



**New Partnership for
Africa's Development (NEPAD)
Comprehensive Africa Agriculture
Development Programme (CAADP)**



**Food and Agriculture Organization
of the United Nations
Investment Centre Division**

GOVERNMENT OF THE REPUBLIC OF SOUTH AFRICA

SUPPORT TO NEPAD–CAADP IMPLEMENTATION

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Volume V of V

BANKABLE INVESTMENT PROJECT PROFILE

**Livestock Development Project: Increasing Productivity,
Commercialisation and Marketing**

July 2007

SOUTH AFRICA: Support to NEPAD–CAADP Implementation

Volume I: National Medium–Term Investment Programme (NMTIP)

Bankable Investment Project Profiles (BIPPs)

Volume II: Woodlands and Forest Resources for Improving Livelihoods and Income Generation

Volume III: Sustainable Natural Resources Management and Use Options to Improve Livelihoods

Volume IV: Biofuels (Bioethanol and Biodiesel) Crop Production: Technology Options for Increased Production, Commercialisation and Marketing

Volume V: Livestock Development: Increasing Productivity, Commercialisation and Marketing

NEPAD–CAADP Bankable Investment Project Profile

Country: South Africa

Sector of Activities: Livestock

Proposed Project Name: **Livestock Development: Increasing Productivity, Commercialisation and Marketing**

Project Area: National

Duration of Project: 2–5 years

Estimated Cost: Foreign Exchange.....US\$2.78 million
Local Cost.....US\$31.20 million
Total..... US\$33.98 million

Suggested Financing:

<i>Source</i>	<i>US\$ million</i>	<i>% of total</i>
<i>Government</i>	25.48	75
<i>Financing institution(s)</i>	3.40	10
<i>Private sector</i>	1.70	5
<i>Beneficiaries</i>	3.40	10
<i>Total</i>	33.98	100

SOUTH AFRICA:
NEPAD–CAADP Bankable Investment Project Profile
*“Livestock Development: Increasing Productivity,
Commercialisation and Marketing”*

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Currency Equivalents

(September 2006)

Local Currency	=	ZAR (Rand)
US\$1.00	=	R7.48
R1.00	=	US\$0.13

Abbreviations

AnGR	Animal Genetic Resources
Asgi-SA	Accelerated and Shared Growth Initiative for South Africa
CAADP	Comprehensive Africa Agricultural Development Programme
CASP	Comprehensive Agricultural Support Programme
DoA	Department of Agriculture
GDP	Gross Domestic Product
GIP	Goat Interest Group
ISRDP	Integrated Sustainable Rural Development Programme
KDE	Kgalikgadi Development Enterprise
KZN	KwaZulu Natal
LRAD	Land Reform Agricultural Development
NEPAD	New Economic Partnership for Africa’s Development
NMTIP	National Medium Term Investment Programme
OVI	Onderstepoort Veterinary Institute
RFP	Rural Fisheries Programme
R&D	Research and Development
SADC	Southern African Development Community

I. PROJECT BACKGROUND

A. Project Origin

I.1. Livestock production in South Africa is an important agricultural sub-sector and the sector includes cattle, sheep, goats, equestrians, game, poultry and aquaculture. However, without underscoring the capacity and potential of other livestock sub-sectors, the scope of this profile is only limited to cattle, goats, poultry and aquaculture. The bankable investment profile is developed in the context of government policy and the investment programme to increase agricultural output and the contribution of livestock to rural development. The livestock development initiative is premised on the need to reinforce the land redistribution programme and, livestock production on communal rangeland is a central feature as overgrazing and livelihood issues are a challenge.

I.2. The sector was identified as one of the priority and high growth potential areas to spearhead agricultural evolution in the country. In line with the National Medium-Term Investment Programme (NMTIP) and the Accelerated and Shared Growth Initiative for South Africa (Asgi-SA), livestock development augments government efforts to unlock the value of agriculture as one of the key economic drivers. The sub-sector plays a key role in agro-processing industry. Employment creation, foreign exchange earnings and general poverty reduction are some of the envisaged spin-offs of accelerated livestock production. Asgi-SA is aimed to consistently grow the economy by 6 percent per annum to ensure sustainable economic growth by 2010. Projects are aimed at helping mainly second economy farmers and communal farming communities to alleviate poverty while ensuring sustainable livelihoods.

I.3. Livestock development is classified as priority 4 and forms the fifth pillar of the Comprehensive African Agricultural Development Programme (CAADP). With particular respect to the historical imbalance in the agricultural sector in South Africa, the main objective is to integrate communal and Land Reform for Agricultural Development (LRAD) resettled farmers into the mainstream agricultural sector through increased productivity, commercialisation and marketing.

B. General Information

I.4. South Africa has a surface area of 1.22 million km² with a population of 46.9 million, and it is one of the largest countries on the African continent. The country experiences mixed climatic conditions that range from temperate summer rainfall, Mediterranean winter rains and all year round rainfall. Around 87 percent of the country's land is not suitable for arable production and is best used for extensive land utilization, including livestock production. The country is characterised by some semi-arid climate with erratic rainfall. The country experiences water deficits and agriculture alone consumes 50 percent of the country's water resources. The country is periodically affected by severe prolonged droughts and often affected by intense floods.

I.5. Only about 13 percent (17 million ha) of the total area of South Africa is suitable for rain-fed crop production and only 3 percent of this area is high potential land. The area under forestry and peri-urban smallholdings account for some 3 million ha of the better soils. Land use distribution is shown in Table 1 below. Veldt (rangeland) is the main source of fodder for most of the 13.96 million cattle, 28.95 million sheep and 6.98 million goats in South Africa.

Land Use	Source of water	
	Rain (ha)	Irrigation (ha)
Agromony	10,779,615	1,086,358
Pasture Crops	1,736,614	209,351
Natural Extensive Grazing	83,928,062	–
Forest & Woodland	1,179,000	–
Other	23,422,000	–

I.6. South Africa is the largest African economy, with a per capita Gross Domestic Product (GDP) of US\$3,530, more than four times the African average. Agriculture contributes less than 4 percent to GDP but accounts for 10 percent of total reported employment. Agriculture is well-diversified with field crops, livestock and horticulture as the main sub-sectors. The current annual gross value of livestock production is US\$3.83 million which represents nearly 43 percent of total current agricultural output which is around US\$8.95 million. Horticulture currently accounts for up to 29 percent of agricultural production at US\$2.59 while field crops contribute the remaining balance of 28 percent at US\$2.52. Notable growth has been achieved in the wine and fruit production during the past ten years with a large share of total output exported, mainly to Europe.

I.7. Total exports for major livestock products on average amount to US\$186.5 million. The gross capital investment for the livestock sector is US\$3,777 million, which is about 50 percent more than the capital value of US\$2,396 for the horticulture and field crops sector combined. Annual input costs for dips and remedies for the livestock sector amounts to US\$351.9 million and US\$1,418 million for dips and remedies and stock feeds respectively.

I.8. The country has undergone considerable social and economic transformation over the last 20 years that has also witnessed fundamental reforms aimed at creating a more open and market-oriented economy. The Land Reform for Agricultural Development (LRAD) and the Comprehensive Agricultural Support Programme (CASP) were positioned in place to ensure fairer land redistribution and to promote agricultural production among the previously disadvantaged communities.

I.9. The Livestock Improvement Act, 1998 (Act 62 of 1998) provides the framework for the livestock development programme which strives for a competitive animal production sector. Its key objective is to facilitate poverty alleviation through the sustainable utilization of animal genetic resources by way of:

- promoting and supporting the identification, evaluation, breeding and use of genetically superior animals to improve the production and performance of animals used for food, agriculture, sport and recreation
- promoting the sustainable use of Animal Genetic resources (AnGR) as a major contributor to national food security
- facilitating the conservation of AnGR for food and agriculture while ensuring reduction in the risk of disease transmission through animal improvement.

I.10. In line with the objective of promoting sustainable agricultural production, policies and strategies were developed and these include policies on animal improvement, animal welfare, aquaculture, range and forage, and all the policies are aligned to the livestock development strategy.

I.11. The underlying principle for government policy is to bring the previously excluded and marginalised black community into the mainstream economy through job creation, sustainable livelihoods and entrepreneurship. The country has a stable and growing economy which is well integrated with regional and international trading systems. Significant progress is being made in redressing past injustices.

I.12. The aim of the policies and the strategy is to ensure that the livestock industry performs at its optimal capacity, with emphasis on providing support to emerging black farmers to be able to participate in the mainstream economic activities. Priority is on introduction of programmes such as Cattle Improvement, Provincial Aquaculture, Animal Health, Livestock and Poultry support within rural development nodes. Other key programmes include the Goat Productivity Improvement and the Development of feedlot / grass lot facilities within the rural development nodes, which links to the accelerated and shared growth initiative.

I.13. Livestock is the largest agricultural sub-sector in South Africa. The estimated cattle population is 13.8 million, and the main activities are dairy and cattle farming. Dairy farming is practised throughout South Africa. Most farms are situated in the eastern and northern Free State, North West, KwaZulu–Natal, the Eastern and Western Cape, Gauteng and the southern parts of Mpumalanga. The four major dairy breeds in South Africa are the Holstein, Jersey, Guernsey and Ayrshire. There is an estimated 4,300 milk producers who directly employ about 60,000 workers and indirectly providing jobs to 40,000 people. Milk production for 2003/04 was estimated at 2 billion litres.

I.14. **Beef farming.** South Africa produces 85 percent of its beef requirements. There are untapped reserves in the communal farming areas. Cattle ranches are found mainly in the Eastern Cape, parts of the Free State and KwaZulu–Natal, Limpopo and the Northern Cape. Popular beef breeds include the indigenous Afrikaner and Nguni and locally developed Bonsmara and Drakensberger. European and American breeds such as Charolais, Hereford, Angus, Simmentaler, Sussex, Brahman and Santa Gertrudis are maintained as pure breeds or used in cross-breeding.

I.15. **Goat Farming.** Goats are generally an easy-care animal. The key management issues for a successful meat goat enterprise are fencing, parasite control, predator control, and marketing. Attention must also be paid to nutrition and to breeding stock selection. The indigenous meat-producing Boer goat accounts for about 30 percent of all commercial goats. Dairy goats are also a thriving business for cheese and milk. The Angora goat is used for mohair production.

I.16. **Poultry.** Intensive poultry production is practised and it is confined to the peripheries of the metropolitan areas of Gauteng, Durban, Pietermaritzburg, Cape Town and Port Elizabeth. South Africa's annual poultry meat production is 960,000 tons. It is an intensive farming sub sector. Broiler production contributes about 82 percent to total poultry meat production, with the rest made up of mature chicken slaughter (culls), small-scale and backyard poultry production, ducks, geese, turkeys and other specialised white meat products. Income from poultry and egg production amounted to R11.3 billion in 2002/03. It is generally believed that the broiler industry tends to be over-subscribed.

II. PROJECT AREA

II.1. Livestock development is a national priority project. It embraces animal health and disease control, livestock production, development of infrastructure and conservation and development of range land. The project has a number of sub-projects that addresses issues of productivity, marketing commercialisation and marketing and these are being implemented at different sites in the provinces. The project is centred on the following sub-projects:

- ***Animal Health and Disease Control;***
- ***Livestock Development In Nodal Areas;***
- ***Small Scale Aquaculture Farming;***
- ***Commercialisation of the Goat Industry.***

II.2. Table 2 below provides an overview of the ecological zones where sub-projects will be implemented. It indicates the various agricultural activities that are undertaken which include horticulture, maize and livestock production. Livestock production is mainly concentrated in the in the Karoo, Eastern Cape KwaZulu Natal and the Northern provinces (North West and Northern Cape) of the country. The Karoo which is characterised by dry arid conditions is renowned for sheep production. Some pockets of sheep production activities are also seen across the country. The Eastern Cape provides vast grasslands for free range livestock production. The Northern Cape and North West have dry climatic conditions and they provide extensive livestock production conditions.

Table 2. Ecological Zones and Provincial overview of sub-projects

Southern and Western Cape	The most productive part of the country, with winter wheat, deciduous fruit, grapes, citrus and vegetables being the major crops.
Karoo	Is arid and almost exclusively a sheep farming area, and centre of fine-wool production. A much smaller, but profitable, racehorse breeding industry is located here.
Eastern Cape	High-potential arable areas are located in the eastern highlands. Along the hot, dry river valleys wheat, maize, cotton, tobacco, vegetables and sub-tropical fruit are grown under irrigation. The area around East London is the centre of the South African pineapple industry. Away from the river valleys, extensive sheep and cattle production predominate. Along the wet escarpment, timber plantations are common.
KwaZulu Natal	The inland areas of KwaZulu Natal practice intensive animal production and timber growing. Along the coast, the warm, wet climate is suitable for sub-tropical crops such as sugarcane, fruit and also timber. In the drier north, sisal and cotton are grown. Along the hot, dry river valleys there are extensive cattle ranching and some irrigated vegetable production.
The Free State	Overwhelmingly a cattle and sheep ranching area, with some wheat, vegetable and fruit production along the eastern part. Part of the North West province is in this area.
Northern	The Northern provinces are mostly arid, and used for cattle farming. Small areas are suitable for irrigated or dry-land production. In Mpumalanga, there is extensive fruit and vegetable production. Along the escarpment the largest timber plantations in the country are found. Gauteng and the eastern part of North West provinces are included in this zone.
Highveld	The Highveld of Gauteng, Mpumalanga, part of the Free State and of northern KwaZulu Natal, is the largest grain-growing area, the heartland of the agricultural economy. The highveld has a stable soil system, reasonable rainfall, and mostly flat topography.

Source: National Medium-Term Investment Programme.

II.3. ***Animal Health and Disease Control*** will focus on the upgrading of the Onderstepoort Veterinary Institute for animal disease control. The Institute is located in the Gauteng province and all the infrastructure upgrading will take place on site. Among other regional commitments, the Institute is FAO’s designated collaboration centre for animal health and disease control.

II.4. ***Livestock Development in Nodal Areas*** will be confined to most of the provinces that provide conducive environment for production activities and these include the Eastern Cape and the North West among other scattered pockets of land in the other provinces. Similarly, Small-scale Aquaculture Farming and Commercialisation of the Goat Industry will take place in the ideal environmental conditions. Some of the sub-projects are already underway on a trial basis in the provinces.

II.5. The Eastern Cape is South Africa's premier livestock province and is home to more livestock than any other province making it one of the most favourable candidates for livestock development for the future. Commercial livestock production has been inhibited in the former homelands, but is receiving substantial support from the provincial government. The provincial livestock industry has developed niche markets in high value meat cuts and is set to increase export markets further. The rich natural grasslands of the Eastern Cape have high potential for high value 'organic' meat production.

II.6. The Eastern Cape has 23 percent of South Africa's cattle, 28 percent of its sheep, and 46 percent of its goats. Livestock roam the vast natural grasslands that cover 82 percent of the province, which is free of foot and mouth disease. However, the potential in livestock has been vastly untapped, although initiatives are starting to position livestock farming on the road to prosperity. Most of the Eastern Cape's livestock (67 percent of its cattle, for instance) is in the former homeland areas.

II.7. While farming of cattle predominates in the former homeland areas, sheep and goat farming is widespread in the dry Karoo. Goats are also common in the former homelands. The goat production project will be implemented in nodal areas in the Alfred Nzo Area of the Eastern Cape and Kgalakgadi Dipudi Enterprise programme falls in the Northern Cape. Twelve similar projects will be implemented in other provinces that will possibly include, KwaZulu Natal, Northern West and Limpopo. Other areas targeted are feedlots and market access for emerging and communal cattle farmers. Among the target provincial areas for development are Limpopo within the Blouberg municipal area and the Eastern Cape's Chris Hani municipality.

II.8. The ***Development of the Poultry Nutrition*** sub-project is planned for all the provinces with a pilot project to be carried out in the KZN. The Provincial Aquaculture Development Programme will be implemented in the Western Cape, Eastern Cape and Limpopo under the Rural Fisheries Programme (RFP).

III. PROJECT RATIONALE

III.1. Livestock is an important sub-sector of agriculture and contributes significantly to rural livelihoods sustainability and food security. About 40 percent of the beef cattle in South Africa are owned by black emerging and communal farmers and yet only 5 percent goes through the formal marketing channels. Farmers' capacity and knowledge to participate in the mainstream economy and make significant contribution to economic development is thus curtailed. Communal and black emerging farmers have potential that needs to be unleashed for them to make significant contributions towards poverty alleviation and economic development. Under Asgi-SA, livestock development has been identified as one of the key agricultural drivers that underpin agro-economic development.

III.2. The livestock development project was also endorsed at the NMTIP National Stakeholder Validation Workshop that was held on August 1–2, 2006 at the Agricultural Research Council in Tshwane. There was consensus that the sub-sector be developed into a Bankable Investment Project in line with CAADP pillars 2 and 4 which seek to address Rural Infrastructure and Trade-related

Capacities for Improved Market Access, and Livestock Development priority 4 under the CAADP pillars. The project is expected to meet the objectives of rural development through market access, rural infrastructure development.

III.3. The development of the project would among other benefits, provide inputs for agro-industries earn foreign currency and generate employment for rural communities, thus transforming and integrating them into the mainstream economy.

IV. PROJECT OBJECTIVES

IV.1. The policy on agriculture for sustainable development facilitates a co-ordinated approach towards achieving an ecologically, socially and economically sustainable agricultural sector in South Africa. This supports the government’s commitment towards poverty alleviation through employment creation and sustainable livelihoods, food security and economic development in a manner that fully integrates black emerging and communal farmers. It emphasises the creation of a prosperous agricultural sector while protecting the national biological and physical resource base, as well as enhancing human health and wellbeing. Specific sub-projects objectives are guided by this framework and they dovetail into the above overall objectives. The common objectives of poverty alleviation and sustainable livelihoods through income generation and employment creation thread through all the sub-projects.

V. PROJECT DESCRIPTION

A. General

V.1. An integrated livestock development project which will focus on animal health and disease control, goat, cattle and poultry production and aquaculture will be implemented in a time frame ranging from 1–5 years during the implementation of the Asgi-SA timeframe of 10 years. Programmes in the various livestock sub-sectors all synergistically augment each other to create a huge, holistic and thriving livestock sector. The main sub-projects under livestock development are Animal Health and Disease Control and Animal Production.

V.2. The first category of activities focuses on controlling the transmission of animal diseases, study of diseases, development of vaccines as well as capacity building for technical expertise and specialised skills to improve the preparedness for dealing with the challenges of outbreaks. Some of the project activities are of an R&D nature and they are associated with extensive research development and trialling of vaccines before roll out for use. Activities to be undertaken include infrastructure development and refurbishment of veterinary facilities to increase the capacity of dealing with outbreaks and also entails the acquisition of modern equipment.

V.3. The second category of activities deals directly with animal production of cattle, goats, poultry and aquaculture. The underlying objective is to improve facilities for the development of livestock sub-sectors for improved production and participation to enhance livelihoods sustainability. In an attempt to redress the previous imbalances within the agricultural sector, there are extensive capacity building programmes in the field of production management, marketing to allow for market access and business management.

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V.4. The timeframe for the various activities ranges from 2006/07 to 2009/10. Table 3 in next page shows a list of all the sub-projects under consideration and their indicative timeframes. The timeframe for the sub-projects ranges from 1–4 years. However, the implementation of most of the projects may take longer due to institutional delays and challenges as well as mobilisation of funding for projects. Summaries of project initiatives are provided below:

Table 3: List of Sub-Projects and Duration	
Sub-project Description	Timeframe
1. Animal Health & Disease Control	
Development of an improved antibody test for bovine TB in cattle and African buffalo	2 years
Taenia cysticercosis – Diagnosis of cattle and pigs	3 years
Single dose recombinant vaccine against heart water	3 years
Development of diagnostic tests for RVFV infection in livestock	3 years
Study of epidemiology of bovine TB in livestock by molecular typing	3 year
Efficacy and protective immunity afforded by tick-borne disease live-blood vaccines	1 year
Development of policy for tsetse & trypanosomosis monitoring, surveillance and control in KZN & Great Limpopo Trans Frontier Park	3 years
Infrastructure development and capacity building	4 years & on going
2. Animal Production	
Development of rangeland monitoring and improvement programme for South Africa production environments (biomes)	3 years
Development of feedlots and market access for emerging and communal beef cattle farmers	3 years
Participatory Development of Provincial Aquaculture Programmes for Improved Rural Food Security & Livelihood Alternatives	3 years
Poultry production for nutrition	4 years

B. Animal Health and Disease Control

V.5. Objectives of livestock development cannot be sufficiently addressed without integrating the animal health and disease control component. The need for state of the art technology requires not to be over emphasised when animal diseases are a major developmental challenge. Globalisation and deregulation have led to more trans-boundary and international animal mobility. This is coupled with uncontrollable migration especially that of birds. Regional and international trade in animals and animal products have become widespread. Therefore, more disease alertness is now more crucial than ever before. Animal disease control is inevitably a major priority for South Africa and the SADC region as a whole.

V.6. South Africa plays a significant role in disease control at both national and regional levels, and upgrading of laboratory infrastructure and human capacity development is imperative if livestock development is to be realised. Poor disease control could jeopardise the contribution of the livestock sector to food security, employment creation and general economic development for both South Africa and the region. The Centre for International Disease Control has also tasked South Africa to provide regional disease surveillance and monitoring programme.

V.7. The Agricultural Research Council – OVI is generally recognized as the Veterinary Research Institute on the African continent. However, for it to maintain such a status and step up its preparedness to deal with outbreaks, the institute requires recapitalisation and refurbishment of its buildings and equipment.

C. Livestock Development in Nodal Areas

V.8. In line with the Asgi–SA programme, government has established targets to increase livestock productivity, quality and marketing opportunities for black emerging farmers. Initial focus will be on goat development and diversification, concentrating goat products such as meat, cheese and milk. There is planned expansion of beef and aquaculture sub–sectors.

(i) Support and Extension Services for Black (Indigenous) Emerging Farmers

V.9. The establishment of integrated service centres for the emergent farmer sector is a priority. Centres will be identified to focus on development programmes for farmers to acquire skilful animal science principles, including effective veldt and pasture management and animal nutrition. The centres will include animal identification and recoding facilities.

V.10. Breed societies will be encouraged to assist black emerging and communal farmers by involving them in projects that include both genetic material and supportive training to equip them for participation in commercial livestock farmers’ markets. Capacity building and adoption of best practice methods in the following critical areas will receive focus:

- Practising designed breeding programmes
- Adaptation of livestock to environment
- Creating mechanisms that make controlled grazing possible
- Ability to prevent and fight livestock deceases
- Improving profitability of small scale farmers
- Creating access to open markets
- Value adding opportunities
- Development of business management skills

(ii) Development of Rangeland Monitoring and Improvement Programme

V.11. There is intense dependency of the South African livestock on rangeland, and yet the degree of degradation continues to accelerate. The national livestock strategy has come up with recommendations to control the situation so as to improve the state of rangeland resources and improving livestock production. The sub–project entails the following:

- Development of a rangeland monitoring and improvement programme based on the current guidelines for veldt management for different production environments
- Training and deployment of interns as range officers to various biomes for monitoring of the veldt in accordance with national guidelines
- Development of research capacity through funding of mentorship of post graduate students recruited from universities and interns.

V.12. The project is addressed under the natural resources component of the bankable investment project profiles (Volume III).

D. Small Scale Aquaculture Farming

V.13. The fishing industry is undergoing transformation and there are initiatives to promote aquaculture to involve previously disadvantaged black communities. The transformation is aimed at:

- improving rural communities standards of living through income generation,
- skills development and nutrition skills development and nutrition;
- actively embracing previously disadvantaged black communities into the
- mainstream economy through employment creation and entrepreneurship;
- boosting food security through high protein supply; and
- sustainably and efficiently utilising resources such as water, human and
- infrastructure to benefit rural communities.

V.14. The sub-projects apply participatory development of provincial aquaculture programmes for improving rural food security and livelihoods. The project entails fish farming development proposals particularly along the Orange River in the Northern Cape, the Eastern Cape and the Western Cape. Small-scale fish farming units are being established on irrigation dams and the formation and issuance of fishing permits to cooperatives is currently underway in the three provinces. Extensive feasibility studies have been conducted by universities to establish the most appropriate fish breeds and business management models for development of the sector.

E. Commercialisation of the Goat Industry

V.15. Goats are simple to rear and they constitute a significant contribution of rural livestock, and they have potential to alleviate poverty through sale of meat, skins, crafts (made from goat skin) and milk products. Goat production has not received much support until in the recent years which has witnessed the development of such projects as the Kgalikgadi Dipudi Enterprise (KDE) and the Umzimvubu goat commercialization projects in the Northern Cape and Eastern Cape respectively.

(i) Kgalakgadi Dipudi Enterprise

V.16. The Kgalakgadi District was selected among other rural nodes under the framework of Integrated Sustainable Rural Development Programme (ISRDP). The sub-project fully conforms to the objectives of Asgi-SA, and there are plans to replicate and expand it to other provinces. KDE project was initially started by a group of unemployed women who pooled together five goats each. The project entails the massification of the goat commercialization on a cooperative model. The project that was started two years ago currently has 42 Goat Interest Group (GIP) members who are engaged in rearing, marketing, quality improvement and product development and diversification focusing on meat, skins and other by-products. Each group has between 10 – 40 members, and the project has a total of 400 members. The members have undergone a number of capacity building programmes that include goat management, record keeping, and marketing, among others. The DoA further distributed goat management kits to the value of R300,000 to co-operatives for animal husbandry.

(ii) Imzimvubu Central Goats Cooperative

V.17. Over 3,000 goat farmers in the Alfred Nzo district of the Eastern Cape have been organized into six registered goat cooperatives six. Members are all emerging farmers and participation in the goat commercialization is being undertaken as part of a contract programme. The objective is to formalize the production and marketing of goats in the Eastern Cape Province. Cooperative members have training on goat management coupled with husbandry, advisory and veterinary services.

V.18. In addition to goat rearing, cooperative members also undertake value addition activities that have necessitated the development of a tannery, meat handling and processing facilities, a workshop, curio shop and a restaurant. Products are marketed locally and to tourists.

V.19. Under the Asgi-SA programme, there are plans to develop business plans to start projects modelled along the concept of the KDE project. At least 500 Small-Medium enterprises will receive training and participate in the goat commercialization sub-project. A total of twelve projects will be launched in five provinces. Projects will be adapted to suit different climatic conditions with different goat breeds being reared to produce a variety of products. Clubbing of goats and sheep will also be considered.

VI. KEY PROJECT ACTIVITIES

VI.1. Project specific activities have been identified for each of the sub-projects and they will be implemented over different timeframes which range from 1 year to 5 years. Most projects have timeframes that will go beyond the indicated range. Some of the key project component activities are identified below:

Table 4: Project Activities 2006/07 – 2009/10

Project	Activities / Deliverables	Target (*)
Animal Health & Disease Control		
Development of an improved antibody test for bovine TB in cattle and African buffalo	Evaluation of known antigens	2006/07
	Collection of serum from confined cattle and buffalo	2006/07
	Identification of a candidate antigen suitable for detection	2007/08
Taenia cysticercosis – Diagnosis of cattle and pigs	Experimentation and veterinary training	2006/07
	Vaccination	2007/08
	Experimentation, veterinary treatment, field studies and plans	2008/09
	Experimentation, field studies, veterinary treatment, vaccination	2008/09
	Information dissemination and educational programmes	2008/09
Single dose recombinant vaccine against heart water	Vaccine candidate gene identification	2006/07
	Vaccine candidate gene identification	2007/08
	Compilation of report	2008/09
Development of diagnostic tests for RVFV infection in livestock	Expression of recombinant	2006/07
	Production of chicken antibody	2006/07
	Standardization of reagents	2006/07
	Technology transfer for up-scaling and mass production	2006/06
Study of epidemiology of bovine TB in livestock by molecular typing	Optimization of typing methods	2006/07
	Typing of all bovine strains routinely isolated during 2006/07	2007/09

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Table 4: Project Activities 2006/07 – 2009/10

Project	Activities / Deliverables	Target (*)
Efficacy and protective immunity afforded by tick-borne disease live-blood vaccines	Filed trial investigations	2007/08
	Laboratory controlled experiment	2007/08
	Development of serological tests	2007/08
	Economic impact assessment on vaccine	2007/08
Development of policy for tsetse & trypanosomosis monitoring, surveillance and control in KZN & Great Limpopo Trans Frontier Park	KZN	
	Assessment of degree of trypanosomosis risk in livestock	2007/08
	Parasitological, serological & trypanosome surveys	2007/08
	Evaluation of drug	2008/09
	Development of sustainable control strategy	2009/10
	Great Limpopo Trans Frontier Park	
	Knowledge improvement on ecology, behaviour and trapping	2008/09
	Development of dispersal model to predict invasion rates	2008/09
	Development of tsetse prevalence probability prediction model	2008/09
	Development of GIS-based tsetse survey to determine route of tsetse encroachment using tsetse movement and distribution models	2008/09
	Establishment of tsetse surveillance sites	2008/09
	Development of tsetse control strategy	2009/10
Formulation of national tsetse policy	2009/10	
Infrastructure development and capacity building	Project feasibility and appointment of contractors	2006/07
	Procurement and construction (refurbishment) of veterinary facilities	2007/08
	Alterations and repairs	2008/09
	Commissioning and evaluation	2008/09
	Building Management System upgrading	2009/10
	Capacity building and research	on-going
Animal Production		
Development of rangeland monitoring and improvement programme for South Africa production environments (biomes)	Training of interns	2006/07
	Deployment of field officers	2006/07
	Annual rangeland monitoring workshops (one/year)	2007/09
	Training, Monitoring and Evaluation	2007/09
Development of feedlots and market access for emerging and communal beef cattle farmers	Livestock capacity building for emerging farmers	2006/07
	Facilitation of market access and marketing information dissemination	2006/07
	Development of entrepreneurship and business models within targeted communities	2007/08
	Infrastructure development	2007/08
	Integration of farmers into the National Livestock Database	2008/09
Participatory Development of Provincial Aquaculture Programmes for Improved Rural Food Security & Livelihood Alternatives	Development of business plans	2006/07
	Strategic planning consultative workshops	2006/07
	Development of action plans	2006/07
	Status and progress reports on establishment of hatcheries	2007/08
	Development of manual for farmer training	2008/09
	Mentoring and aquaculture extension	2007/09
	Progress and evaluation report	2008/09
	Promotion of aquaculture, mobilization of communities and formation of cooperatives	2007/08
	Formation of aquaculture and fish resource centre	2008/09
	Research & development – Action research on development models	2006/07
	Conservation awareness, education and application of regulation	2006/07
Establish a national marketing board and marketing training	2006/07	

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Table 4: Project Activities 2006/07 – 2009/10

Project	Activities / Deliverables	Target (*)
Participatory Development of Provincial Aquaculture Programmes (<i>cont.</i>)	Development of provincial marketing infrastructure for framers	2006/07
	Finalization of national aquaculture act and policies	2007/08
	Biodiversity survey and genetic development	2006/07
Poultry production for nutrition	Farmer identification	2006/07
	Infrastructure development	2007/08
	Pilot project	2007/08
	Contractual agreements	2007/08
	National roll out of production project	2007/08
	Capacity building and poultry management programmes	2007/08
	Improving market access	2008/09
Project monitoring and evaluation	2009/10	

(*) Target reflects the period within which specific project activities are planned for implementation.

VII. INDICATIVE COSTS

VII.1. South Africa has the capacity to fund agricultural development projects given its economic position. The country has no international financial obligations with the donor and development community. With, a favourable track record and reputation, South Africa has become a preferred candidate for development agencies and NGOs. All stakeholders are anticipated to contribute towards the financing of sub-projects. While the bulk of project funds will be provided for by government through its Public Sector Investment Programme, it is assumed that there will be at least US\$2.55 million inflow of the funds through NGOs and the donor agencies. The material contribution by beneficiaries has been quantified at US\$1.70 million which represents 5 percent of the total project financing requirements. The contribution of the private sector and financial institutions is estimated to be US\$3.40 million each.

VII.2. In developing the cost components for the projects, the following assumptions have been made:

- Government will finance 75 percent of the project costs;
- Financing institutions and the private sector would finance 10 percent each of the project financing costs, while beneficiaries through varied material contribution would meet 5 percent of the financing;
- Exchange rate 1US\$: ZAR7.5;
- CPI – 7 percent.

VII.3. Table 5 in next page provides a summary of the projects cost components over their implementation time frames. It is projected that US\$33.98 million will be required for implementation of the different project activities.

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Component	Local (US\$)	Foreign (US\$)	Total (US\$)	% Foreign Exchange	% Total Base Costs
Animal health and disease control	20,223,096	2,247,010	22,470,107	10	66
Participatory Development of Provincial Aquaculture Programmes	1,587,729	83,565	1,671,294	50	5
Development of rangeland monitoring and improvement programme for livestock production environments (biomes)	1,937,610	341,931	2,279,542	15	7
Development of feedlots and market access for emerging and communal beef cattle farmers	680,225	67,275	747,500	90	2
Commercialisation of goat industry	5,625,000	625,000	6,250,000	10	18
Poultry (layers hatchery) development	556,375	5 625	562,500	1	2
Total	30,610,537	3,370,406	33,980,943	10	100

VII.4. In Table 6 below, more detailed cost breakdown for the sub-projects is provided for a 5-year period. The implementation timeframes for the components vary from project to project.

Component / Activity	Year 1	Year 2	Year 3	Year 4	Year 5
1. Animal Health					
Development Onderstepoort – Veterinary Institute	637,500	462,500	27,750	–	–
Exotic Diseases Division Upgrading	500,000	3,750,000	1,250,000	–	–
National Services & Assets	744,057	–	–	–	–
Human Resources Development	273,750	91,250	91,250	91,250	–
Operating costs	3,067,911	3,067,911	3,067,911	3,067,911	–
Disease Control	867,704	615,502	515,282	280,668	–
Sub Total	6,090,922	7,987,163	4,952,193	3,439,829	0
2. Aquaculture Development					
Infrastructure and institutional development	726,454	363,227	181,613	100,000	–
Business support	37,500	37,500	37,500	37,500	–
Workshops and capacity building	37,500	37,500	37,500	37,500	–
Sub Total	801,454	438,227	256,613	175,000	0
3. Goat Development (*)	625,000	625,000	625,000	625,000	625,000
4. Poultry Production	80,000	93,750	125,000	125,000	125,000
5. Development of feedlots and market access for emerging and communal beef cattle farmers					
Training & mentoring	250,000	150,000	157,500	190,000	–
Development of rangeland monitoring and improvement programme for livestock production environments (biomes)	332,875	515,712	384,314	600,155	446,486
Sub Total	582,875	665,712	541,814	790,155	446,486
Total	8,180,251	9,809,852	6,500,620	5,154,984	1,196,486

(*) Project implementation framework is 5 years, and the full investment outlay is indicated in Table 5.

VIII. PROPOSED SOURCES OF FINANCING

VIII.1. The project will be financed from Treasury through the Department of Agriculture and relevant implementing agencies will in turn receive funds from the DoA. Some of the sub-projects have already received funding allocations in the current budget. This profile has assumed 75 percent government funding of project sub-projects. It is anticipated that participants in some projects may make material contributions that may not be at this point in time be easy to accurately quantify. The estimated contribution is 5 percent of total project cost. The private sector and financial institutions are expected to finance 10 percent of the project financial requirements each. Contribution from donors and NGOs would bring in foreign exchange as projects receive funds for implementation.

IX. PROJECT BENEFITS

IX.1. Benefits from the various sub-projects will accrue to all stakeholders involved and they will by and large benefit the local and regional economies. Benefits will accrue to stakeholders as follows:

- ***Farmers***
 - increased incomes, better nutrition and enhanced standards of living are standards of resulting from increased livestock production and productivity and reduced animal loss as well as product diversification;
 - skills transfer and development through participation will improve knowledge.
- ***Government and country***
 - There will be an expansion of rural economies and more meaningful integration of farmers into the mainstream economy which will result in more economic contribution from the agricultural sector;
 - Livestock and fish exports will earn foreign currency for the economy;
 - Project development will have other trickle down effects that will benefit other sectors, for instance infrastructural development occurs;
 - A healthy national livestock population will be maintained if there is state of the art equipment and technology to deal with livestock threatening diseases;
 - Infrastructure development particularly in rural areas will take place and this will facilitate more economic activity in previously marginalised undeveloped rural areas.
- ***Agricultural Research Council***
 - There will be more preparedness to control and deal with animal diseases thereby minimising risk of losing stock;
 - Reputation of the institute as a regional state of the art institution will be protected and income can be generated from undertaking research and diagnosis.

IX.2. Benefits derived from such developmental projects have a trickle down and multiplier effect which is directly and indirectly beneficial to the entire economy. Through increased demand for goods and services, more jobs are created and incomes earned to sustain livelihoods, as well as improved economic activity and infrastructure development.

X. IMPLEMENTATION ARRANGEMENTS

X.1. From a business development point of view, each component has identified optimal and effective implementation arrangements which involve different stakeholders. Table 7 below outlines the roles and responsibilities of the stakeholders:

Table 7: Implementation Arrangements	
Project Component	Stakeholder and Responsibilities
Animal health and disease control	DoA – Funding
	ARC – Undertaking refurbishments
Livestock development in nodal areas	NDA – policy formulation, monitoring and evaluation, funding
	Provincial DoA – policy implementation, extension services, farmer livestock management programmes, workshops and field days
	Farmers project implementation through farmer groups
	Communal cooperative
	ARC – Disease control
	Universities – Technical support
Commercialisation of goat industry	NDA – policy formulation, monitoring and evaluation
	Provincial DoA – policy implementation, extension services, farmer livestock management programmes, workshops and field days
	Farmers project implementation through farmer groups
	Agri-SETA – training
Small scale aquaculture farming	NDA – policy formulation, monitoring and evaluation
	Provincial DoA – policy implementation, extension services, farmer livestock management programmes, workshops and field days
	Cooperative fisher groups – project implementation
	Universities – technical assistance
	ARC – Research and Development
	Agri-SETA – training

XI. TECHNICAL ASSISTANCE REQUIREMENTS

XI.1. Technical assistance will be expected from FAO, universities and the Agricultural Research Council. Extensive R&D programmes are important and these should be coupled with study tours to and exchange programmes with other countries that have thriving livestock programmes. This will aid skills transfer and accelerate human capital development within the sector.

XI.2. FAO’s technical assistance will be required in undertaking financing plans, costing and feasibility studies in preparation for the implementation of the projects. This process ideally involves a number of stakeholders, project sites visits and consultations. The financial resources required for this exercise have not yet been costed. Institutional capacity building is critical for the project implementation phase, and FAO’s assistance in this regard would benefit farmer groups and support institutions.

XII. POSSIBLE RISKS

XII.1. Main risks identified are as follows:

- All agricultural projects are susceptible to changing climatic conditions. Droughts have adverse effects on grazing lots for livestock, water for aquaculture and, and disease outbreaks become common.
- Livestock theft is rampant in the provinces, and this may curtail development projects.
- Veldt fires are common and these destroy grazing land for livestock
- Implementation of projects can be hampered by delays in funding resulting from delayed resource allocation and different prioritisation of programmes.
- There is a possibility of institutionalisation problems where groups of people are brought together to form cooperatives. This is normally worsened by the problem of illiteracy among participating members.
- Shortage of funds may affect projects at a micro level thereby affecting their performance.
- Cooperatives may fail to honour contractual agreements especially where they are contracted to supply products to specific markets.
- The lack of developed infrastructure and high transport costs tend to escalate transportation costs for farmers.

XIII. ISSUES AND PROPOSED ACTIONS

XIII.1. There are a number of issues that impinge on the LDP. The key ones are analysed below.

XIII.2. **Transformation.** Small-scale farmers are used to subsistence ways of farming. There is the great challenge of transition and adjustment to conduct farming as commercial businesses that contribute meaningfully to agriculture and economic growth and rural development. This can be achieved through mentoring and capacity building programmes.

XIII.3. **Competition.** Farmers experience stiff competition from commercial livestock farmers who are more established and have better access to markets. Emerging farmers can organise themselves into groups to achieve economies of scale and reduce costs especially those related to production, veterinary services, transportation and marketing. Government should also move in to provide the required services and infrastructure.

XIII.4. **Access to information and markets.** There is generally poor access to marketing information and markets for emerging farmers. Most marketing facilities and abattoirs are privately owned and are restricted mostly to commercial farmers. This makes the marketing process costly and unaffordable for emerging farmers as they end up selling livestock at below market prices. More public abattoir and auction facilities need to be put into place to accommodate the new group of farmers.

XIII.5. **Institutional and technical support.** The main challenges being faced by emerging livestock farmers include inadequate extension services, poor research and development. Government needs to

play an active role by deploying officers as well as working with the private sector to undertake R&D to develop appropriate livestock breeds. Veterinary services should be made available to control livestock diseases.

XIII.6. **Capacity Building.** Skills and techniques of livestock breeding and management are poor. Training is essential to ensure better proper planning and quality stock.

XIII.7. **Resources.** Low stock levels as a result of lack of resources do not make business viable. In addition to programmes like MAFISA, other financing facilities for stocking and development of farm infrastructure should be made available to farmers. There is a problem of overgrazing due to overcrowding of animals and poor land management practices. More land needs to be made available so that livestock densities are reduced.

XIII.8. **Policy implementation.** There is a general lack of agricultural policy understanding. Legal issues are often overlooked. This tends to result in poor policy implementation. More awareness and education is critical. The policy on aquaculture is still evolving and there is need for government to finalise and create awareness among farmers.

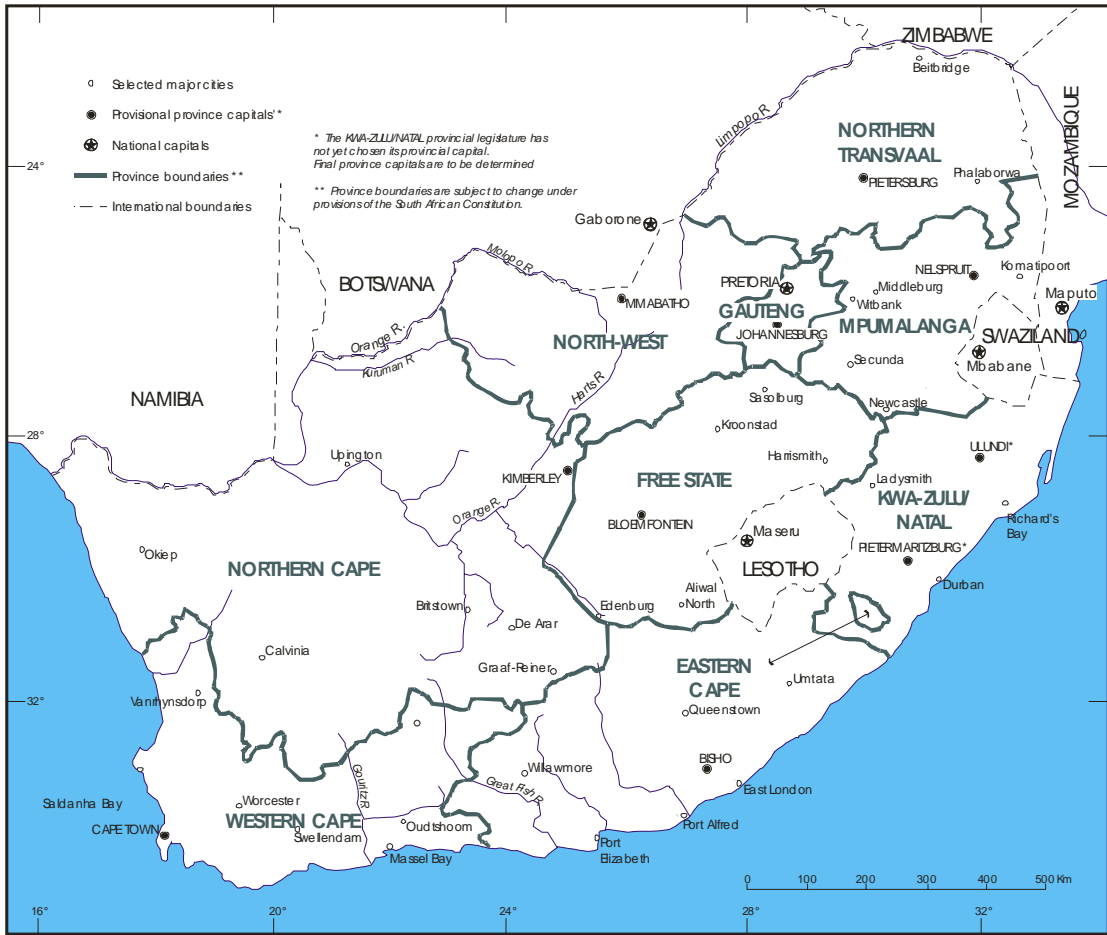
XIII.9. **Participatory approach.** There should a participatory approach towards the development of the livestock sector where all stakeholders and farmer groups should be adequately represented for integrated sectoral development.

ANNEXES

- Annex 1: Administrative Map of South Africa**
- Annex 2: Livestock Population (2000–2005)**
- Annex 3: South Africa’s Provincial Livestock Density (1997–2002)**
- Annex 4: List of References**

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Annex 1: Administrative Map of South Africa



Annex 2: Livestock Population (2000–2005)

Livestock Population (thousand)					
	2001	2002	2003	2004	2005
Cattle	13,507	13,634	13,538,	13,513,	13,763
Sheep	26,100	25,727	25,820	25,359	25,316
Goats	*	*	*	6,370	6,360
Pigs	1,678	1,710	1,663	1,651	1,656
Poultry	*	185,073	*	*	*

Source: Abstract of Agricultural Statistics 2006, Department of Agriculture.
Trends in the Agricultural Sector 2005, Department of Agriculture.
* Data not available

Annex 3: South Africa’s Provincial Livestock Density 1997 – 2002

All livestock, Density total land (LU/km ²)						
Province	2002	2001	2000	1999	1998	1997
Eastern Cape	18.2	18.1	16.3	15.1	18.4	19.5
Free State	14.2	17.1	14.1	11.0	11.6	13.3
Gauteng	18.5	20.8	10.9	10.9	9.9	15.5
KwaZulu-Natal	17.6	20.6	21.8	20.9	21.4	22.1
Mpumalanga	6.0	16.1	12.7	11.2	11.6	12.7
North West	14.0	13.2	19.0	13.2	12.5	11.5
Northern Cape	2.6	2.6	2.5	2.6	2.5	2.5
Northern Province	9.4	8.3	8.7	8.4	8.7	8.6
Western Cape	4.9	4.9	5.0	5.3	4.5	4.5

Annex 4: List of References

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