



Conservation, Partnerships & Ecotourism

## ***Biodiversity Economy Nodes***

*Growing people through partnerships in responsible  
wildlife-based industries*



### **1. INTRODUCTION**

Biodiversity and extensive wildlife systems provide ecosystem services such as water, climate and disease control; nutrient cycling and crop pollination; spiritual and recreational benefits; and wildlife-based tourism including hunting. It is also acknowledged internationally that biodiversity is the cornerstone for sustainable economic development. While it is a constitutional right to have our biodiversity heritage protected, many South Africans are unemployed, poverty-stricken and live in degraded environments. It is government's responsibility to improve the well-being of our people. In the process, competition for land is increasing and the pressure on the remaining natural areas is higher than ever before.

Research done by the South African National Biodiversity Institute has shown that at the current rate of land-use change, three of our provinces would probably have none or very limited extensive wildlife areas left outside of protected areas by 2050. For KwaZulu Natal, indications are that it may be in less than 20 years. This situation places a huge responsibility on all of us to identify risks that can worsen this trend and to find effective solutions very soon to reduce the need for complex trade-offs between economic, social and environmental objectives.

As the biggest and oldest role-player in the wildlife industry with more than 39 000 members, the South African Hunters and Game Conservation Association (SAHGCA) understands the importance of biodiversity conservation and the role that a responsible wildlife industry should play in addressing the challenges mentioned above, especially in rural areas in dry-land ecosystems. With both conservation and responsible wildlife use as objectives, SAHGCA partnered with Ezemvelo KZN Wildlife to develop an innovative strategy to address these challenges. The strategy entails the establishment of Biodiversity Economy Nodes (BEN) that serve as strategic vehicles to achieve economic, social and environmental objectives through an integrated land-use planning process.

### **2. BIODIVERSITY ECONOMY NODES**

BENs utilise the economic development potential of our wildlife and cultural heritage to create vibrant wildlife-based economic development nodes in rural dry-land ecosystem where other land-uses may not be viable. These nodes link core conservation areas to other wildlife areas that are managed by the private sector and communities (often successful land claimants). By pooling the resources of the various partners, extensive wildlife areas are established

that provide rich cultural and wildlife variety that offer viable, long lasting economic opportunities for communities to benefit from economies of scale.

Viable business opportunities and sustainable jobs are generated throughout the entire value chain of the wildlife-based industries, as well as other supporting service industries such as transport and meat processing. Clustering foster economies of scale that enable businesses to compete at local and international level and address some of the complex challenges in growing rural economies. Sharing of risks and benefits among landowners stabilises the system and reduce the risk of land transformation within wildlife areas. Harnessing the economic development potential enables conservation and extensive game farming and its associated industries to compete as a viable land-use option while addressing socio economic development challenges. It reduces the direct pressures on our wildlife by creating an inclusive, wildlife-based economy with sustainable jobs, diminishing poverty and inequality, and simultaneously protecting landscapes, productive ecosystems and associated products and services to society. It also improves business models for extensive wildlife areas ensuring their continuing contribution in delivering critical ecosystem products and services.

This model further allows Government to strategically focus support programmes in these nodes as they are effective vehicles for service delivery to the broader community and to achieve national conservation and development targets. A further benefit is that the BENs retain and enhance the existing value of restituted land and enables rapid and sustainable transformation of the wildlife sector. Through engagement with government at a strategic planning level, the concept of BENs has now been included in the National Biodiversity Economy Strategy and the National Biodiversity Strategy, which lists the uMfolozi BEN, which is a strategic initiative of SAHGCA, as a flagship project.

### **3. THE UMFOLOZI BIODIVERSITY ECONOMY NODE**

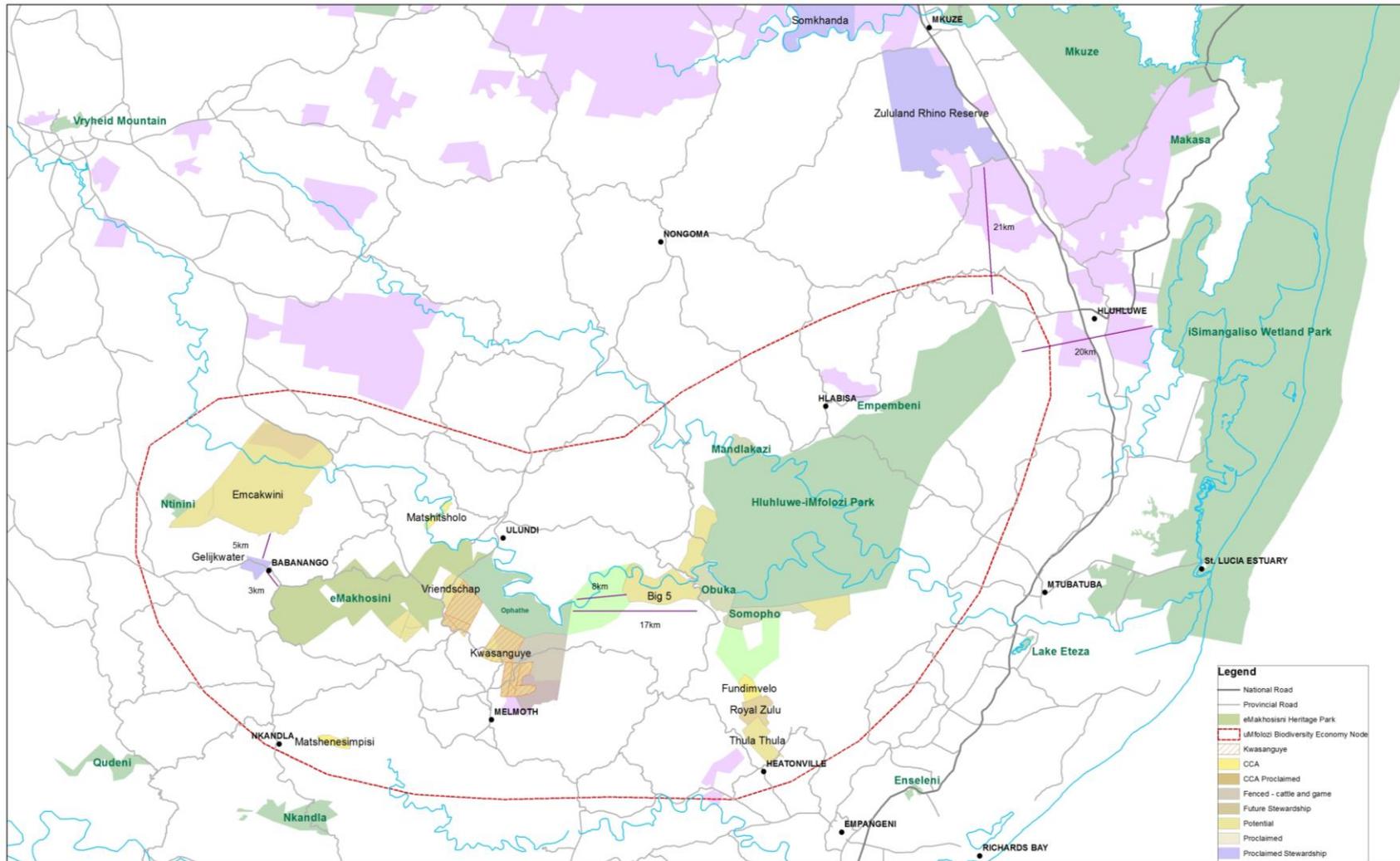
SAHGCA and Ezemvelo KZN Wildlife initiated a process to develop the uMfolozi BEN in 2014. It consists of the Hluhluwe-iMfolozi Park (HiP) and eMhakosini-Ophathe Heritage Park as the core conservation areas. These are linked with private protected areas, stewardships sites, private game farms and communal land situated in a horseshoe around the southern reaches of Ulundi in KwaZulu Natal. The area has the potential to create a conservation area in excess of 150 000ha. There are also several game reserves, stewardship sites and community reserves in the surrounding area such as Ntinini, Emcakwini, Babanango to the West and Fundimvelo, the Royal Zulu Game Reserve and Thula Thula to the South that can be linked to the core area. Conservation, wildlife-based tourism (photographic and hunting tourism) and Nguni cattle farming are the dominant land-uses that form the foundation of the wildlife economy in an area with otherwise limited options for sustainable growth and a strong rural economy.

The Greater uMfolozi BEN will include the big five, various other threatened species and the rich cultural heritage of the Zulu Kingdom that would attract both tourists and investors. The clustered development approach will ensure the critical mass needed for viable operations and sustainable business opportunities.

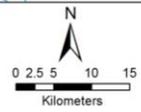
Luxury tourism and hunting lodges will be established and provide opportunities throughout the entire value-chain. The Ulundi Airport as a gateway to the region, is likely to expand and accommodate more flights as a result. Similarly, the Owen Sithole Agricultural College in the area has the potential to expand its curriculum to include training in, for example, wildlife management; meat-processing; hunting; tourism; hospitality; marketing and sales. It could become a centre of excellence in both agricultural and wildlife industries to provide the intellectual capital required for a growing economy.

#### **3.1 Key livelihood and income streams strategies identified for the uMfolozi BEN**

- ✓ Income and job opportunities from tourism operations, lodges, land concessions and hunting operations, as well as downstream ancillary businesses and entrepreneurial development opportunities.
- ✓ Job opportunities emanating from reclaimed areas that have been incorporated into parks and from the establishment of game farms and grazing areas, including clearing of invasive alien plants and restoring the ecology in the area.
- ✓ Renovation and reactivation of water abstraction infrastructure including boreholes, windmill pumps and dams. Access to sufficient water resources is a critical challenge facing agricultural production in the area.



- Legend**
- National Road
  - Provincial Road
  - eMakhosini Heritage Park
  - ⬭ uMfolozi Biodiversity Economy Node
  - Kwasanguye
  - CCA
  - CCA Proclaimed
  - Fenced - cattle and game
  - Future Stewardship
  - Potential
  - Proclaimed
  - Proclaimed Stewardship
  - EKZNW Protected Areas
  - HHP - Ophathe Link
  - Game Ranches



**uMfolozi Biodiversity Economy Node**



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- ✓ Income, jobs and food security from reactivating or developing new commercially viable agricultural practices in areas adjacent to the core natural areas, with improved production in communal gardens and cattle herds. Shops are a far away from communities resulting in a viable local market for vegetable production. A fresh food market can supply visitors to parks and game reserves and those working on the mining settlements in the area. Local schools are also viable markets for locally produced vegetables.

### 3.2 Positive outcomes to date within the uMfolozi BEN

- ✓ Through private sector support, communities adjacent to HiP have established a joint venture called the iMfolozi Big Five Trust to connect portions of tribal land to the protected area to develop wildlife industries that contribute to conservation. Three portions of land were proclaimed in 2014 as protected areas and will be incorporated into HiP to expand it by 6000ha. A joint-management agreement is being finalised.
- ✓ Following a successful partnership between the KwaSanguye Community and neighbouring Vriendschap Boerdery in forestry, sugar cane, cattle and game-farming, SAHGCA requested Ezemvelo KZN Wildlife to drop fences between Ophathe Nature Reserve (8500ha), game farmers and the community (3000ha). Phase two will include the eMakhosini area (10000ha) and private land (4000ha) that will result in an expanded area of approximately 30500 ha. Approval, in principle, has been granted for the development of an agreement where the KwaSanguye Community with their private sector partners, and with support from SAHGCA, may manage parts of the eMakhosini-Ophathe Heritage Park, including Ophathe Nature Reserve. This will be a first for South Africa where a rural community and their partners will potentially manage a government protected area. It is expected that the management of this reserve will improve substantially as it has been shown that the private sector is more effective in managing financial resources to achieve management objectives. At the recent Biodiversity Economy Indaba it was announced that Ezemvelo KZN Wildlife would donate four rhinoceroses to KwaSanguye in acknowledgement of the community's role in conservation and sustainable use of the country's biodiversity.
- ✓ Ezemvelo KZN Wildlife has recently bought two farms, 1750ha in total, as part of a process to ensure critical linkages between some of the anchor projects within the uMfolozi BEN.
- ✓ A process has been initiated to link Thula Thula private game reserve (TTGR) (4280ha), Fundimvelo Reserve (1080ha), Lavoni (1500ha) and the Royal Zulu Reserve (potential 9000ha community-owned land) through corridors with HiP. Discussions have been initiated with district municipalities and local Amakhosi to incorporate some of their land as part of these corridors into their land use plans to establish community conservation areas. The owner enlisted the support of some of the surrounding Amakhosi and plans are well underway to complete the link. Another 3500ha has been pledged recently for inclusion in this node within the next 18 months.
- ✓ Communities and farmers are now contributing to the expansion of protected areas, Black and White Rhino habitat, protection of a pack of critically endangered Wild Dogs and threatened plant species. During the past two years, the Wild Dogs raised their puppies on KwaSanguye land. The community protected the pack in spite of incurring significant livestock losses, because of their improved understanding of the potential economic benefit of the wildlife in the area. This demonstrates the potential of BENs in addressing some of challenges associated with human-wildlife conflict in communal areas adjacent to protected areas.
- ✓ Private sector investments exceeding R130 million have been secured to develop wildlife-based industries, including luxury tourism lodges and hunting operations on the above-mentioned communal land.
- ✓ Following growing interest from other communities and landowners to become part of the uMfolozi BEN, SAHGCA has been assessing financial models to develop further tourism and hunting operations; a meat processing plant; a tannery and a taxidermy in this area to assist with transformation of the wildlife industry and to reduce poverty.
- ✓ Lessons learnt from the successful partnerships between communities on restituted land and commercial farmers are used to foster further productive partnerships and establish new and improved business operations in agriculture and wildlife that will enhance profitability and benefit all.

- ✓ SAHGCA has signed memoranda of understanding with communities, game farmers, developers and government to continue promoting the uMfolozi BEN and to establish productive partnerships; inclusive and viable wildlife-industries; conservation projects; development of a green certification system for responsible wildlife management and utilisation; an auditing systems to assess conservation performance in a multidimensional land use framework; and promoting hunting opportunities to SAHGCA's members.
- ✓ Synergy and collaborative funding and development applications and programmes empower rural communities to participate in the wildlife industry and increase agricultural productivity in areas adjacent to the core wildlife areas towards improving food security.

Table 1: Investments and job opportunities of core development initiatives in the initial development phase

| PROJECT SITE                  | PRIVATE SECTOR INVESTMENT                | DESCRIPTION OF INVESTMENT / LEVERAGING OF DEVELOPMENT POTENTIAL  | JOB /SMME OPPORTUNITIES CREATED          |
|-------------------------------|--|--|--|
| Thula Thula                   | R20 m                                    | Expansion of TTGR to include an additional 3000 – 6000 ha for conservation. Rhino rehabilitation centre established and local community employed in reserve and centre.                    | 70 permanent jobs                        |
| Umfolozi Big 5                | R105 m                                   | Zulu Tented Lodge; Biyela 5 Star Lodge; Mthemba 4 Star Lodge including road infrastructure; water reticulation for lodges from boreholes; sewerage and electrical supply from solar panels | 350 temporary jobs<br>237 permanent jobs |
| Opathe/Emakhosini /KwaSanguye | R10 m with annual re-investment of R 2 m | Improving cattle, game farming and sugar farming operations and infrastructure.  | 100 temp jobs<br>60 permanent jobs       |

### 3.3 Natural Resource Management Programme

Through experience gained in working with communities, SAHGCA understands that initiatives such as the uMfolozi BEN require significant social investment. It might take a couple of years before sustainable income streams will impact significantly on households within the uMfolozi BEN. This is especially true for uMfolozi BEN where the socio-economic development initiatives are primarily driven by private sector and communities, with little support from government to date, even for communities that obtained land through the land restitution process. A significant number of households in this rural area are headed by females that are usually more disadvantaged in terms of resources and education according to research. The unemployment rate is 49.4% with limited opportunities for other viable socio-economic activities.

The National Resource Management Programme of the Department of Environmental Affairs can play a major role during the initial development phase of this BEN to create incentives for communities that made land available for conservation. It also supports a biodiversity economy while addressing challenges of water security, threats to biological diversity, the ecological functioning of natural systems, exacerbation of wild fires, flooding, soil erosion, siltation, and challenges that would impact on the envisaged tourism development initiatives for the area. Therefore, SAHGCA as facilitator of the development of the uMfolozi BEN, submitted a proposal on behalf of communities for clearing alien invasive plants in the uMfolozi BEN. It is of critical importance in the initial phases of development that reclaimed areas are incorporated into parks, established as game farms and used to expand grazing areas. It does not only prepare the area for development, but also demonstrates to communities that their commitment to making land available for inclusion in the BEN, delivers benefits while hunting and tourism operations are being developed.

Because all the identified community projects are located in underdeveloped rural areas, very little work has been done to date to describe and classify the resource base. Preliminary assessments revealed that significant interventions are required to improve the integrity of the resource base, especially given that parts thereof will be included in formal protected areas. Should this proposal be successful, capacity within these communities to manage these projects is limited. Therefore, private sector partners would have to oversee the projects and provide in-kind

support through office and administrative infrastructure. This process will provide mentorship and develop the capacity of community members to manage these and similar projects as small contractors in the future.

Such activities will give effect to the objectives of the BEN i.e. to develop wildlife-based industries and business opportunities within rural communities. The intention is to use this national resource management (NRM) application to develop opportunities for entrepreneurs to become contractors to clear invasive alien plants. It could continue beyond the life of the project because the BEN creates economies of scale that would ensure sustainable employment to community members that will become contractors providing a service throughout the BEN, as opposed to casual labour. Therefore, the projects funded through the NRM programme are seen as part of the business incubator process for the BEN. Although the initial focus is on clearing alien plants, it can be expanded to working on fire and other similar programmes.

SAHGCA believes in generating synergy through partnerships and has signed partnership agreements with various organizations that will contribute to the delivery of outcomes of this initiative. SAHGCA and its partners have in-depth knowledge and experience in conservation, land management, administration, community and economic development that are required to turn this initiative into a success story. Given the depth of understanding of the South African conservation and socio-economic landscape, the benefits of the Department of Environmental Affairs' Natural Resource Management Programme can be harnessed to improve the integrity of the resource base that will contribute to well-functioning ecosystems and improve the provision of basic ecosystem services and livelihoods such as food, forage, fuel, building materials and water. Expert input and leadership will also produce more tangible economic benefits in-line with the national development targets in dry-land ecosystems in KwaZulu-Natal where people are greatly affected by environmental vulnerability and poverty.

Specific projects have been selected for intervention because they are key anchor projects that will unlock the economic potential of the biodiversity economy around Ulundi, and also because of their positive impact on changing the well-being of vulnerable households. The majority of unemployed persons rely on the resource base for livelihoods. The region falls within the highest priority areas for clearing of alien plant infestations, yet it is also an area that can contribute significantly to provincial and national conservation targets because it falls within the protected expansion priority areas of Ezemvelo KZN Wildlife. Clearing of invasive alien plants in these areas will further contribute to reduce the negative impacts of veld and forest fires on human livelihoods, biodiversity, ecological processes and ecosystem services in these vulnerable communities. At the same time, it will contribute to improved water quality in the area and more specific in the uMfolozi River that runs through the area.

A tender of R57 m has been submitted by SAHGCA on behalf of these communities to provide jobs during the initial phases of the development of the biodiversity economy, while improving the integrity for future tourism and wildlife-based investments.

### **3.4 Hunting as Economic Driver**

There is sufficient scientific proof that it is beneficial to conservation if both the public and private sector benefit from wildlife, including through responsible hunting. We must ensure that adding value to wildlife supports the stewardship role that landowners play in conservation. Therefore, it is critical that wildlife, game farming and hunting should be managed in a manner that promotes social, economic and environmental responsibility. SAHGCA is committed to assist landowners and communities within the uMfolozi BEN to develop responsible wildlife industries with an emphasis on the hunting industry.

The Millennium Ecosystem Assessment demonstrated that functional ecosystems are critical for human well-being and sustainable economic growth. There is growing pressure on natural areas and well-functioning ecosystems to provide not only basic ecosystem services and livelihoods such as food, forage, fuel, building materials and water, but also to produce more tangible economic benefits. The contribution of South Africa's biodiversity in terms of ecological goods and services, such as clean air, water, food and materials, is valued at R73 billion, which is equivalent to about 3% of the national Gross Domestic Product (GDP). SAHGCA believes that the wildlife industry and responsible hunting in particular, can achieve triple bottom line profits, especially in dry-land ecosystems where people are greatly affected by environmental vulnerability and poverty.

Over the years, hunters all over the world have played a major role in conservation of biodiversity and conserved millions of acres of wildlife habitats to ensure the sustainability of hunting stocks and to preserve the beauty of our natural heritage. A peer-reviewed study on trophy hunting in 23 countries in Africa indicated that the largest industries occurred in southern Africa and Tanzania and were growing. However, the hunting industry has remained static or is shrinking in central and west Africa. A minimum of 1,394,000 km<sup>2</sup> is used for trophy hunting in sub-Saharan Africa, which exceeds the area covered by national parks. Hunting is of major importance to conservation in Africa because it creates economic incentives for conservation over vast areas, including areas which might be unsuitable for alternative wildlife-based land-use, especially in dry-land ecosystems. The financial reward for wildlife management in dry-land ecosystems is approximately three to four times higher than for domestic stock (R220/ha vs. R80/ha for stock farming). Three times more staff is also employed and trophy hunting in particular generates foreign income that is critical for the trade deficit.

In South Africa, 17% of the country's surface consists of extensive wildlife areas under management of the private sector that plays a huge role in providing ecological goods and services. It is approximately three times more than the area under formal protection by government, confirming the important contribution that the private sector and the wildlife industry make to conservation. These game farms are home to approximately 18.5 million head of game, four times the number present in state protected areas. The value of wildlife and hunting activities exceeds the biggest percentage generator of income for the sector. Therefore, it makes sense to incentivise the private sector as encouragement to continue protecting their contribution to the country's natural capital and economy.

Nationally, the wildlife industry generated R9.1 billion for the economy in 2013. International trophy hunters spent R1.1 billion on 7 638 hunts in the same period. Of the 70% (R7.4 billion) generated by hunting alone, the estimated 200 000 local hunters contributed the lion's share of R6.3 billion. On average, a local hunter spent R31 000 per hunting season, of which 50% is spent on game and the rest on other expenses. The most popular provinces to hunt in are Limpopo (50%), the Northern Cape (48%) and the Eastern Cape (38%). Although the gross regional domestic product (GDP) per capita in these three provinces is some of the lowest in the country, hunting provides opportunities throughout the entire value chain for communities to generate income. ABSA's Agricultural Outlook Report indicated that the world demand for venison was 100 000 tons, with current supply only at 40 000 tons and a projected growth potential of 20% for local markets and 8% in the export market between 2013 and 2020. Game biltong generates approximately R237 million a year.

The argument for game meat as an alternative protein source lies in the fact that it is seen to be healthy and organic, while contributing to sustainability of extensive wildlife systems in some of the poorest and agriculturally marginal land in South Africa. It also complements hunting and eco-tourism and generates ancillary industries such as abattoirs and tanneries. A study published in 2013 further showed that hunting could contribute to food security in poor, rural communities where edible by-products from hunting are sold. The results revealed that edible by-products to poor consumers appear to be culturally acceptable, affordable, accessible and safe. Although very few studies have been done in this field, it is common knowledge that the sales of game meat to the informal sector would increase traceability and safety of game meat products and concomitantly minimize the risk of poaching. The study suggested that methods should be developed to enable feasible distribution of edible by-products to vulnerable rural communities.

Together with our partner, SAHGCA is developing business models for various hunting related income streams that will be used to guide development of viable business opportunities within the uMfolozi BEN. Attention is given to opportunities throughout the value chain of hunting such as hunting operations, meat processing plants, tanneries, taxidermy and other ancillary businesses.

### **3.5 Agricultural Support Programme**

Interventions that provide positive opportunities to contribute to South Africa's food security, especially to the rural poor, must receive attention given the challenges facing this country in relation to protecting food security. Much has been discussed about how to reconcile land reform with agricultural production. Since 1994, a significant amount of land has been transferred to black communities. One of the criticisms of this process has been the fact that support for new black landowners has not kept pace with the transfer of ownership. Stakeholders at all layers of government and from the agricultural sector have been debating these issues. The Department of Rural Development and Land Reform is

working closely with the Department of Agriculture, Forestry and Fisheries to find ways of ensuring that South Africa does not face a food supply crisis in the future as a result of insufficient commercial agricultural producers. One of the solutions is to forge mutually beneficial relationships between agricultural and rural development stakeholders. Another solution is the active promotion of small-scale but multiple homestead agriculture. The uMfolozi BEN Agricultural Support Programme seeks to address both of these approaches to rural development and sustainable agricultural production.

The geophysical context of the uMfolozi Agricultural Support Programme is a further factor in understanding the credibility of this initiative. This part of KwaZulu-Natal is remote and underdeveloped, it lacks infrastructure, has poor access to markets with very little consistent institutional support. These factors have rendered these communities economically vulnerable. Many of these communities depend largely on the natural resource base for livelihoods and are extremely vulnerable to climatic conditions such as droughts. The lack of water infrastructure has hurt pastoralists and growers fundamentally. Livestock herds have diminished, and previously productive agricultural lands are lying fallow.

This programme seeks to address some of these issues by revitalizing water management systems, re-establishing communal gardens and improving livestock herds. Combining this initiative with the other wildlife-based interventions within the uMfolozi BEN, addresses the issue of sustainability. This proposal is seen as a way to kick-start small-scale agricultural production. An initial agricultural, infrastructural and hydrological assessment of some of the sites has revealed a typical picture of underdevelopment, poverty and deprivation. The development of ecotourism and agricultural activities is the most logical solution to secure the future of these communities. This area is particularly desperate because of its remote location and the effects of droughts in the past decade, especially during the past three seasons.