

# Periurban Tenure Management in South Africa

Michael BARRY, Canada

**Key words:** urban sprawl, periurban agriculture, shack farming, traditional leaders

## SUMMARY

South Africa's periurban areas remain economically segregated with different parts of the urban periphery occupied by affluent small holders, growing informal settlements and traditional tenure systems. Preserving periurban land for agriculture is critical for containing urban sprawl and for retaining valuable agricultural land for food production.

Peri-urban environments are complex and development and regularisation projects have to take account of this complexity. Market opportunities, infrastructure, HIV influences, administrative capacity and transportation networks are some of the factors impacting on the whole urban perimeter. In informal settlement areas and traditional areas, the situation is even more complex due to the nature of the tenure systems, which tend to be an adaptation of traditional and western practices. Warlords, civics and other powerful actors also play a significant role in some areas.

Since 1990, South Africa has produced an admirable set of policies and legislation to manage land reform. However, largely due to local level dynamics, land tenure reform is proving very difficult to implement. What is required are local level policy and action plans and zoning schemes to set the basis for strengthening periurban agriculture and development.

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## 1. INTRODUCTION

Managing the periurban zone is a complex, conflict ridden problem. It is particularly so in developing nations. Of major concern is that urban sprawl consumes valuable agricultural land and the urban edges are not economically sustainable.

Up to a billion people live in slums (UN-HABITAT 2003). Many of these slums are informal settlements or formal housing estates for the poor situated on the urban edge. These are often a result of increasing urban populations, which are largely attributable to rural-urban migration. In South Africa's case, illegal immigration from drought stricken and strife torn nations in other parts of sub-Saharan Africa is also a contributing factor.

The periurban zone in many South African towns and cities is unique in many ways. This uniqueness is largely a legacy of racial segregation policies of the colonial and apartheid eras. The wealth gap between rich and poor is most visible on the urban edge.

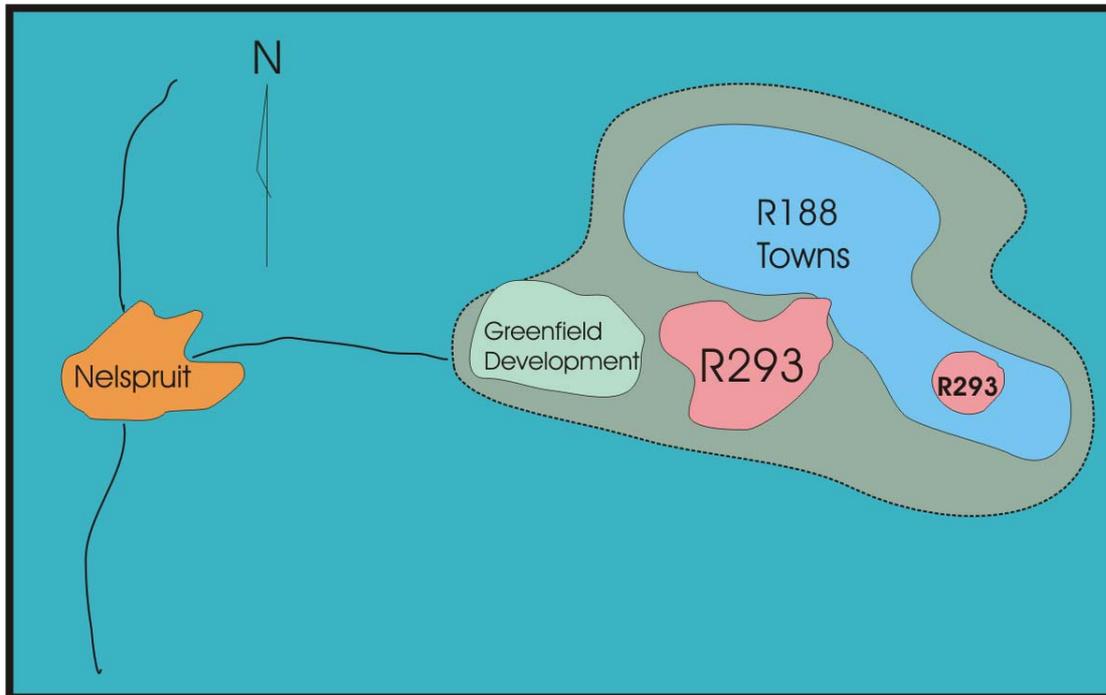
Parts of the periurban zone are similar to those of cities and towns in developed nations. There are small holdings within and proximate to the urban edge on lots ranging from ½ ha to 20ha, which planners intended for small scale agriculture. A number of these are occupied by affluent people who earn their income in the nearby city and their small holdings are not farmed. But some towns and cities do have productive farms peripheral to and within the urban edge. Striking examples are the wine estates in Constantia in Cape Town and Paarl in the Western Cape.

In these same towns and cities, informal settlements have been growing for the past thirty years. Most of these have developed on the urban edge. Addressing this phenomenon by creating low cost developments of free standing houses has contributed to ever sprawling cities.

Containing and compacting cities is critical to their sustainability, especially where a large proportion of their residents are poor. Dewar (2002) notes that public transportation subsidies in some South African cities are higher than the earnings of many people who use the system.

Apartheid spatial planning created unique land occupation patterns in many South African towns. Periurban systems are found in areas that are dislocated from urban areas. Black populations were placed in areas some distance from urban cores. Racially based ideology, rather than economic rationale, was the basis for locating people in these areas. Consequently, unrealistic subsidies are necessary to transport people to places of economic opportunity (Ambert ND, STHS 2002).

Some towns and cities now incorporate former traditional areas. As examples, the city of Durban in the Kwazulu-Natal province and the town of Nelspruit in the Mpumalanga province, have conurbations that typify apartheid spatial planning. The former “white” urban areas of these towns and cities were close to “independent” or self-governing homelands. Parts of these former homelands have now been consolidated with former white municipal areas. Consequently, there may be a number of distinctive urban areas within the same municipality.



**Figure 1:** Nelspruit and Surrounds (after Ambert ND)

Nelspruit in Mpumalanga, is a typical case. In figure 1, the former white middle class area of Nelspruit provides the main focus for employment and other economic opportunity. Outside of this are areas of rural, mixed use and residential land which were governed by regulations promulgated during the apartheid era under a separate administration. Specifically, these were the Black Areas Land Regulations, (R188 of 1969), and the Administration and Control of Townships in Black Areas, (R293 of 1962). The outskirts of these R188 and R293 settlements shown in figure 1 are up to 40 km away from central Nelspruit.

Tenure system types in the conurbation east of Nelspruit proper include traditional, mixed settlement type with traditional dwellings and surveyed, registered land, and tenant and sub-tenant infill. Formally, land was held under permission to occupy (PTO's) permits in these R293 and R188 towns. There is also a greenfield development, a new housing development where the land has been surveyed and is scheduled to be registered in ownership (Ambert ND).

Thus there are three different occupation patterns in South African periurban areas. These are small holding areas unaffected by informal settlement, areas with informal settlements and low cost housing estates, and those areas where there is an overlap of traditional and elected authority in governing certain areas of land. Typical of most the urban edge itself the boundaries between these zones are often fuzzy.

The paper is structured as follows. Characteristics of the different periurban areas are described. Then the current legal framework is discussed in brief and analysed. Finally other components of strategy for managing the urban edge are described, with the purpose of preserving agricultural land.

## **2. PERIURBAN ZONES**

Prior to democracy in 1994, outside of the homelands, rural and urban areas were managed and administered independently in South Africa. Relevant policy and legislation were fragmented. The periurban zone was at the boundary of urban and rural administrative authorities, and so it was seldom managed as a transition zone between urban and rural systems.

Recent legislation, policy and institutional structures do address this problem. However, while new instruments of policy are being introduced, old ones still apply on the ground with the result that policy and legislation are often overlapping and at times contradictory. In a number of areas, the capacity to implement policy is lacking as is the capacity to govern and police the new legislation. These issues apply to most South African periurban areas, but the effects are most striking in the former homeland areas.

### **2.1 Upper Income Small Holding Areas**

In the more affluent areas on the edges of town and cities the periurban zone is productively dysfunctional because there is a mix of inappropriate land uses. The history of separate management of urban and rural areas is a major contributory factor (CMC 2002, DMC 2000, WCP 2000, City of Cape Town 2001). Land portions are often fragmented and it is a costly, lengthy process to plan, consolidate and re-subdivide parcels into suitable units. Some intensive agriculture does take place. However, residential, tourism, illegal industry (e.g. motor and agricultural services, sand mining) and leisure activities predominate. Illegal industry has often been located in periurban areas outside of municipal boundaries to avoid payment of land taxes. Land is also held for speculative purposes. There have been instances where land has been stripped of its agricultural potential deliberately in order to obtain housing development rights (Setplan 1998).

As a land management practice, planning for small holdings on the urban periphery is a questionable practice. Small holdings are frequently an uneconomic land use. The costs of providing services to low density parcels is high and places a financial burden on local urban residents. The broader community may effectively subsidise smallholders' services (Setplan 1994). Therefore, management strategies have to take this into account.

Security is a major factor on the urban edge, especially in areas close to informal settlements. Crime impacts on personal safety as well as theft of product and theft of infrastructure. Unoccupied homesteads on smallholdings are often vandalised (City of Cape Town 2001). Small farm areas outside of some towns have become dysfunctional as a result of the growth of informal settlements (STHS 2000). Electric fences and rolls of barbed wire surrounding the boundaries and homesteads of Western Cape commercial wine farms that are adjacent to informal settlements and low cost housing projects bear testimony to the security issues faced by many periurban farmers.

## **2.2 Low Cost Housing Estates and Informal Settlements**

In stark contrast to the small holding areas described above, other parts of South Africa's urban peripheries are occupied by the poor. Most informal settlements evolve on the urban edge. Low cost, subsidised housing developments to improve the lives of the poor tend to be located in the same areas. There are risks that these will become perpetual slums, which in turn will have implications for managing the periurban zone as a mixed use area where agriculture predominates.

It is a major challenge to preserve green space, encourage agricultural land use within and adjacent to these areas and to contain urban sprawl. Key elements of successful strategies to address this are good governance, personal security, security of tenure, security of product and infrastructure, informal settlement pressure on the land, and ability to distribute and sell products.

One of the greatest challenges facing South Africa is the issue of land reform, which is progressing slowly. The issues are complex and there are high risks that many projects will not yield the desired outcomes. There are numerous factors that the authorities cannot control, which frequently delay the delivery of land and housing. Moreover, reform projects tend to be either rural or urban. Projects with an emphasis on sustainable land use practices in the transition zone between the two are not common.

Low cost housing estates often do not function according to planners' desires. Social pressure, shortages of accommodation and survival strategies of generating income from numerous sources are contributing factors. In spite of official attempts to prohibit it, landlordism occurs as powerful individuals purchase houses informally and then rent them out. Informal money lenders are often involved. The house is "transferred" to the money lender in lieu of debt.

Backyard infill shacks are common in many land reform housing projects. The dynamics of this are often due to rural-urban social networks. House holders feel obliged to accommodate extended family members or people from their rural village who have recently arrived in the city. People also rent out shack space to generate income.

These land tenure practices may inhibit a formal land market. Informal trading means that the transaction is not registered. Thus the cadastre becomes inaccurate, the formal land market

becomes frozen as the land will not be able to attract mortgage financing until the titles are cleaned up.

Different stakeholders frequently have competing agendas for land-use. Land reform projects can be disrupted, manipulated and delayed by overlapping claims to land involving different power structures such as warlords, civics and traditional leaders.

Informal settlements are often created by organised invasions or shack farming. Preventing these developing during land tenure regularisation projects is an important consideration. Shack farming occurs on former commercial farms, small holdings and in traditional areas too (DMC 2000).

HIV-AIDS and related illnesses are having a significant impact on South Africa's poor population, including recent migrants to cities. This has led to the loss of agricultural workers, lost production as people attend funerals, and a rising number of orphans who need to be cared for. Families have been observed to sell houses granted to them as part of land reform subsidy projects in a city to fund funerals.

### **2.3 Traditional Areas**

Addressing the legacy of apartheid spatial planning is a major factor in the former traditional areas. This is manifested in fears over loss of power by traditional leaders, uncertain land tenure, and conflicting legislation and land administration practices.

The power issue impedes periurban development. For example, DMC (2000) note that there is reluctance on the part of many traditional leaders to contemplate development initiatives in their areas for fear of losing control over the process. In some areas, de facto land administration continues to be conducted by traditional authorities where elected local authorities are mandated to do this. Development cannot proceed until this is resolved in a particular area.

Tenure problems in traditional areas relate to lack of legal recognition of communal tenure, abuse by elites, the breakdown of the old permit system, and gender inequality. The result is conflicting claims to land and bitter disputes over authority, and rights often overlap and conflict (Cousins 2002). While not a universal problem, in many areas the number and nature of formal rights to many parcels of land are not known. Many of the records relating to former South African Development Trust (SADT) land are inaccurate. Permits have been issued on SADT land (under regulations R188 of 1969 and R293 of 1962) without being recorded, and so the number of permits issued is not known.

In areas where the urban area interfaces with former African traditional areas, groups have been known to split away from the main tribal coalitions to create informal settlements. The landscape then has informal settlements adjacent to areas where customary rural practices are continued. This has security and informal settlement pressure implications for continued farming operations in the traditional zone. There are also cases in periurban areas where civic associations took over land allocation from traditional headmen after 1994. What were

sustainable land allocation practices under the traditional system were replaced by practices that have led to land degradation (STHS 2002).

The above serves as no more than an overview of how complex and difficult it is to manage the periurban zone in post-apartheid South Africa. In spite of the conflict, uncertainty and the numerous uncontrollable factors, the State has produced a commendable set of policies and legislation to address the issue. A sample of these are discussed and analysed below.

### **3. LEGISLATION**

A number of acts were passed between 1986 and 1994 that abolished the pass laws, abolished racially based land occupation policies, allowed for land tenure to be upgraded to ownership and facilitated the fast tracking of development projects. The major statutes were the Abolition of Influx Control Act 68 of 1986, Abolition of Racially based Land Measures Act 108 of 1991, the Upgrading of Land Tenure Rights Act 112 of 1991 and the Less Formal Townships Establishment Act 113 of 1991.

However, most of the legislation which currently governs the periurban zone was passed after the democratic elections of 1994. The Constitution laid the principles, legal framework and guidelines for managing the urban, rural and periurban areas as a set of integrated systems. Subsequent laws deal with the implementation of these principles.

#### **3.1 The Constitution Act 108 of 1996**

The Constitution lays down an ethical framework for governance, development and administration. It re-inforces the concept of co-operative governance and stipulates developmental functions for local government, in addition to local government's usual functions. There is also been a trend by national and provincial departments towards devolving many functions to local level.

The Constitution sets out the powers and duties of municipalities and creates three categories of local government (S155):

*Category A* municipalities have exclusive municipal executive and legislative authority in their areas. To date, the metropolitan areas of Cape Town, Durban, East Rand, Johannesburg, Port Elizabeth and Pretoria are class A. All other land falls under B and C municipalities.

A *Category B* municipality shares municipal executive and legislative authority in its area with a category C municipality within whose area it falls.

A *Category C* municipality has municipal executive and legislative authority in an area that includes more than one municipality. Category C municipalities may contain a number of category B municipalities and rural areas. This does away with the problem of periurban zones being at the boundary between rural and urban administrative authorities. One authority contains the other.

The Constitution (S211) recognises the institution, status and role of traditional leadership. A traditional authority that observes customary law may function subject to any applicable legislation and customs and subject to the Constitution. However, details of how this should be achieved have only been published recently in the Draft White Paper on Traditional Leadership and Governance of 2002. Traditional leaders may also participate in local government in terms of local government legislation discussed below.

### **3.2 The Development Facilitation Act 67 of 1995 (DFA)**

This act strives to integrate various aspects of land development policy and procedures in addressing the spatial patterns inherited from apartheid (Budlender et al 1998). It attempts to fast track formalising land rights and it provides for a range of tenure options including individual, communal or tribal based systems. Local government is required to set land development objectives relating to, inter alia, services (including public transport), urban and rural growth, interests of beneficial occupiers, coordination with other authorities and finance. A beneficial occupier is defined as someone who has been in continuous, peaceful and undisturbed occupation of a piece of land for at least five years.

The act provides for initial ownership, registered as a deed in a Deeds Registry, where a person is entitled to occupy a parcel as if he or she were the owner thereof. Once all the development procedures have been completed, initial ownership can be converted into full ownership. The Act also introduced development tribunals to deal with objections and disputes. Originally the Act was intended to cover the entire country, but much of it duplicates a number of existing provincial planning ordinances. For example, it has not been applied in the Western Cape as it duplicates much of the province's Land Use Planning Ordinance 15 of 1985. However, it has been applied in provinces such as the Eastern Cape and the former homelands where in many cases no such suitable legislation existed. The Durban Metro adopted the DFA as a framework for formulating its land reform strategy (DMC 2000).

### **3.3 Communal Property Associations Act 28 of 1996 (CPA)**

This act sets out to allow previously disadvantaged communities to acquire, hold and manage property in common using a CPA as the juristic person. Although legal entities that could be used for joint or communal ownership existed prior to the promulgation of the CPA act (e.g. shareblocks, trusts, sectional titles, not-for-profit private companies), this act strives to specifically address the needs of holding land under a communal system. It also strives to give a broader legislative effect to the economic and social role that communal property holding plays in African tradition. A community which qualifies requires a written constitution, which should incorporate the principles of justice, fairness and equity. A register of members of the association is required and the rules relating to management and administration of the association need to be established, which should ensure that it is managed in a democratic, fair, transparent and accountable manner.

### **3.4 Communal Land Rights Bill GN 1423 of 2002**

This proposed legislation appears to consolidate lessons learned from much of the reform and restitution legislation outlined above. Amongst many other objectives, the Bill sets out to protect against arbitrary deprivation of land tenure rights, transfer communal land to communities who have land tenure rights, give legal recognition to customary and other communal land tenure systems and provide for the administration of communal land and the functions of administrative structures. Furthermore, it strives to ensure that the institution of traditional leadership is administered according to democratic values. It also makes provision for conflict management and dispute resolution structures and processes.

It has taken a long time for the Bill to be published for comment. It is controversial and it has attracted a range of criticism. Much of the criticism revolves around traditional leadership.

### **3.5 Local Government: Municipal Demarcation Act 27 of 1998, Municipal Structures Act 117 of 1998 and the Municipal Systems Act 32 of 2000**

These acts give effect to the local authority framework of A, B and C class municipalities set out in the Constitution. The municipal areas have been demarcated, but uncertainty over separation of mandates, interests and obligations between B and C municipalities is common.

Traditional authorities that observe a system of customary law in the area of a municipality, may participate, through their leaders, in the proceedings of the council of that municipality, and those traditional leaders must be allowed to attend and participate in any meeting of the council.

Municipalities are also compelled to formulate an integrated development plan (IDP). Each municipal council must, within a prescribed period after the start of its elected term, adopt a single, inclusive and strategic plan for the development of the municipality. These must be aligned with, and complement, the development plans and strategies of other affected municipalities and other organs of state to give effect to the principles of co-operative government. Plans should be in harmony with the Constitution and the Development Facilitation Act.

### **3.6 Analysis of Legislation**

South Africa has developed a comprehensive set of land reform and restitution legislation. It provides an excellent legal framework. It is innovative in the manner in which rights can be held communally and it compels a strategic planning approach to land development, administration and reform. Moreover, the category B and C municipal structure has done away with the periurban zone falling on the boundary between an urban and a rural administrative authority. A detailed analysis of the legislation falls beyond the scope of this discourse, and numerous critiques of this raft of legislation exist.

Distinguishing features of the legislation are the formalising of rights in accordance with the ethics and values codified in the Constitution. Moreover, the legislation embraces the notion

of holism, which is particularly relevant to periurban zones. There is recognition that the built and natural environment involves numerous interacting social and natural systems.

Land development objectives and municipal integrated development plans need to be cognisant of other institutions, their objectives, and the relevant legislation. Wide consultation is necessary. In addition, it attempts to set protocols, codes of practice, which will allow for coexistence between government and traditional leaders. In this context, the legislation also allows for the adaptation of indigenous tenure systems to accord with the Constitution rather than replacement thereof.

Philosophical considerations aside, the major criticism of the reform legislation, but more explicitly of the reform programme in general, is that there has not been the administrative capacity to implement reform. Bruce warned of the cardinal sin in land reform, “daring too much, then achieving so little that confidence in land reform is undermined”. A land reform programme that is too complex, incomplete or inconclusive and does not deliver what it sets out to do may create greater insecurity (Bruce 1998). Clearly, the administrative capacity to implement the reforms has not been in place.

The hierarchical institutional structure of B and C municipalities is sound. But, anecdotal evidence suggests that in many areas, the respective powers and functions of the B and C municipalities have not been determined adequately. The administrative functions and services (e.g. water, sewerage, spatial planning) that some B and C municipalities are meant to deliver may overlap. This is a difficult issue to resolve, which in turn affects service delivery.

Formalising communal tenure systems is fraught with difficulties. To date, many Communal Property Associations can not be considered a success. Cousins in criticising the draft Communal Land Rights Bill, notes that over 500 group titles have been issued using communal property associations and community trusts. But, many are dysfunctional. In his analysis this is because, constitutions are poorly drafted and misunderstood, rights for individuals are ill defined and internal conflict is common. Traditional leaders have contested the authority of elected trustees and elites have often captured the benefits of the process. He goes on to argue that the titling model, which he believes is encapsulated in CPA's, does not match the principles of African tenure (Cousins 2002).

A further criticism of the legislation, and policy, is that if a community based system of tenure is not selected for a particular situation, then the only alternative that qualifies for land reform subsidies is individual ownership. Given the history of permits, quitrents and leases to which black Africans were restricted prior to democracy, this is understandable. Whites hold land in ownership. From a political perspective, a land reform programme that adopts tenure forms that do not bestow equivalent powers on the beneficiaries to those historically held by whites will be politically unacceptable.

However, ownership is an expensive tenure system to administer and it carries onerous obligations for the landowner. Transactions have to be registered; otherwise they are not legally valid. Moreover, land taxes have to be paid by the owner. If informal transactions in

land rights take place, it is a very expensive process to intervene and recreate clean titles. It should be noted that affordability is a major issue before middle class people can own land. For the middle class, attaining property ownership unencumbered by mortgage obligations which, if unfulfilled carry the penalty of them losing their land, tends to take at least twenty years.

What are needed are systems of individual tenure that are cognisant of the risks in land reform projects that currently exist in South Africa. These include options such as short term rental, long term lease, lease that is convertible to ownership and ownership acquired by purchase through instalments over a long period. There should be a path to ownership, acquired over time.

#### **4. PERIURBAN AGRICULTURE**

South Africa has developed the legal and institutional framework to manage the periurban zone in a manner that promotes mixed land use with agriculture predominating. But, as the foregoing discussion has emphasized, the social, political, economic and legal environments are complex and antagonistic. What is lacking is the capacity, and in some cases the will, to implement the changes. The country is also enduring fatigue from a long period of substantial change. Security and law enforcement remain a problem.

Managing the periurban zone in the more affluent areas poses less of a problem as it can be addressed through existing legislation and taxation. Relevant policy and planning will form part of integrated development plans formulated in terms of the Municipal System Act. However, as stated above, there are doubts about the economic sustainability of agriculture on small parcels. There are high input costs, service costs and escalating property taxes in areas adjoining local authorities. However, some towns (e.g. Paarl) have encouraged agriculture within the municipal boundaries by providing land tax relief, providing that the land continues to be farmed. In the case of Paarl, policy makers believe that urban wine farms draw tourists to the town.

Managing the periurban zone in the poorer areas and where the zone incorporates traditional land is more difficult. However, there are a number of opportunities to use periurban agricultural developments for land reform and social upliftment. The following have been identified as needs and opportunities for such projects.

In addressing the colonial and apartheid legacy, it is a social and political imperative that a significant number of black South Africans practice agriculture under secure tenure. In harmony with South Africa's land policy intensive small scale farming peripheral to and within the urban edge provides opportunities for families to contribute to their income and daily nutrition needs from a variety of sources, of which food production as emergent farmers is one source. On their own, they may not be sustainable. However, the periurban poor lead multifaceted livelihoods and small scale farming can contribute to part of their income and nutritional needs.

Small scale farming operations can provide buffer zones around installations (e.g. sewerage works and nature reserves) and be used as a buffer of low intensity settlement to protect wetlands and riverine environments (Setplan 1998). Small parcel farming operations can also serve a role in restoring environmentally damaged areas (e.g. quarries and open cast mines). In these buffer zones, periurban agriculture provides an opportunity for recycling waste and for the usage of grey water. Grey water (e.g. storm water and treated sewerage) is often high in nutrients and negatively impacts when released into the natural environment.

There is a need to create urban and periurban conservancies in partnership with traditional healers and medicine suppliers. Traditional medicinal plants and trees should be grown commercially because many indigenous habitats close to urban areas are being stripped of certain species (Dewar D 2002).

There is a need to manage township livestock for health reasons. For example, informal slaughtering, lack of inspection of live animals and carcasses, and the disposal of skins and carcasses on rubbish dumps, which are then harvested by the hungry, leads to worm infestation in children (Dewar 2002). Moreover, livestock grazing along urban gateway roadsides constitute a traffic hazard.

However, while these needs exist, there is a high risk of failure in such projects. Pilot studies in the Durban metropolitan area showed that although urban and periurban agriculture are good ideas in concept, they are very difficult to implement. Many of the factors in the preceding discussion arose and the land was not farmed. Instead infrastructure was vandalised or projects did not start at all.

Drawing lessons from these cases, the DMC argues for the establishment of urban (and periurban) agriculture development institutions. These should be established before micro-level projects are initiated to ensure that the systems are in place to sustain agriculture. These institutions need to establish linkages with input suppliers and markets while ensuring that the required level of support is being obtained from the various government agencies. As such an institution becomes established, it should facilitate access to bulk inputs to the area in order to reduce the costs of agricultural production. This could entail encouraging the stocking of products by local retailers and encouraging farmers to coordinate their purchases and buy in bulk directly from the suppliers. It should also facilitate access to production credit and facilitate sales, marketing and distribution of products (DMC ND).

Allocation and monitoring of continued usage of the allotments is important.

The right people need to be selected for agricultural allotments. Only those families willing to farm on an ongoing basis should be allocated agricultural land. Many people on the urban fringe do not want to farm or do not know how to farm. Moreover, beneficiaries should be adequately trained in farming and micro business management. Aspirant farmers should be offered a long lease with significant municipal rates rebates. However, strict enforcement of lease conditions need to be applied to ensure that the land is actually farmed, and not 'shack farmed'. Adequate infrastructure (e.g. water supply, distribution mechanisms) is also critical (DMC ND).

## 5. CONCLUDING REMARKS

In conclusion, South Africa has created a commendable municipal governance structure and legislation for managing periurban areas. But, managing the periurban zone remains one of the most difficult tasks facing municipalities.

Governing the more affluent areas poses less of a challenge than the poor and traditional areas. Taxation has been shown to be one way of encouraging landholders to farm their land rather than use it for other purposes.

In spite of the risks, it is a political imperative that a significant number of the periurban poor engage in small scale farming. This should form part of South Africa's land reform programme as it will create much needed skills and knowledge in farming practices. However, there are structural and local level political factors that may cause a project to fail. Managing these local political factors remains one of the most important aspects of a periurban farming project. Finally, institutions should be in place to develop the necessary technical systems (e.g. marketing, supply chains, water, distribution and training) for farming to be sustainable before land is allocated and production commences.

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## **BIOGRAPHICAL NOTES**

**Mike Barry** is an Associate Professor in the Geomatics Engineering Department at the University of Calgary, where has been since the end of 2002. Prior to this, he was at the Department of Geomatics at the University of Cape Town. He has PhD, MBA and BSc(Survey) degrees. His research interests are in land tenure, analysing and managing change in implementing elements of cadastral systems, and spatial data analysis.

## **CONTACTS**

Dr Michael Barry  
Associate Head  
Department of Geomatics Engineering  
University of Calgary  
2500 University Dr. NW  
Calgary, Alberta T2N 1N4  
CANADA  
Tel. + 1 403 220 5834  
Fax + 1 403 284 1980  
Email: [barry@geomatics.ucalgary.ca](mailto:barry@geomatics.ucalgary.ca)  
Web site: [www.geomatics.ucalgary.ca/~barry](http://www.geomatics.ucalgary.ca/~barry)