# Development Concept

**Chapter 11**

# 11. DEVELOPMENT CONTEXT

## 11.1 Introduction

This OR Tambo Master Agri-Park Master Business Plan reviewed the current agricultural activities in the OR Tambo District Municipality including, but not limited to, a review of the major agricultural products produced and the activities of the various public sector organisations supporting agriculture and farming projects in the region.

In Chapter 7 commodities were identified through a review of the status quo of agricultural activities and biophysical conditions of the region, a review of policy documents and current agricultural projects. These commodities were then analysed by way of a prioritisation matrix which has assessed each commodity according to 37 scoring criteria falling into four broad classes. These are:

A) Biophysical criteria
B) Enterprise viability
C) Economic development
D) Political & social objectives

In accordance with the Agricultural Policy Action Plan and directives from the DRDLR the three top scoring commodities have been identified for inclusion as the core focus areas for the OR Tambo Agri-Park. The top three scoring commodities for OR Tambo were identified as: vegetables, maize and red meat (Including beef, sheep and chevon/goat) production. The identified commodities were then taken through a detailed analysis, including a Market Analysis; Value-Chain Assessment and SWOT Analysis (Chapter 8). Forestry was considered as a key commodity for the OR Tambo District due to the district's competitive advantage. As per the directive provided by the National Department however, it was decided to focus on the three main commodities. The commodities were also presented to the DAPOTT to allow for comments and consensus from the district. The selected commodities therefore take into consideration DAPOTT's comments, the directive from the National Department and a detailed analysis. The following were the key outcomes of the commodity analysis, relating to these three candidate commodities:

**Vegetables:**

- While the OR Tambo environment may not be perfectly suited in all areas to vegetable farming, there are numerous areas across the District where a variety of crops can be produced.
- By supporting multiple crops the Agri-Park can ensure more faming concerns are catered for and the most suitable crops are planted in each area. This will greatly improve the quality of production, improve enterprise flexibility to market demands and enhance food security.
- Markets for vegetables are strong and new supply will easily find a market, especially in the rural Eastern Cape where much of the vegetables sold are imported into the region. Local production should easily be able to supply the local marketplace at lower unit cost than imported vegetables.

**Maize:**

- Maize is well suited to many parts of the OR Tambo District.
- The crop is grown as a subsistence crop throughout the District, i.e. many of the skills required for production are already present in the region, which bodes well for future efforts to increase maize production.
- Maize not only contributes to food security directly, but plays a major role in supporting the red meat value chain as a major source of feed.
- The maize market is robust and any maize production will find a buyer. High quality maize will fetch a premium price but even lower quality price can be sold to offset costs in the feed market.

**Livestock:**

- The OR Tambo environment is well suited to livestock farming with almost all areas of the District showcasing good suitability to livestock farming.
- Large opportunities exist in the OR Tambo District in red meat sub-classes beef, sheep and pork. These opportunities include production opportunities for commercial and emerging farmers as well as numerous opportunities for small and large concerns in the upstream and downstream portions of the value-chain including agro-processing.
- The demand for red meat has been showing strong growth in recent years and conditions are seen as optimal for new entrants into the red meat market.

**General:**

- Large investments in road, water and electricity infrastructure is required to facilitate the growth of agriculture in the rural areas of the OR Tambo DM.
- Significant investment in skills development and training in all identified commodities is required before significant levels of production can be achieved
- A large portion of the OR Tambo District Municipality comprises former homeland areas. As a result, much of this land is held under communal land ownership. Releasing good quality land for commercial development is therefore likely to be difficult.
- Theft and vandalism of farm infrastructure / crops poses a moderate threat to crop and livestock farming in the OR Tambo District.
- Non-productive state land must be prioritised for agricultural development.

## 11.2DRDAR Agri-Park general concept

### 11.2.1 Agri-Park

To restate the description of the Agri-Park from Chapter 2, and Agri-Park is a networked innovation system of agro-production, processing, logistics, and marketing, training and extension services. The Agri-Park system is located in a district municipality, serving to enable market-driven combination and integration of various agricultural activities and rural transformation services. The Agri-Park concept comprises of three basic units:

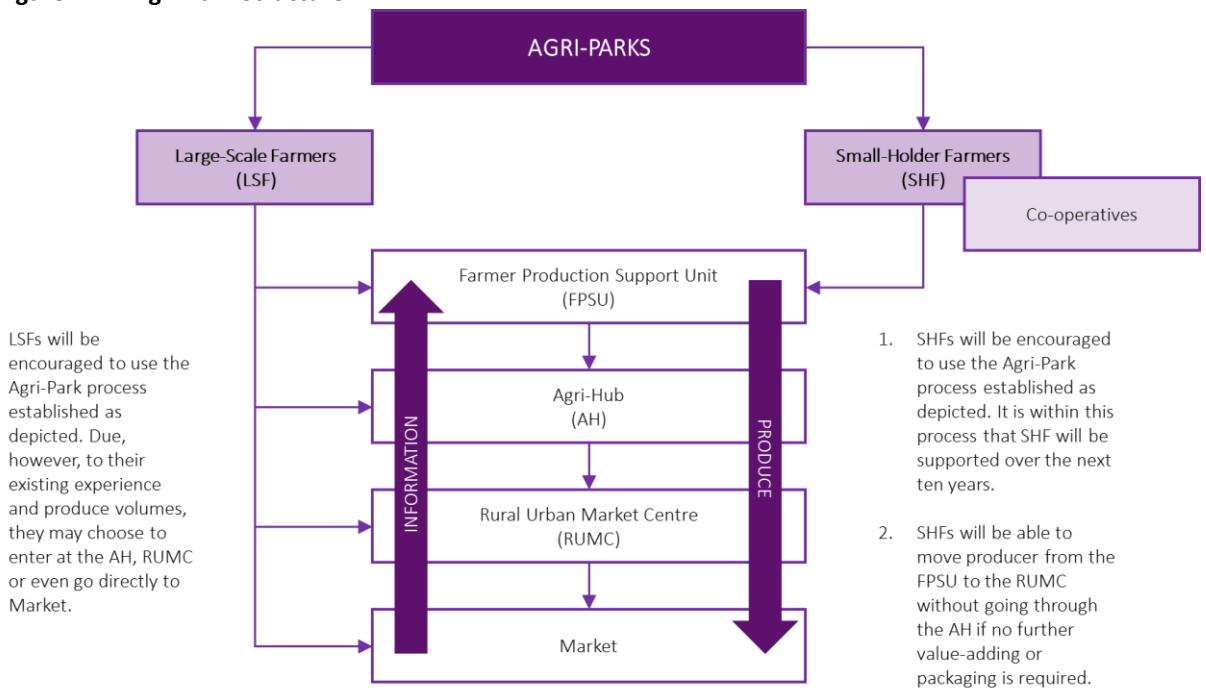
**A. Agri-Hub Unit (AP).**
**B. The Farmer Production Support Unit (FPSU).**
**C. The Rural Urban Market Centre Unit (RUMC).**

The objectives of which is primarily to:

- Kick start rural economic transformation
- Promote the growth smallholder and emerging farmer agriculture
- Promote the development of skills for, and assistance to, small-holder and emerging farmers
- Strengthen existing and create new partnerships between government, the private sector and civil society
- Bring under-utilised land into full production

Figure 11.1 below shows the structure of the Agri-Park, displaying the various elements of the model such as the Agri-Hub, FSPU and RUMC. These three elements of the Agri-Park model are described briefly below.

**Figure 11.1: Agri-Park Structure**




*Source: DRDLR 2015*

**Agri-Hub**

Agri-Hubs are located in centralised places within a District Municipality that are able to service and interact favourable with agricultural activities within the district. The Agri-Hub, by necessity, is located in an area that can serve as a link between district agricultural production and markets, and supply inputs from service and product providers towards the agricultural producers.

**Farmer Production Support Units**

The Farmer Production Support Unit (FPSU) is a rural outreach unit connected with the Agri-Hub. The FPSU serves as a resource node in areas isolated away from the main Agri-Hub, serving the surrounding community. The FPSU is detailed with collecting primary production from agricultural initiatives in the area, storing this product, engaging in small-scale processing operations for the local market, and providing extension services to surrounding operations (including mechanisation).

**Rural Urban Market Centres**

Rural Urban Market Centres (RUMC) are located on the periphery of large urban areas, providing three main purposes. The first is to link rural, urban and international markets; the second is to act as a holding facility for product, releasing produce as required to urban markets based on seasonal trends; and the third is to provide market intelligence and feedback to the Agri-Hub and FPSU.

## 11.3 OR Tambo Agri-Park development concept

### 11.3.1 Agri-Park

The three priority commodities identified for ORTDM, namely: livestock, maize and vegetables, deemed to have the best potential for growth and development in the district especially when considering criteria such as local agro-processing opportunities, suitability for smallholder and emerging farmers, and contribution to employment within the district.

The following sections outline the roles within the district for the Agri-Hub, RUMC and FPSU's, the physical and organisational requirements of each, discussions on the operational dynamics between the various role-players in the Agri-Park model (Agri-Hub, FSPU's, RUMC, the commercial, smallholder and emerging farmers, public sector entities, and the markets for the goods produced), as well as considerations affecting the implementation of the Agri-Park concept in the OR Tambo District Municipality.

The Agri-Parks main elements, the central Agri-Hub, the Farmer Production Support Units and the Rural-Urban Market Centre are three complimentary elements that will contribute to a competitive, successful and inclusive district agriculture sector.

Small and emerging farmers will be able to access key agricultural inputs, equipment, skills training and business administration and production assistance through the FPSUs as well as assistance with the productive elements of farming such as harvesting and moving produce from the farm onwards. The Agri-Hub will feature the centralised planning and oversight necessary to manage the multitude of agricultural projects in the district as well as key infrastructure and agricultural services necessary process base agricultural production such as meat, fresh vegetables and un-milled maize into finished and semi-finished products. Farmers, in addition to being able to access the services provided by the Agri-Hub, will also be able to sell directly to commercial farming cooperatives and/or form production agreements with commercial farming concerns. Choosing not to restrict smallholder and emerging farmers to the usage of the Agri-Hub facilities will ensure that local farmers receive the best price for their produce and allow them to form business relationships that may see them accessing financial and management support at a level which the Agri-Hub may not be in a position to offer.

The RUMC then provides an avenue for local farmers and the Agri-Hub to sell goods either to large retail concerns, smaller local retailers or directly to the person on the street. Here again, the Agri-Parks model should be flexible in how it accommodates farmers and Agri-Hubs, allowing both groups to sell produce forward to the client / market where production will fetch the highest price and allow commercial entities and other agricultural entities to make use of the RUMC. There are likely only to be one RUMC in the Eastern Cape for the initial phase of the Agri-Parks roll out. It will likely be located in Buffalo City. After this initial phase a RUMCs may be located in each district municipality if there is a need for it. When the OR Tambo Agri-Park develops into a feasible business venture and there is a demand for a RUMC, one could be developed specifically for OR Tambo in the Mthatha SEZ.

### 11.3.2 Key thrusts

The three commodities identified are unique and require different levels of support and different development initiatives to enable them to grow and achieve the stated goals of the Agri-Park development concept. As discussed through chapters 8 through 10, the key thrusts (focus areas) for each commodity are outlined below.

**Table 11.1: Key thrusts**

| Vegetable | |
|---|---|
| Processing of vegetables | Basic processing of vegetables could take place at the Agri-Hub. Cutting, peeling and packaging could be an important processing opportunity. |
| Production of vegetables in key projects | Vegetable production can be kick-started in areas through investment in key projects. |
| Agri-Park Linkages | Linkages with other Agri-Parks also focusing on vegetable production, such as Amathole DM, is important for market support and improved sustainability. |
| Training | A key aspect involved in Agri-Park concept is that of training and development of farmers. Emerging vegetable farmers need practical training in best farming practices as well as training in how to access markets. |

| Maize | |
|---|---|
| Silos | Integrate the existing silos at Lambasi into the Agri-Park concept as a storage facility for local farmers. |
| Milling | The maize mill at Mqanduli would be a value-adding activity in the district. Milling can also enhance the quality of maize produced in the district. |
| Fencing | Fencing of local farms and commonages for small holder and emerging farmers. |
| Training | Training is a vital aspect of the Agri-Park concept. In order to give small holder and merging farmers an opportunity to produce maize for the market then it is important to train farmers in farming techniques and market information. |
| Agri-Park Linkages | Linkages with other Agri-Parks also focusing on maize production, such as Joe Gqabi DM and Amathole DM, is important for market support and improved sustainability. |
| **Livestock** | |
| Genetic improvement | Improving the genetic quality of emerging and small-holder farmers for immediate relatively fast improvement of prices offered for carcasses when sold to abattoirs. |
| Fencing | Fencing of commonage key grazing areas for small holder and emerging farmers. |
| Management of commonage | A key aspect of improving small holder farmer's herds is an improvement in the management of commonage. Commonage, if correctly planned and managed, can be vital for small holder farmers. |
| Veterinary support | FPSUs could potentially provide a base for DAFF veterinarians to operate out of and are invaluable to emerging and smallholder farmers. |
| Training | Training is a vital aspect of the Agri-Park concept. In order to give small holder and merging farmers an opportunity to produce livestock for the market then it is important to train farmers in animal handling and market information. |
| Abattoir facilities | There is currently space in the market for an abattoir at FPSU level that has deboning facilities. This should largely be focused on B and C grade meats for the local markets. |

### 11.4 Commodity Development Concepts

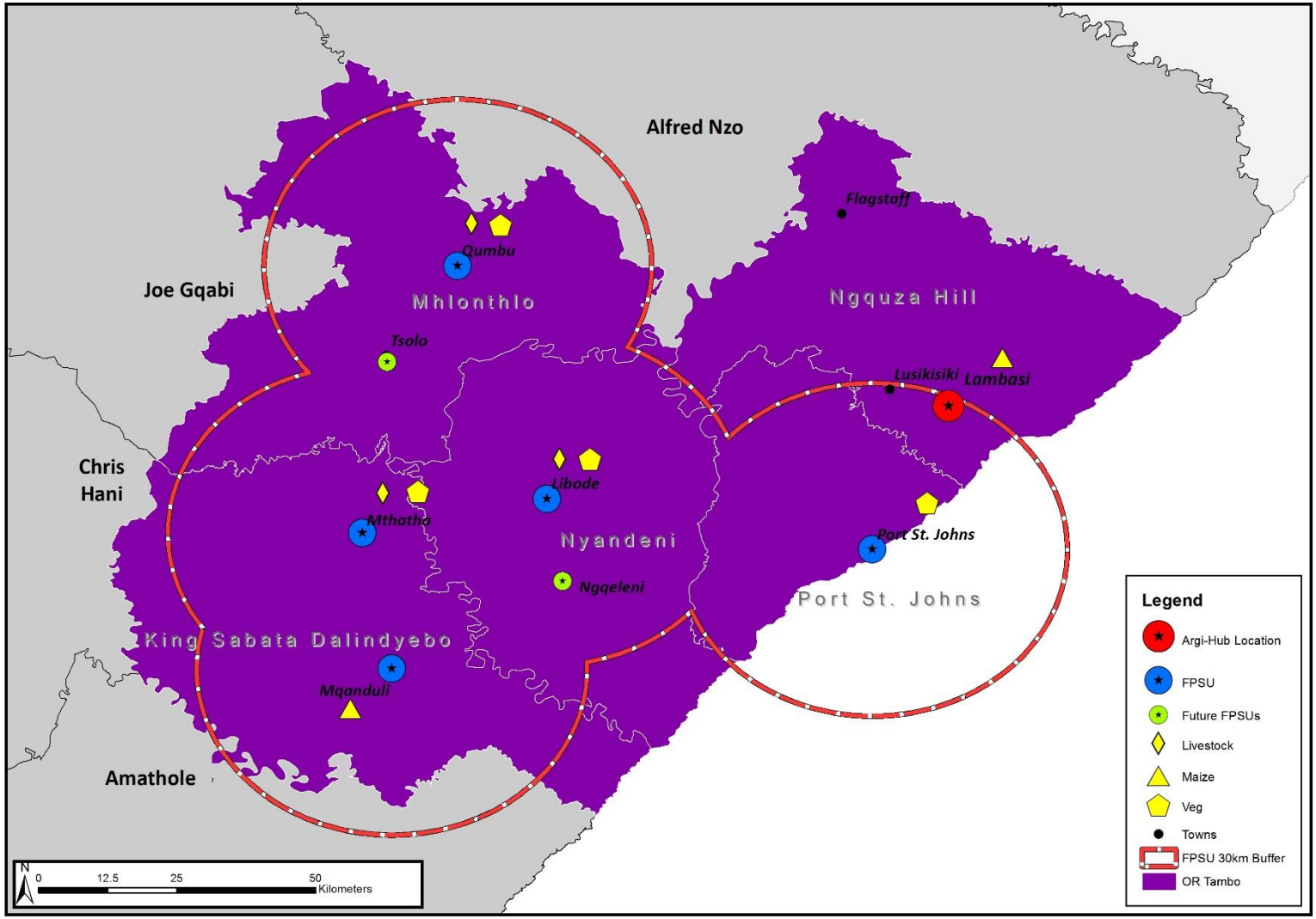
The commodity development concepts unpacked below, consider the requirements of the location and coverage of the FPSU, AH, and the RUMC.

The concept is developed by the defining the following aspects:

- Roles and functions
- Location
- Key products/services
- Infrastructure and equipment
- Logistics
- Human Resources (HR)
- Training

The development concepts take into consideration the current agricultural situation of each commodity and translates this into how the Agri-Park should support and develop the commodity and agricultural sector in the district. The map of the ORTDM Agri-Park is shown below.

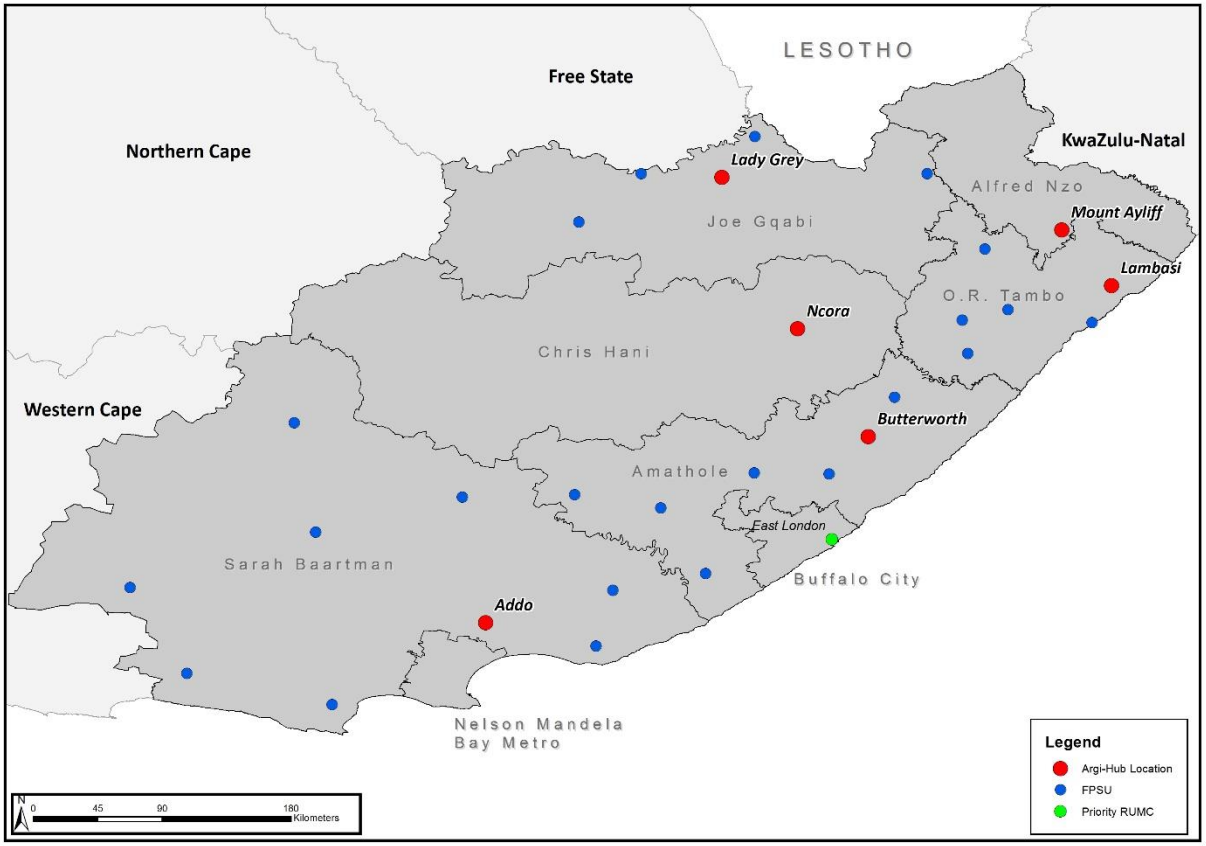
**Figure 11.2: Agri-Park Location**




***Source: Urban-Econ GIS Unit, 2015***

The figure below indicates the Agri-Hubs, RUMC and FPSUs throughout the entire province. It is important to consider the cross border linkages with other Districts particularly if those districts have the same commodities such as vegetables and livestock that is shared with Amathole District. It would be beneficial for those FPSUs that are on the border of each district to share information and expertise.

**Figure 11.3: Location of Agri-Hubs, RUMC and FPSUs throughout the Province**[1]




[1] The FPSUs and prioritised commodities of Chris Hani and Alfred Nzo are not known at the time of publication.

It is important to consider the commodities of each district municipality and create linkages to those areas where the same commodity is supported e.g. livestock is supported in ORTDM and in neighbouring ADM. The following table outlines the commodities in each district municipality.

**Table 11.1: Commodities Prioritised in other Districts in the Eastern Cape[1]**

| District Municipality | Prioritised Commodities | | |
|---|---|---|---|
| Amathole | Livestock | Maize | Vegetables |
| Joe Gqabi | Livestock | Wool | Maize |
| OR Tambo | Livestock | Maize | Vegetables and Fruit |
| Sarah Baartman | Livestock | Vegetables | Citrus |

### 11.4.1 Maize

The concept for the production of maize in the district also looks at the production flow from the farm to the market (through to the RUMC). Due to maize being a relatively low priced commodity, the primary production of maize will need to table place at large scale, meaning that large hectares of land are needed and can be provided by the state. The production of maize will entail mechanisation and storage support from the FPSU among other services. The FPSU will support farmers with the planting and harvesting activities and maize can be transported back to FPSU for local sales and straight to the AH for further processing. Distribution to markets can be facilitated by the AH where possible, otherwise the RUMC will act as a distribution centre and assist with market related information. Further details on the development concept for maize are found in Table 11.2.

**Table 11.2 Maize Development Concept**

| Production Flow | Farmers | FPSUs | Agri-Hub | RUMC |
|---|---|---|---|---|
| **Location** | All smallholder farmers and some commercial farmers (those willing to participate) involved in livestock production in the ORTDM. Livestock farming takes place across the district. | Mqanduli, KSD LM maize mill can be utilised as the district's maize FPSU. The Mqanduli maize mill[2] (RED Hub) is set to provide farmers with services such as finance, supply, storage, processing and trade. It would therefore easily fit into the FPSU and Agri-Park model. | The site for the Agri-Hub has been identified as Lusikisiki (Lambasi), Ngquza Hill LM. Lusikisiki (Lambasi) is located near the R61 and the town Port St Johns. Refer to figure 11.2. | There are likely only to be one RUMC in the Eastern Cape for the initial phase of the Agri-Parks roll out. It will likely be located in Buffalo City. After this initial phase a RUMCs may be located in each district municipality if there is a need for it. When the OR Tambo |

[2] The Mqanduli Maize Mill is an ECRDA RED Hub initiative. Six primary co-operatives were set up to supply the mill. Secondary co-ops were responsible for taking maize from the primary co-operatives and sending it to the mills for processing.

| Production Flow | Farmers | FPSUs | Agri-Hub | RUMC |
|---|---|---|---|---|
| | | The Agri-Hub at Lambasi would also focus on maize farmers. The FPSUs in the district will be located in:<br><br>KSD LM – Mqanduli & Mthatha<br>Nyadeni LM – Libode<br>Mhlontlo LM – Qumbu<br>Port St Johns LM – Port St Johns<br>Ingquza Hill LM – Lambasi (Agri-Hub)<br>If there is a need for additional FPSUs in OR Tambo additional FPSUs can be located in Ngqeleni and Tsolo during a later phase of Agri-Parks development. | | Agri-Park develops into a feasible business venture and there is a demand for a RUMC, one could be developed specifically for OR Tambo in the Mthatha SEZ.<br><br>It is recognised that a SEZ is proposed for the Mthatha airport. It is therefore proposed that in the long term the SEZ would serve as OR Tambo DM's RUMC. |
| **Key Roles and Functions** | Farmers are responsible for the primary production, but have slightly different roles according to size and complexity of operations.<br><br>**Smallholder**<br>Smallholder farmers and subsistence farmers are primarily concerned with crop production to aid food security supplying primarily to their own households and communities and also to local fresh produce markets or selling directly to public in village market centres. | The FPSU plays a critical role in ensuring availability and facilitating services. The FPSUs will serve as a collection and distribution point for farmers. It should operate as a small-scale, decentralised Agri-Hub. The FPSU should perform the following functions:<br>• Farmers should be able to source input supplies (such as fertilizer, pesticides & herbicides). | The main role of the Agri-Hub will be the training of emerging farmers in the region on how to farm maize sustainably to a market acceptable quality. Training in the marketing aspects of farming. It is important to consider training in business practices and marketing. These actions alone should improve the prices that are being offered to emerging farmers. Training sessions involving practical and experiential learning will be crucial to the success of emerging farmers. | The RUMC would also provide the Agri-Park with valuable market intelligence, such as demand and supply trends, marketing strategies and pricing mechanisms. The RUMC should also provide a large warehouse (silo) and/or cold storage facilities. |

| Production Flow | Farmers | FPSUs | Agri-Hub | RUMC |
|---|---|---|---|---|
| | **Emerging farmer**<br>Emerging farmers form a link between smallholder farmers and commercial farmers, being more sophisticated that smallholders and having higher levels of production. These farmers exhibit features of both smallholder and commercial farmers and may sell produce in small fresh produce markets and/or through commercial marketing channels.<br><br>**Commercial**<br>Commercial farmers farm large portions of land with a high degree of mechanisation and technical sophistication. These farmers make use of well-established commercial fresh produce marketing channels to sell produce and move to destination markets. | • Training and extension services can also be provided at the FPSUs.<br>• Mechanisation and logistic support<br>• Provide limited storage facilities<br>• Provide limited sorting and processing services<br>• Distribute excess products to the Agri-Hub. | Critical to the services offered by the Agri-Hub is the facilitation of training and skills development especially in the area of agricultural economics to ensure farmers understand the fundamentals running a sustainable farming enterprise.<br><br>The new maize mill at Lambasi would also provide processing facilities at the Agri-Hub. | |
| **Human Resources** | Additional human resources may only be required at emerging and commercial farms. This may include permanent staff to deal with day-to-day farm operations and seasonal workers during harvest time. | The following positions or services are required to assist smallholder or emerging farmers in each FPSU area. These may available at present through existing public or private agriculture industry structures. If access to these services or personnel are not available in a FPSU area they need to be provided by the Agri-Park.<br>If there are existing staff, they should be integrated into Agri- | The following positions or services are required to assist smallholder or emerging farmers in each FPSU area. These may available at present through existing public or private agriculture industry structures. If access to these services or personnel are not available in a FPSU area they need to be provided by the Agri-Park.<br>Local private and public entities, such as DAFF & DRDLR, must be | The following positions or services are required to assist smallholder or emerging farmers in each FPSU area. These may available at present through existing public or private agriculture industry structures. If access to these services or personnel are not available in a FPSU area they need to be provided by the Agri-Park.<br>Local private and public entities much be approached to identify |

| Production Flow | Farmers | FPSUs | Agri-Hub | RUMC |
|---|---|---|---|---|
| | | Park. Local private and public entities much be approached to identify what services are available for inclusion into the Agri-Park model so duplication of services is avoided<br>The FPSU will provide the following HR/HR facilities:<br>• Agricultural extension officer/ support office;<br>• Machine operators/ Local mechanisation centre and workshops;<br>• Agronomist<br>• Researchers<br>• Voluntary/Established commercial farmers to mentor the small scale farmers (*as many* as possible).<br>• State veterinarian | approached to identify what services are available for inclusion into the Agri-Park model so duplication of services is avoided<br>The AH will provide the following HR:<br>• Administrative manager<br>• Quality control personnel<br>• Research and Demonstration personnel<br>• Training personnel | what services are available for inclusion into the Agri-Park model so duplication of services is avoided.<br>The RUMC will provide the following HR:<br>• IT expert/personnel<br>• Administrative manager<br>• Training personnel<br>• Marketing agents (to faceplate market linkages, facilitate contracts with wholesalers and major retail outlets and also to gather information on prices at fresh produce market that would be communicated to the AH and FPSU). |
| **Training** | OR Tambo DM has a large maize farming sector. Many farmers are familiar with growing both yellow and white maize. Subsistence, smallholder and emerging farmers may require training on:<br>• New production methods<br>• Best practice farming techniques<br>• ICT<br>Extension officers and commercial farmers are well positioned to provide training and mentorship programmes. | One of the key functions of the FPSU would be to provide training and extension support on various farm practices, to the SHF and emerging farmers. This support as mentioned before would entail best farming practices, training for business management and market access as well as financial management. | The Agri-Hub would be the centre of training facilities. Training at the Agri-Hub would include:<br>• Training on best practices, based on changing demand and supply.<br>• Training on new innovations as they surface. | Training of personnel on how to disseminate information to the farmers, FPSUs and the Agri-Hub. |

| Production Flow | Farmers | FPSUs | Agri-Hub | RUMC |
|---|---|---|---|---|
| **Key products/ activities** | **Core activities**<br>• Land preparation (including land clearing, bed making), installing infrastructure (including water infrastructure, tunnel construction where applicable)<br>• Maize farming (including planting, fertilization, disease control, irrigation etc.)<br>• Harvesting of maize<br>• Packaging and transportation of maize.<br>**Core products**<br>• Yellow maize<br>• White maize | The FPSUs core activities with regards to maize will be to:<br>• Collect local farmers' maize crops<br>• Provide limited storage facilities<br>• Milling<br>• Limited processing services<br>• Some quality control<br>• Engaging with RUMCs<br>• Auction facilitator<br>• Transporting excess produce to the Agri-Hub | The core activities of the Agri-Hub is the training of best practice farming techniques, business management and to provide logistic support. The Agri-Hub would also be responsible for facilitating relationships between local farmers and markets. The Agri-Hub's core activities related to maize is facilitating the sale of produce.<br><br>Importantly, the Lambasi Agri-Hub would include a silo and mill which would provide agro-processing services. | The core activities of the RUMC are:<br>• Collection of final products from the Agri-Hub<br>• Marketing and distribution of final products to different wholesalers and major retail outlets<br>• Exporting of final products<br>• Bulk storage of final products |
| **Infrastructure/ equipment** | Infrastructure and equipment required are specifically targeted to the smallholder and emerging farmers. Subsistence farmers do not produce a large enough quantity to warrant the need for extensive infrastructure and equipment. Commercial farmers are thought to already own or are in a position to acquire the infrastructure or equipment relatively easier than smallholder and emerging farmers. Equipment such as:<br>• Tractors<br>• Trailers<br>• Ploughs<br>• Planters (seeds) | The FPSU would require to put in place the following equipment/infrastructure:<br>• Transport (eg. Bakkie or pick-up vehicles)<br>• Weighing and packaging machines<br>• Local pack house<br>• Small scale processing facilities for local market<br>• Produce sorting facility<br>• Auction facility<br>• Storage facility | The AH would require to put in place the following equipment/infrastructure:<br>• Administrative facilities<br>• Rental facilities<br>• Agro-Processing facilities<br>• Packaging facilities<br>• Quality control facilities<br>• Agricultural input distribution and sales centre<br>• Training centre<br>• Logistics and transport facility | The RUMC would require to put in place the following equipment/infrastructure:<br>• Large warehouses/ holding facilities<br>• Cold storage facilities<br>• Administrative facilities/ information centre |

| Production Flow | Farmers | FPSUs | Agri-Hub | RUMC |
|---|---|---|---|---|
| | • Irrigation<br>• Fencing<br>• Basic farming implements (spades, hoes etc.)<br>• Trucks or Light Delivery Vehicles (LDVs) for transporting goods.<br>The concept is that smallholder farmers would hire the necessary equipment from the Agri-Hub but emerging farmers would receive assistance to buy their equipment. | • Training room with appropriate training equipment | | |
| **Logistics** | Farmers should be organised into groups. Each group should have a group head that would communicate information from the farmers to the FPSU and also arrange for delivery of inputs with the FPSU.<br>Certain days of the week should be assigned for collection of maize from the farmers. Farmers will unlikely have the necessary logistics available to take crops to silos so this will have to be organised with the FPSU. Farmers intending to sell on certain days would notify the FPSU for necessary arrangements. For farmers with large quantity of crops, special arrangements should be made to transport crops as this can greatly increase capacity at a silo. Smallholder and emerging farmers should be allowed to rent a truck and driver to fill a truck and deliver it to processing facility. Commercial farmers will have access to | The FPSU should organise primary logistics in the form of collection vehicles either to hire or operated by the FPSU to collect crops to transport to the silos. | The same transport will be used to collect fresh crops from the FPSU to the Agri-Hub for processing. Transport facilities would need to serve a number of stages in the production line. | The same transport will be used for the distribution of final products to wholesalers and major retail outlets. |

| Production Flow | Farmers | FPSUs | Agri-Hub | RUMC |
|---|---|---|---|---|
| | their own vehicles or hire vehicles from the FPSU. | | | |
| **Technology/ ICT** | There has been a number of recent developments in the maize farming sector that must be considered if the Agri-Park is to be efficient and competitive. These include developments in mechanisation, renewable energy, genetically modified crops and pest management control. | The FPSUs should have computers for training purposes. Vehicles should be fitted with tracking devices. The FPSU should also house the most current agricultural information, such as weather conditions to maize prices on the global markets. | The Agri-Hub should provide easy access to information for the district's agricultural sector. | The RUMC will provide information data base that all the various basic units of the Agri-Park can subscribe to. |

### 11.4.2 Livestock

The development concept for the production of red meat has been developed according to the Agri-Parks Model, as stated in the introduction. The process begins with the production of livestock by the farmer and is supported by the FPSU by providing services such as supplying feed, veterinary assistance, and auctions and sales. Livestock that is not intended for processing is sold at the FPSU to the local market, while livestock for further processing is transported to the AH. The abattoir will be responsible for slaughtering and performing other production function through other facilities. From the AH or abattoir, the red meat products can be sold, transported to various retail and distribution markets or the RUMC. The RUMC can further transport products to local and international market, while providing information on demand and market trends to the other components. Table 11.3 explores the development for red meat production.

**Table 11.3: Livestock development stock**

| Production Flow | Farmers | FPSU | Agri-Hub | RUMC |
|---|---|---|---|---|
| **Location** | All smallholder farmers and some commercial farmers (those willing to participate) involved in livestock production in the ORTDM. Livestock farming takes place across the district. | Livestock farmers will be supported by all the FPSU(s) that would be situated in the ORTDM since it is a major primary agricultural activity in the district. The existing abattoir in Mthatha, Umzikantu Red Meat Abattoir, should be linked to the Agri-Park concept. It is proposed that Umzikantu is upgraded to expand its capacity. The abattoir would then serve as the main red meat FPSU in the district.<br><br>The FPSUs will be located in:<br><br>KSD LM –Mthatha & Mqanduli<br>Nyadeni LM – Libode<br>Mhlontlo LM – Qumbu<br>Port St Johns LM – Port St Johns<br>Ingquza Hill LM – Lambasi (Agri-Hub) | The site for the Agri-Hub has been identified as Lusikisiki (Lambasi), Ngquza Hill LM. Lusikisiki (Lambasi) is located near the R61 and the town Port St Johns. Refer to figure 11.2. | There are likely only to be one RUMC in the Eastern Cape for the initial phase of the Agri-Parks roll out. It will likely be located in Buffalo City. After this initial phase a RUMCs may be located in each district municipality if there is a need for it. When the OR Tambo Agri-Park develops into a feasible business venture and there is a demand for a RUMC, one could be developed specifically for OR Tambo in the Mthatha SEZ.<br><br>It is recognised that a SEZ is proposed for the Mthatha airport. It is therefore proposed that in the long term the SEZ would serve as OR Tambo DM's RUMC. |

| Production Flow | Farmers | FPSU | Agri-Hub | RUMC |
|---|---|---|---|---|
| | | If there is a need for additional FPSUs in OR Tambo additional FPSUs can be located in Ngqeleni and Tsolo during a later phase of Agri-Parks development. | | |
| **Key Role & Function** | Farmers are responsible for the primary production of livestock, but have slightly different roles according to size and complexity of operations.<br><br>**Smallholder**<br>Smallholder farmers and subsistence farmers are primarily concerned with crop production to aid food security supplying primarily to their own households and communities and also to local fresh produce markets or selling directly to public in village market centres.<br><br>**Emerging farmer**<br>Emerging farmers form a link between smallholder farmers and commercial farmers, being more sophisticated that smallholders and having higher levels of production. These farmers exhibit features of both smallholder and commercial farmers and may sell meat to markets and/or through commercial marketing channels. | The FPSU plays a critical role in ensuring availability and facilitating services. The FPSUs will serve as a collection and distribution point for farmers. It should operate as a small-scale, decentralised Agri-Hub. The FPSU should perform the following functions:<br>• Farmers should be able to source input supplies (such as fertilizer, pesticides & herbicides).<br>• Training and extension services can also be provided at the FPSUs.<br>• Mechanisation and logistic support<br>• Provide limited storage facilities<br>• Provide limited sorting and processing services<br>• Distribute excess products to the Agri-Hub.<br>• Abattoir would serve as a processing facility at the Mthatha FPSU. | The main role of the Agri-Hub will be the training of emerging farmers in the region on how to farm livestock sustainably to a 'market acceptable' quality and how to improve animal well-being and training in the marketing aspects of farming.<br><br>Critical to the services offered by the Agri-Hub is the facilitation of training and skills development especially in the area of agricultural economics to ensure farmers understand the fundamentals running a sustainable farming enterprise. | Market intelligence, assist farmers, and processors in managing a nexus of contracts, large warehousing and cold storage facilities. |

| Production Flow | Farmers | FPSU | Agri-Hub | RUMC |
|---|---|---|---|---|
| | **Commercial**<br>Commercial farmers farm large portions of land with a high degree of mechanisation and technical sophistication. These farmers make use of well-established commercial fresh produce marketing channels to sell produce and move to destination markets. | Improving genetic quality – expand. Regional level. | | |
| **Human Resources** | The core HR personnel that farmers would require from the FPSU are:<br>• Extension officers<br>• State veterinarians<br>• Agronomist<br>• Researchers<br>• Some permanent staff to manage day to day farm operations.<br><br>Commercial farmers should have all the HR personnel they need to operate a farm but can use extension officers from the FPSUs and the Agri-Hub. | The following positions or services are required to assist smallholder or emerging farmers in each FPSU area. These may available at present through existing public or private agriculture industry structures. If access to these services or personnel are not available in a FPSU area they need to be provided by the Agri-Park. If there are existing staff they should be integrated into the Agri-Park.<br><br>Local private and public entities much be approached to identify what services are available for inclusion into the Agri-Park model so duplication of services is avoided<br>The FPSU will provide the following HR/HR facilities: | The following positions or services are required to assist smallholder or emerging farmers in each FPSU area. These may available at present through existing public or private agriculture industry structures. If access to these services or personnel are not available in a FPSU area they need to be provided by the Agri-Park. Local private and public entities much be approached to identify what services are available for inclusion into the Agri-Park model so duplication of services is avoided<br>The AH will provide the following HR:<br>• Administrative manager<br>• Quality control personnel<br>• Feedlot personnel<br>• Research and Demonstration personnel | The following positions or services are required to assist smallholder or emerging farmers in each FPSU area. These may available at present through existing public or private agriculture industry structures. If access to these services or personnel are not available in a FPSU area they need to be provided by the Agri-Park. Local private and public entities much be approached to identify what services are available for inclusion into the Agri-Park model so duplication of services is avoided<br>The RUMC will provide the following HR:<br>• IT expert/personnel<br>• Administrative manager<br>• Training personnel |

| Production Flow | Farmers | FPSU | Agri-Hub | RUMC |
|---|---|---|---|---|
| | | • Agricultural extension officer/ support office;<br>• Machine operators/ Local mechanisation centre and workshops;<br>• Researchers<br>• Voluntary/Established commercial farmers to mentor the small scale farmers (*as many* as possible).<br>• State veterinarian linked to DAFF. | • Training personnel | • Marketing agents (to faceplate market linkages, facilitate contracts with wholesalers and major retail outlets and also to gather information on prices at fresh produce market that would be communicated to the AH and FPSU). |
| **Training** | Small holder and emerging farmers would require training on: best farm practices (animal growth and nutrition), use of tools and equipment, training on how to interpret market information (Access to markets and prices) and ICT. The extension officers that are involved with livestock production are well positioned to render this type of training. Also, training can be provided by the well-established commercial farmers through a mentorship programme. Extension officers through the DAFF can also organise Agri-shows, where farmers can express their concerns, and where training can be provided. | One of the key function of the FPSU would be to provide training and extension support on various farm practices, to the smallholder and emerging farmers.<br>They can also provide some support to the commercial farmers particularly with veterinary services. | Training at the Agri-Hub would include:<br>• Training on best practices, based on changing demand and supply.<br>• Training on new innovations as they surface.<br><br>Livestock production and services would mainly be undertaken at the Mthatha FPSU because of the Umzikantu Red Meat Abattoir. | Training of training personnel on how to disseminate information to the farmers, FPSUs and Agri-Hub. |

| Production Flow | Farmers | FPSU | Agri-Hub | RUMC |
|---|---|---|---|---|
| **Key product/activities** | The core activities of the small holder farmers are:<br>• Ensuring animal health<br>• Disease control<br>• Rearing of young livestock to replace herds taken to abattoir<br>• Key output will be live animals that are taken to abattoirs<br>• Improving the genetic quality of the herds<br>Commercial farmers will focus on these aspects as well.<br><br>Dairy is one of the smaller sub-products derived from livestock. The dairy sector in OR Tambo is relatively small however it is recognised that dairy farmers require support. | The core activities of the FPSU are:<br>• Collection of livestock from the farmers<br>• Transportation of livestock to abattoirs/ feedlots or holding areas for sale<br>• Some quality control (most to be performed by abattoirs and feedlots)<br>• Transportation of processed carcasses from abattoirs to markets | The core activities of the AH are:<br>• Training of farmers on how to effective raise livestock.<br>• Training farmers in business management<br>• Logistics support | The core activities of the RUMC are:<br>• Collection of final products from the AH/ FPSU (abattoir)<br>• Marketing and distribution of final products to different wholesalers and major retail outlets<br>• Exporting of final products<br>• Bulk storage of final products |
| **Infrastructure/ Equipment** | The smallholder farmer would require the following equipment, which can be hired from the FPSU:<br>• Tractor<br>• Trailer<br>• Feeding troughs<br>• Water troughs<br>• Tagging equipment<br>• Animal handling areas<br>• Storage facilities for feed, poisons, and medicines. | The FPSU would require to put in place the following equipment/infrastructure:<br>• Transport ( e.g. Bakkie or pick-up vehicles)<br>• Weighing facilities<br>• Auction facility<br>• Storage facility<br>• All equipment listed to be required by the small holder farmers. | The AH would require to put in place the following equipment/infrastructure:<br>• Administrative facilities<br>• Rental facilities<br>• Quality control facilities<br>• Agricultural input distribution and sales centre<br>• Training centre<br>• Student and staff housing<br>• Logistics and transport facility | The RUMC would require to put in place the following equipment/infrastructure:<br>• Large warehouses/ holding facilities<br>• Cold storage facilities<br>• Administrative facilities/ information centre |

| Production Flow | Farmers | FPSU | Agri-Hub | RUMC |
|---|---|---|---|---|
| | Commercial farmers should have access to all of this equipment and infrastructure. | • Upgrade of the Umzikantu abattoir | | |
| **Logistics** | Smallholder farmers should be organised into groups. Each group should have a group head that would communicate information from the farmers to the FPSU and also arrange for delivery of inputs with the FPSU.<br><br>**Selling of animals**: Certain days of the week should be assigned for collection of animals from the farmers. Farmers will unlikely have the necessary logistics available to take the animals to abattoir so this will have to be organised with the FPSU. Farmers intending to sell on certain days would notify the FPSU for necessary arrangements. For farmers with large numbers of livestock, special arrangements should be made | The FPSU should organise primary logistics in the form of collection vehicles either to hire or operated by the FPSU to collect livestock to transport to the abattoirs and feedlots.<br>Cold storage transport should also be arranged for distribution to the various marketing channels and the RUMC.<br><br>***It should be noted that some of these transport facilities will be used to deliver farm inputs to the collection centres, after which it can be distributed to individual farmers***. | Rental of transport could occur from the AH but will primarily be the role of the FPSU. | The same cold storage transport will be used for distribution of final products to wholesalers and major retail outlets. |

| Production Flow | Farmers | FPSU | Agri-Hub | RUMC |
|---|---|---|---|---|
| | to transport these animals as this can greatly increase capacity at an abattoir. They should be allowed to rent a truck and driver to fill a truck and deliver it to the abattoir for processing.<br>Commercial farmers will have access to their own vehicles or hire vehicles from the FPSU. | | | |
| **Technology/ICT** | In order to boost their production efficiency and health of the animals, smallholder and emerging farmers would require:<br>• Modern tools,<br>• Mobile devices for subscription to Apps. , to enable them receive information from the RUMC on weather forecast, disease control etc. | Tracking devices on all vehicles to prevent hijack and also to monitor the movements and locations of the drivers. Also, the FPSU would require subscription to certain Apps from the RUMC to remain conversant with the current prices fetched on the global, national and local market, so as to be able to strategically supply potatoes/ potato products to the markets.<br>****It should be noted the same transport facilitates would be used to service all the basic units of the Agri-Park, therefore, all the Transportation facilities would have these tracking devices.*** | In order to remain aware of the current prices fetched on the global, national and local market, so as to be able to strategically supply red meat to the markets, the RUMC would also require subscription to certain digital applications (Apps). This will enable the AH to remain informed. | The RUMC will provide Information Data base that all the various basic units of the Agri-Park can subscribe to. |

### 11.4.3 Vegetables

The concept for the production of vegetables in the district also looks at the production flow from the farm to the market (through to the RUMC). Vegetables is one of the district's key commodities and it is therefore essential to provide training and support to smallholder and emerging farmers that want to enter the market. The production of vegetables will entail mechanisation and storage support from the various FPSUs among other services. The FPSUs will support farmers with the supply of inputs, such as seeds and fertilisers and will provide collective transport means for fresh produce. Distribution to markets can also be facilitated by the AH where possible, otherwise the RUMC will act as a distribution centre and assist with market related information. Further details on the development concept for vegetables are found in Table 11.4.

**Table 11.4: Vegetable Development Concept**

| Production Flow | Farmers | FPSU | Agri-Hub | RUMC |
|---|---|---|---|---|
| **Location** | Vegetables can be grown in all areas of the OR Tambo District. The varying climatic and soil conditions across the district will determine what crops farming projects are suitable in each LM and to what degree. | The FPSUs in Mthatha, Libode and Port St Johns would be more focused on vegetable support services. This does however not exclude the other FPSUs from providing vegetable farmers with support or limit them only to vegetable focus.<br><br>KSD LM – Mqanduli & Mthatha<br>Nyadeni LM – Libode<br>Mhlontlo LM – Qumbu<br>Port St Johns LM – Port St Johns<br>Ngquza Hill LM – Lambasi (Agri-Hub)<br><br>If there is a need for additional FPSUs in OR Tambo additional FPSUs can be located in Ngqeleni and Tsolo during a later phase of Agri-Parks development. | The site for the Agri-Hub has been identified as Lusikisiki (Lambasi), Ngquza Hill LM. Lusikisiki (Lambasi) is located near the R61 and the town Port St Johns. Refer to figure 11.2. | There are likely only to be one RUMC in the Eastern Cape for the initial phase of the Agri-Parks roll out. It will likely be located in Buffalo City. After this initial phase a RUMCs may be located in each district municipality if there is a need for it. When the OR Tambo Agri-Park develops into a feasible business venture and there is a demand for a RUMC, one could be developed specifically for OR Tambo in the Mthatha SEZ.<br><br>It is recognised that a SEZ is proposed for the Mthatha airport. It is therefore proposed that in the long term the SEZ would serve as OR Tambo DM's RUMC. |
| **Key Role & Function** | Farmers are responsible for the primary production of fresh vegetables, but have | The FPSU plays a critical role in ensuring availability and facilitating access to Input supplies such as | The main role of the Agri-Hub will be the training of emerging farmers in the region on how to | Market intelligence, assist farmers, and processors in managing a nexus of contracts, large |

| Production Flow | Farmers | FPSU | Agri-Hub | RUMC |
|---|---|---|---|---|
| | slightly different roles according to size and complexity of operations.<br>**Smallholder**<br>Smallholder farmers and subsistence farmers are primarily concerned with crop production to aid food security supplying primarily to their own households and communities and also to local fresh produce markets or selling directly to public in village market centres.<br><br>**Emerging farmer**<br>Emerging farmers form a link between smallholder farmers and commercial farmers, being more sophisticated than smallholders and having higher levels of production. These farmers exhibit features of both smallholder and commercial farmers and may sell produce in small fresh produce markets and/or through commercial marketing channels.<br><br>**Commercial**<br>Commercial farmers farm large portions of land with a high degree of mechanisation and technical sophistication. These farmers make use of well-established commercial fresh produce marketing channels to sell | vegetable seed, seedlings, fertilizer, pesticides, herbicides, training and extension support, mechanisation support, local logistics support, limited sorting of fresh produce, some packaging, some storage, and processing for local markets, through-put of excess products to Agri-Hubs. | farm vegetables sustainably to a market acceptable quality.<br>Critical to the services offered by the Agri-Hub is the facilitation of training and skills development especially in the area of agricultural economics to ensure farmers understand the fundamentals of running a sustainable farming enterprise.<br><br>The Agri-Hub should also facilitate access to key agricultural processes including pack-houses, grading and sorting facilities, logistics services and agro-processing services. | warehousing and cold storage facilities. |

| Production Flow | Farmers | FPSU | Agri-Hub | RUMC |
|---|---|---|---|---|
| | produce and move to destination markets. | | | |
| **Human Resources** | The core HR personnel that farmers may require from the FPSU are:<br><br>• Extension officers<br>• Agronomist<br>• Researchers<br>• Seasonal staffs ( harvest labour)<br>• Some permanent staff to manage day to day farm operations.<br><br>Commercial farmers should have all the HR personnel they need to operate a farm but can use extension officers from the FPSUs and the Agri-Hub. | The following positions/services are required to assist smallholder/emerging farmers in each FPSU area. These may be available at present through existing public/private agriculture industry structures. If access to these services or personnel are not available in a FSPU area they need to be provided by the Agri-Park.<br><br>Local public and private entities must be approached to identify what services are available for inclusion into the FSPU service model to ensure duplication of positions / functions is avoided.<br><br>The FPSU will provide the following HR/HR facilities:<br><br>• Agricultural extension officer/ support office;<br>• Machine operators/ Local mechanisation centre and workshops;<br>• Agronomist (for soil testing etc.)<br>• Researchers | The following positions/services are required to assist smallholder / emerging farmers in the Agri-Hub area. These may be available at present through existing public/private agriculture industry structures. If access to these services or personnel are not available in an Agri-Hub area they need to be provided by the Agri-Park.<br><br>Local public and private entities must be approached to identify what services are available for inclusion into the FSPU service model to ensure duplication of positions / functions is avoided.<br><br>The AH will provide the following HR:<br>• Administrative manager<br>• Quality control personnel<br>• Staff to manage the Agro-Processing facilities<br>• Research and Demonstration personnel<br>• Training personnel | The following positions / services are required to assist smallholder / emerging farmers in the RUMC area. These may be available at present through existing public/private agriculture industry structures. If access to these services or personnel are not available in the RUMC area they need to be provided by the Agri-Park.<br><br>Local public and private entities must be approached to identify what services are available for inclusion into the FSPU service model to ensure duplication of positions / functions is avoided.<br><br>The RUMC will provide the following HR:<br>• IT expert/personnel<br>• Administrative manager<br>• Training personnel<br>• Marketing agents (to Facilitate market linkages, facilitate contracts with wholesalers and major retail outlets and also to gather |

| Production Flow | Farmers | FPSU | Agri-Hub | RUMC |
|---|---|---|---|---|
| | | • Voluntary/Established commercial farmers to mentor the small scale farmers (as many as possible). | | information on prices at fresh produce market that would be communicated to the AH and FPSU). |
| **Training** | Small holder farmers would require training on: best farm practices, use of tools and equipment, training on how to interpret market information (Access to markets and prices) and ICT. The extension officers that are involved with livestock production are well positioned to render this type of training. Also, training can be provided by the well-established commercial farmers through a mentorship programme. Extension officers through the DAFF can also organise Agri-shows, where farmers can express their concerns, and where training can be provided. | One of the key function of the FPSU would be to provide training and extension support on various farm practices, to the farmers. | Training at the Agri-Hub would include:<br>• Training on best practices, based on changing demand and supply.<br>• Training on new innovations as they surface. | Training of training personnel on how to disseminate information to the farmers, AH and the FPSU. |
| **Key product/activities** | The core activities farmers are:<br>• Land preparation (including land clearing, bed making), installing infrastructure (including water infrastructure, tunnel construction where applicable)<br>• Vegetable farming (including planting, fertilization, disease control, irrigation etc.)<br>• Harvesting of vegetables<br>• Packaging and transportation of fresh produce. | The core activities of the FPSU are:<br>• Facilitate collection/ delivery of fresh vegetables from the farmers<br>• transportation of fresh produce to the pack houses/sorting facilities within the FPSU or AH service nodes<br>• Quality control<br>• Cleaning, sorting and grading | The core activities of the AH are:<br>• Receiving of fresh cleaned and sorted fresh produce from the FPSU;<br>• Further Quality control;<br>• Processing of fresh produce into products such as :Frozen vegetables;<br>• Storage of products ;<br>• Some marketing;<br>• Transportation of products to the RUMC. | The core activities of the RUMC are:<br>• Collection of final products from the AH<br>• Marketing and distribution of final products to different wholesalers and major retail outlets<br>• Exporting of final products<br>• Bulk storage of final products |

| Production Flow | Farmers | FPSU | Agri-Hub | RUMC |
|---|---|---|---|---|
| | | • Packaging for the local market and small retail outlets and fresh produce markets<br>• Facilitate transportation of produce destined for processing directly from the farm to the AH | | |
| **Infrastructure/Equipment** | There are numerous infrastructure elements unique to the farming of individual vegetable sub-types. There also many common forms of infrastructure. The major infrastructure requirements for vegetable farming, especially on a smallholder or emerging farmer level are:<br>• Tractors and harvesters<br>• Utility vehicles, trucks, bakkies etc.<br>• Piping, sprinklers and other water distribution technology<br>• Seed, fertilizer and chemical storage<br>• Farming hand tools and implements<br>• Equipment storage<br>• Fencing<br>• Packaging infrastructure and materials<br>• Sprayers<br>• Greenhouses / farming tunnels (depending on crop) | The FPSU would require to put in place the following equipment/infrastructure:<br>• Transport (e.g. Bakkie or pick-up vehicles)<br>• Vegetable cleaning, sorting, grading, drying machines<br>• Weighing and packaging machines<br>• Local pack house<br>• Small scale processing facilities for local market<br>• Produce sorting facility<br>• Auction facility<br>• Storage facility<br>• All equipment listed to be required by the small holder farmers.<br>Stalls that would allow subsistence farmers to sell any excess vegetables along the side of road, if desired, should also be created along the N2. | The AH would require to put in place the following equipment/infrastructure:<br>• Administrative facilities<br>• Rental facilities<br>• Agro-Processing facilities<br>• Packaging facilities<br>• Quality control facilities<br>• Agricultural input distribution and sales centre<br>• Training centre<br>• Logistics and transport facility | The RUMC would require to put in place the following equipment/infrastructure:<br>• Large warehouses/ holding facilities<br>• Cold storage facilities<br>• Administrative facilities/ information centre |

| Production Flow | Farmers | FPSU | Agri-Hub | RUMC |
|---|---|---|---|---|
| **Logistics** | Smallholder farmers should be organised into groups. Each group should have a group head that would communicate information from the farmers to the FPSU and also arrange for delivery of inputs with the FPSU. It is suggested that there should be input collection centres which would serve as small offices for the group heads. This group heads would work closely with the Packhouses and the FPSU.<br><br>**Harvesting**: Farmers intending to harvest on certain days would notify the FPSU for necessary arrangements. For smallholders with less than 2ha of land, harvesting would be done semi-manually, harvested potatoes will be transported as each trailer gets filled up. For farmers with more than two hectares, harvesting would be done mechanically and vegetables will be transported to the FPSU as each trailer gets filled up. | The FPSU should organise Primary logistics collection centre in the form of pack houses where trucks (bakkie/pick up vehicles) would pick up potatoes from various farms and convey it to these packhouses. Cold storage transport should also be arranged for distribution to the various marketing channels and the RUMC.<br><br>***It should be noted that some of these transport facilities will be used to deliver farm inputs to the collection centres, after which it can be distributed to individual farmers***. | Rental of transport could occur from the AH. | The same cold storage transport will be used for distribution of final products to wholesales and major retail outlets. |
| **Technology/ICT** | In order to boost their production efficiency, the smallholder and emerging would require:<br>• Modern tools,<br>• Mobile devices for subscription to Apps, to enable them receive information from the RUMC on | Tracking devices on all vehicles to prevent hijack and also to monitor the movements and locations of the drivers. Also, the FPSU would require subscription to certain Apps from the RUMC to remain conversant with the current prices fetched on the global, national and local market, so as to be | In order to remain aware of the current prices fetched on the global, national and local market, so as to be able to strategically supply red meat to the markets, the RUMC would also require subscription to certain Apps. This | The RUMC will provide Information Data base that all the various basic units of the Agri-Park can subscribe to. |

| Production Flow | Farmers | FPSU | Agri-Hub | RUMC |
|---|---|---|---|---|
| | weather forecast, disease control etc. | able to strategically supply vegetables to the markets. ***It should be noted the same transport facilitates would be used to service all the basic units of the Agri-Park, therefore, all the Transportation facilities would have these tracking devices.*** | will enable the AH to remain informed. | |

**11.5 Logistics Plan**

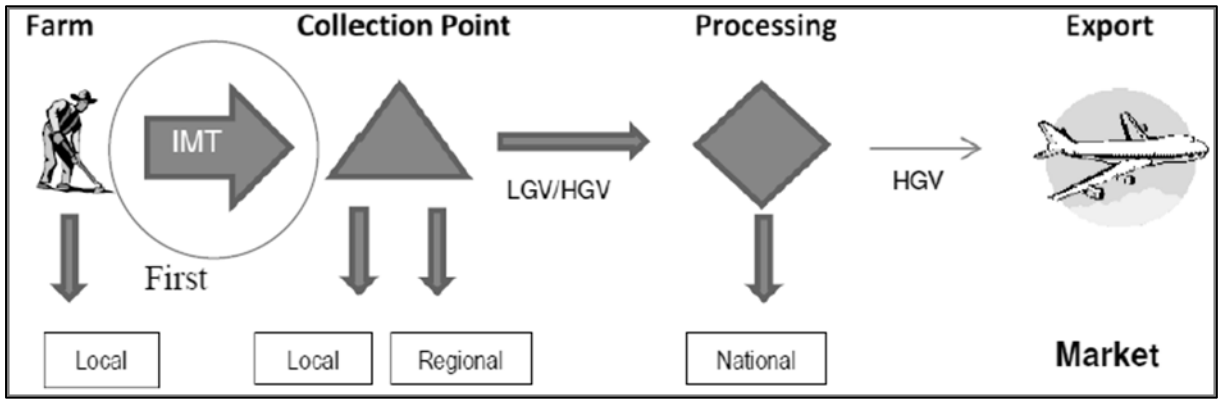
The focus of the logistics plan is to develop a strategy to move farm produce to market as smallholder and emerging farmers seek to become important players in the emerging food supply chain in South Africa. The logistics plan draws on challenges and opportunities faced by the farmers that are likely to participate within the Agri-Parks programme, while the focus remains on recognising the importance that transport plays in the emerging farmer value chains.

**Understanding the logistics chain**

It is important that the transport segments in the emerging agricultural sector are understood. The segments include the primary, intermediate and final transport route segments, described in further detail below:

1. The primary transport segment, also known figuratively as the first mile, is the segment in which product moves from farm to a consolidation/collection point that are found on primary roads where collection is typically easier. The key role-players in this segment are the farmers who move the produce from their farm to the consolidation/collection point.
2. The intermediate transport segment realises the movement of produce from the primary consolidation, or collection point to an intermediate point, or in this case an Agri-Hub. The key role-players at this point are larger, commercial farmers, or transporters.
3. The final transport segment will move product from the intermediate point to the final market, or destination.

These segments are exemplified in the following figure:




The above figure is a generic emerging, or small-scale farmer's logistics chain that contains the farm, consolidation/collection points, intermediate processing points and the final markets for the product. The first mile, in general, is the most important segment since it can be the most expensive segment of the logistics chain. It is often the case that product quality is compromised through bruising and ageing in this segment.

**Recommended logistics strategy**

Unlike commercial, large-scale farming, small-scale and emerging farmers produce smaller quantities and farms are spread over a wide spatial territory. As such, it is of high importance that consolidation points are developed in order to collect produce in viable volumes, while coordination with intermediaries and transporters is crucial so that the farmers jointly are able to create economies of scale. Consolidation points should therefore be developed at strategic locations on easy access roads and a well-structured approach is required in order to assist the farmers in produce consolidation. This is exemplified in the following logistics plan:

In order to do this, appropriate infrastructure is required at the consolidation points along with organised transport coordination (exploiting ICT) that will reduce value deterioration at the farm gate and consolidation/collection points. The following recommendations can be used in order to develop the logistics plan for the Agri-Park:

1. Locate and demarcate specific areas of production that will participate in the Agri-Parks programme.
2. Develop an inventory of what will be produced in the given demarcated areas.
3. Determine quantities to be produced in the demarcated areas.
4. Determine the total value of production that will be produced my small-scale farmers.
5. Determine and map the spatial location and spread of farms that will be producing within the programme.
6. Determine the location of the consolidation/collection points and what facilities should be made available.
7. Assess the potential perishability of the produce/value of the post-harvest losses.
8. Plan for the availability and reliability of transport services to collect produce.
9. Assess the quality of transport infrastructure in the location.
10. Determine the key market locations/destinations in the given area.
11. Develop, or enhance farmers' organisations and support groups.

The above process will assist in providing a better understanding of how to move produce from farm to market, while a comprehensive and integrated logistics management system can be employed to improve the efficiency in which produce can be moved to market taking into account rural infrastructure, consolidation management and collection services. The ability to understand the product movement will provide a foundation from which a logistics plan can be developed.

The following steps provide a broad outline toward the logistics plan, in which all elements of the Agri-Park including the farmers, FPSU, Agri-Hub and RUMC are integrated:

1. Demarcate farmer groups within a given production area.
2. Determine a central location of the consolidation/collection point for the produce in each of the demarcated areas.
3. Implement a logistics management system and programme through the FPSU and RUMC that will assist in moving farmers produce to the consolidation points.
4. Implement a logistics management system and programme through the FPSU and RUMC that will move product from the consolidation points to the Agri-Hub.
5. Implement a logistics management system and programme through the RUMC that will move product from the Agri-Hub to the market/final product destination.
6. The FPSU will be responsible for the movement/transportation of the product.
7. The RUMC will provide the market intelligence and therefore the timing of the movement of the product.

### 11.6 High Level Costing

The following tables present a high level analysis of the costs to establish the Agri-Park by looking at the costing examples of one FPSU and the Agri-Hub in Lambasi. These costing examples are for complete new builds and do not take into consideration all of the existing infrastructure/services which may already be available for integration into the FPSU and AH.

The following costing presents an estimation of the costs to establish an FPSU in Libode. These costs are representative of the costs for FPSU's in other parts of the OR Tambo DM. The total new-build cost for a complete FPSU is calculated at **± R24 288 500.** This capital investment should be spread over the long-term and assume that the costs include consulting fees.

**Table 11.5: FPSU – Libode**

| | |
|---|---|
| **Buildings** | **R 2 360 500** |
| Office space | R 780 000 |
| Mechanisation Centre and Workshop | R 700 000 |
| Warehousing Facility | R 490 000 |
| Training facility | R 390 500 |
| | |
| **Infrastructure** | **R 2 173 000** |
| Water bulk connection | R 65 000 |
| Electricity connection | R 302 000 |
| Road | R 1 050 000 |
| Security fencing & installation | R 592 500 |
| Parking | R 163 500 |
| | |
| **Livestock** | |
| Farm Vehicles | R 710 000 |
| Transport Vehicles | R 3 400 000 |
| Implements | R 120 000 |
| Processing Equipment | R 870 000 |
| **TOTAL** | **R 5 100 000** |
| **Maize** | |
| Farm Vehicles | R 3 550 000 |
| Transport Vehicles | R 3 900 000 |
| Implements | R 1 775 000 |
| Processing Equipment | R 75 000 |
| **TOTAL** | **R 9 300 000** |
| **Vegetables** | |
| Farm Vehicles | R 700 000 |
| Transport Vehicles | R 3 400 000 |
| Implements | R 530 000 |
| Processing Equipment | R 725 000 |
| **TOTAL** | **R 5 355 000** |
| **TOTAL** | **± R24 288 500** |

The following costing presents an estimation of the costs to establish the Agri-Hub in Lusikisiki (Lambasi). These costs are for a complete new build. If the Agri-Hub makes use of existing infrastructure for the warehousing and processing of produce, existing cold storage facilities and infrastructure such as abattoirs and maize mills the costs of establishment for the Agri-Hub can be drastically reduced. This refers to the use of the new structure at Lambasi, as well as Umzikantu Abattoir and the maize mill at Mqanduli. The total new-build cost for a complete Agri-Hub is calculated at **±R 26 608 500**. This capital investment should be spread over the long-term.

**Table 11.6: Agri-Hub – Lambasi**

| | |
|---|---|
| **Buildings** | **R 7 244 500** |
| Administration offices | R 1 105 000 |
| Training facilities | R 785 000 |
| Warehouse & processing | R 2 446 000 |
| Retail | R 2 174 500 |
| Cold storage | R 734 000 |
| | |
| **Infrastructure** | **R 2 364 000** |
| Water bulk connection | R 65 000 |
| Electricity connection | R 188 500 |
| Road | R 1 750 000 |
| Fencing & installation | R 197 500 |
| Parking | R 163 000 |
| | |
| **Equipment** | **R17 000 000** |
| Transport vehicles | R 5 000 000 |
| Processing equipment – vegetable | R 5 000 000 |
| Processing equipment – maize | R 7 000 000 |
| **TOTAL** | **±R 26 608 500** |

The following costing presents an estimation of the costs to establish the Agri-Park. These costs are for all the Agri-Park units. If the Agri-Park makes use of existing infrastructure the costs of establishment for the Agri-Park can be drastically reduced. The total new-build cost for a complete Agri-Park is calculated at ± R 148 051 000

| Agri-Park Unit[3] | Total Cost |
|---|---|
| **FPSU**<br>Mqanduli<br>Mthatha<br>Libode<br>Qumbu<br>Port St Johns | R 121 442 500 |
| **Agri-Hub**<br>Lusikisiki (Lambasi) | R 26 608 500 |
| **TOTAL** | **±R 148 051 000** |

### 11.7 Conclusion

The Agri-Park development concept has provided an initial step to the development of the Agri-Parks programme that will become the foundation for the operation and functioning of the OR Tambo DM Agri-Park. Furthermore, the Agri-Park development concept ensures that the Agri-Park Model put forward by the DRDLR is applied by aligning to itself to the Model. Using the three main units – the FPSU, the AH and the RUMC as the foundation of the concept allows the development concept to reflect the model. Another basic component of the concept, the smallholder farmer, ensures that the smallholder farmer benefits from the programme while acknowledging and including primary production. With a basic understanding of the selected commodities

[3] The costs for the Mqanduli and Mthatha FPSUs and the Agri-Hub at Lambasi would only require upgrades and expansions of existing infrastructure and therefore costs would be significantly less.

production flow, each of the commodities had a specific development concept proposed with the guidance of a combined development concept. The main aspects that need to be considered in the production flow were explored according to the smallholder farmer, FPSU, AH and RUMC.

# Implementation Guidelines

**Chapter 12**

## 12.1 Introduction to the Implementation Guidelines

The purpose of the business plan was to guide the implementation of the Agri-Park Model in the OR Tambo District. This entailed various studies including analysing the socio-economic and agricultural status quo of the district, as well as an analysis of the top three commodities identified. Thus, the above studies informed the concept that has been developed for the Agri-Park and the top three commodities to be developed.

Implementation guidelines provide further information that leads to the realisation of the vision and concept of the Agri-Park. Practical guidelines are provided through which further development of the Agri-Park can be based upon. The OR Tambo Agri-Park's implementation guidelines are presented according to the following:

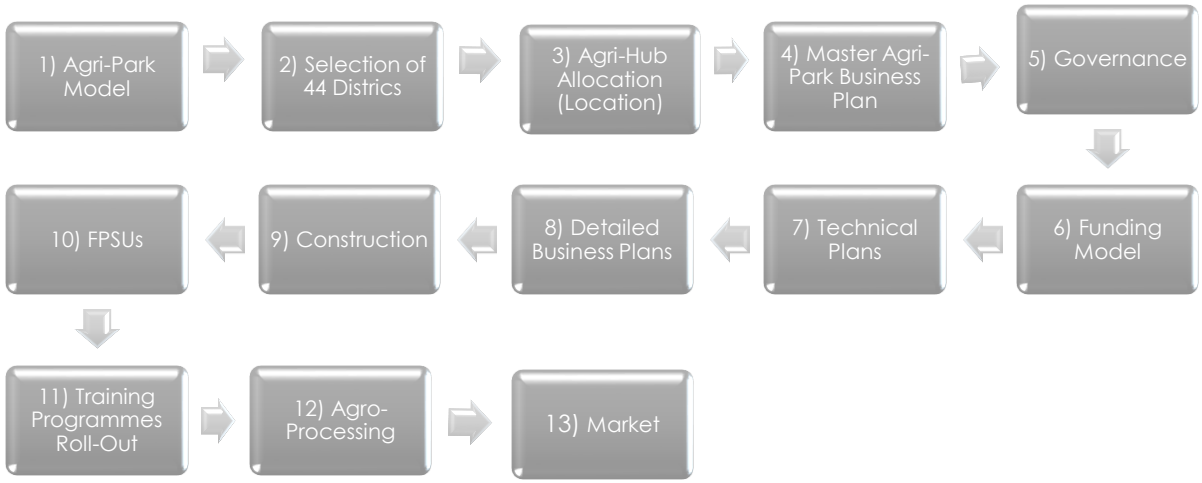
1. Implementation Process
2. Alignment to Government Programmes
3. Recommendations
4. Roll-Out Plan

The above are discussed in detail in the sub-sections below.

## 12.2. Implementation Process

The implementation process is a step-by-step sequence at which the implementation of the Agri-Park is expected to take place. In developing the implementation process for the OR Tambo Agri-Park, the stages that occurred before the development of the Business Plan are considered along with the relevant steps that should occur to make sure that the OR Tambo Agri-Park and is up and running with the top three commodities being produced, processed and sold to the identified markets. Figure 12.1 indicates the implementation process for the OR Tambo Agri-Park.

**Figure 12.1: OR Tambo DM Master Agri-Park Implementation Process**




The steps indicated in figure 12.1 can be briefly described as follows:

1. **Agri-Park Model –** The DRDLR initiated the Agri-Park Programme to implement the Agri-Park Model.

2. **Selection of 44 Districts –** 44 districts in South Africa were identified and selected where each district would have an Agri-Park.
3. **Agri-Hub Allocation (Location) –** The locations for the Agri-Hubs were identified in each district.
4. **Master Agri-Park Business Plan –** A business plan is developed for each Agri-Hub.
5. **Governance –** Strategic bodies and plans will be formed including defining ownership and management structures.
6. **Funding Model –** A financial plan will be developed.
7. **Technical planning –** The technical aspect of the Agri-Park will entail mainly the physical construction of the Agri-Park along with related infrastructure and technologies.
8. **Detailed Business Plans –** the different units of the Agri-Park (FPSUs, AH and RUMC) as well as the farmers will have specific detailed business plans developed.
9. **Construction –** The construction of the Agri-Park's units and other related infrastructure will start**.**
10. **Farmer Production –** FPSUs will be set up and run in order to make assistance available for farmers to start production through the Agri-Park**.**
11. **Training Programmes Roll-Out –** Training programmes will commence from the FPSUs
12. **Agro-Processing –** Once primary production has taken place, and products are ready, agro-processing activities will begin through the Agri-Park's AH.
13. **Market –** Completed products will be distributed and sold to relevant markets through assistance of the RUMC.

### 12.2. Alignment with Government Programmes

This section of the Business Plan provides an analysis of the policies that are related to the Agri-Park's development along with the implications involved. However, for implementation that is effective and allows the district's Agri-Park to function efficiently, the programmes influenced by these policies should also be identified to make sure that the Agri-Park aligns with the programme's targets. Thus, programmes related to the Agri-Park from different government departments have been identified along with the Agri-Park's alignment these programmes. Table 12.1 demonstrates the alignment of the Agri-Park to the government programmes.

**Table 12.1: Government programmes**

| Programme/ Project/Campaign | Description | Agri-Parks Alignment |
|---|---|---|
| **Agricultural Programmes** | | |
| **Agricultural Broad-Based Black Economic Empowerment (AgriBEE)** | The implementation of AgriBEE is based on the commodity value chain approach. The approach is fundamental in creating partnerships, linkages, and networks for balanced, mutually benefiting results for all concerned. The AgriBEE is expected to ensure enhanced competitiveness and sustainable development with expansion of the existing businesses, rehabilitation of agricultural business that are performing poorly and expanded entry for new businesses in the sector.<br><br>AgriBEE also encourages partnerships between established agricultural | ✓ The Agri-Park will focus on the development of the value chains for each of the identified commodities.<br>✓ In developing the value chain there needs to be a focus on integration of all stakeholder to be involved.<br>✓ Integration of the value chain will create partnerships and linkages that will be mutually beneficial for all stakeholder involved and enhance the competitiveness of the Agri-Park.<br>✓ Stakeholder engagement is required to encourage partnerships that are beneficial from farmers to markets. |

| Programme/ Project/Campaign | Description | Agri-Parks Alignment |
|---|---|---|
| | enterprises and emerging farmers and entrepreneurs. | |
| **Comprehensive Agricultural Support Programme (CASP)** | The programme provides agricultural support to land and agrarian reform projects, which contributes towards food security, job creation and poverty alleviation.<br><br>CASP is also involved in the development of a number of policies, strategies and projects that are geared toward the development of the agricultural sector. These include:<br><br>• Agricultural finance lending<br>• Co-operatives establishment<br>• Access to markets<br>• Value chain development<br>• Improvement policies<br>• Production guidelines<br>• Agro-logistics planning<br>• Early warning climate systems | ✓ The Agri-Park should work closely with CASP projects to support the initiatives set out within CASP.<br>✓ Policy alignment is key to achieve a common set of goals.<br>✓ The Agri-Park should focus on job creation through various initiatives, especially primary agriculture where there is potential for many job opportunities.<br>✓ The Agri-Park should investigate initiatives to extend credit to farmers.<br>✓ The Agri-Park needs to encourage and manage the establishment of co-operatives.<br>✓ Management practices need to be implemented at various stages of the value chain in order to ensure consistent production and product quality.<br>✓ Information technology should inform all stakeholders within the value chain. |
| **Integrated Food Security and Nutrition Programme (IFSNP)** | This programme was initiated by the Food and Agricultural Organisation (FAO). The core goal of this initiative was to reduce hunger and food insecurity. To take further steps toward achieving this objective, the Special Programme for Food Security (SPFS) will be expanded to all nine provinces (DAFF, 2016). The SPFS and CASP have collaborated, and as a result 10% of the total CASP budget will also be aligned to projects that contribute directly towards food security (DAFF, 2016). | ✓ A major objective of the Agri-park is to improve food security.<br>✓ Primary production should be a key focus of the Agri-Park.<br>✓ The Agri-Park will therefore be required to improve access to markets through engaging the markets and meeting the requirements of the market procurement policies. |
| **Research and Development (R&D)** | The programme encourages research and development within the realm of agriculture and involves all stakeholders within the national agricultural research system. | ✓ Training forms part of the Agri-Parks many roles.<br>✓ Training requires research and development initiatives that should align with R&D programmes set out by government. |

| Programme/ Project/Campaign | Description | Agri-Parks Alignment |
|---|---|---|
| | | ✓ R&D is required throughout the value chain and will be required to evolve as technologies do. |
| **National Regulatory Services (NRS)** | The increased trade in regulated agricultural products has required the development of the NRS that regulates and promotes international trade. This includes inspections of agricultural produce and bilateral negotiations. In addition, the NRS promotes awareness with respect to agricultural produce health matters. | ✓ The Agri-park should implement policies that enforce international standards on production and processing that will allow the programme access to international markets. |
| **LAND and AGRARIAN REFORM PROJECT (LARP)** | The objectives of LARP are the redistribution of land, increased black entrepreneurship, promoting access to agricultural support services, increased agricultural production, and increased agricultural trade.<br><br>The programme builds on lessons that have been learnt from previous land reform projects, reviews, the Land Summit and implementation reforms. | ✓ The Agri-Park forms part of the market for farmers and will therefore encourage production.<br>✓ Models are to be developed to distribute state own land and ensure land tenure is in place for producers.<br>✓ Access to the market through the Agri-Park will further encourage land that was previously not in production to produce. |
| **LandCare** | The LandCare programme was established to promote productivity through the sustainable use of natural resources, to improve food security and create employment, therefore encouraging South Africans to use sustainable methods of cultivation, livestock grazing and harvesting of natural resources in order to limit land degradation. | ✓ Access to the market through the Agri-Park will further encourage land that was previously not in production to produce.<br>✓ The Agri-Park is to encourage the sustainable use of land and resources. |
| **Small Holder Farmer Evaluation** | The programme focuses on the integration of smallholder farmers into the greater agricultural value chain. The programme works in conjunction with other programmes and provides strategic agricultural support. | ✓ The Agri-Park will manage and encourage smallholder production, a primary objective of the Agri-park.<br>✓ Logistics and management plans are key to the success of integration of smallholder farmers. |
| **Rural Development Programmes** | | |
| **Comprehensive Rural Development Programme (CRDP)** | The CRDP is in place to create decent work and sustainable livelihoods. The programme ensures sustainability, communal ownership and effective contribution toward the objectives of developing rural areas. | ✓ The Agri-park encourage primary production.<br>✓ Will have support mechanisms in place to ensure best production methods.<br>✓ Create jobs in primary agriculture. |

| Programme/ Project/Campaign | Description | Agri-Parks Alignment |
|---|---|---|
| | The overarching objective of the CRDP is social cohesion and integrated development through participatory approaches and partnerships with all sectors of society. | ✓ Ownership models encourage social cohesion, integration and participation from all stakeholders. |
| **National Rural Youth Service Corps programme (NARYSEC)** | NARYSEC is a youth skills development and employment programme that also forms part of the CRDP.<br><br>The programme also provides character building programmes, soft and hard skills training and dispatches youth to rural areas for rural development projects. The programme further transforms the youth of rural areas, from being job seekers to being job creators. | ✓ The Agri-Parks programme will encourage youth to participate in agriculture by creating viable and attractive agricultural enterprises. |
| **Rural Enterprise and Industrial Development (REID)** | REID is in place to facilitate poverty reduction, social organisation, youth development and the development of cooperatives, rural enterprises and industries. | ✓ The Agri-park encourage primary production.<br>✓ Will have support mechanisms in place to ensure best production methods.<br>✓ Create jobs in primary agriculture.<br>✓ Ownership models encourage social cohesion. |
| **Rural Infrastructure Development (RID)** | • Erection of 1,5 km fencing in Lambasi<br>• Renovation of the Kei fresh produce market<br>• Renovation of Ikhwezi Dairy<br>• Renovation of Umzikantu red meat abattoir<br>• Fencing of arable land measuring 18km at Nyandeni village | ✓ All these projects must be integrated into the Agri-Park concept. |
| **Special Economic Zones** | A SEZ has been proposed for development in Mthatha. A SEZ is defined as geographically designated area set aside for specifically targeted economic activities, supported through special arrangements and support systems that are often different from those that apply in the rest of the country. The SEZ proposed for Mthatha is set to focus on agro-processing. | ✓ The SEZ would serve the Agri-Park as its long-term RUMC and would provide additional agro-processing services. |
| **DRDLR Agri-Hubs Development** | The DRDLR seeks to develop Agri-Hubs that will result in the growth of the local agricultural sector through integrated agricultural value chains. | ✓ Similarities in the programmes are complementary and will align accordingly. |

| Programme/ Project/Campaign | Description | Agri-Parks Alignment |
|---|---|---|
| **Eastern Cape Dept. Rural Development & Agrarian Reform** | The mandate of DRDAR is to "promote, support and coordinate rural development and agrarian reform to reduce poverty and underdevelopment through integrated and participatory interventions." | ✓ Similarities in the programmes are complementary and will align accordingly. |
| **Eastern Cape Rural Development Agency** | The ECRDAs mandate is to promote, support and coordinate rural development and agrarian reform to reduce poverty and underdevelopment through integrated and participatory interventions. | ✓ Rural development programme<br>✓ Renewable energy programme<br>✓ Rural finance programme<br>✓ Rural development support programme<br>✓ Coordinate and facilitate external funding and investments to co-fund mega projects<br>✓ Establishment of rural development clusters and nodes. |

### 12.3 Recommendations

The below table provides a list of recommendations that should be considered for the development of the Agri-Park in ORTDM:

**Table 12.2: Specific Recommendations for the OR Tambo DM Agri-Park.**

| Key Areas | Recommendations |
|---|---|
| **Infrastructure** | • It is recommended that all the unsurfaced (gravel) roads around the proposed location of the Agri-Hub should be upgraded and developed, to facilitate easy access to and for the Agri-Hub.<br>• The road network that will link to the various market centres (e.g. the fresh produce market) must be carefully considered and upgraded where necessary.<br>• It is further recommended that the district should capitalise on all existing initiatives and infrastructure for the establishment of the Agri-Park. There should be upgrading and revitalisation of any existing infrastructure that can be used to support the Agri-Park process. This includes the current development at Lambasi, the maize mill at Mqanduli and the Umzikantu Abattoir.<br>• Also, it is recommended that the district should look into establishing infrastructure that will aid the recycling of water. |
| **Natural Resources** | • Considering that the entire district is water scarce, more work should be done in determining water availability for agricultural production around the proposed location of the Agri-Hub, FPSU(s) and around all the major areas where primary production potentials is huge as well as areas where the available water sources can be used to support primary production.<br>• District should also look into water allocations and the existing irrigation schemes in the major production areas and maximise the use of these existing infrastructures.<br>• A further recommendation is that small scale farmers should have rain harvesters (e.g. JoJo Tanks) on their farms. This would serve as water reservoirs in the absence of rain fall. |

| Key Areas | Recommendations |
|---|---|
| **Agri-Park commodities** | • Efforts should be made in ensuring that products processing and packaging (value – addition) comply with international standards, to enhance products' suitability for the export markets.<br>• Although, the initial phase of the project will support the development of the value-chain of the three pre-dominant commodities in the OR Tambo DM, it is recommended that processing facilities should be expanded in subsequent phases.<br>• Vegetable peeling and cutting - Basic processing of vegetables could take place at the Agri-Hub. Cutting, peeling and packaging could be an important processing opportunity.<br>• The upgrade or expansion of the Umzikantu Abattoir.<br>• Inclusion of the Mqanduli maize mill as part of the Agri-Park.<br>• Maize milling can be developed at the Agri-Hub level and Agro-Processing of maize into such products as feed pellets, canned sweet corn, frozen corn etc. once sufficient local supply is available for such enterprises to become viable. |
| **Technology** | • Although, statistics show that the majority (82%) of households in the OR Tambo DM already have access to cell phones, it is recommended that the telecommunication services should be upgraded (e.g. erection of cell towers) in areas that are currently underserviced, particularly in the rural areas, since most of the farmers that would be targeted are located in these Areas.<br>• A further recommendation is that all the technologies that are to be adopted (particularly in the area of farm mechanisation) throughout the Agri-Park process should be those that will not lead to a decline in the number of job opportunities.<br>• The ICT to be adopted or introduced to the farmers should be user friendly and not be too complex. |
| **Training** | • It is recommended that the FPSU should establish partnership with certain research institutions for research and development, and also to facilitate training programmes. Partnership should also be established with commercial farmers in this regard. The FPSUs have the opportunity to create linkages with the University of Walter Sisulu.<br>• It is also recommended that practical manuals and information packages should be developed for the small scale and emerging farmers to assist them in their production processes. These manuals and information packages should cover aspects relating to: regulatory requirements, information on support programmes, production guidelines, etc. Where possible, manuals should be developed in language of choice to enhance easy understanding. |
| **Agri-Park Units** | • The FPSU(s) should be strategically located around productive farms and areas with huge potentials for primary production. Mqanduli, Mthatha, Libode, Port St Johns, Qumbu and Lambasi have been selected as FPSU sites due to existing infrastructure or existing farming potential in the area.<br>• The group of farmers that would be earmarked for production, for the Agri-Park, should be identified as part of the kick-off programme.<br>• It is a further recommendation that business plans should be developed for the FPSUs, the Agri-Hub and RUMC of the Agri-Park as well as the farmers that would participate in the Agri-Park process.<br>• Develop an inventory a map farmers that are earmarked for production within the Agri-Park. Production areas should be zoned and mapped and FPSUs should be centrally located to these production zones. Zoning in this manner will allow for streamlining of logistic activities that take place within the Agri-Park. Farmers are |

| Key Areas | Recommendations |
|---|---|
| | to be engaged and informed of the process and development of the Agri-park – they will also be required to have a representative body for engagement with various stakeholders. |
| **Logistics** | • It is recommended that a comprehensive logistic plan should be developed as a separate document that would guide the implementation of the Agri-Park process.<br>• It is recommended that smallholder farmers with small production capacities should be encouraged to work in joint ventures in order to participate in supplying the Agri-Park.<br>• A further recommendation is that internal transport facilities (e.g. long buses) should be arranged for the purpose of transporting tourist visiting the Agri-Parks. This transport facilities can also be used as staff buses. This will serve as a source of revenue for the Agri-Park.<br>• The District Agri-Parks Councils should engage with other departments and be responsible for the implementation of the Agri-Parks. A representative body must take ownership of the Agri-Park and implement the project. This body should represent all stakeholders, public and private, within the Agri-Park. |
| **Policy Environment** | • Cross-border relationships and partnerships should be encouraged or formed with neighbouring districts, where infrastructure and resources can be shared, should the district be short of or have excess of certain resources.<br>• The establishment and management of committees and structures contribute to maintaining the AP's principles and drive its development.<br>• It is also recommended that the district should develop a strategic plan that can be reviewed after a certain short term period, to allow for the normative context of the AP to be upheld, and also to allow for the evaluation of the AP development.<br>• Policy around land ownership should be revised such that it provides security of tenure to farmers. Ownership of land encourages farmers to invest in their land and encourages borrowing for financing activities. Ownership of land encourages productivity and is therefore mutually beneficial for the farmer and the Agri-Park. |
| **Funding /investment** | • ORTDM should develop funding mechanisms that would encourage and attract foreign investments.<br>• Investment policies that would encourage more investments on agricultural land should be established. |
| **Integrated Development** | • The structures within the RUMC and the AH should be developed in such a way that it will allow for Agro-tourism e.g. school excursion, visits by tourist, etc. |
| **Market** | • More programmes that would be directed towards establishing market linkages should put in place.<br>• ORTDM should form partnership with some of the existing main players in the various industries to enable them penetrate the international market. |
| **Incentive programme** | • Incentive programmes and packages that would make agriculture more attractive, (especially to the youth) should be developed. For example, awarding scholarships that would encourage young individuals study in the field of agriculture, creating a youth centre within the Agri-Park, to help the underprivileged youth in a way such that they render services to the Agri-Park, while they get taken care of in return. |

These recommendations are based on the analysis done on the economic infrastructure, socio-economic analysis and consultations with district stakeholders and the understanding of the status quo of agriculture within the ORTDM. The recommendations inform what needs to be done in order to achieve the goals that have been set out within the business plan.

### 12.3.1. Recommended Catalytic Projects

Over and above the recommendations compiled in Table 12.2, projects that will assist in the kick starting and supporting the Agri - Park's success are recommended. These are referred to as catalytic projects that will be the main focus of the Agri - Park.

- Increase the genetic quality of emerging farmers' livestock (District wide).
- Development of vegetable processing facilities (cutting, peeling, packaging) and possible inclusion of Kei Fresh Produce Market.
- Creation of maize silos and milling facilities for maize production.
- Upgrading of the Umzikantu Abattoir to support deboning and production of lower grade meat for the local market.
- Renovation of the Ikhwezi Dairy.
- Develop training facilities for small holder and emerging farmers in order for farmers to produce livestock, maize and vegetables for the market (Lambasi).

### 12.4 Roll-Out Plan

The roll out plan is illustrated below – indicates a step-by-step plan that should be followed.

| Action | Description | Start month | Timeframe |
|---|---|---|---|
| **Infrastructure investment plan** | The infrastructure investment plan will determine what infrastructure is required at each FPSU, Agri-Hub and RUMC and prioritise infrastructure projects to ensure efficient allocation of resources and the greatest impact on local agriculture. | 5 | 3 – 6 months |
| **Construction of FPSU infrastructure** | Construction of all necessary FPSU infrastructure as listed in the report. | 6 | 3 – 6 months |
| **Construction of Agri-Hub infrastructure** | Construction of core Agri-Hub infrastructure aimed at developing local small-holder and emerging farmer groups. | 6 | 6 – 12 months |
| | Construction of processing and agro-processing infrastructure (where necessary) to advance the local agriculture sector. | Varying | Varying investment timelines for agro-processing infrastructure according to **infrastructure investment plan** |
| **Construction of RUMC infrastructure (If complete new build required)** | Construction of RUMC infrastructure as listed in the report. *NOTE: It is likely that no new RUMC infrastructure is required and that the existing fresh-produce market in Mthatha can be used / upgraded to suit the needs of the RUMC. | 10 | 3 – 6 months |

| Action | Description | Start month | Timeframe |
|---|---|---|---|
| **Agriculture land audit** | An agricultural land audit is necessary to determine specific areas of agricultural suitability within the district for agricultural production of the three prioritised commodities, including an assessment of the land currently under cultivation by small-holder and emerging farmers to guide the development of these farming concerns. | 1 | 3 – 6 months |
| **Farmer identification** | Interested small-holder and emerging farmers must be assessed to determine current levels of production, infrastructure and equipment gaps and organisational requirements. A prioritisation model must be applied to candidate farmers to determine the farms/farmers where Agri-Park projects can have the greatest impact. | 1 | 3 – 6 months |
| **Project development & prioritisation** | The Agri-Park, in addition to supplying key services to local farmers also has a role to play as an implementing agent developing projects to develop local farmers or invest in key processes and technologies to advance local small-holder and emerging farmer agriculture. | 3 | Ongoing |
| **Logistics plan** | The logistics plan will create a logistics management system to handle in-bound and outbound logistics for the FPSU, AH and RUMC to ensure the efficient movement of produce, and agricultural inputs between farmers and destination markets. | 2 | Ongoing |
| **Training & mentorship plan** | The training & mentorship plan will determine what training and mentorship services need to be provided to local farmers and set out a system for the implementation of training and mentorship across the district. | 2 | 1 – 3 months |
| **Operational plan** | The operational plan will set out the norms and procedures for the day to day operation of the Agri-Park and its individual elements. | 2 | Ongoing |
| **Agriculture & business services scoping report** | This report will assess what agricultural & business services (including infrastructure) are already in place, what entity (public / private) provides said services and where gaps exist that the Agri-Park must address through infrastructure or other interventions. | 3 | 3 – 6 months |
| **Establishment of linkages with key public / private sector stakeholders** | Engage with local public / private stakeholders to provide key agricultural and business services to local small-holder and emerging farmers to ensure access to these services and to prevent needless duplications of infrastructure or services within the district. | 3 | 3 – 6 months |
| **Develop infrastructure funding model** | Development of a funding model to finance the construction of fixed assets, infrastructure and other long term Agri-Park projects. | 4 | 3 – 6 months |

| Action | Description | Start month | Timeframe |
|---|---|---|---|
| **Establishment of management committee** | Establishment of management committee to oversee the functioning of the Agri-Park and constituent elements. | 1 | 1 – 3 months |
| **Skills audit** | The skills audit will determine the exact staffing requirements for each functional section of the Agri-Park including staff for FPSU, AH and RUMC. | 2 | 1 – 3 months |
| **Advertising of employment opportunities** | Following the skills audit, employment opportunities will be advertised. | 5 | 1 – 3 months |
| **Project funding model** | Development of a funding model to finance the construction of short - medium term operational projects. | 4 | 3 – 6 months |
| **Procuring of services for training and mentorship** | Procuring of various trainers, agricultural mentors etc. required to enhance the agricultural and business skills of local small-holder and emerging farmers. | 5 | 1 – 3 months |

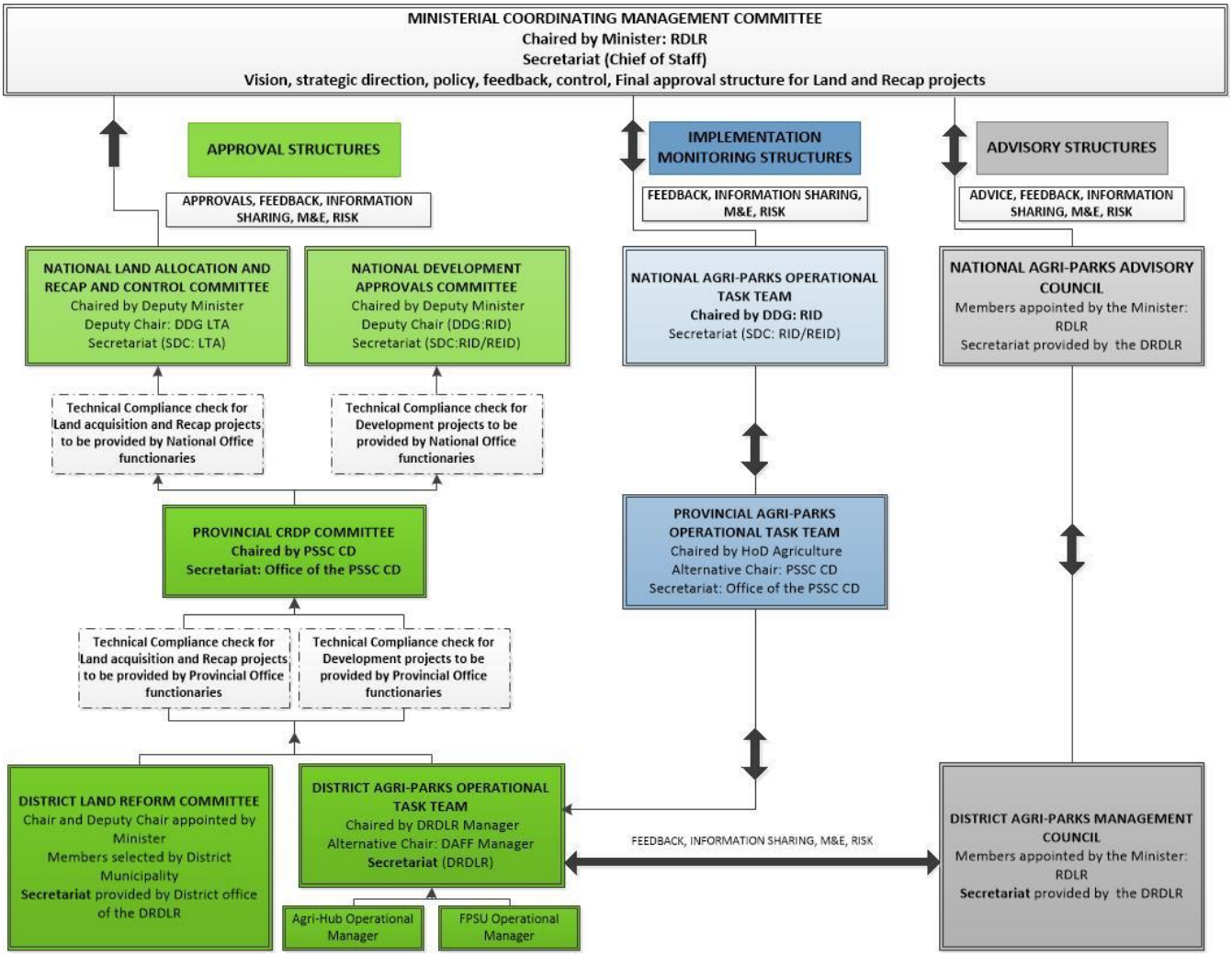
# Organisational Structure

**Chapter 13**

# 13. AGRI-PARKS ORGANISATIONAL STRUCTURE

To explain the organisational structure of the Agri-Parks the following schematic is used:

**Figure 13.1: Agri-Parks Organisational Structures**




In explaining the organisational structure, there are three sub structures that form part of the Agri-Parks: 1. Advisory Structures, 2. Approval Structures and 3. Implementation Monitoring structures.

**13.1 Advisory Structures:**

The main functions of the advisory structures within the Agri-Parks organisational structure are to give advice to the approval structures. The advisory structures that are currently identified are the National Agri-Parks Advisory Council (NAAC) and District Agri-Parks Management Council (DAMC). It is important to note that the advisory structures' member primarily comprise of stakeholders and interested party.

***13.1.1 NAAC***

This council reports directly to the minister and consists of elected representatives of various organisations. Functions of the NAAC may include (as stipulated in *Circular 9 of 2016*):

- *To solicit, co-ordinate and advise the Executive, on issues and concerns of the implementation of the Agri-parks Programme;*
- *To encourage public awareness and education of the Agri-parks Programme;*

- *To review studies, plans and proposals as may be referred by the Executive and District Agri-parks Management Councils (DAMCs) and the National Agri-parks Operational Task Team, and to provide comments and advice thereon;*
- *To provide advice on policies, legislation and programmes from the Department of Rural Development and Land Reform (DRDLR) that impact on the Agri-parks Programme;*
- *To initiate advice on the Agri-parks Programme and implementation of the business plans as referred to by the DAMCs;*
- *To liaise with the Executive, the Management of the DRDLR, the DAMCs and any other stakeholder involved in the Agri-parks Programme as required; and*
- *To mediate disputes arising from the DAMCs concerning its operation and/or advice provided to the Department or other bodies that are implementing the Agri-parks programme in a district.*

#### *13.1.2 DAMC*

The District Agri-Parks Management Council, also referred to as the "voice" of the stakeholders/interested parties in Agri-Parks. The DAMCs like the NAAC consist of representatives from various organisations. The DAMCs main function is to communicate advice from the council members to the NAAC as well as DAPOTT (District Agri-Parks Operational Task Team). Further functions of the DAMC include, but are not limited to the following:

- *Assist in identifying new business opportunities within an Agri-park;*
- *Provide advice on the implementation of the business plans;*
- *To advise on regulatory compliance with applicable policies and legislation;*
- *To advise on the alignment with the National Development Plan, Agricultural Policy Action Plan, Provincial Growth and Development Strategies and other development frameworks; and*
- *To assist in the identification, evaluation and monitoring of risks related to projects.*

#### *13.1.3 Agri-Hub and FPSU Operations Manager*

The Agri-Hub and FPSU operations manager will be in charge of the daily operations of the Agri-Hub and FPSU. They will form part of the operations team for the Agri-Park. Each FPSU should be staffed by FPSU Officers while the FPSU Operations Manager will oversee the Officers. There will only be one FPSU Operations manager per district but there will be one officer per FPSU to oversee the basic operations of the FPSU e.g. in OR Tambo District the Agri-Hub and FPSU operations Managers will be located in Lambasi at the Agri-Hub while five FPSU officers will be located in each FPSU in the District.

### 13.2 Approval structures:

These structures are responsible for approvals, feedback, information sharing, monitoring and evaluation regarding land reform activities and Agri-Park project approval. To explain the functioning of the approval structure it essential to understand that in terms of the Agri-Parks organisation the project approval process is started on the district level.

The approval structures that form part of the Agri-Parks include the DAPOTT, District Land Reform Committee, Provincial CRDP (Comprehensive Rural Development Programme) Committee, National Development Approvals Committee (NDAC) and the National Land Allocation and Recapitalisation Control Committee (NLARCC).

**Note: It is understood that both the DLRCs and DAMCs can recommend projects/producers to be considered to be part of Agri-Parks.**

#### *13.2.1 DAPOTT*

The DAPOTT as part of the Agri-Parks Approval Structure receives advice from the DAMC as well as information from PAPOTT and NAPOTT. DAPOTT appears to have the role to interpret all the information and acting as a

monitoring agent to advise on projects and land reform beneficiaries to be included in the Agri-Parks. Some of the functions of the DAPOTT include but are not limited to:

- *To provide technical support and guidance for implementation;*
- *To provide oversight of the implementation of the district Agri-parks business plan;*
- *To monitor expenditure against the district Agri-parks business plan;*
- *To identify all district projects that contribute to the district Agri-parks business plan and to compile a district project register (all DRDLR branches);*
- *To monitor project implementation against the approved project plan and district Agri-parks business plan;*
- *To participate in the identification and packaging of local development projects in support of the mandate of the Department of Rural Development and Land Reform;*
- *To advise on proposals that should be submitted to the Provincial CRDP Committee; and*
- *To provide an oversight function and monitor the implementation of the Government's Rural Development Programmes.*

### *13.2.2 DLRC*

The District Land Reform Committees (DLRCs), are primarily concerned with land reform in general. However, the DLRCs have additional functions linked to Agri-Parks:

- To identify the district projects contributing to Agri-Parks business plans; and
- To align projects and beneficiaries with the identified sites for Agri-Parks.

The abovementioned functions are however secondary to the following main functions:

- *Identify farms suitable for acquisition by Government (the target is 20% of agricultural land per district);*
- *Identify and interview potential candidates for farm allocation;*
- *Advise the Minister on the strategic support needs of identified farms and support needs of recommended candidates; and*
- *Advise the Minister on resolving land rights conflicts, as might be referred to a DLRC by him/her.*

**Note: Projects and or beneficiaries identified by the DLRCs and DAPOTT, are subjected to technical compliance checks before being passed onto the PCRDP**

### *13.2.3 PCRDP*

The PCRDP functions as the provincial approval structure that passes projects/beneficiaries identified by the DLRCs and DAPOTTs onto the National Government structures. Regarding this specific structure within the Agri-Parks organisational structure the name of this structure may have changed to the PJSC (unknown) as suggested in a different schematic (see below). The projects/beneficiaries identified are then catalogued into a Provincial Project Register that contributes to the formulation of a provincial spatial target plan. The functions of the PCRDP include:

- *To provide inputs to assist in the compilation of the provincial spatial targeting plan, as provided by the districts;*
- *To recommend all development, land acquisition and tenure projects in line with a Delegation of Authority Framework to the NLARCC and NDAC through its technical committees; and*
- *To provide an oversight function in relation to the work of the Provincial Technical Committees and District CRDP Committees, to eliminate disjuncture and to ensure alignment of projects and funding at a provincial level.*

The PCRDP can also include specialists if specialist skills are required to inform decisions to be made regarding project selection.

**Projects and or beneficiaries chosen by the PCRDP are subjected to technical compliance checks before being passed onto the NLARCC and the NDAC**

### *13.2.4 NLARCC*

The function of the NLARCC is to recommend land acquisition and recapitalisation projects to the MCM (Ministerial Coordinating Management committee). The full list of functions of the NLARCC is as follows:

- *To provide inputs to assist in the compilation of the national spatial targeting plan as provided by the provinces;*
- *To identify all national projects as per operational plans and compile a national project register*
- *To approve land acquisition, tenure and recapitalisation and development projects in line with a delegation of authority framework; and*
- *To provide an oversight function in relation to the work of the National Technical Committee and Provincial Committees, to eliminate disjuncture and to ensure alignment of projects and funding at a national level.*

Looking at the above function, the NLARCC and PCRDP have the same functions but only on different levels within the government.

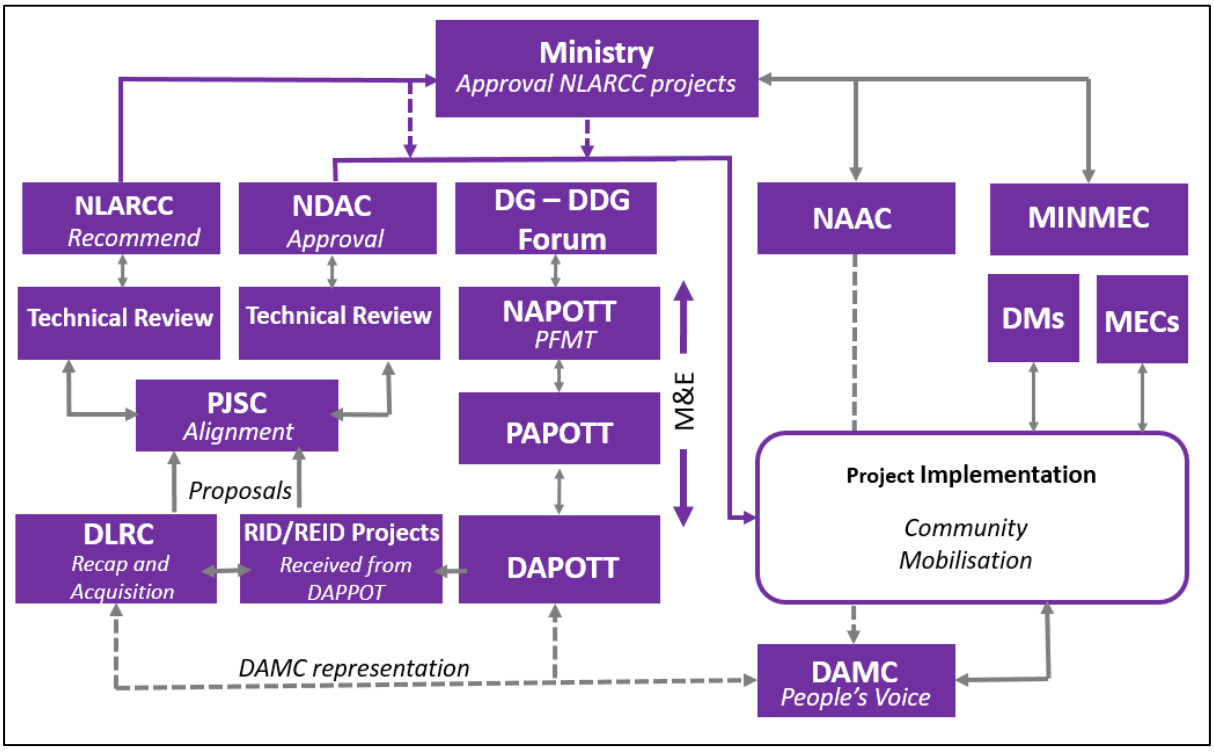
### *13.2.4 NDAC*

The main function of the NDAC is to approve all the national development projects and to give oversight to the PCRDP committees and the National Technical Committees (NTCs part of the land reform approval process). The functions of the NDAC are almost the same as the functions of the NLARCC, but the NDAC does not play a role in the identification of projects or the approval land acquisition, tenure recapitalisation and development projects.

## 13.3 Implementation and Monitoring Structures

Currently there are only two structures within the Agri-Parks organisational structure that are solely dedicated to implementation and monitoring, the PAPOTT (provincial Agri-Parks Operation Task Team). PAPOTT and NAPOTT are however not exclusively dedicated to Agri-Parks, these two structures also play a role in the monitoring and implementation of other programmes that can influence the Agri-Parks programme.

**Figure 13.2: Implementation and Monitoring Structures**



### *13.3.1 NAPOTT*

The NAPOTT has various functions that are focussed towards on the operation of Agri-Parks both in terms of implementation and on-going operation. These functions include but are not limited to:

- *Developing the National Agri-Parks Plan;*
- *Contributing to the development guidelines of Agri-Parks;*
- *Monitoring provincial business plans against the abovementioned guidelines;*
- *Monitoring budget alignment as set out in the business plans;*
- *Giving inputs to assist in the compilations of provincial Agri-Park business plans; and*
- *Managing project project roll out of Agri-Parks in line with approved project plans nationwide.*

### *13.3.2 PAPOTT*

The main functions of the PAPOTT is to coordinate and facilitate integrated implementation of Agri-Parks by providing technical support regarding planning and implementation, giving inputs to the compilations of Agri-Parks Business plans etc. **Note: PAPOTT will only remain operational until the Agri-Parks programme has reached a sustainable level, then PAPOTT will be integrated with the PCRDP.**

## REFERENCES


ABSA, 2015. **Agricultural Outlook 2015**,

BFAB, 2015. **Agricultural Outlook 2015-2024**.

BRITZ, P.J., LEE, B. AND BOTES, L. 2009. **Aquaculture Benchmarking Survey: Primary Production and Markets. A report for the Aquaculture Institute of South Africa.**

CAPE WOOL SA. 2013. **Production statistics: Production per province 2011/12**.

CAPE WOOLS SA. 2014. **2012/2013 Provincial Production Statistics.**

CAPE WOOL SA, 2015**. Production Statistics.** [Online] Available at: ttp://www.capewools.co.za/

COCKS, M.L., DOLD, T., VETTER, S., 2012. '**God is my forest' – Xhosa Cultural values Provide Untapped Opportunities for conservation.** South African Journal of Science, Vol. 108 No. 5-6, January 2012. Pretoria.

CROSS, C., 2000. **Spatial implications of population migration for South Africa's development and infrastructure programmes.** University of KwaZulu-Natal, January 2000.

DAFF, 2015. **Crops and Markets, first quarter 2015. Vol 96, no. 963. Issued by the Directorate Statistics and Economic Analysis.** Department of Agriculture, Forestry and Fisheries, Pretoria.

DAFF, 2015a. **Abstract of Agricultural Statistics,** Pretoria: Directorate Statistics and Economic Analysis.

DAFF, 2015b. **Newsletter: National Livestock Statistics**, Pretoria: Department of Agriculture, Forestry and Fisheries.

DAFF, 2015C. **Trends in the Agricultural Sector, 2014.** Department of Agriculture, Forestry and Fisheries, Pretoria.

DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES (DAFF). 2014. **Agricultural Policy Action Plan** (APAP). Department of Agriculture, Forestry and Fisheries, Pretoria.

DAFF, 2013. **Trends in the Agricultural Sector, 2012.** Department of Agriculture, Forestry and Fisheries, Pretoria.

DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES (DAFF). 2012. **South Africa's Aquaculture Yearbook 2012.** Department of Agriculture, Forestry and Fisheries, Pretoria.

DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES (DAFF). 2011. **Maize Market Value Chain.** Department of Agriculture, Forestry and Fisheries, Pretoria.

DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES (DAFF). 2011**. Profile of the South African Forestry and Wood Products Market Value Chain.** Department of Agriculture, Forestry and Fisheries, Pretoria.

DEPARTMENT OF BASIC EDUCATION. 2013. **Education Statistics in South Africa, 2011**. Pretoria: Department of Basic Education.

DEPARTMENT OF ECONOMIC DEVELOPMENT, ENVIRONMENTAL AFFAIRS AND TOURISM (DEDEAT), 2014. Eastern Cape **Sustainable Energy and Greenhouse Gas Mitigation Initiatives Status Quo Assessment 2003/2014**. DEDEAT: Bhisho.

DEPARTMENT OF ECONOMIC DEVELOPMENT, ENVIRONMENTAL AFFAIRS AND TOURISM (DEDEAT). 2013. **Geo-spatial Tourism Database.** DEDEAT: Bhisho.

DEPARTMENT OF ENVIRONMENTAL AFFAIRS. 2011. **National Strategy for Sustainable Development.**

DEPARTMENT OF RURAL DEVELOPMENT AND AGRARIAN REFORM. 2015. **OR Tambo Agri-Park Proposal Draft 2015.**

DEPARTMENT OF RURAL DEVELOPMENT AND AGRARIAN REFORM. 2015. One Pager Executive Summaries – 27 Priority Districts Agri-Hubs as on 15 July 2015. 2015

DEPARTMENT OF RURAL DEVELOPMENT AND LAND REFORM (DRDLR), 2009. **Comprehensive Rural Development Programme.** Department of Rural Development and Land Reform, Cape Town

DEPARTMENT OF RURAL DEVELOPMENT AND LAND REFORM (DRDLR), 2015. **Strategic Plan 2015 – 2020.** Department of Rural Development and Land Reform, Cape Town

DEPARTMENT OF RURAL DEVELOPMENT AND LAND REFORM. 2015. **The Rural Economy Transformation Model: One District, One Agri-Park/Every Municipality – A CRDP Site.** Department of Rural Development and Land Reform, Cape Town

DEPARTMENT OF RURAL DEVELOPMENT AND LAND REFORM. 2015. **Draft Eastern Cape Rural Development Plan** Department of Rural Development and Land Reform, Cape Town

DEPARTMENT OF RURAL DEVELOPMENT AND LAND REFORM, DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHEREIES & DEPARTMENT OF RURAL DEVELOPMENT AND AGRARIAN REFORM, 2014**. O.R. Tambo District Municipality APAP**. Department of Rural Development and Land Reform, Cape Town

DTI, 2013. **Industrial Policy Action Plan, 2013/14** – 2015/16. Department of Trade and Industry, Pretoria.

EAST LONDON IDZ (ELIDZ). 2011. **Framework for a Green Value Proposition.** East London

EASTERN CAPE DEVELOPMENT CORPORATION. 2015. **Regional Economic Profile – OR Tambo District.** 2015

EASTERN CAPE PARKS AND TOURISM AGENCY (ECPTA). 2013. **Destinations and Tariff Guide: 2013.** Eastern Cape Provincial Government, Bhisho.

EASTERN CAPE PARKS AND TOURISM AGENCY (ECPTA). 2015. **Reserves as Products (Draft Report).** Eastern Cape Provincial Government, Bhisho.

EASTERN CAPE PROVINCIAL GOVERNMENT. 2010. **Eastern Cape Provincial Spatial Development Plan.** Eastern Cape Provincial Government, Bhisho.

EASTERN CAPE PROVINCIAL GOVERNMENT, 2010**. Eastern Cape Rural Development Strategy.** Eastern Cape Provincial Government, Bhisho.

EASTERN CAPE SOCIO ECONOMIC CONSULTATIVE COUNCIL (ECSECC). 2012. **Eastern Cape Socio-Economic Atlas.** ECSECC, East London

FOASTAT, 2015. Food and Agriculture Organization of the United Nations: Statistics Division. FOASTAT, Rome. Food and Agricultural Organisation (FAO). 1997. **State of Food and Agriculture, 1997**.

FORT HARE INSTITUTE OF SOCIAL AND ECONOMIC RESEARCH (FHISER). 2006. **Rapid assessment of service delivery and socio-economic survey in the Eastern Cape.** FHISER, Fort Hare

FRASER, G. 2006. **Value Chain Report on Vegetable Processing Project.** Thina Sinako.

FROST AND SULLIVAN. 2008. In Managed Shared Services Centre (2008): **SA BPO Industry Analysis and International Participation Analysis.**

HINRICHSEN, E. 2008.**Introduction to Aquaculture in the Eastern Cape: Edition 1.** Division of Aquaculture, Stellenbosch University Report.

**ITC Trade Maps**, 2015. [Online] Available at: http://www.trademap.org [Accessed 18 February 2015].

ORTDM, 2015 **OR Tambo Integrated Development Plan**

JORDAAN, A.J., 2013. **Vulnerability, adaptation to and coping with drought: The case of commercial and subsistence rainfed farming in the Eastern Cape.** WRC/KSA4 /1002947/2280 (Project in Progress):

Government Gazette, 1947. **Fertilisers, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act No. 36 of 1947)**. Cape Town, The Presidency.

GOVERNMENT GAZETTE, 1959. **Stock Theft Act, 1959 (Act No. 57 of 1959).** Cape Town, The Presidency.

GOVERNMENT GAZETTE, 1962**. Animals Protection Act, 1962 (Act No. 71 of 1962).** Cape Town, The Presidency.

GOVERNMENT GAZETTE, 1968**. Marketing Act, 1968 (Act No. 59 of 1968).** Cape Town, The Presidency.

GOVERNMENT GAZETTE, 1983. **Basic Conditions of Employment Act, 1983 (Act No. 3 of 1983).** Cape Town, The Presidency.

GOVERNMENT GAZETTE, 1990. **Agricultural Products Standards Act, 1990 (Act No. 119 of 1990).** Cape Town, The Presidency.

GOVERNMENT GAZETTE, 1993**. Occupational Health and Safety Act, 1993 (Act No.85 of 1993).** Cape Town, The Presidency.

GOVERNMENT GAZETTE, 1998**. National Water Act, 1998 (Act No.36 of 1998).** Cape Town, The Presidency.

GOVERNMENT GAZETTE, 1998**. National Forestry Act, 1998 (Act No. 84 of 1998).** Cape Town, The Presidency

GOVERNMENT GAZETTE, 2000. **The Meat Safety Act, 2000 (Act No. 40 of 2000).** Cape Town, The Presidency.

GOVERNMENT GAZETTE, 2002**. Animal Health Act, 2002 (Act No. 7 of 2002).** Cape Town, The Presidency.

GOVERNMENT GAZETTE, 2008. **Consumer Protection Act (Act No 68 of 2008).** Cape Town, The Presidency.

GRAIN SA. 2015. **Market Reports** [Online] Available at: http://www.grainsa.co.za/pages/industry-reports/market-reports

KOTZE, W. A. G., 1987**. Fifty years of fruit research**: A bibliography review. Fruit and Fruit Technology Research Institute. Pretoria: Government Printer.

LAND TYPE SURVEY STAFF. 1972 – 2006. **Land Types of South Africa: Digital map (1:250 000 scale) and soil inventory databases**. ARC-Institute for Soil, Climate and Water, Pretoria, South Africa.

LOBELL, D.B., BURKE, M.B., TEBALDI, C., MASTRANDREA, M.D., FALCON, W.P. AND NAYLOR, R.L 2008. **Prioritizing climate change adaptation needs for food security in 2030.** Science, Vol. 319 (5863).

MALHERBE, J., TACKRAH, A. 2003. **Long term average ten daily 1km X 1km temperature, rainfall and evaporation grid surfaces modelled from weather station data with a long term recording period. Unpublished.** ARC-Institute for Soil, Climate and Water, Pretoria.

MENNONITE ECONOMIC DEVELOPMENT ASSOCIATES (MEDA). 2009. **Agricultural market research for microfinance and SME interventions.**

MILK PRODUCERS ORGANISATION (MP0). 2014. **Lacota Data Statistics.**

NATIONAL PLANNING COMMISSION (NPC), 2012. **National Development Plan**. National Planning Commission, Pretoria.

NEL, J.L., DRIVER, A., STRYDOM, W.F., MAHERRY, A., PETERSEN, C., HILL, L., ROUX, D.J., NIENABER, S., VAN DEVENTER, H., SWARTZ, E. AND SMITH-ADAO, L.B. (2011). **Atlas of Freshwater Ecosystem Priority Areas in South Africa: Maps to support sustainable development of water resources. Report to the Water Research Commission. WRC Report No. TT 500/11**

OLIVIER, G. C. (2004). **An Analysis of the Beef Supply Chain: From Farm to Fork**. Johannesburg: Rand Afrikaans University.

OOSTHUIZEN, H.J. 2014. **Modelling the financial vulnerability of farming systems to climate change in selected case study areas in South Africa.** PhD thesis, Stellenbosch University, South Africa.

PORTEOUS, D. 2006. **The Enabling Environment for Mobile Banking in Africa, Bankable Frontier**, Commissioned by the Department for International Development.

O.R. TAMBO DISTRICT MUNICIPALITY, 2014. **Local Economic Development Strategy**. O.R. Tambo District Municipality, Mthatha.

O.R. TAMBO DISTRICT MUNICIPALITY, 2015. O**.R. Tambo Agri-Park Business Proposal**. O.R. Tambo District Municipality, Mthatha.

QUANTEC RESEARCH (PTY) LTD. 2015. **Regional, Standardised Data Set**. Available: http://www.quantec.co.za.

RED MEAT LEVY ADMIN, 2015. **Total Slaughters – Nov. 2013 to Oct. 2014.** Red Meat Levy Admin, Pretoria

RICHARDS, 2003. **The Unending Frontier: *An Environmental History of the Early Modern World*.** John Wiley & Sons, West Sussex.

RICHARDS, G. 2011**. Cultural Tourism Trends in Europe: A Context for the Development of Cultural Routes**.

SCHULZE, R.E. (ED) (2008). **South African Atlas of Climatology and Agrohydrology.** Water Research Commission, Pretoria, RSA, WRC Report 1489/1/08, Section 18.3.

SCHULZE, R.E. 2011**. Atlas of Climate Change and the South African Agricultural Sector: A 2010 Perspective**. Department of Agriculture, Forestry and Fisheries, Pretoria, RSA.

SMALL ENTERPRISE DEVELOPMENT AGENCY (SEDA). 2013. **Eastern Cape Poultry Value-Chain Analysis.**

STATISTICS SOUTH AFRICA (STATS SA). 2002. **Census 2001**. Statistics South Africa: Pretoria.

STATISTICS SOUTH AFRICA (STATS SA). 2007. **Census of Commercial Agriculture 2007 (Eastern Cape).** Stats SA: Pretoria.

STATISTICS SOUTH AFRICA (STATS SA). 2012. **Census 2011.** Statistics South Africa: Pretoria.

STATISTICS SOUTH AFRICA (STATS SA). 2014. **Quarterly Labour Force Survey, 4th Quarter 2013**. Statistics South Africa: Pretoria.

STATISTICS SOUTH AFRICA (STATS SA).2014. **Survey of Employers and the self-employed 2013**. Statistics South Africa: Pretoria.

VAN DER HOFF, G. 2006. **Value Chain Report on Forestry Project**. Thina Sinako.

WEE, H., YANG, M., CHOU, C. AND PADILAN, M.V. 2012. **Renewable energy supply chains, performance, application barriers, and strategies for further development**. Renewable and Sustainable Energy Reviews Vol. 16:8, pp. 5451 – 5465.

WILKINSON, J. and Rocha, R. 2009. **Agro-industries for Development**. Rio de Janeiro, Brazil