



# SECTORIAL OPPORTUNITIES

Enterprise Development Research

## Executive Summary

This report by the Planning, Monitoring and Evaluation Department aims to give guidance with regards to the selection of possible opportune sectors for enterprise development in the Kingdom of Lesotho.

It was through extensive research in such documentations as the LMDA SIE Concept Note, Publications and Consultations that we were able to present these preliminary findings.

Enterprise Development Opportunities shall be presented in bullet format.

# AGRICULTURAL SECTOR

## Trout Farming

**The Largest Trout Farm in Africa** is a Highlands Aquaculture Initiative that is destined to become the largest trout farm on the African continent. Most of Southern Africa is unsuitable for trout production, which needs clean, cold, well-aerated water. The Katse lake area is ideally suited to trout farming, and produces high quality trout all year round. Future phases at sites on Mohale, Muela and the proposed Polihali in the Mokhotlong district will expand this production.

There are currently **two Trout farmers** in Lesotho who export approximately 800 tonnes per annum to South Africa and Asia, mostly. However there is potential to scale up trout production to more than 6000 tonnes per annum given the capacity of the current dams, and the demand in Southern Africa and Asia.

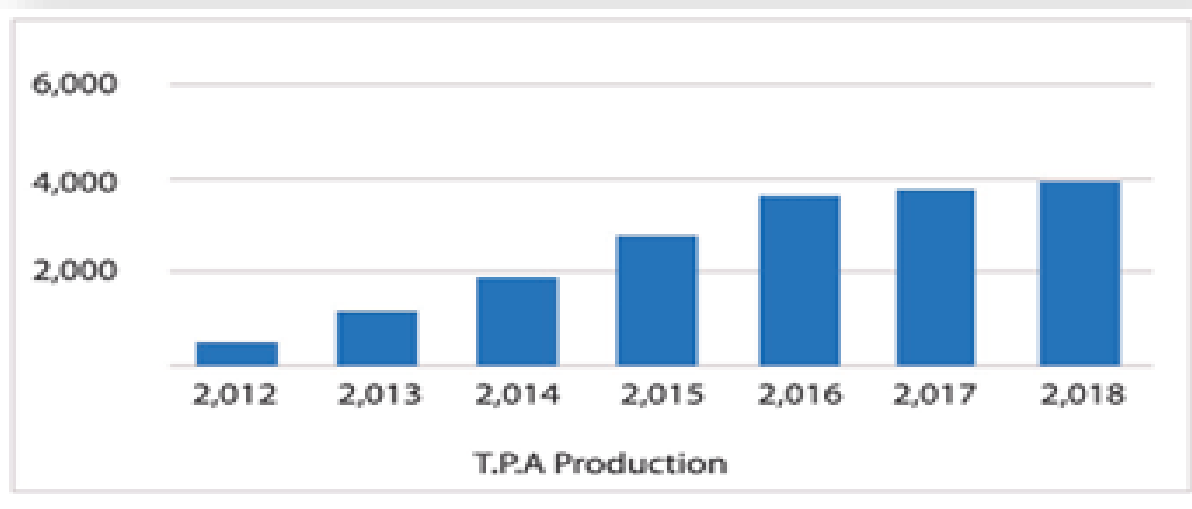
### Farmers:

#### a) Highlands Trout

Highlands Trout is located at Katse Dam ( $\pm 2000\text{m}$ ) and offers an environment uniquely suited to the scale of the production of Large Trout in Africa. Their first harvest of Rainbow Trout (*Oncorhynchus mykiss*) was in 2012 with a production of 500 T.P.A of which they aim for 1,250 T.P.A in late 2014 Highlands Trout has the capacity to produce about 4,000 metric tons or \$20 million (M 243.6 million) of fish a year. Japan takes 80% of its produce, 15% goes to South Africa while the remaining 5% is sold locally.



## Highlands Trout Production Projections



### b) Royale Highlands Trout

The Royal Highlands Trout farm is situated at Ha Lejone, a rural community in the Lesotho Highlands. Trout eggs are hatched in the clear streams of the **FRANSCHHOEK** Mountains, then raised in the **LESOTHO** Highlands, in the pure, cold, free-flowing waters of the Katse Lake. The trout farm currently produces 200 tons of trout per year.

Royal Highlands Trout is distributed to Three Streams Smokehouse supplies food service outlets in Southern Africa.



### c) Alternative Trout Farming Hotspots

Identified hotspots for Trout Farming include:

#### ➤ The Famous Katse Trout

Ha Lejone is located on the road to the Katse Dam, where the trout farm on the far end of the dam project produces the finest trout in Africa. The trout farm is a private/ public sector partnership, providing jobs for the Basotho people who live in Ha Lejone. The trout farm currently produces 200 tons of trout per year which are fed on a diet specifically formulated to keep them healthy and to prevent any harm to an environmentally sensitive area. Most of the trout is for export and is sold in South Africa. Plans are on track to double the size of production.



➤ **Botha - Bothe**

The Malibamats' o, 2km below Oxbow Lodge.



➤ **Mokhotlong**

Khubelu River, upstream from the point where the road crosses Khubelu at Tlokoeng Village and a few kilometres downstream from Metebong ea Lelingoane (on Khubelu), are reportedly especially good.

Mokhotlong River upstream from Moteanong.





➤ Qacha's Nek

Sehlabathebe Park Area Tsoelikane River downstream from the fall outside the park.

- Park Ponds -available for fishing for guests
- Leqooa River - the river is reportedly good from its confluence upstream



➤ Maseru

Makhaleng River Downstream, 2km below Molimo Nthuse Hotel. They are stocked a few times, it is the nearest fishing area, 2 hours' drive from Maseru.

- Senqunyane River - Around Marakabedi Lodge and upstream from the Lodge.



➤ **Thaba - Tseka:**

The Thaba - Tseka main dam has been stocked with trout for recreation, it has an average mass of 270g. There is another small dam below the Basotho pony which has been for trout recreational purposes. Additional permits required.

**Note:** During the rainy season most rivers are clouded with silt and fishing is badly affected.

## Trout Farming in South Africa and Market Opportunities for Lesotho:

According to Trout Farming in South Africa: Expanding Local Markets Work with Ecotourism; trout is currently the most commonly grown freshwater fish species in the region, the Trout farming sector maintains stability and competitiveness, particularly with value-added products. Total production is marketed almost exclusively in South Africa, with markets mainly in urban areas. In 2008 South Africa produced approximately 1,800 mt of trout, with a farm gate value of 63 million rand (R), about U.S. \$8.7 million, and a unit value of R 35/kg (U.S. \$4.82/kg). Current global trout prices are over \$5 (£3) a kilogram (BBC: 2014). The Western Cape and Lesotho focus mainly on the production of trout larger than 1 kg in size, with the other provinces producing mainly plate-size trout.

### *Value Chains and Market*

**Service providers** such as *feed suppliers, hatchery services, equipment suppliers, veterinary services* and *processors* are well represented in **Mpumalanga** and the **Western Cape**. The fish eggs are imported from the U.S. and Denmark while importing feed from France.

Trout are sold in a variety of forms, including whole gilled and gutted fish, smoked fish and fillets, as well as live fish for supplying the sport fishery sector. Approximately 60 to 70% is sold in the foodservice sector, and 30 to 40% goes to the retail sector, with markets mainly in the hospitality and retail industries in the larger urban areas, especially Gauteng, Cape Town and Durban. Direct sales to local markets also play an important role in terms of marketing.

The local demand for trout is greater than the local supply, so production is market driven at this stage. The local market was approximately 2,000 mt/year in 2008 with a predicted 2 to 3% annual future growth rate.

### *Challenges*

The main challenges that restrict growth in the local trout sector are **seasonally limited freshwater resources** and **unfavourable environmental conditions**. **Constrained supplies of fingerlings and feed**, and **high feed and transportation costs with limited access to financing** also **slow industry growth**. In addition, biodiversity legislation restricts movement and farming areas.



**High summer temperatures** exacerbated by global warming that have negative effects on trout production. **Poor water quality and water temperatures of 25° C** are responsible for disease outbreaks and high mortalities, particularly in the late summer months of February and March.

Better control over environmental conditions, such as with recirculation systems, is required, particularly with regard to trout hatcheries. The costs of recirculation technology are often thought prohibitively expensive, and a lack of development funding further jeopardizes access to these technologies. New biodiversity zoning regulations will also restrict the development of the trout industry in South Africa.

### *Future*

As long as Trout challenges are addressed, trout farming in South Africa faces a positive future because of the **stable prices** and growth in the **local market demand**. It will always be a high risk sector, but with ideal site location, good operational management and feed-conversion ratios of less than 1:1.5, it is a tempting investment to consider.

### **Trout Farming in Lesotho and Market Opportunities for Lesotho:**

Consultations with the two big trout farmers in Lesotho (Katse Fish Farms and Highlands Trout) reveal a very troubled sector. This is primarily based on the high capital costs of running a trout farm and also making sure the Lesotho Highlands Water Projects Water is not contaminated by the fish waste and diseases that may affect the Trout species. The high operational costs include the cost of boats, refrigerators, nets, trucks only to name a few, other costs include logistical costs where high quality eggs are imported from Norway and Denmark, and the shipping costs to places such as Japan. Other costs are the costs of labour where professionals have to source from South Africa as no locally based experts exist, the costs of capacitating local employees who have no previous employment history.

Highlands Trout has failed to meet its projected sales of 1250 tonnes by late 2014 as it currently produces 600 Tonnes. Royale Highlands Trout has also failed to grow substantially as it currently produces 300 tonnes. This is because the industry is currently incurring major losses since inception and needs approximately + 100 million Investment in order to break even, when such an investment is put forward it would take a year to two, to gradually move from around the 1000 tonnes production to around + 2500 collectively, assuming both farms increment production accordingly.

The trout farming experts at Highlands Trout stipulate that at around 8000 production tonnes the business will be able to support small linkage businesses, this is primarily in a drive towards specialisation where trout processing and packaging may be independent of farming and independent of maintenance, marketing, and waste management. Speciality areas such as food procurement businesses can also be established.

Besides the 8000 tonne mark, they did highlight current opportunities for business development being in the sales of fish heads: which are currently waste in their production. They highlighted opportunities in fertilizer sales where they are currently in consultation with the Ministry of Agriculture to pilot a project where the liquid fertilizer they produce from fish waste can be tested for commercial consumption. Opportunities in trout sales also exist where individuals can order in larger quantities and sell trout in individual quantities. This is currently occurring at a local shop named lucky 7 in Katse, where the owner buys 5 boxes of fish from highlands trout and sells them off the shelf in Katse - Thaba Tseka and Maseru.

## **Conclusion**

Based on the high costs of operation, demand for consistent research into the Trout farming dynamics and funding needs. It is clear that business opportunities exist in the Trout Farming industry, but currently at a minimum level for small businesses.

Interventions though challenging for small enterprise linkages, could be in the facilitation of a fish market/ flea markets either at Ha Lejone/Katse/Maseru. This will introduce the culture of fish consumption and also raise interest in the industry as a whole. It will standardise the fish prices in the region and also give the small scale farmers a platform to grow in the business.

Opportune areas such as fish head sales and liquid fertilizer sales can also be assessed.