

# CONNECTING TRANSPORT, AGRICULTURE AND RURAL DEVELOPMENT: EXPERIENCES FROM MHLONTLO LOCAL MUNICIPALITY INTEGRATED INFRASTRUCTURE ATLAS

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## ABSTRACT

This paper establishes the connection between transport, agriculture and rural development. The paper achieves this purpose by drawing from the experiences of the Mhlontlo municipality integrated infrastructure atlas project. The connection between transport, agriculture and rural development is described and explained in two related ways. Firstly, a comprehensive analysis of the current socio-economic development situation in Mhlontlo municipality is outlined. Secondly, a rapid situational analysis of the transport, agricultural and basic rural infrastructure requirements is conducted. In addition, emphasis is placed on linking the infrastructural requirements to Asgisa-Eastern Cape's rural development initiatives. This bi-cameral approach provided a basis for projecting the transport and agriculture infrastructure profile in the study area. Major recommendations revolving around projecting and spatial mapping of infrastructure requirements (including transport) to support integrated rural development, strengthen agricultural transformation, food security alongside the desired spatial form and land uses of the Mhlontlo Local Municipality are advanced.

### **Key Words**

*Transport, agriculture, rural development, Mhlontlo Local Municipality, infrastructure, atlas, South Africa*

## 1.0 INTRODUCTION AND BACKGROUND TO THE STUDY

Transportation has long been recognised as a strategic factor in agriculture, rural development and social change dynamics (Johnston & Mellor, 1961; FAO, 2004; Mashiri et al, 2002; World Bank, 2008; Chakwizira & Mashiri, 2009). Accessible low cost transportation makes it possible to bring raw materials from mines, fields and forests to factories and industries where the raw materials or semi-processed goods are transformed into desired products (World Bank, 2005). Transportation acts as a bridge linking factories and industries with markets making it possible for finished products and industrial inputs to be available at the right time, at the right place and in the required form and desired quantities (IFAD, 2004; Chakwizira et al, 2008). In terms of reducing the price of agricultural inputs, as well as improving market access for agricultural outputs and access agricultural extension services, improvements in rural roads and transport are essential. Indeed numerous studies strongly suggest that investments in rural road construction and maintenance can have significantly positive impact on rural incomes and quality of lives (Kilkenny, 1998; FAO, 2004; IFAD, 2004; World Bank, 2008, Mashiri et al, 2008). Table 1 summarises the many ways in which agriculture contributes to development. In short,

agriculture contributes to rural development, firstly, as an economic activity, secondly, as a livelihood and, thirdly, as a provider of environmental services – making agriculture a unique sector and instrument that under-girds rural development in particular and development in general.

**Table 1: Agricultural Tripartite Contribution to Rural Development**

Economic Activity	Livelihood	Provider of Environmental Services
<ul style="list-style-type: none"> <li>• Source of growth for national economy</li> <li>• Provides investment opportunities for private sector</li> <li>• Prime driver and vehicle of agricultural related industries and the rural non-farm economy</li> <li>• Generates on average 29 per cent of the gross domestic product (GDP) and employs 65 percent of the labour force</li> <li>• Industries and services linked to agriculture in value chains often account for more than 30 percent of GDP in transforming and urbanising countries</li> <li>• Important for food security since it is a major source of income for the majority of the rural poor</li> </ul>	<ul style="list-style-type: none"> <li>• Source of livelihood for an estimated 86 percent of rural people</li> <li>• Provides jobs for 1.3 billion small holders and landless workers</li> <li>• Foundation for viable rural communities</li> <li>• Of the developing World's 5.5 billion people, 3 billion live in rural areas, nearly half of humanity.. Of these rural inhabitants, an estimated 2.5 billion are in households involved in agriculture and 1.5 billion are in small-holder households</li> </ul>	<ul style="list-style-type: none"> <li>• One of the biggest users of water thereby contributing to water scarcity</li> <li>• A major player in underground water depletion, agro-chemical pollution, soil exhaustion, and global climate change, accounting for up to 30 percent of greenhouse gas emissions</li> <li>• Sequestering carbon</li> <li>• Managing watersheds</li> <li>• Preserving biodiversity</li> </ul>
<ul style="list-style-type: none"> <li>• Agriculture is a vital crossing cutting tool and platform to facilitate the realisation of the Millennium Development Goals (MDGs) that calls for halving by 2015 the share of people suffering from extreme poverty and hunger.</li> <li>• Three out of every four people in developing countries live in rural areas, and most of them depend directly on agriculture for their livelihoods.</li> <li>• Growth is agriculture acts as stimulus for stimulating growth in other sectors of the economy.</li> </ul>		

Source: (FAO, 2004; World Bank, 2005, 2008; AfDB, 2006; May, 2006; UNECA, 2006)

Rural transport infrastructure and services is not only a key component of rural development but it is also an important ingredient in ensuring sustainable poverty reduction.

Few countries and regions have experienced sustained growth at a high level without growth in agricultural productivity. Interestingly, the search for bio-fuels will even make it significantly profitable to invest in agriculture (FAO, 2004; World Bank, 2008). Although agriculture alone does not constitute the only ingredient in Mhlontlo's rural development, it certainly is a significant contributor to the municipality's cash flows. To realise the agricultural potential of Mhlontlo Local Municipality (MLM), it is important to seek to put in place an integrated approach along the agricultural extension, production, processing and marketing continuum. In this regard, transport infrastructure and services can be crucial for developing links with agricultural markets and services and in the process enhancing rural growth and development. Clearly, to strengthen access of small farmers to markets and agricultural production information and services, there is need to improve and maintain as well as expand road networks to open up these areas of high agricultural production potential, facilitate the development of village market centres linked to the main market at Tsolo Junction (Mashiri et al, 2009). The need to improve linkages between collection points, terminal markets and the agro-industry cannot be over-emphasized. These aspects constitute a central focus of this paper's orientation.

### 1.1 Purpose and aim of the paper

This paper aims at drawing the link between transport, agriculture and rural development making use of Mhlontlo municipality as a case study. The paper achieves its aim by focusing on the following aspects (Mashiri et al, 2009):

- Spatially mapping existing infrastructure related to ASGISA-Eastern Cape (ASGISA-EC) and other economic activities in MLM.
- Assessing and spatially mapping infrastructure requirements linked to ASGISA-EC and other rural development initiatives clustered around agriculture, tourism and nodal development in MLM.
- Generating an integrated indicative rural development infrastructure atlas underpinned by agriculture as the engine for rural growth and development for MLM.

### 1.2 Research methodology

The study approach involved thorough literature review, fieldwork surveys of the agricultural and rural infrastructure in Mhlontlo Local Municipality, physical infrastructure observation surveys and key informant interviews with stakeholders such as Mhlontlo Local Municipality officials, Provincial departments of Agriculture and Roads and Transport, (Province of the Eastern Cape), councillors and community members.

### 1.3 Structure of paper

This paper is organised into *four sections*. *Section one* has provided background information to the study including explaining the purpose and methodology used in investigating the research problem. *Section two* is dedicated to literature review regarding linkages between agriculture, transport and rural development. *Section three* discusses the study findings and results. Finally *section four* draws out the major conclusions and recommendations of the study.

## **2.0 LITERATURE REVIEW**

A review of rural development, agriculture and transport interventions present agriculture as having provided the main engine of rural growth, development and rural poverty reduction (Dorward et al, 2007). Mashiri et al (2008) argue for the inclusion of appropriate low cost technology and access interventions as a response to challenges of accessibility, remoteness, dispersion and low volume markets. However, approaches and perspectives that over-emphasise the potential role that agriculture growth plays in combating rural poverty and under-development may be seriously challenged especially given the current situation in Sub-Saharan Africa and parts of rural deep South Africa faced by severe difficulties in raising agricultural productivity and or accessing wider agricultural markets. The density of paved roads varies between African countries and was very low in 1990 as compared with India in 1960, although comparable with some other Asian Green Revolution countries in 1960 and 1970 (World Bank, 2005). A number of studies have also found out that truck transport costs are higher in Africa than in Asia (Platteau, 1996). Trade costs constitute a high percentage of import and export costs in Africa (they are an estimated 30% to 40% higher than in other developing regions), seriously undermining Africa's investment, growth and development potential (Chakwizira, 2009). In South Africa logistics costs have averaged approximately 15% over the past few years, which are almost double those of Europe (South African Annual State of Logistics, 2009). This is

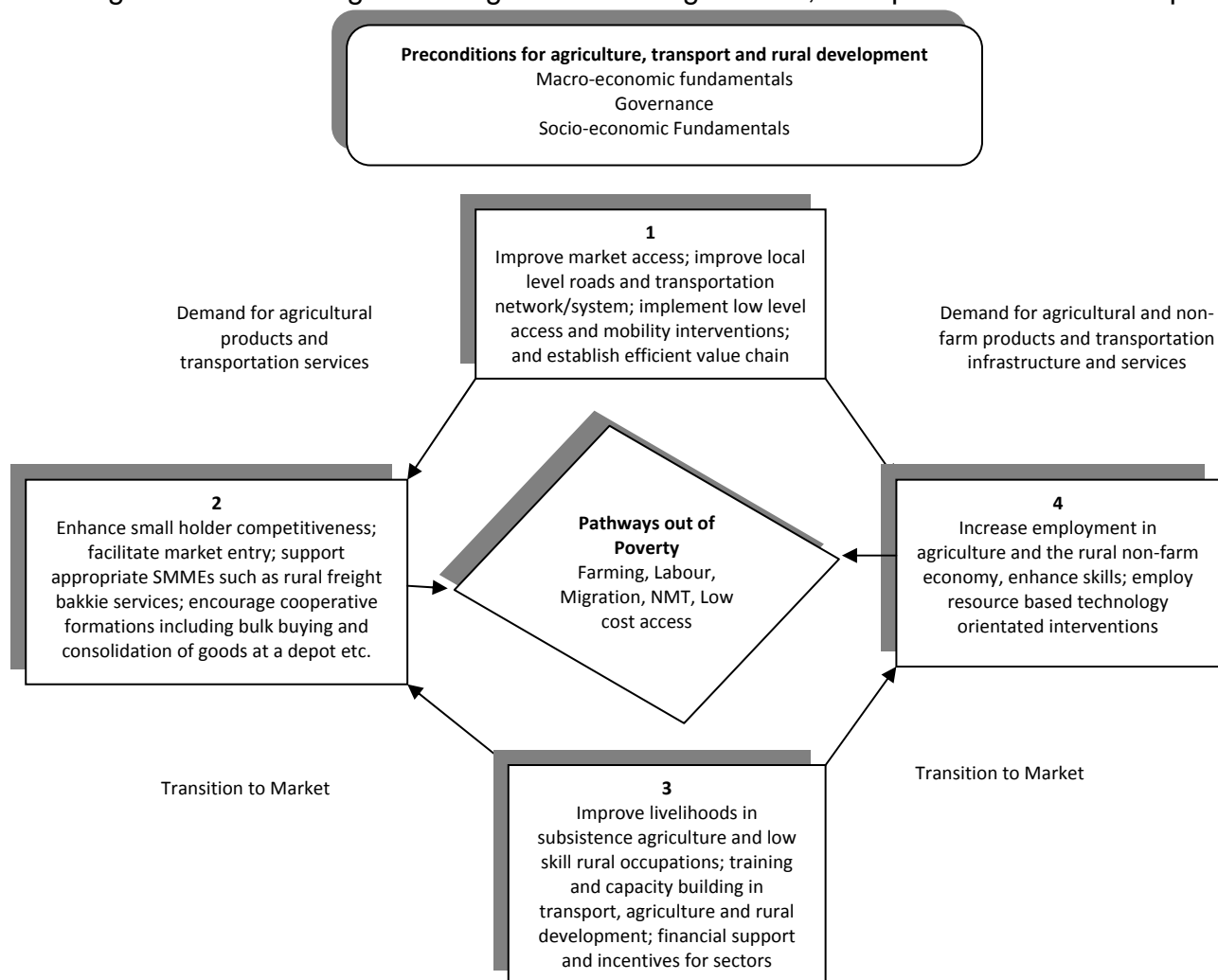
despite the advent of cell phones technology which has been hailed by some as offering the potential for dramatic and low-cost access to phone services in rural areas.

A review of investment trends in the agriculture sector and by extension rural development presents a picture of a large reduction in official investment in agricultural development (Department of Agriculture, 2009; FAO, 2004). Perhaps one may argue that many policy makers do not currently consider investment in agricultural development the best bet for poverty reduction, growth and development promotion. Instead there seems to be a growing recognition of the importance of non-farm incomes and activities in sustaining and strengthening livelihoods of the rural poor (Chambers, 1997). It is interesting to acknowledge perhaps a sense of disillusionment with the lack of agricultural growth in poor areas despite heavy investment in agricultural development in these areas in the past. Critics have argued persuasively that agriculture development in marginal areas is more difficult to achieve and maybe not worth the toil. There is also a growing school of philosophy that posits that the majority of agriculture's problems lie outside the agriculture sector. Adequate roads, transport and telecommunications infrastructure and services provision in rural agriculture and the provision of robust development governance institutions and system platforms are presented as key success factors for rural agriculture prosperity and by extension a recipe for rural transformation and development (World Bank, 2005, 2008; Chakwizira & Mashiri, 2009).

Policy makers in agriculture, transport and rural development the world over, are faced with what Kydd and Dorward (2001) term the "*agricultural investment dilemma*". This is true even in countries where the importance of agriculture is recognised. This partly explains why generally it is a daunting task for donors and governments to design, attract and channel substantial funding to agriculture and to some extent transport infrastructure programs. The argument of the "new institutional" approach to rural transport, agriculture and development is that the very low level of development in the institutional environment of deep, marginal, peripheral and isolated rural areas, together with a low density of transactions, leads to very high transaction risks and costs in rural development financial, input and output markets. This is particularly the case with financial markets and to a lesser extent with input markets.

High agricultural transaction costs and risks exacerbated by low population densities, poor rural local level roads and connectors, inefficient and sub-optimal intra and inter-rural and urban routes and transport infrastructure network and services, and poor communication leads to co-ordination and market failures. Indeed farms, households and other components of the economic rural systems require a minimum bundle of rural infrastructure services to function efficiently. Among these basics include transportation infrastructure and services. Without roads, railroads and appropriate inland transport farmers cannot send their produce to markets outside their localities and trade cannot expand. Figure 1 presents a graphical illustration of the linkages and value add that a systematic transportation set-up provide for unbundling agricultural potential and fostering rural development in an area.

Figure 1: Unbundling the linkages between agriculture, transport and rural development



Adapted: World Development Report (2008); Rosegrant et al (2008); Staatz et al (2007); Chakwizira et al (2008)

In South Africa, the quest for linking agriculture, transport and rural development has witnessed the development of the integrated rural mobility and access (IRMA) approach. Stated simply, the IRMA approach is a useful instrument in unlocking and unleashing prosperity, development and growth in deep rural communities and areas (Mashiri *et al*, 2002; Department of Transport, 2007; Chakwizira *et al*, 2008). This approach is a localised and adapted version of the integrated access planning approach (IRAP) developed by the international labour organisation (ILO) (ILO, 2000). The Rural Transport Strategy developed by the South African Department of Transport provides the policy direction and guidance on how transport can be used as a rural development transformational tool (Department of Transport, 2007). Table 2 presents a summary of the linkages between transport, agriculture and rural development as informed by experiences from South America and Africa.

**Table 2: Linkages between transport, agriculture and rural development: Selected Experiences from South America and Africa**

<i>Peru: Roads Bring Markets to the Rural Poor</i>	<i>Madagascar: Rural Non-farm Investment Benefits the Poor</i>
<ul style="list-style-type: none"> <li>• New roads in the sierra countryside, built under the Peru Rural Roads Project, have made the outside World and its markets more accessible for the area's 3 million poor</li> <li>• The program's design was innovative with a strong poverty focus, grassroots participation, and collaboration among key players – Ministry of Transport and Communications, the Inter-American Development Bank, the World Bank and more than 20 non-governmental organisations. An institutional collaborative framework was set up to make the most of each stakeholder's best talents.</li> <li>• The program reduced the isolation and facilitated the integration of the beneficiary communities, enhanced economic opportunities, and spurred local entrepreneurship.</li> <li>• More than 11,000km of rural roads were rehabilitated and 32,300 seasonal unskilled and 4,700 permanent jobs were created in 410 local road maintenance enterprises.</li> <li>• This innovative partnership program received a 2001 World Bank President's Award for Excellence.</li> </ul>	<ul style="list-style-type: none"> <li>• Aqualma, a shrimp-processing and export company in a remote corner of Madagascar has become one of the country's top private enterprises, with exports of US\$26 million in 2000.</li> <li>• Established in 1992 with support from the International Finance Corporation, the company has had a profound impact on the local economy and living conditions. Of Aqualma's 1,200 employees in 2001, 80 percent had never previously held a wage paying job.</li> <li>• Employees and local villagers gained access to education and health services through the primary school and clinic established by the company. The project generated many connections with small local enterprises during the construction and operational phases.</li> <li>• Future plans include expanding production on a new site, for which a community development plan and a conservation management plan to protect biodiversity habitats will be developed.</li> </ul>

DFID (2007); World Bank (2008)

### 3.0 DISCUSSION OF RESULTS AND FINDINGS

#### 3.1 Mhlontlo socio-economic profile

This section provides an analysis of the current agricultural and other rural infrastructure in MLM against the backdrop of prevailing socio-economic conditions with a view to generating and mapping of integrated infrastructural requirements linked to ASGISA-EC rural development initiatives.

##### 3.1.1 *Poverty and unemployment*

Mhlontlo Local Municipality is characterized by very high poverty levels (more than 78%) and significantly higher than the provincial level. Consistent with these high poverty rates is high dependence on social security grants with household grant dependents higher (77%) compared to OR Tambo District Municipality (75%) and significantly higher when compared to provincial (64%) levels. Mhlontlo Local Municipality also has very high unemployment rates estimated at 83% in 2005 compared to 70% in 2000 (Mhlontlo Local Municipality, 2007).

Infrastructure development projects through the Expanded Public Works Programme (EPWP) have been implemented to provide jobs in the municipality. Examples of key infrastructure projects include the Tsolo Main Street, Sulenkama Tar road, Tsolo Hospital, Lengthman programme and Storm water drainage (IDP, 2008-2012). The important message from these experiences is the need for more involvement of communities on beneficiary-oriented programmes from planning, implementation and evaluation. This supports the bottom up approach that is currently being implemented in the municipality's development strategies and programs (Mhlontlo Local Municipality, 2008).

### 3.1.2 *Economic structure and performance*

A sound understanding of the economic structure and performance of Mhlontlo Local Municipality is important for making recommendations for infrastructure requirements. Realising sustained higher socio-economic growth rates remains a major challenge for Mhlontlo Local Municipality. Key constraints include the predominantly rural nature of the municipality characterised by poor and inadequate investments in economic and basic infrastructure, high levels of functional illiteracy and low skills base (Local Economic Development Strategy, 2007).

### 3.1.3 *Gross value added (GVA) composition*

GVA measures the value of goods and services produced in given geographic areas within a particular period. Unlike the Gross Geographic Product (GGP), the GVA value excludes taxes and subsidies and therefore is considered a better indicator of economic performance. The key sectors constituting Mhlontlo Local Municipality's GVA in 2005 included: community services (R470 million), followed by agriculture (R246 million), trade (R116 million), manufacturing (R38 million), finance (R21 million) and construction (R17 million). Agriculture is one of the key sectors of the economy and as such investments in extension services and agricultural infrastructure would likely have profound impacts in stimulating socio-economic growth and development and reducing poverty (Local Economic Development Strategy, 2007).

### 3.1.4 *Sector Employment*

Most of the population are employed in the community services sector (56.9%) followed by households (16.4%) and agriculture (11.7%). The results further confirm the importance of the community services and agricultural sectors in Mhlontlo Local Municipality's economy. While 60% of the population in the study area is dependent on government grants, it is instructive to note that efforts to widen livelihood pathways have to be directed at growing the agriculture sector which currently contributes 12% through actual farming. A number of factors explain this current situation such as the absence of a conducive and more supportive agriculture industrial and value add approach, lack of adequate infrastructure and equipment to support small farmers and a low skills and knowledge base among the local and household incumbents expected to drive and champion higher agricultural production. Invariably, infrastructure investments in these sectors are likely to have significant impacts in stimulating socio-economic development and poverty reduction in the municipality (Local Economic Development Strategy, 2007).

## 3.2 Major land uses and resource profile

Table 3 presents a summary of land cover for Mhlontlo Local Municipality. Approximately 76% of the land cover is either degraded grassland or unimproved grassland. However such land can be reclaimed through innovative agriculture methods so that it is available once more for agricultural production. Another important observation is that only about 17% is cultivated on a semi-commercial/subsistence basis. Forest plantations constitute about 8% while urban or built-up residential covers about 5%. This implies the need to identify economic potential and the necessary infrastructure requirements to stimulate development and socio-economic development of the current underdeveloped areas.

**Table 3: Land cover in Mhlontlo Local Municipality**

Land Cover Classification	Hectares	% of Total Area
Barren rock	204.60	0.08
Cultivated: temporary - semi-commercial/subsistence dry land	44798.92	16.57
Degraded: unimproved grassland	82218.35	30.41
Dongas & sheet erosion scars	327.95	0.12
Forest	3807.19	1.41
Forest plantations	21508.72	7.96
Improved grassland	8.46	0.00
Thicket & bushland (etc)	8355.43	3.09
Unimproved grassland	96591.38	35.73
Urban / built-up land: residential	12386.86	4.58
Urban / built-up land: residential (small holdings: shrub land)	7.36	0.00
Water bodies	157.28	0.06

Source: Adapted from Local Economic Development Strategy (2007)

Given that agriculture is the mainstay of the Mhlontlo community, it is imperative that necessary infrastructure investments are identified and implemented to stimulate agricultural production and local economic development. However, it should be stressed upfront that infrastructure alone is not the panacea for unlocking the agriculture development in the area, other factors such as appropriate agriculture skills and knowledge transfer and political leadership will also play influential roles in the quest to remove the development obstacles in the study area.

### 3.2.1 Forestry sector

Forestry (20%) is the largest primary sector in Mhlontlo. The forestry sector's contribution is higher compared to the OR Tambo's district share of 7%, Eastern Cape Province's share of 1, 6% and national share of 0, 4%. The combined private sector investment in the Langeni area is estimated at more than R120 million. The main businesses located at Langeni include a saw milling plant operated and managed by Singisi Forests Products, veneering managed by the Eastern Cape Veneers and chipping plant managed and operated by Chip Board Industries Transkei. Scope for the further development and expansion of the sector exists with Langeni being the primary forestry nodal area identified in the SDF.

Infrastructure assessment points to opportunities of investing in value adding processing operations such as a furniture-making plant. Another important infrastructure requirement identified is the development of the Ugie/Maclear/Langeni link road to unlock value of the forestry sector and other supporting industries. Another important requirement is the formalization of the Langeni informal settlement and the creation of a rural based township to build on the growth of the nodal area. While initiatives and some progress in this direction have been made, the missing link is the failure to generate a much more comprehensive and integrated approach in tackling the rural development challenges in the area.

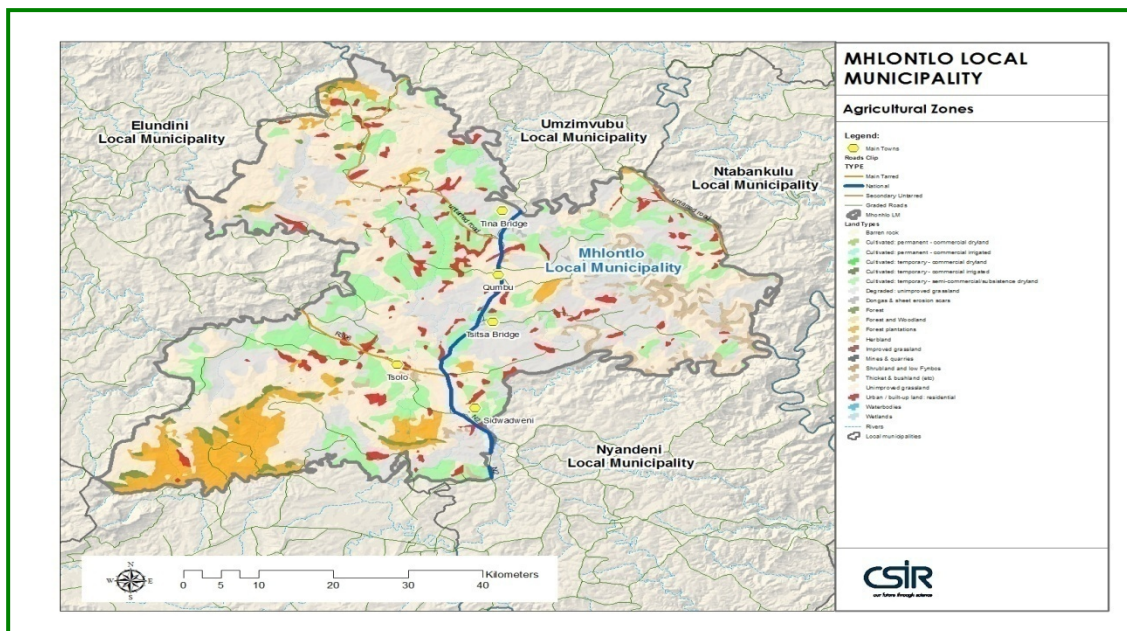


Furthermore, the potential of tourism and recreations (such as bird viewing in the natural forests and fishing at Mabeleni Dam) in the Langeni area in addition to timber opportunities need careful exploitation. Important infrastructure requirements to exploit tourism and recreation opportunities include biking and hiking trails and tourism accommodation, trout fishing and conference facilities.

### 3.2.3 Agriculture

The study confirmed the high agricultural potential in Mhlontlo Local Municipality. The good climatic conditions, soils and land abundance point to the richness of the municipality and potential in high value crops and fruit production. The municipality has a huge potential for agriculture that still needs to be developed as well as improved utilization of available arable agricultural land. Lack of existing infrastructure and other supporting structures has constrained productive utilization of a number of areas and implementation of agricultural and rural development projects in some areas. Map 1 presents the key agricultural zones in the municipal area respectively.

**Map 1: Key agricultural zones in Mhlontlo Local Municipality**



### 3.3 Spatial assessment and mapping of integrated agriculture and transport infrastructure requirements

Integrated rural and agricultural infrastructure includes all of the basic services, facilities, equipment, and institutions needed for the economic growth and efficient functioning of the rural, food and fibre economies. In many rural areas of South Africa, the availability of rural and agricultural infrastructure is not uniform across the country. Whereas the agricultural infrastructure is readily available in rural areas that are inhabited by the so called organized agriculture/ commercial farmers, the rural areas occupied by emerging and developing farmers as well as communal lands, like Mhlontlo Local Municipality, lack such infrastructure. This has hindered all facets of development in such rural areas, whose likely key development driver is agriculture. Agriculture is viewed from a wider perspective including the development of natural forests, plantations and eco-tourism in the area. However, agriculture alone cannot resolve the rural development problems in Mhlontlo without commensurate support from the transport, economic, social, political, environmental and financial sectors. Furthermore, no deliberate efforts have been directed at developing agricultural infrastructure in these areas even after the democratic elections

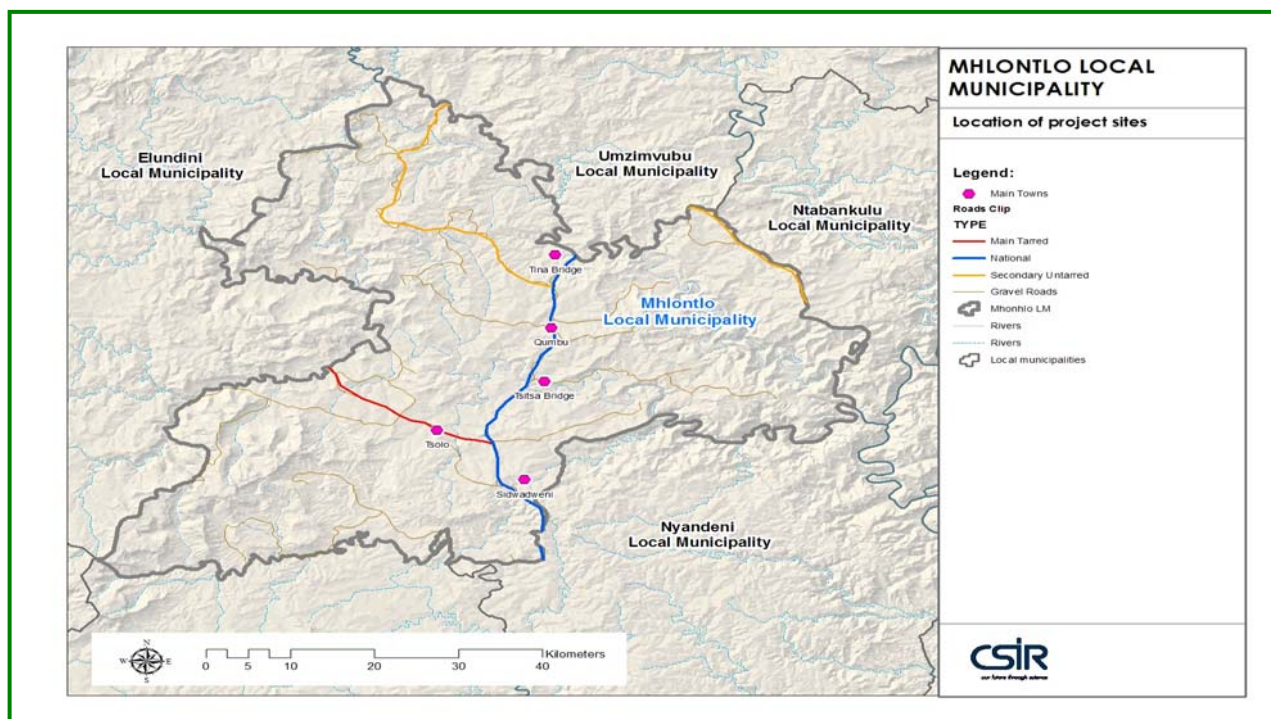
of 1994. This section reviews the existing situation in terms of access to basic infrastructure and services in the local municipality.

### 3.3.1 Access to basic infrastructure and services

Access to basic infrastructure and services is considered both a constitutional right of every citizen as well as important basis and foundation for stimulating socio-economic growth and development. Despite progress made in the Mhlontlo Local Municipality in providing basic infrastructure and services huge backlogs still remain to be addressed. The rural nature of the municipality significantly affects provision of basic infrastructure and services to all areas of the municipality.

### 3.3.2 Roads and Transport Infrastructure

More than 97% of roads in the municipality are gravel and are generally not in good condition and this poses a major challenge for socio-economic development (Mhlontlo Local Municipality, 2008). Maintenance of roads infrastructure is identified as a major challenge for the municipality. There is also need to properly develop and upgrade strategic roads linking various parts of the municipality to developmental nodal areas. Map 2 presents a graphical view of the road network in Mhlontlo Local Municipality.



**Map 2: Road Network in Mhlontlo Local Municipality**

### 3.3.3 The road network and non-agricultural infrastructure

In general, the condition of roads leading to the various wards where farming lands are away from the main roads is poor. To begin with, most access road surfaces in the municipality are earthen. This means that these roads can only handle limited volume and payloads. Given that agricultural raw products are usually bulky and heavy in nature; the access road network in its current state is a big threat to the successful implementation of the proposed integrated development strategy. Even if the processing plants are to be

situated within the municipality, there is still need to have a better road network to link such plants to the farms.

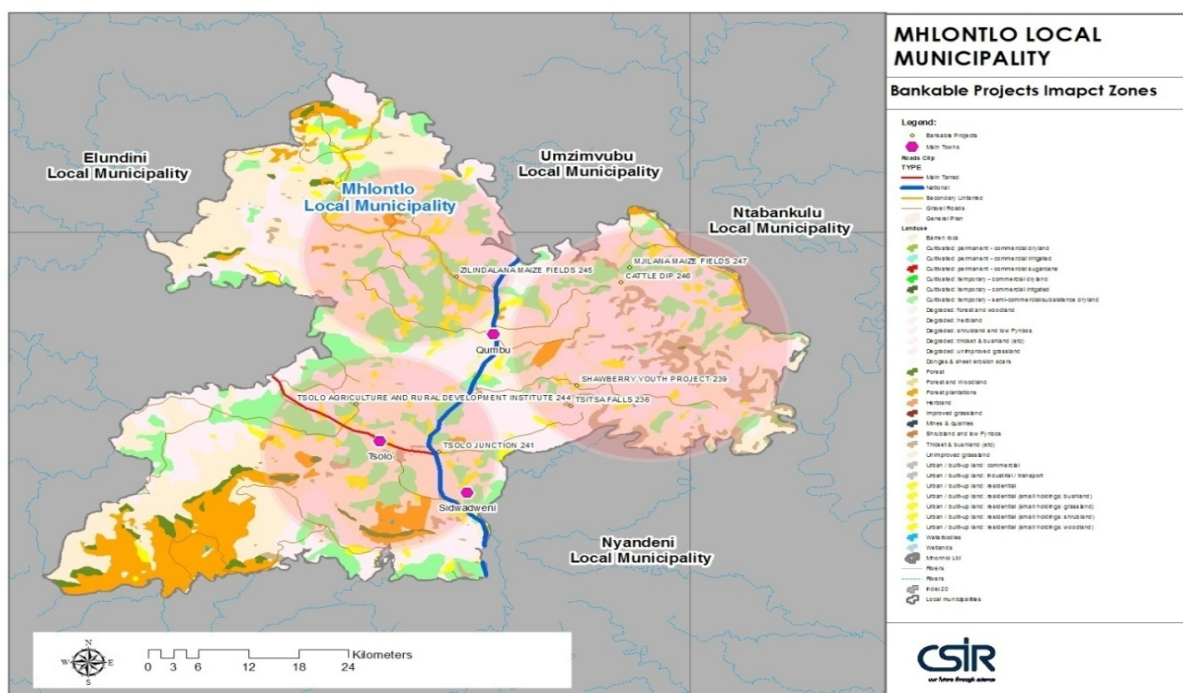
A further complicating factor for the development of the access road network in the municipality is the undulating terrain with excessive steep slopes, at some locations. This makes the use of earthen surface roads in the municipality a real challenge for two-wheel and less powerful four-wheel drive vehicles, even during the dry season. For instance, during the field visits which were done during a dry spell in summer, the vehicle used by consultants had difficulty manoeuvring several locations along the access roads although it had a fairly powerful engine and good clearance. The opening-up of the municipality is therefore contingent upon construction of suitable access roads to the areas earmarked for the proposed development projects. To help reduce the cost of constructing access roads within the municipality, a strategy of constructing a mixed earthen surface and all-weather roads can be adopted. In this case, the sections with the difficult terrain along the access roads can be all-weather while the easy-terrain sections can be earthen surfaced.

#### *3.3.4 Irrigation development and Infrastructure requirements*

Smallholder irrigation for communities is a promising vehicle for rural development. It offers farmers in the community increased crop production thereby helping reduce poverty and improving food security and nutrition of households in rural setups. Irrigation development can make meaningful contribution towards productive utilization of land. Thus, the problem of underutilization of land by the communities in the municipality (and the Eastern Cape Province at large) can partly be addressed by investing in irrigation infrastructure. This is particularly so given the fact that two perennial rivers, namely, Thina and Tsitsa Rivers traverse the municipality and there are large parcels of community land that are suitable for irrigation (the municipality has a business plan for the development of irrigation in the Tsitsa River Basin).

#### **3.5 Bankable infrastructure project profiles**

The approach that was taken to generate bankable investment profiles was to seek to create clusters with a view to create a critical mass that ensures significant impact even though some intervention may be largely for demonstration purposes. As indicated above, target areas for assessment were tourism, agriculture, node development and capacity development. Map 3 presents the locations of the selected bankable projects including their envisaged impact zones.



**Map 3: Bankable Projects**

The municipality boasts of natural resources like water falls, rivers and dams as well as heritage sites and a very rich culture. The development of infrastructure is critical to ensure viability and sustainability of the tourism sector. In addition, the strategic location of the municipality along the N2 national highway provides great tourism and trade opportunities for the local economy. An alternative view is that the proposed Wild Coast N2 toll road could potentially reverse this current advantage. Alternatively a flagship eco-tourism family of projects can be implemented to demonstrate and link the proposed tolled N2 road with local socio-economic growth and development. Key tourism development nodes include the Tsitsa and Thina Falls. Some infrastructure investments have already been put in place at the Tsitsa Falls including an access road, accommodation chalets, water pipe etc. However, it is imperative to identify other necessary infrastructure that is important to stimulate and harness the tourism potential of the area.

The Zilandana maize fields represent a case where production is ongoing and the fields have fairly good infrastructure available such as access road, fencing; etc. The Mjilana fields represent a case where there is nothing happening at present despite the area having high agricultural potential. There are key infrastructure gaps constraining such pieces of land to be productively utilised the most important of which are access roads.

### 3.7 Energy sources

While energy issues have not been covered in this paper, it is a truism to say for the vast majority outside the national energy grid, the absence of energy has profound implications for productivity, employment, communication, healthcare and education. It would thus be important for ASGISA-EC to seek to facilitate the development of off-grid energy sources especially from natural resources such as wind and the sun (small farmers could, for example be drying fruit using solar energy).

### 3.8 Project funding

Besides its own resources, ASGISA-EC can play a significant role in seeking to marshal resources from domestic and international sources to make rural development a reality in Mhlontlo municipality. A robust funding strategy needs to be generated and implemented.

## 4.0 **CONCLUSION AND RECOMMENDATIONS**

### 4.1 Concluding Remarks

One of the key constraints to sustainable agricultural and rural development in Mhlontlo municipality as the case in many other local municipalities across the country, is the poor state of basic infrastructure for economic and social service delivery, which tends to hamper the contributions of the rural labour force to productive enterprises as well as limits the knowledge base of rural people. Because local municipalities are largely unable to fund their infrastructure requirements, external intervention is often required.

An integrated approach to rural development in Mhlontlo requires infrastructure investments with a more broader scope that transcend agricultural developments, where direct agricultural infrastructural investments and activities are complemented by investments in social services aimed at reducing poverty and stimulating economic and social growth and development of the local municipality. Related infrastructure that should also be considered include, rural housing, water supply for drinking and commercial purposes, soil conservation and watershed development, forestry development, educational infrastructure including village knowledge centres, public health institutions including mobile clinics, mini hydropower generation and infrastructure for information technology.

### 4.2 Recommendations

The major recommendations in terms of strengthening the linkage between transport, agriculture and rural development include:

- Need to address income disparities in rural communities – this requires a comprehensive approach that pursues multiple pathways out of poverty – shifting to high value agriculture and providing assistance to help move people out of agriculture;
- Strengthen the role of agencies – rural development agencies need to engage proactively in the implementation of robust innovative policy initiatives to address transport, agriculture and rural development bottlenecks.
- Diversification of rural economic base and skills pool – opening and widening pathways out of poverty with particular reference to households who pursue a portfolio of farm and non-farm activities that allow them to capitalise on different skills of individual members and to diversify risks. Recognising the contribution, role and scope that alternative agriculture and transport growth and development pathways out of poverty exist such as smallholder farming, wage employment in agriculture, wage or self employment in rural nonfarm economy, non-motorised transport, facility and amenity development and improvement and migration out of rural areas – or a combination of these
- Holistic development approach – agriculture, transport and rural development interventions should be informed by the need to address challenges in rural areas in their entirety – be they social, economic, political or environmental. Past agriculture,

transport and rural development approaches identified most pieces of the puzzle but failed to put them together in a way that attained transformational objectives.

- Sustainable rural development - need for multi-disciplinary and pluralistic approaches to poverty reduction, social and gender equity, local economic development, natural resource management and good governance.
- Long-term horizons - solutions should be long-term, integrated and tailored to suit the particular rural environments.
- Robust development policies – intervention policies must neither discriminate against agriculture nor give it special privileges but instead be comprehensive and inclusive.
- Provision of adequate infrastructure and services - rural areas need substantial investment in education, health, and infrastructure such as roads, irrigation, energy, etc.
- Inclusive development trajectory – the needs of women, youths, disabled and aged – a neglected group of farmers and farm labourers – must be built into all programs.

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