agricultural projects. ABMs subsequently shifted to a maintenance role or closed down. Correspondingly, several initiatives launched through ABMs either stalled or closed down after the reorganization and reincorporation of the activities of ABMs within the existing municipal administrative structures. For example, it was revealed that forestry efforts collapsed with the demise of ABMs. Since the closure of ABMs, the agriculture mandate has been divided between two departments with eThekwini Health Department running with food security programmes, IMS department mainly involving themselves with infrastructure support to community gardens, and the remaining larger economic-based agricultural interventions not being supported by any department. The Parks department also has inherited certain projects. Overall, these developments underscore the governance issues for a metropolitan authority in handling issues relating to agriculture. Above all, the research reveals that agriculture has no formal role in municipal structures and capacity shortages exist of qualified and experienced personnel necessary to manage the agricultural component within the municipality.

i. The research revealed a different governance trajectory in the case of Tshwane. It is observed that the Tshwane Metro is unique in that it is the only cross-boundary municipality, with parts of the city located in the North-West Province and other parts in Gauteng. The Tshwane metropolitan area thus has an extraordinarily complex inter-governmental legislative, financial and service delivery situation to manage. One aspect of the new institutional arrangements was the introduction of the 'regional services model' through which the city aimed to bring government closer to the people and to énhance service delivery throughout the different regions. The adoption of the regionalisation model resulted in seven regions and functions devolved to the regional service centres including Agriculture and Rural Development. This said, only four of the seven regions have a rural component. It was this mix of rural and urban that became the rationale for establishing the Agriculture and Rural Development division. The original Agricultural Division was initiated in 2008 and established the Integrated Agricultural Strategy Policy and Implementation Plan. As part of this structure, to date the City has developed four agricultural centres termed Sustainable Agricultural Villages. Further, in Tshwane a comprehensive rural development programme was established and based upon the Gauteng provincial rural development programme. The focus of this programme is the development of economic opportunities. As compared to the experience of Ethekwini in rural development, however, the research revealed the Tshwane experience that administratively the wheels turn slowly following a traditional municipal governance approach.

j. In terms of governance as a whole it was disclosed rural spaces present several specific sets of problems. First, rural communities expect the same services as urban areas. A problem emerges, however, that in order for those services to be delivered in a sustainable way necessarily they have to be at a lower level than that of urban services. For example, in Buffalo City it was disclosed that access to waterborne sewerage is limited to the formal settlements in the urban centres and to some of the larger peri-urban settlements. Here the Metro separates rural and urban areas in their Spatial Development Framework with the 'dividing line' known as the rural-urban divide. Rural communities either have access to a basic sanitation service (limited coverage), a sub-basic service, or no service at all. The basic level of service in rural areas is a standpipe not more than 200 meters from the household; this is the RDP standard. A second set of issues identified in the research is that the agricultural communities, which can overlap across the urban-rural boundaries into the urban and peri urban areas were revealed to have different set of needs. Finally, particular issues arise in situations where land is held under customary forms of tenure. In particular, the role of traditional leaders was viewed as problematic in terms of requests for accessing land for developmental purposes.

4.2. The Extended Metropolitan Regions of South Africa: Character and Planning Challenges

This section reviews a range of material to isolate the character and unfolding planning challenges of South Africa's extended metropolitan areas. The central focus is on eThekwini as the case study. The special focus on eThekwini can be justified on the grounds of it being the South African metropolitan authority with the largest proportional land area of so-termed 'rural space', is the best documented in terms of research reports, and that access was granted for a detailed interview with key metropolitan officials (Gilmore, 2014).

4.2.1. The Durban Metropolitan Open Space System

At the outset it must be recognized that the eThekwini municipality introduced an innovative planning linked to 'rural spaces' even prior to the absorption of the rural spaces that created the extended metropolitan region. The Durban Metropolitan Open Space System (DMOSS) is a system of open spaces, some 74 000 hectares of land and water that incorporate areas of high diversity value linked together in a viable network of open spaces (Roberts, 1994). Durban is acknowledged as the most innovative city in South Africa in terms of its initiatives for protection of biodiversity and open space (Cilliers et al. 2013). The origins of this project to conserve green spaces can be traced back to the late 1970s (Biodiversity & Conservation Biology Department, University of Western Cape et al. 2004). It was particularly innovative as prior to 1994 "environmental management at the local government level received very limited attention" (Roberts, 2008: 521).

Although the initial planning of this project was focused on issues of conservation, a shift occurred to the re-conceptualisation of DMOSS as part of sustainable development planning for the metropolitan area (Roberts, 1994; Cilliers et al., 2013). According to Roberts et al (2005) key factors that underpinned this reorientation were the democratization of South African society, the global focus on sustainable development issues and increased priority given to addressing the basic needs of urban residents. Cilliers et al (2013: 688) maintain that "Durban's open-space system was regarded as a service provider of goods (eg. water for consumption) and services (eg. waste treatment) all of which are important issues in meeting people's basic needs and improving their quality of life".

The DMOSS system is viewed as a major contributor to attaining provincial and national biodiversity targets. Critically, it provides also a suite of ecosystem goods and services for the city's residents including soil formation, erosion control, water supply and regulation, climate regulation, recreation opportunities, provision of raw materials for craft, opportunities for food production, pollination, nutrient recycling and waste treatment. Arguably, from a climate change perspective the biodiversity that is protected by DMOSS plays a vital function (Roberts et al., 2011). Indeed, for Simon (2012: 207) whilst many of the DMOSS areas are leisure oriented it is considered that "the underlying purpose is to utilize this 'green infrastructure' for EC (environmental change) mitigation through ecosystem services such as carbon sequestration, water quality maintenance, flood mitigation and erosion control linked to the needs of a rapidly growing and unequal city". DMOSS is an integral part of urban climate adaptation strategies for Ethekwini, one of the leaders in the global South in respect of use of "bio-infrastructure" in climate change adaptation by local governments (Carmin et al. 2012; Roberts and O"Donoghue, 2013).

4.2.1. New Challenges of Extension and Incorporation

Historically, the incorporation into the Ethekwini metropolitan municipality of land areas of adjacent local municipalities occurred on both the city's northern and southern periphery. The character of the newly incorporated areas was described variously as 'semi-rural' and 'rural' with significant portions consisting of areas of traditional settlement areas. Importantly it was recognized that the inclusion of these rural spaces into Ethekwini "poses a serious challenge to the Municipality that has a history and expertise limited to the management and development of urban areas" and thereby requiring that "skills and expertise relating to rural development still need to be developed within the council" (Linda Masinga Iyer Rothaug Project Team, 2003: 108).

The municipality recognized the immediate need to establish a better knowledge base of these areas and in 2003 produced the Rural Development Framework which provided the essential framework which guided planning in these areas for the past decade (Linda Masinga Iyer Rothaug Project Team, 2003). The baseline document acknowledged the key immediate issues of limited access to physical and economic services and the minimal level of economic development. These themes are reiterated in recent planning documentation. It was recognized, for example, that distinguishing features of these areas are that much land falls under traditional authorities with the consequence that it is "characterized by dual systems of governance – both traditional and democratic". Other issues are the high disease burden, paucity of basic services (roads, water, electricity), fragmented service delivery by different spheres of government, and overall chronic poverty as a result of limited economic opportunities with high levels of dependence by households on social grants (McIntosh Xaba and Associates, 2007: 3). In one study area, of the cohort population of working age (15 to 64 years) only 22.1 percent were formally employed, 35.2 percent were unemployed and the rest were not working (Institute of Natural Resources & Iyer Rothaug Collaborative, 2005: 20). Poverty levels are extreme with only 26 percent of households recorded as obtaining a basic income sufficient for "an average family to maintain a reasonable level of health and hygiene" (Institute of Natural Resources & Iyer Rothaug Collaborative, 2005: 20). Agricultural livelihoods may be viewed as typical but in some areas such as the so-termed Southern Agricultural region of Ethekwini the largest share of formal employment is outside agriculture and is recorded in manufacturing as well as wholesale and retail trade (Institute of Natural Resources & Iyer Rothaug Collaborative, 2005: 21). This finding indicates significantly that the rural geographies of metropolitan areas incorporate a diverse mix of economic activities beyond agriculture.

A critical issue for municipal planning was the inadequacy of the knowledge base concerning these 'rural spaces'. It was admitted clearly in the Rural Development Framework that a "limited understanding exists of the economic situation of the people residing in the rural and peri-urban areas of eThekwini" (Linda Masinga Iyer Rothaug Project Team, 2003: 33). Further, it was conceded this poor knowledge base "includes a lack of understanding of the sources of income and the migration patterns of rural people, both issues which substantially impact on future economic development strategies to be adopted" (Linda Masinga Iyer Rothaug Project Team, 2003: 29). A decade later this knowledge gap on critical issues impacting planning and governance remains unaddressed. This said, it is evident that major early planning challenges relate to a cluster of poverty-related issues around the provision of basic services, the promotion of local economic development opportunities and the need to address environmental management concerns because of the degradation of the natural environment (Linda Masinga Iyer Rothaug Project Team, 2003). The problems of a deteriorating environmental base and threats to sustainability were flagged in the early 2000s. It was recognized that in terms of ecosystem services that the "declining status of natural resources in rural areas is generating undesirable effects, and constrains the potential to achieve equity, efficiency and sustainability" (Linda Masinga Iyer Rothaug Project Team, 2003: 146).

4.2.3. Key Planning and Governance Challenges

Essentially these three clusters of poverty-related issues continue to dominate the policy agenda a decade later (Gilmore, 2014). Agriculture development is one core and obvious focus for policymakers in these rural spaces as household "survival is often dependent on agricultural production" (Institute of Natural Resources & Iyer Rothaug Collaborative, 2004: 1). Within the 2003 Rural Development Framework, however, it was observed that "the Municipality has no specific programme to promote agricultural development as an income generator for communities" (Linda Masinga Iyer Rothaug Project Team, 2003: 29). Indeed, problems relating to municipal planning for agriculture have been a consistent challenge for the past decade (Gilmore, 2014). During 2004 it was noted "agriculture is not a municipal function nor a ''funded mandate' of the municipality (Institute of Natural Resources & Iyer Rothaug Collaborative, 2004: 1). This point was re-stated three years later in the 2007 municipal guidelines for agricultural development and food security (Institute of Natural Resources et al. 2007: 1). Nevertheless, in terms of national policy guidelines the municipality has a role to assume in respect of the following:

- Creating an environment in rural areas conducive to agricultural development;
- Integrating and coordinating agricultural development in rural areas; and
- Promoting and supporting agricultural development in rural areas.

Policy development has occurred for agricultural development with proposals for supporting in particular the emerging agricultural economy which ranges "from subsistence farming to commercial production" (Institute of Natural Resources & Iyer Rothaug Collaborative, 2004: 2). In particular the policy focus in agricultural development policy is weighted towards "previously disadvantaged communities" often mainly living in traditional settlement areas with customary forms of tenure (Institute of Natural Resources & Iyer Rothaug Collaborative, 2005: 50). Promoting food security is a strong policy focus in recent proposals (eThekwini Municipality, 2010; McIntosh Xaba and Associates, 2010). Among select key planning issues are, inter alia, issues of land redistribution, the development of agricultural support services, the establishment of rural agricultural service or marketing hubs, promoting organized farmers groups, enhancing access to credit for emerging farmers and building the potential of special events such as farmers days for promoting awareness of agricultural opportunities (Institute of Natural Resources & Iyer Rothaug Collaborative, 2004, 2005; Institute of Natural Resources et al. 2007). Other critical support measures relate to improving agricultural-specific infrastructure such as soil conservation works, storm water drainage, provision of storage facilities, irrigation and agricultural roads to assist in expanding access opportunities to markets (Institute of Natural Resources & Iyer Rothaug Collaborative, 2005; Gabhisa Planning and Investments, 2012). The issue of building market linkages is one of special importance for existing and potential commercial rather than subsistence producers (Institute of Natural Resources & Iyer Rothaug Collaborative, 2005). Overall, it is argued that in a metropolitan area such as eThekwini "agriculture has an important role to fulfil in the development of the municipality as a whole" not least for rural livelihoods, economic development and food security (Institute of Natural Resources & Iyer Rothaug Collaborative, 2004).

Land conversion is a major challenge for maximizing the opportunities for economic development. It is conceded that there is the continued erosion of the agricultural potential within eThekwini "due to the conversion of agricultural land to primarily, higher income residential estates and other urban uses" (Institute of Natural Resources & Iyer Rothaug Collaborative, 2004: 1). It is observed "large tracts of high potential agricultural land are lost on a daily basis to alternative uses (most notably upmarket residential development, commercial development, industrial development and leisure developments serving a particular sector of society) (Institute of Natural Resources & Iyer Rothaug Collaborative, 2004: 5). In addition, in other of these rural spaces the absence of land use and planning guidelines results in housing developments occurring within environmentally sensitive areas (Gabhisa Planning and Investments, 2012: 3). Indeed, it is evident that unplanned dense settlement cause problems for infrastructure provision with the consequence that hygiene and sanitation issues become another key planning challenge (Gabhisa Planning and Investments, 2012: 4).

The mixed character of livelihoods in these areas raises the issue of the dichotomization between urban versus rural spaces. It was acknowledged by a key municipal official that "we always had definitional issues with these areas" (Gilmore, 2014). A particular problem exists with the classification of these rural spaces in terms of funding for upgrading and improvement. It was observed in 2007 that eThekwini's rural areas are ineligible for grants "that are designated as urban" (McIntosh Xaba and Associates, 2007: 15). Moreover, "neither are they eligible for rural grants through the Integrated Sustainable Development Programme or the Department of Environmental Affairs and Tourism because these programmes and departments classify eThekwini's rural areas as metropolitan" (McIntosh Xaba and Associates, 2007: 15). Accordingly it remains that eThekwini's rural areas are "in a limbo when it comes to access to funding", including even from development assistance agencies (McIntosh Xaba and Associates, 2007: 15). Overall, there is a policy dilemma with respect to funding for projects as these rural spaces "are classified as neither rural nor urban either by Government Departments or other donors and agencies" (McIntosh Xaba and Associates, 2007: 16). Once again, this situation underlines the problematic nature of the dichotomization of space simply between the urban and the rural.

4.2.4 Economic Diversification

It is evident that planning for these 'rural spaces' is not confined simply to issues relating to the natural environment and to agricultural planning in particular. The 2003 Rural Development Framework makes clear that planning necessarily had to encompass other economic sectors. For example, tourism promotion was identified as a potential significant issue and that "establishing linkages between rural tourism opportunities and established tourism attractions/activities in the urban core must receive priority" (Linda Masinga Iyer Rothaug Project Team, 2003: 35). Other sectors under scrutiny include services with the view that "the development of commercial nodes in close proximity to the rural population should be encouraged and promoted" (Linda Masinga Iyer Rothaug Project Team, 2003: 35). Construction was flagged as another sector of potential opportunity for diversifying the local economic base. Finally, it was acknowledged manufacturing was a critical activity which impacted upon these rural spaces as "a large percentage of the rural workforce is active in this sector" (Linda Masinga Iyer Rothaug Project Team, 2003: 35).

Accordingly, whilst it was maintained that key resources for economic development in these ostensible rural spaces relate to land and natural environment a consistent planning focus has been upon seeking to secure the active diversification of local economies beyond natural resource-based activities (Linda Masinga Iyer Rothaug Project Team, 2003: 34). During 2006 there was produced a benchmark document for the municipality in terms of planning guidelines beyond that of the 2003 Rural Development Framework (Gilmore, 2014). This was a manufacturing, construction, commercial and services development strategy and multi-annual work plan which was prepared for the (then) Rural Area Based Management Office (McIntosh Xaba and Associates, 2006). Importantly, the underlying rationale for its preparation was that "the absence of a concrete development plan, to date, for the rural areas, has meant that limited progress has been made with regard to economic development (McIntosh Xaba and Associates, 2006: 1). The details in this plan further casts light on the descriptor for these areas as simply rural spaces. The plan contains a series of project proposals for economic diversification beyond a natural resource based economy. Among its several proposals were for investigating potential local job creation linked to the Dube Trade Port, potential manufacturing employment prospects related to industrial land at Harrison Flats, agro-processing opportunities and support for local contractors and block makers (McIntosh Xaba and Associates, 2006).

This shift towards planning for economic diversification beyond a natural resource based economy finds expression also in the most recent planning proposals for a "revised rural economic development strategy" (McIntosh Xaba and Associates, 2010). The aim of this strategy is "to provide a set of approaches aimed at encouraging the development of the rural economy and improving the quality of life and economic prospects of the communities in the rural areas" (McIntosh Xaba and Associates, 2010: iii). This particular document was a response to a situation analysis that had isolated the following development challenges that needed to be addressed:

- o Dual systems of governance;
- o Pressure on land for settlement/urban development;
- o Pressure on land for property development;
- o Threats to commercial agriculture;
- o Underutilisation of good agricultural land in communal areas;
- o Economic leakages;
- o *Reliance on government investment;
- o Dependence on social transfers/grants;
- o Poverty and inequality; and
- o Absence of a coordinated approach to development and service delivery.

The strategy document was a response to these multiple challenges which had been identified. In addition, it sought to align the municipal strategy with that of national government's recently promulgated Comprehensive Rural Development Programme which sought to combat poverty, hunger, unemployment and absence of

development in the country's rural areas (McIntosh Xaba and Associates, 2010). Among its recommendations were the following:

- o The essential comparative advantage of the rural areas is within tourism and agriculture. Proposed projects are (1) to extend tourism potential through developing new tourism products and linking rural tourism assets to those in Durban; (2) to encourage commercial agriculture and agro-processing through a stepped approach by supporting value-added activities; and (3) to enhance food security (through community gardens) in areas of lesser agricultural potential.
- o Other potential economic development opportunities relate to outsourcing from manufacturing activities especially the automotives and chemicals sector; stimulating local SMMEs in construction and housing to maximize opportunities around new public investment in housing and infrastructure; and general support for SMME development in particular with pro-poor micro-finance initiatives; and applying an expanded public works methodology to infrastructure provision (McIntosh Xaba and Associates, 2010).

4.2.5. Governance and Tradition

The revised rural development strategy accords particular significance to resolving tensions in governance and to "encourage constructive communication between ward councilors and traditional leadership" (McIntosh Xaba and Associates, 2010: 31). It is acknowledged that a major hindrance to the progress of rural economic development has been the "breakdown of communication and a conflict in priorities between the traditional leadership and ward councillors" (McIntosh Xaba and Associates, 2010: 31). It is observed current relationships are characterized by suspicion and trust and no evidence exists that "either previous or current structures have helped to improve communication between the incumbents of the formal and traditional systems of governance" (McIntosh Xaba and Associates, 2010: 31).

In addressing this critical governance issue what is proposed is to move towards an agreed institution for joint decision-making. Such an institution or platform is to "geared to enhancing communication and encouraging stakeholders to engage freely with one another in a constructive manner" (McIntosh Xaba and Associates, 2010: 31). The essential purposes are threefold: (1) to enhance communication between the traditional leadership, ward councilors and other key local stakeholders; (2) to enable stakeholders to engage with each other so as to strive for consensus about ways of improving communication; and (3) to search for ways of enabling the current traditional authority structures (clerks and traditional councils) to assume a more meaningful role in communication and participatory development (McIntosh Xaba and Associates, 2010: 31). Further the objective is to "facilitate participatory planning with ward councilors and traditional leadership" with the long-term goal "to ensure that the AmaKhosi and ward councilors engage with Municipal line departments in achieving service delivery goals" (McIntosh Xaba and Associates, 2010: 32). It is argued the essential rationale for an institution of engagement is "the need for the AmaKhosi to play a more focused role in driving socio-economic development" by drawing them into the formal planning ambit (McIntosh Xaba and Associates, 2010: 32).

5. Reflections and Recommendations

The task of this report was to consolidate the findings that emerged from preliminary research forays which were commissioned by SACN into the particular planning and governance issues surrounding South Africa's extended metropolitan regions which incorporate rural spaces. The report built upon the SACN research which largely focused on infrastructural delivery issues by seeking to offer a broader international and local context of analysis. A central goal has been to provide new insight and analysis that might inform the development of findings and planning recommendations to advance future debates. By way of conclusion this final section offers a summary of key findings with certain recommendations.

i.   Overall, the analysis highlights key problems with applying the urban-rural dichotomy as a basis for planning. It is shown that the dynamics of urbanization in the global South are producing a range of forms of extended metropolitan regions that challenge this simplistic dualism and suggest that to base planning on this dichotomy is inadequate.

ii. The international literature reveals the validity of the terminology of the peri-urban interface as a useful starting point for unpacking the dynamics of change in 'transitional' spaces where urban and rural features are interwoven. The peri-urban interface is distinctive for the multiple challenges that it offers to urban planners because of its rapid pace of change, ecological and socio-economic features and usually fragmented institutional context.

iii. The review of international research revealed at least 15 critical planning and governance related issues that require scrutiny and policy attention. For many scholars there is an imperative to evolve new restructured planning and management frameworks in order to address the challenges of the peri-urban interface.

iv. Potential recommended best pathways for new governance relate to the need to shift planning away from only localized solutions to instead consider also broader regional frameworks and to shift away from an extrapolation of planning approaches or tools applied in traditional urban or rural planning. The specific issues of peri-urban zones require a regional approach in order to address complex poverty and environmental challenges especially within the context of objectives of sustainability and a search for social justice.

v.   A critical finding from the international literature was detailed research and monitoring is required of the peri-urban interface zones in order to understand the dynamics of change in these areas and to interpret relationships with the wider urban system. In addition, it is essential to disaggregate the changes occurring in these areas in respect of livelihood strategies so as ultimately to prepare a pro-poor management plan.

vi. In South Africa at the outset there is an obvious need to transcend the urban-rural dichotomy which is clearly inadequate for interpreting and managing the dynamics of change in the country's extended metropolitan areas. The use of 'rural' as a descriptor for spaces which are diversified economically beyond natural-resource economies is inadequate. The available descriptions of the planning challenges facing these 'rural' areas in South Africa appear to exhibit close parallels to those described as peri-urban in the international scholarship.

vii. In beginning a dialogue on planning and governance issues for South Africa's extended metropolitan spaces it is useful to learn from the scholarship about peri-urbanisation and the challenges of the peri-urban interface as has been documented in several Asian, Latin American and African contexts. It is observed the planning documentation which has informed policy development for 'rural development' in South African metropolitan areas makes no reference at all to policy and practices of planning in any other part of the world. Breaking out of this isolated and blinkered view of planning and governance by drawing upon international debates (if not best practice) can be an important start point for evolving fresh planning insights.

viii. From the existing material there is a clear message in terms of the need for policy-making to be informed by greater in-depth evidenced-based research. Currently, these areas are 'neglected spaces' in planning scholarship in South Africa and there is an urgent need for comprehensive research investigations to further comprehend the dynamics of change in these contested spaces in

South Africa. Currently, baseline material is difficult to access and the changing complexion of these spaces not well understood.

ix. From the existing experience of planning in South Africa's extended metropolitan spaces two particular issues emerge that require further consideration. First, is the potential of reintroducing some form of local development agency model to be used as an institutional structure for directing change in these areas. Such localized planning however would need to be embedded within broader regional planning considerations in terms of developing pro-poor initiatives that could be harmonised with pro-environment initiatives. Second, the issues around customary land and traditional leadership must be addressed urgently. Useful learning may emerge from the proposals put forward in eThekwini for forging an institution for joint decision-making which could be used in participatory planning especially concerning complex infrastructural issues.

x. Finally, as it is apparent that South Africa's extended metropolitan areas exhibit a set of unique challenges for planning and governance potential benefits could be obtained through established a learning network to connect the municipalities of Buffalo City, eThekwini and Tshwane. The purpose of this learning network would be simply for practitioners and local scholars to engage in evidence-based discussions to explore the dynamics of change and best practice planning for extended metropolitan regions. An invitation to an international expert to discuss lessons from international experience could provide an initial platform for launching such a networking event.

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