TRANSFORMATION IN THE AQUACULTURE INDUSTRY: TWO CASE STUDIES INVESTIGATING EMPOWERMENT AND ENTERPISE DEVELOPMENT

BY:

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We hope that the insight provided by the case studies will go far in supporting decision-making in the interests of the development of the aquaculture sector in South African.

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1. Introduction

The transformation of the South African economy is seen as a policy and business imperative within government and industry to redress the racial inequalities of the past where black people were excluded from access to ownership, capital and the means of production in the economy. Current legislation in the form of the Employment Equity Act (Act 55 of 1998) and the Broad-Based Black Economic Empowerment Act (Act 53 of 2003) provide the regulatory framework for enabling industry to address the needs of transformation and ensure the meaningful participation of black people in the economy.

Transformation has already begun in several sectors. The financial services sector as well as the mining and tourism sectors has put transformation charters in place. The agriculture sector is in the process of formulating an AgriBEE Charter in preparation for implementing industry-wide transformation initiatives. Industry players themselves have already begun community-based programmes in rural areas to promote transformation.

The Masiza Mussel Farming project and the Hands-on Small-scale Trout farming project (hereafter referred to as "Hands-On") offers important insights as models for economic transformation.

2. Objective of Study

The objective of the surveys was threefold. *Firstly*, to document the success stories within both the freshwater aquaculture sub-sector and the marine aquaculture sub-sector. *Secondly*, to document the model on which these two successful enterprises operate and *thirdly*, to investigate the value chain to underpin the difficulties experienced by these two enterprises to possibly pinpoint further SMME opportunities.

3 Masiza Mussel Farm, Saldanha Bay

Masiza Mussel Farm was established as a mussel farming project under the initiative of Blue Bay Aquafarm, a small-scale commercial producer of mussels and oysters in Saldanha Bay in the Western Cape. The motivation for this transformation programme was commercial. Blue Bay Aquafarm purchased its current operations from Sea Harvest's Saldanha farm in the year 2000 and, as a condition of the sale, Blue Bay Aquafarm committed to start a black economic empowerment project.

Sea Harvest's insistence that Blue Bay Aquafarm promote transformation in the local economy came at a time when an empowerment initiative in the area was failing. Saldanha Mussel Growers, a propriety limited company owned by black entrepreneurs, took on the challenge of farming mussels in the area. However, after a few years in operation this business closed down due to internal dynamics among the owners, a lack of capital, and no business support mechanisms.

3.1 The pilot project – the Masiza Farming Project

The Masiza Farming Project was conceived in 2003. It was set up as a partnership between three former employees of Blue Bay Aquafarm, Blue Bay Aquafarm and the Department of Trade and Industry's (DTI) empowerment programme, the Community Public Private Partnership Programme (CPPP).[1] The DTI representatove who was driving

[1] The aim of CPPP is to promote economic activity in rural areas by supporting black-owned small business development. A key mechanism for meeting this goal was the establishing of public-private partnerships that promote the sustainable use of natural resources.

the CPPP at the time, consulted with Blue Bay Aquafarm's management and employees and proposed the business model which was adopted for the Masiza Farming Project.

The partnership between government, private sector and black entrepreneurs provided the empowerment model for the Masiza Farming Project. The goal of this aquaculture small business development project is "to establish profitable mussel farming units by the empowerment of self-employed owners of mussel rafts providing minimum personal take-home income of R3,500.00 per month per owner/farmer" (Masiza Mussel Farm Business Plan, 2004).

The first three black farmers were selected through a self-selection process among Blue Bay Aquafarm employees. The process was facilitated by the DTI representative. These farmers then entered into an agreement with Blue Bay Aquafarm for the hire purchase of two rafts each and began operations under the auspices of Blue Bay Aquafarm's water lease. While the farmers were still seeding their rafts, during the first six months, they remained employees of Blue Bay Aquafarm. During this six month period they received training in entrepreneurial, financial management and technical aquaculture skills by Blue Bay Aquafarm. Once the seeding process was completed the farmers began farming operations as independent mussel growers with mentorship and operational support from Blue Bay Aquafarm, Mr Vossie Pienaar. The first farming unit produced 55 metric tons from three rafts in 2003 (totalling R178,750.00 in turnover). They doubled production in 2004 using six rafts.

3.2 An Empowerment model

The pilot project led to the roll-out of the project and its formalisation as a propriety limited entity in 2004. A second group of three entrepreneurs began operations in September 2004 and a third group of farmers were in production by February 2005.

The specific model adopted for the Masiza Farming Project was one in which skills development, business mentoring, and strong inter-firm relations within the local production to processing value chain offered the entrepreneurs the opportunity as owners and farmer to generate a sustainable income. This effectively was the bringing together of two business concepts: a franchise relationship between Blue Bay Aquafarm (as franchise owner) and Masiza Mussel Farm (as franchisee) linked to a "stokvel" or cooperative relationship between the farmers whereby each entrepreneur worked on each others' raft. The nature of this model is described in the sections below.

3.3 Ownership structure

Masiza Mussel Farm (Pty) Ltd is the business that provides the structure for this entrepreneurial mussel farming venture. The entity holds the water lease and mariculture rights. The shareholders in the business are: Vincent Lelaletsi, Mhangabezi Mbudula, Michael Tinzi, Lindela Makhotyana, Mpumelelo Yamile, Zwelitsha Mhlungwini, Jan Booysen, Clinton Mithel and Kobus Adams. The nine black entrepreneurs collectively hold 74% of the shares and Blue Bay Aquafarm holds 26%. Shareholding is linked to the ownership of the rafts. Of the nine raft owners, six entrepreneurs accessed financing through ABSA Business Banking Services and the remainder raised their own capital to become Masiza Mussel Farm shareholders.

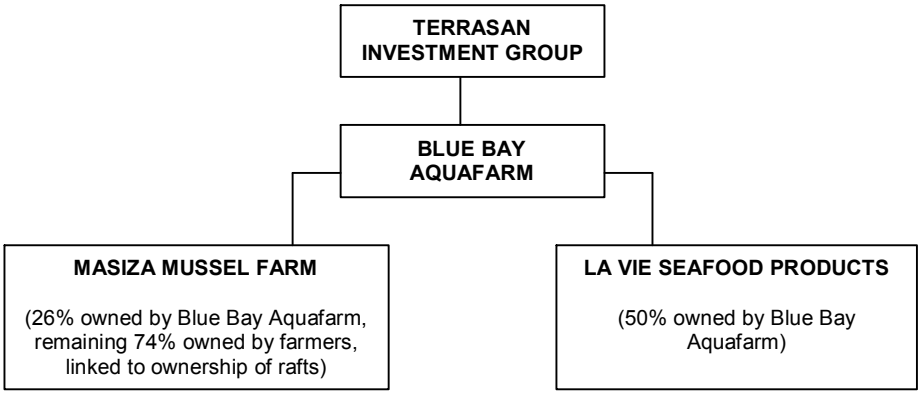

Figure 1: Masiza Mussel Farm Operational Model

3.4 Regulating operations

The mussel farming operations of Masiza Mussel Farm is governed by a contract entered into between Blue Bay Aquafarm and an entrepreneur. The "Mussel Farmers Contract" sets out the rights and obligations of each party in respect to the purchase of two stocked mussel rafts by the entrepreneur from Blue Bay Aquafarm as well as the overall day-to-day operation of the farming of mussels as per the "Mussel Farmer – Work Schedule". The contract upholds the collaborative spirit of the agreement between Blue Bay Aquafarm and the mussel farmers whereby Blue Bay Aquafarm undertakes to provide reasonable business and technical support to "ensure the future success of the farmer in mussel farming as a new entrepreneur while the farmer aims to respond to this in a positive, contributory way" (Masiza Mussel Farm Business Plan, 2004). To ensure that this empowerment project is driven by commercial imperatives, Masiza Mussel Farms pays Blue Bay Aquafarm a monthly levy that covers the costs of business support as well as operational services such transport, overheads, protective clothing, netting and rope materials, insurance, repair and maintenance and public health monitoring.

3.5 The mussel farming unit

Masiza Mussel Farm has 18 rafts owned between nine farmers making up three mussel farming units. The farmers work in autonomous units of three and work on six rafts on a rotational basis seven days a week, sharing the income from their produce. Each production unit produces 10 to 15 metric tons of mussels per month.

Currently, Masiza Mussel Farm units have access to a water lease of 15 hectares for a five-year period. A further 50 hectares has been applied for from the National Port Authority (NPA) to allow for the doubling of current production and the introduction of further farming units.

3.6 Access to market and value chain benefits

The key mechanism of ensuring that the Masiza Mussel Farm entrepreneurs have access to market is through strong linkages within the local value chain with La Vie Seafood Products, a mussel processing plant based in the nearby West Coast town of Velddrift. The Masiza Mussel Farm entrepreneurs sell the mussels produced on their rafts to La Vie. La Vie has an exclusive sales agreement to purchase mussels from Masiza Mussel Farm.

The price for the mussels is negotiated annually, with a minimum Rand value per kilogramme in place to offset market fluctuations in the production of mussels and safeguard the income of the farmers. La Vie sells mussel products to the local market via wholesale distributors. Currently, Masiza Mussel Farm is in negotiation to purchase shares in La Vie and thereby benefit directly from the value-add of processed mussels.

3.7 Blue Bay Aquafarm's capacity to support Masiza's enterprise development needs

Blue Bay Aquafarm provides Masiza Mussel Farm with enterprise development support within the value chain described above as the technical partner within this empowerment project. The form of business support that Blue Bay Aquafarm provides Masiza Mussel Farmer can best be described as embedded business support, commonly known as extension services within the aquaculture and agribusiness sectors, whereby the mussel farmers' business confidence is built up by means of an inter-enterprise support programme. However, to fully appreciate this form of small enterprise development it is necessary to understand the scale and nature of Blue Bay Aquafarm operations thereby demonstrating its capacity to enable and support the nine mussel farmers.

Blue Bay Aquafarm is a privately financed, small-scale commercial producer of mussels and oysters. The business has been in operation for 6 to 10 years and farms within fifty hectares of ocean water in Saldanha Bay in the Western Cape. Blue Bay Aquafarm has a staff compliment of twenty-three persons, of which twenty employees are black persons. It is affiliated to the Aquaculture Association of Southern Africa (AASA) as well as the Mussel and Oyster Forum.

Blue Bay Aquafarm's operations include several business processes, namely: grow-out of mussels and oysters on rafts as the farming method, grading of product before on-selling products to La Vie for processing and packing. The operation collaborates with La Vie to promote and market competitively priced mussel products in the local market to stimulate demand. A breakdown of the domestic market is: 50% of mussels produced are sold in the Western Cape, 10% to the KwaZulu Natal market, 35% to the Gauteng market and 5% to Eastern Cape market. Blue Bay Aquafarm and Masiza Mussel Farm together have captured 30% of the South Africa mussel market. To consolidate its position in the value chain, the company holds shares in La Vie Seafood Products.

In the year 2000, the volume of mussels produced by Blue Bay Aquafarm was 300 metric tons. By 2004, the volume of production has grown to 600 metric tons. However, in 2005 production dropped to 350 metric tons due to a significant outbreak of a harmful algal bloom species (red tide).[2] The red tide caused a five month interruption in production.

Blue Bay Aquafarm's levels of production is a small contribution to the over two million metric tons of mussels produced on the international market. The operation is currently operating at 50% capacity and has the infrastructure to increase its level of production. The percentage breakdown of the cost of mussel farming in 2005 was: 15% labour, 13% transport, and 62% running (or input) costs. Approximately 10% of Blue Bay Aquafarm's annual preferential procurement expenditure, as a total of production costs in 2005, was spent on staff human resource development and the Masiza Mussel Farming project.

[2] The West Coast of South Africa experiences red tide on an annual basis and Blue Bay Aquafarm has the necessary risk management procedures in place to measure toxicity levels and salvage threatened stock.

Blue Bay Aquafarm complies with permitting and related regulations pertaining to marine aquaculture production. The farm operates under approved permits issued by Marine and Coastal Management (MCM). These permits cover the water quality testing, transport, selling and import of stock. The company also complies with the South African Marine Safety Authority (SAMSA) vessel safety regulations and has secured marine lease rights from the National Parts Authority (NPA) via a tender process.

In terms of its supply chain, the business draws on several supply inputs, including: mariculture and oyster seed imports from North America, mussel netting imported from Spain, and the local supply of boats, marine equipment and rafts.

As an established aquaculture operation, Blue Bay Aquafarm's business risk does not lie within the supply-side but on the demand-side. The local aquaculture market is not able to match consumer demand for mussel products. Currently, there are insufficient producers on the West Coast to increase the scale of mussel production. This has resulted in the South African market relying on significant imports of frozen mussel products by international producers who can compete on price due to the Rand exchange rate. The expansion of Blue Bay Aquafarm operations, including establishing and supporting Masiza Mussel Farm, is seen as means of addressing the need to increase mussel production for the local market.

3.8 Empowerment and extension services

The extension services referred to in this context include several small enterprise support mechanisms offered by Blue Bay Aquafarm and promoting broad-based black economic empowerment. These are: improving the entrepreneurial skills of the farmer by providing training in financial management and production management. This training is offered in *isiXhosa*. A further skills transfer process in the form of mentorship is provided by Blue Bay Aquafarm. This mentoring enables each farmer to manage their operation within the farming unit. In particular, guidance is provided in financial management, daily operational support in the form of infrastructure and farming skills and facilitates monthly progress meetings.

The mentorship model is also implemented at the farming unit level, whereby new farmers are inducted and coached through daily interactions with an established farmer. This peer support system further the skills transfer process and autonomy of the entrepreneurs.

Blue Bay Aquafarm's role extends beyond skills transfer to provide infrastructure support to Masiza Mussel Farm. A key contribution is Blue Bay Aquafarm's underpinning of the start-up period for each farmer as a means to reduce the working capital requirements of the farmers. Blue Bay Aquafarm has secured the water lease and stands as surety for Masiza Mussel Farm for an entrepreneurial support raised from ABSA Business Banking Services. Furthermore, the company has assisted Masiza Mussel Farm in negotiating rates for the sale of mussels with La Vie as the primary buyer of Masiza's produce.

3.9 Lessons learnt

Masiza Mussel Farm provides important lessons for the setting up of a successful empowerment programme within the South African aquaculture industry. In using an enterprise development model to advance empowerment, the sustainability of Masiza Mussel Farm benefits from a closed value chain. Within this value chain, Blue Bay Aquafarm provides extension services, or embedded business support, that include

farming equipment, transport of goods, mentoring and technical support as well as providing access to financing and water lease rights or the mussel farmers. In addition, Masiza Mussel Farm produce is bought exclusively by La Vie, the processing plant ensuring that the entrepreneurs have direct access to market.

There are several key lessons that point to the model's success, namely:

- Strong inter-firm relationships with the value chain and a long-term (at least 3 years) commitment to transformation from among the programme partners.
- There is local **market** for mussel products.
- The transfer of management skills to the entrepreneurs via mentoring and **sustained daily technical and operational support.**
- The consistent monitoring and evaluation of the farm units' production performance.
- The selection of the farmers was by the employees of Blue Bay Aquafarm, that is, within the local community.
- The farming units themselves are sustainable small-scale farming operations.
- The farmer work full-time on their rafts and have **true ownership** and control over the running of their unit and the company.
- The assets required for farming operations become the property of the farmers at the finalising of the hire-purchase agreement period (a defined exit strategy).

Masiza Mussel Farm demonstrates that access to skills, finance and the market empowerment can be addressed within an enterprise development model of empowerment. **This model is driven by commercial interests supported by an active partnership between an established private aquaculture producer, a banking institution, and the black entrepreneurs operating mussel farming units.**

To further the strength of this project the following is needed:

- Community members in board member positions require urgent Management-level training.
- If/When more are in operation, external extension services will be necessary.

4 Hands-On Small-scale Trout Farming project

Trout has been farmed commercially in South Africa since the 1960's. In 2003, the overall domestic trout production was 1,750 metric tons (R44 million) and production volumes are growing at an annual rate of 2-3%. The key domestic markets for trout production are: KwaZulu Natal, Mpumalanga, the Eastern Cape and the Western Cape. The demand for trout in the local market provided the justification for establishing the Hands-On Fish Farmers Co-op Pty Ltd as a commercially-orientated empowerment programme. The main objective of this project is business and technical skills development and providing farm workers with an essential supplementary income.

Hands-On started in 1995 as a small-scale trout farming project under the guidance of the Aquaculture Division of Stellenbosch University. In 1995 De Doorns was chosen for the first trout farming project within the Hands-On programme. The farm dam was used for trout production and offered farm workers with an opportunity to supplement their income.

The project received a poverty alleviation grant of R2.2 million from the Department of Science and Technology (DST). Hands-On has also received a R1,5 million loan from the New Farmers Development Company and several capital injections from various other small investors such as Linge Lethu and Woord-en-Daad as well as government support from the Cape Winelands District Municipality. This funding provided the impetus for the

setting up of five other projects in Worcester, Paarl, Ceres, Stellenbosch in 2002. Eight projects set up in 2005 in Franschoek, Grabouw and Stellenbosch and an additional twelve projects are earmarked for 2006.

In 2002, the farmers involved in the project called for the pooling of resources to strengthen their ability to engage in the local market. Two workshops were held to debate an appropriate structure. It was during these sessions that the same DTI representative that assisted the Masiza Mussel project, introduced the Community Public Private Partnership Programme (the process funded by the Western Cape Provincial Department of Economic Development and Tourism) to the new farmers and laid the foundation for the cooperative model that was adopted by Hands-On.

Hands-On has benefited from a gap in the local market. The building of the Berg River Dam led to the closing down of Dew Dale Trout Farm and the reduction in supply of trout to Three Streams Smokehouse. Within this context, Hands-On has entered into an agreement to supply trout with Three Streams, a processing plant in Franschoek. The twenty-five small-scale farms aim to produce 200 metric tons of trout in three years time. This will provide Hands-On with an estimated turnover of R5 million.[3]

In 2004, Hands-On produced 15 metric tons of rainbow trout (R375,000) and in 2005, production volumes increased to 52 metric tons (R1,300,000). The company is currently operating at 30% of its full capacity. The main obstacle to Hands-On in order to increase its production, is capital investment to grow the number of small farms involved in the cooperative.[4] Production costs in 2005, as a percentage of all annual expenses, were: 20% for fry, 5% for labour costs, 3% for transport, 12% on processing trout product, and 60% for running costs. The farming processes on the farms include grow out and grading where cages are used as the farming method.

The job creation potential of the project is clearly evident in the increase in resources employed by the Hands-On programme. In 2004, there were 12 individuals involved in the project, in 2005 this number increased to 55 and in 2006 the total number of persons employed full-time by the project is 110. The majority of who are black persons with few skills. A further 53 temporary employees are brought into the project during the harvesting season during the months of October and November.

4.1 The cooperative model

Hands-On uses a cooperative model to support the development of small trout farmers involved in the project. The model is partnership between the private sector, public entities in government, the tertiary sectors and the local communities.

The cooperative is a registered business entity that is 100% black-owned. Five black people have board positions, including a woman who is also involved in the executive management of Hands-On. Hands-On employs Henk Stander as the project manager to support the enterprise development needs of the small-scale trout farmers involved in the project. The main purpose of the cooperative model is to limit the expenses of bulk buying,

[3] The other important local buyers of trout for Hands-On are: Fly-ing Trout, Marchado Rainbow Trout and Franschoek Fish House. In terms of its supply-side, Hands-On also receives inputs Aqui-S in New Zealand and the local inputs: feed, nets, ropes and cages.

[4] Hands-On's market is not threatened by trout imports as currently trout and salmon products carry a 25% import duty. There is a significant mark-up on trout product in the local market with the farmer receiving a small percentage of the final cost to consumer. A trout farmer sells fish at R25/kg. However, the processor's ex-factory price for trout fillet is R55/kg and the retailer's off-the shelf price to consumers is R180/kg for trout fillet.

facilitate training among farmers, secure the access to the market, and support the integration with the supply chain. Hands-On is affiliated to Aquaculture Association of Southern Africa (AASA) as well as the Western Cape Trout Farmers Association.

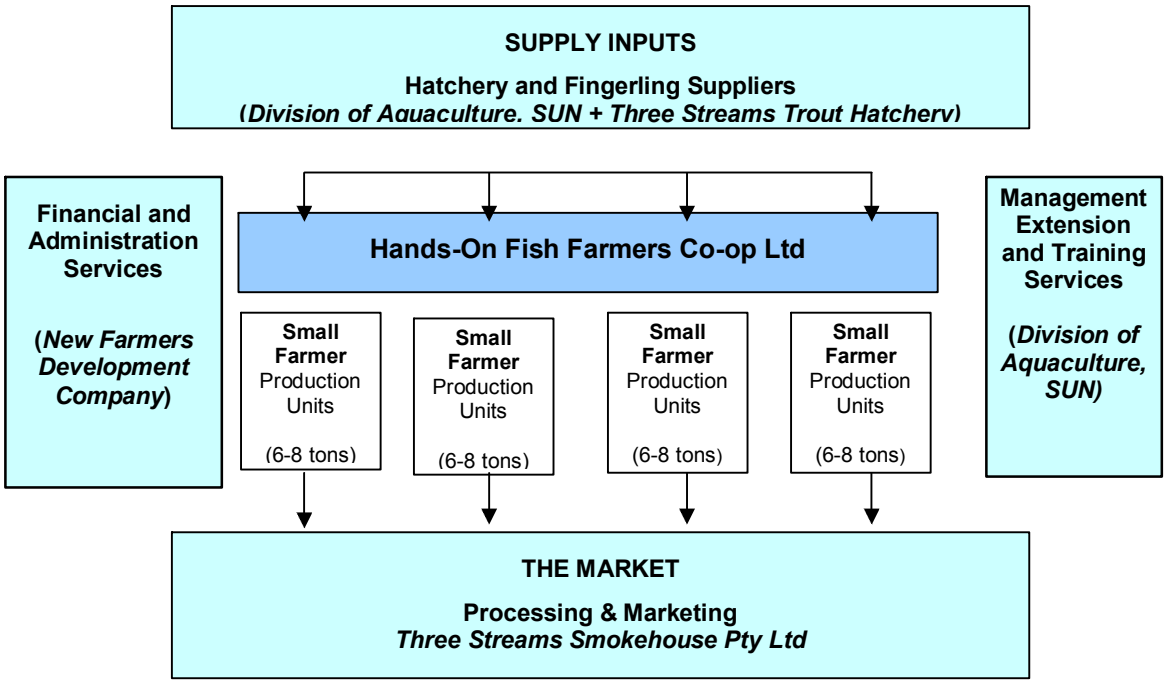

Figure 2: Operational Model of Small-Scale Trout Farming Project
(Source: Hands-On Presentation)

As per Figure 1 above, the cooperative is supported on the supply-side by the Division of Aquaculture, Stellenbosch University and Three Streams Trout Hatchery who provide fingerlings to the farmers. On the buy-side of the value chain, Three Streams Smokehouse purchases A-Grade trout for processing and marketing.[5] Further marketing and promotion is undertaken in collaboration with members of Western Cape Trout Association.

Operationally, Hands-On is underpinned by the financial and administrative services of New Farmers Development Company and management, mentoring and technical services by the Division of Aquaculture. This includes compliance with permitting from the relevant authorities. The Hands-On operational structure supports the black-owned small-scale farms (termed production units) and has an annual budget of R 900,000 for 3 years to grow operations.

Like Masiza, this model is driven by commercial interests supported by an active partnership between an established private aquaculture producer, a banking institution, and the black entrepreneurs. Once again, the success of the model is based on the fact that there must be a market for the product, there must be support and mentorship available on a daily basis and finally, there must be true ownership.

4.2 Farming operations

Each small-scale farm has the capacity to produce 6 to 8 metric tons of trout per season. These production units are staffed by project participants who were chosen through a self-

[5] This is a requirement from all local trout buyers which leaves the farmers with a dilemma of what to do with B-Grade product.

selection process by the farming community. The fish farming process is a secondary income for these farmers whose primary occupation is as an agricultural or wine farm worker. The farms are set up not to interfere with their farming responsibilities. Trout farmers feed the fish before work, during lunch, or after work. Nevertheless, the owner of the agricultural farm has the right of primary access and use of the dams where trout is produced. The Hands-On project is set up with the aim of promoting the integration and sustainable use of agriculture and aquaculture resources on a farm.

Environmental considerations are borne in mind in terms of the use of the dams for agricultural use (working with statistical models that provide the carrying capacity of various size dams). If the water quality, used to irrigate the agricultural crops, is negatively impacted upon due to trout farming, the project is stopped and the farming infrastructure removed. In managing the quality of the water, students linked to the University test the water once every two weeks.

In supporting farming operations, Hands-On signs a legal agreement with each small-scale farmer. The farmer than receives a start-up grant of R25,000 for farming infrastructure and cages. The total cost of setting up an operation is R90,000 and this is supported by a loan to the farmer by the cooperative. It then costs a farmer R1,200 per month to rent this farming equipment. The project has a planned exit strategy that promotes business sustainability and will allow these black-owned farms to own the assets to support their farming operations at the end of the project period.

4.3 Extension services

The extension services provided by the Hands-On project manager are: mentorship, training and skills development. These services address the business and technical support needs of the small-scale farmers and ensure that they have basic business skills (including computer training and accounting) as well as technical and specialised training in trout farming methods.

Over and above these skill transfer programmes, Hands-On via the project manager continuously monitors and assist in the set up of trout farm activities. The following steps are involved in setting up a small farming unit: site selection, consultation and information exchange, statutory approval process, development of infrastructure, technical training, stocking of fingerlings, production management and the farming itself (including feeding, grading, water quality monitoring, disease monitoring, harvesting and processing). Further support is provided at the end of the season (that is, after 6 months) is the maintenance and repair of equipment.

4.4 Lessons learnt

The lessons learnt through the Hands-On project provide important insights into the development and implementation of a cooperative model for supporting black-owned freshwater aquaculture operation in the rural areas. These lessons are:

- A key success factor is the improving of the standard of living of rural communities in regard to access to secondary income, training and skills. This has provided previously disadvantage individuals with the opportunity to participate in economic activities through small business development and the sustainable utilisation of human capital and natural resources.

- A major weakness in the aquaculture small business value chain is access to funding as well as business management and administration skills. The regional government should intervene to assist enterprise development among small and medium enterprises. This can be achieved through funding as well as assistance extension services.
- The lack of capital and investment is the main factor stifling the expansion of the project and has led to slower growth in the volume of production. A challenge concerning access to finances is that aquaculture is perceived as a high risk business opportunity by banking institutions largely due to the fact that few farmers have the collateral or assets to secure a loan due to historical reasons of lack of access to resources and ownership rights.
- The policy-statutory approval by authorities for the setting up of new aquaculture operations on farms takes time and negatively impacts on the setting up of a commercial trout farm. Processing of permit applications is incredibly slow and can take 1 - 3 years to obtain a record of decision or a permit to farm trout in the Western Cape.
- There is a need for capacity and technical know-how among farmers, specifically concerning disease monitoring.
- The farmers are vulnerable to environmental changes (such as drought, extended warm weather, and veld fires) which may negatively impact their operations and the quality of the water required for successfully farming trout.
- A significant challenge facing Hand-On is the price of trout and the pressure placed on farmers to offer competitive prices in a value-chain that has high mark-ups. Furthermore, as only A-Grade trout are bought by the processing plant, the farmers need to seek alternative markets for B-Grade product.
- To overcome the effects of seasonality within agriculture, an integrated approach to aquaculture farming should be considered.

To further the strength of this project the following is needed:

- Faster turn around time on permit applications
- Community members in board member positions require urgent Management-level training.
- Veterinary, water quality and extension services are required in support of the almost 30 Western Cape based trout farms

4.5 Way Forward

- The next phase for Hands-On is to use the cooperative model to develop quasi-vertical integration within the value chain and develop new products to compensate for the low market for B-Grade trout. However, the expansion of the project is currently restricted by a lack of funding from commercial banks and poor service from the authorities. It is within this context that sector development activities in support of empowerment programmes within the aquaculture industry are seen to further the support for small-scale trout farms in the Western Cape.

4.6 Opportunities arising from this case studies

After close investigation it appears that various SMME opportunities could arise from this project, such as:

- Reliable Truck Company to transport fingerlings
- Cage Building company to assist with the building quality cage structures.

- There is currently only one local feed producing company that produces trout feed. More support for this particular company is needed and more feed producing companies are needed.
- Mark-up on products can be reduced if Hands-on do their own marketing. For example, in the Western Cape a few abalone farmers teamed up to form their own abalone marketing company.
- There is an opportunity for a company to do the packing and packaging for Hands-on's B-grade products. The possibility of selling (to close-by communities) fresh B-grade products directly from the farm should be investigated. This could be a constant market for the B-grade produce.
- There is also an opportunity for a company to assist with harvesting.

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Annexure I – Cover letter and Questionnaire for Case Studies

AQUACULTURE PRODUCER CASE STUDY QUESTIONNAIRE

CASE STUDY RESEARCH OBJECTIVES

This research falls within the mandate of the Aquaculture Institute of South Africa (AISA) to document industry developments as a means of promoting the sector.

The objective of this research is to provide an in-depth analysis of enterprises supporting broad based black economic empowerment in the aquaculture industry of the Western Cape. Furthermore, these enterprises demonstrate and/or may require embedded business support services within their value chain to optimise production, increase employment, or grow their turnover.

This case study questionnaire draws on the findings of the 2006 Benchmark Survey of the Aquaculture Industry in South Africa. For ease of use, the respondent's submissions from the Benchmark Survey are included in the case study questionnaire. This questionnaire builds on the Benchmark Survey to enable an assessment of the enterprises' value chain, business development needs, and socio-economic environment.

For further details on this research programme, please contact:

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PLEASE ANSWER ALL QUESTIONS IN THIS SURVEY.

1. RESPONDENT PROFILE

1.1 Your name:

1.2 The name of your company / project:

1.3 What is your job title (position) in the company / project?

1.4 Please could you confirm your company / project contact details:

Physical Address:
Postal Address:
Telephone number:
Cell phone number:
Fax number:
Email address:
Website address:

2 COMPANY / PROJECT PROFILE

2.1 Company / project registration

Pty Ltd	Closed Corporation	Sole trader	Cooperative	Trust	Not registered
Other (please specify):					

Indicate answer with "X" or specify registration.

2.2 How many years has company / project been in operation?

< 1	1 – 5	6 – 10	11 – 15	16 - 20	21 - 25	> 25

Indicate answer with "X".

2.3 What were the major factors influencing your decision to begin aquaculture farming?

2.4 In what sub-sector of the aquaculture industry do you operate?

Marine	Freshwater
Other (please specify):	

Indicate answer with "X" or specify sub-sector.

2.4 What species do you farm?

Mariculture	Abalone		Finfish	

	Eel		Mussels	
	Ornamental fish		Oysters	
	Prawns		Seaweed	
	Other (please specify):			

Indicate answer with "X" or specify other species farmed.

Freshwater	African Catfish		Bass	
	Carp		Eel	
	Goldfish		Koi Carp	
	Labeo		Marron	
	Mullet		Nile Crocodile	
	Ornamental fish (various)		Rainbow Trout	
	Shrimp		Tilapia	
	Trout		Water Hawthorne(Waterblommetjies)	
	Finfish		Other (please specify):	

Indicate answer with "X" or specify other species farmed.

2.5 How would you describe the scale of your operations?

Commercial / industrial production (> R5m p.a. turnover)	Small-scale commercial / Smallholding (< R5m p.a. turnover)	Community project / cooperative
Other (please specify):		

Indicate answer with "X" or specify scale of operations.

3 ENTERPRISE VALUE CHAIN (PRODUCTION PROCESSES)

3.1 Which business processes are included within your company's / project's operations?

Spawning	Fry rearing / Weaning	Grading
Grow Out	Processing	Packing
Distribution	Other (please specify):	

Indicate answer with "X" or specify business process.

3.2 What farming method/s does the company / project use?

Baskets	Yes	No
Cages	Yes	No
Long line	Yes	No
Racks	Yes	No
Rafts	Yes	No
Recirculation	Yes	No
Tanks	Yes	No
Pump ashore	Yes	No
Trays in ponds	Yes	No
Earth ponds	Yes	No
Circular ponds	Yes	No

Urban ponds	Yes	No
Raceways	Yes	No
Other (please indicate):		

Indicate answer with "X" or specify farming method.

3.3 Are all those operations conducted from one location?

Yes	No

Indicate answer with "X".

3.4 If no to 3.3 above, please indicate where these operations are based and which business processes are conducted there.

Business processes conducted	Location

3.5 Do you use any software package for farm management? If yes, please indicate software:

Yes	No
Software package:	

Indicate answer with "X" or specify software package.

3.6 Who are your most important suppliers? (Please note feed supplier brands)

Supply-side company	Nature of supply

3.7 If you purchase feed, is feed you use:

Animal protein	Plant protein

Indicate answer with "X".

3.8 Are there problems in obtaining supplies? Please explain your answer.

Yes	No

Indicate answer with "X" and then explain your answer.

3.9 Please rate the importance of following supply-side factors as an overall indication of your satisfaction with your suppliers:

Supply-side factors	1	2	3	4	5
Quality of supply					
Availability of supply					
Delivery on time					
Delivery on specification					
Price					

Rating: 1 = not important, 2 = little importance, 3 = neutral, 4 = some importance, 5 = very important.

3.10 Are you able to influence your suppliers to provide you with better service?

Yes	No

Indicate answer with "X".

3.11 If yes to 3.10, how do you influence your suppliers to improve their supply?

Financial incentives	Yes	No
Training	Yes	No
Integration of computer systems	Yes	No
Business development services (extension services)	Yes	No
Other (please specify):	Yes	No

Indicate answer with "X".

3.12 Have you ever made purchases jointly with other business to minimise your company's financial outputs? Please explain your answer.

Yes	No

Indicate answer with "X" and then explain your answer.

3.13 Who are your most important buyers?

Buy-side company	What do they purchase?

3.14 In your opinion where are the major weaknesses in the aquaculture business value chain?

3.15 In your opinion, can these weaknesses in the value chain be used as opportunities to create new ventures (supply-side, buy-side, or within operation)? Please explain your answer.

Yes	No

Indicate answer with "X" and then explain your answer.

3.16 What is the greatest challenge facing your aquaculture operation today?

3.17 Do you ever collaborate with other firms on promotion and/or marketing? Please explain your answer.

Yes	No

Indicate answer with "X" and then explain your answer.

3.18 What are the most important infrastructure constraints affecting your business' growth and profitability?

Road/transport conditions	Yes	No
Telephone service	Yes	No
Electric supply	Yes	No
Crime/corruption	Yes	No
Storage	Yes	No
Other (please specify):	Yes	No

Indicate answer with "X".

4 COMPLAINCE

4.1 Is your production facility operating under an approved permit from a relevant authority?

Yes	No

Indicate answer with "X".

4.2 Do you obtain the relevant permits when you:

Nature of Permit	Always	Occasionally	Never
Transport stock			
Sell stock			
Import stock			
Export stock			
Other (please specify):			

Indicate answer with "X".

4.3 Please indicate which authority, and for what purposes, you have a permit?

Issuing Authority	Yes	No	Purpose of permit
Department of Agriculture			
Marine and Coastal Management			

Department of Water and Forestry Affairs			
Cape Nature Conservation			
Other (please specify):			

Indicate answer with "X" and then explain your answer.

4.3 Please indicate how long it takes to obtain the relevant permit / approval from the authorities, as well as the stumbling block that need to be addressed within these processes.

a) How long does it take to obtain a Record of Decision from the relevant authority (e.g. Provincial department or Local Municipality) where your Environmental Impact Assessment (EIA) is submitted?

Issuing Authority	Timeframe	Identify stumbling blocks

b) How long does it take you to obtain approval for municipal water use and/ or extraction of sea water from the relevant authority?

Issuing Authority	Timeframe	Identify stumbling blocks

c) How long does it take your local authority to authorise land use affairs?

Issuing Authority	Timeframe	Identify stumbling blocks

d) In cases where sea space or a piece of land is leased, how long does it take to obtain such lease agreements?

Issuing Authority	Timeframe	Identify stumbling blocks

e) How long does it take to process your rights applications to engage in marine farming?

Issuing Authority	Timeframe	Identify stumbling blocks

f) Please indicate any other areas not covered above where approval is required from the authorities to ensure your aquaculture operation is compliant with policy and legislation.

Issuing Authority	Timeframe	Identify stumbling blocks

4.4 In your opinion, how can the authorities streamline the handling and processing of permits / approvals? Please suggest timeframes that would benefit your operation.

4.5 Is the livestock/product that you sell certified by a veterinary scientist as disease free?

Yes	No

Indicate answer with "X".

4.6 If no to 4.5, what are the reasons for not gaining certification?

4.7 Have you had outbreaks of notifiable diseases / harmful algal blooms at your farm?

Yes	No

Indicate answer with "X".

4.8 If yes to 4.7, when have these outbreaks of disease / harmful algal blooms occurred:

In the last 12 months	In the last 3 years	In the last 10 years

Indicate answer with "X".

4.9 If yes to 4.7, please describe the impact these outbreaks of disease / harmful algal blooms had on production?

4.10 If yes to 4.7, do you have the necessary traceability process in place? Please explain your answer.

Yes	No

4.11 If yes to 4.7, is there a risk management process in place to protect product and/or farming operation. Please indicated the nature of this management process.

Yes	No
Self-regulated	
Government	
Combination of self-regulation and government	

Indicate answer with "X".

4.12 In general, how would you describe your company / project's relationship with the regulatory authorities?

Good working relationship	Acceptable working relationship	Poor working relationship

Indicate answer with "X".

4.13 Please explain your answer in 4.12 above:

5 VALUE AND VOLUME OF PRODUCTION

5.1 What were the total volumes (in metric tonnes) and the total values (annual turnover) of production of species for the years 2000 - 2005?

Year	Species	Volume (metric tonnes)*	Value (R's)	Total (%)
2005				
2004				
2003				
2002				
2001				
2000				

*In the case of ornamental fish and crocodiles, please indicate individuals produced.

5.2 Is your company / project operating at full capacity (100%)? If no, please indicate percentage capacity utilisation for production:

>10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

Indicate answer with "X".

5.3 What obstacles prevent your operation from increasing its volume of production?

5.4 What obstacles prevent your operation from increasing the value of production?

5.5 What were your specific production costs in 2005? (Please indicate costs as a percentage of all annual expenses).

Species	Labour	Transport	Processing	Running (input) costs	Total Production Costs (%)

6 MARKETS (DOMESTIC, EXPORT AND IMPORT)

6.1 Please indicated the percentage volume and value of production per species supplied to the domestic market:

Market	Species	% Volume

		(metric tonnes)*
Eastern Cape		
Free State		
Gauteng		
KwaZulu Natal		
Limpopo Province		
Mpumalanga		
Northern Cape		
North West		
Western Cape		

*In the case of ornamental fish and crocodiles, please indicate individuals produced.

6.2 What are the obstacles you face in increasing sales in the domestic market?

6.3 If you export, when did you begin exporting?

Species	Year

6.4 Which exports markets do you supply product?

Region	Species	% Volume (metric tonnes)
Africa		
Americas (North, Latin, South)		
Asia		
Europe		
Middle East		
Oceania (Australia / New Zealand)		

6.5 Which specific countries do you export to?

Region	Country/s
Africa	
Americas (North, Latin, South)	
Asia	
Europe	
Middle East	
Oceania (Australia / New Zealand)	

6.6 What are the obstacles you face in increasing export sales?

6.7 Do you import aquaculture products?

Yes	No

Indicate answer with "X".

6.8 If yes, what products do you import and from which country/s?

Region	Country	Product imported
Africa		
Americas (North, Latin, South)		
Asia		
Europe		
Middle East		
Oceania (Australia / New Zealand)		

6.9 What are the obstacles you face when importing products?

6.10 Is your business threatened by the importing of products to the South Africa market, especially in those cases where imported products are the same as the product your farm?

7 EMPLOYMENT

7.1 What are your past, current and future year-on-year *permanent* employment trends per skill level* and historical racial classification**? (A permanent employee works full-time for the company / project).

Year	Professional				Skilled				Middle Services				Semi-skilled				Unskilled				Total
	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	
2001																					
2002																					
2003																					
2004																					
2005																					
2006																					
2007																					
2008																					
2009																					

Please indicate number of employees per category per year.

* Definitions: professional = upper management, scientist; Skilled = technicians, artisans; middle services = clerical, semi-skilled = secondary, some secondary education, unskilled = no formal training.

** As per Statistics South Africa categories: B = Black South Africans, C = Coloured, I = Indian, and W = White.

7.2 What are your past, current and future year-on-year *temporary* employment trends per skill level and historical racial classification? (A temporary employee works for the company / project on a part-time basis or as per seasonal requirements, e.g. harvesting).

Year	Professional				Skilled				Middle Services				Semi-skilled				Unskilled				Total
	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	
2001																					
2002																					
2003																					
2004																					
2005																					
2006																					
2007																					
2008																					
2009																					

Please indicate number of employees per category per year.

7.3 Please indicated which months of the year you use part-time (temporary) employees:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

Indicate answer with "X".

7.4 What is the average monthly salary per skill level in 2006?

Professional	Skilled	Middle Services	Semi-skilled	Unskilled
R	R	R	R	R

7.5 What are the employment patterns per production process within the company / project in 2006? (Please indicate when staff hold positions in two or more processes/business units).

a) Management

	Professional				Skilled				Middle Services				Semi-skilled				Unskilled				Total
	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	
F/T																					
P/T																					

Please indicate number of employees per category per year.

* F/T = full-time

** P/T = part-time

b) Administration

	Professional	Skilled	Middle Services	Semi-skilled	Unskilled	Total

	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	
F/T																					
P/T																					

Please indicate number of employees per category per year.

c) Spawning

	Professional				Skilled				Middle Services				Semi-skilled				Unskilled				Total
	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	
F/T																					
P/T																					

Please indicate number of employees per category per year.

d) Weaning

	Professional				Skilled				Middle Services				Semi-skilled				Unskilled				Total
	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	
F/T																					
P/T																					

Please indicate number of employees per category per year.

e) Grading

	Professional				Skilled				Middle Services				Semi-skilled				Unskilled				Total
	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	
F/T																					
P/T																					

Please indicate number of employees per category per year.

f) Grow out

	Professional				Skilled				Middle Services				Semi-skilled				Unskilled				Total
	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	
F/T																					
P/T																					

Please indicate number of employees per category per year.

g) Processing

	Professional				Skilled				Middle Services				Semi-skilled				Unskilled				Total
	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	
F/T																					
P/T																					

Please indicate number of employees per category per year.

h) Packing

	Professional				Skilled				Middle Services				Semi-skilled				Unskilled				Total
	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	
F/T																					
P/T																					

Please indicate number of employees per category per year.

i) Distribution

	Professional				Skilled				Middle Services				Semi-skilled				Unskilled				Total
	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	
F/T																					
P/T																					

Please indicate number of employees per category per year.

j) Other (please indicate):

	Professional				Skilled				Middle Services				Semi-skilled				Unskilled				Total
	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	
F/T																					
P/T																					

Please indicate number of employees per category per year.

7.6 Do most of your semi-skilled and unskilled employees (i.e. farm workers):

Live on the farm	Yes	No
Live in the nearest town	Yes	No
Migrate to town in peak season	Yes	No

Indicate answer with "X".

7.7 What benefits do the company / project offer its workers?

Housing	Yes	No
Food security	Yes	No
Transportation	Yes	No
Health care	Yes	No
Access to infrastructure (water, electricity)	Yes	No
Other (please specify):		

Indicate answer with "X".

7.8 Please describe the socio-economic conditions of your local area (unemployment, poverty, etc?

8 HUMAN RESOURCE DEVELOPMENT AND SKILLS DEVELOPMENT

8.2 What management skills would you like to strengthen in order to grow your business?

8.3 Does the company / project offer human resource development and skills development programmes to its staff?

Yes	No

Indicate answer with "X".

8.3 If yes to 8.2, what was your total spend on human resource development and skills development, as a percentage of total spend in 2005?

>10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

Indicate answer with "X".

8.4 If yes to 8.2, does the company / project offer a mentorship programme to its staff? If yes, please describe the nature of the programme and who provides this service:

Yes, in-house	Yes, outsource	No
Describe mentorship programme		

Indicate answer with "X" and/or specify programme.

8.5 If yes to 8.2, does the company / project offer training programmes to its staff? If yes, please describe the nature of the programme and who provides this service:

Yes, in-house	Yes, outsource	No
Describe skills development programme/s		

Indicate answer with "X" and/or specify programme.

8.6 If yes to 8.2, does the company / project offer skills development programmes to its staff? If yes, please describe the nature of the programme and who provides this service:

Yes, in-house	Yes, outsource	No
Describe skills development programme/s		

Indicate answer with "X" and/or specify programme.

8.7 Please indicate your current training/skills requirements:

8.8 Please indicate your future training/skills requirements for 2007 - 2009:

8.9 Do you perceive the need for a National Qualification Framework for the aquaculture sector that includes the development of one or more of the training options listed below?

Postgraduate diploma	Yes	No
Degree	Yes	No
M.Tech	Yes	No
B.Tech	Yes	No
National Certificate	Yes	No
National Diploma	Yes	No
SETA accredited short course	Yes	No

Indicate answer with "X".

9 BROAD BASED BLACK ECONOMIC EMPOWERMENT

9.2 What is the BEE status of your company?

Black owned (75.1- 100% black ownership)	Black empowered (50.1-75% black ownership)	Black influenced (25.1-50% black ownership)

Less than 25% black ownership	None, but we are planning for BEE ownership	None, but we are interested in seeking a BEE partner

Indicate answer with "X".

9.3 Is there a need for a BEE broker in the sector to enable the matching of parties? Who should undertake this?

Yes	No
Brokering party	

Indicate answer with "X" and indicate party.

9.4 If you have indicted BEE ownership in 9.1, what percentage of the company / project is owned by black people?

Designated group	Total
Black people (all)	
Black women	
Workers / staff	
Youth	
People with disabilities	
Rural	

Indicate answer with "X" and indicate total number of black people in ownership.

9.5 If you have indicted BEE ownership in 8.1, what is the nature of this ownership?

Shareholding	Share equity schemes with employees	Joint venture with farm labour	Joint venture with black entrepreneur

Indicate answer with "X".

9.6 If you have indicted BEE ownership in 8.1, how many black people have management control?

Type of control	Total
Board positions	
Executive management	
Women on board and executive management	
Non-executive board positions	

Indicate answer with "X" and indicate number of black people with control.

9.7 If you indicated BEE ownership in 9.1, did you raise finance to fund the venture?

Yes	No

Indicate answer with "X".

9.8 If yes to 8.6, please specify the nature of funding, as well as the institution/s that provided the capital.

Domestic Investment and Loans	Foreign investment	Foreign aid	Government Assistance	Private Capital
Institution/s (please specify):				

9.9 What was your annual preferential procurement expenditure, as a total of all production costs in 2005, on black people and black-owned small medium enterprises?

>10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

Indicate answer with "X".

9.10 Is your company / project involved in enterprise development programmes assisting black-owned small medium enterprises?

Yes	No

Indicate answer with "X".

9.11 If yes to 9.9, please describe the nature of these programmes and the beneficiaries of business support.

Enterprise support	Yes / No	Describe programme and beneficiaries
Develop operational capacity		
Develop financial capacity		
Provide mentoring		
Access to inputs (supply)		
Access to credit		
Access to infrastructure		
Access to markets		
Access to technology		
Access to business support services		
Lease land		
Other (please specify):		

Indicate answer with "X" and specify programme.

9.12 If yes to 9.9, what was your total expenditure on enterprise development, as a percentage of total spend in 2005?

>10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

Indicate answer with "X".

9.13 Does your company / project have a corporate social investment (CSI) programme?

Yes	No

Indicate answer with "X".

9.14 If yes to 9.12, please describe the nature of these CSI programmes:

CSI programme	Yes / No	Describe programme and beneficiaries

Housing		
Access to infrastructure (water, electricity)		
Health care		
Transportation		
Retirement and funeral schemes		
Community education facilities		
Community training programmes		
Youth development programmes		
Conservation projects		
Job creation programmes		
Arts and culture development		
Community clinics		
Sport development		
Recreational facilities		
Other (please specify):		

Indicate answer with "X" or specify programme.

9.15 If yes to 9.12, what was your total expenditure on CSI, as a percentage of total spend in 2005?

>10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

Indicate answer with "X".

10 ENVIRONMENTAL MANAGEMENT

10.2 Please indicate the size (in hectares) of your farm:

10.3 What are the GIS coordinates for your farm:

Latitude	Longitude

10.4 Please describe the source of your water supply:

River	Dam	Estuary	Ocean
Borehole	Municipal water (tap water)	Other water supply :	

Indicate answer with "X" or specify other water source.

10.5 Do you make use of heated water? (i.e. or)

Yes, natural / hot springs	Yes, artificially heated	No

Indicate answer with "X".

10.6 Is water use approved by the relevant authority?

Yes	No

Indicate answer with "X".

10.7 Please indicate whether your have a water treatment plan for effluent:

None	Planned	Implemented

Indicate answer with "X".

10.8 Is there any treatment of water before it leaves the farm? If yes, please explain nature of the water treatment.

Yes	No
Water treatment	

Indicate answer with "X" and explain answer if yes.

10.9 In order to understand aquaculture's non-consumptive use of water supply, how much water (in kilolitres per hour) flows in and out of your operations

Maximum water use	In (kl/hr)	Out (kl/hr)
Marine		
Freshwater		
Minimum water use	In (kl/hr)	Out (kl/hr)
Marine		
Freshwater		

10.10 Please rate the importance of the following environmental issues to the operation of your company / project today.

Environmental Issues	1	2	3	4	5
Site location					
Water supply quantity					
Water supply quality					
Water use permits					

Water pollution (effluent)					
Impact of species on environment					
Impact of genetically modified organisms on environment					
Feed practices					
Chemical use					
Disease management					

Rating: 1 = not important, 2 = little importance, 3 = neutral, 4 = some importance, 5 = very important.

10.11 Please rate the importance of the following regulatory issues for environment management in general:

Regulatory Issues	1	2	3	4	5
Best practice management guidelines					
Zoning					
Nodes					
Legislation - Policy and Acts					
Biodiversity regulations					
Sanitation programmes					
Veterinary programmes					
Coordination by sector body					

Rating: 1 = not important, 2 = little importance, 3 = neutral, 4 = some importance, 5 = very important.

10.12 Please describe what steps your company / project has taken to minimise impacts on the natural environment.

11 ENTERPRISE DEVELOPMENT

11.2 Please indicate your current sources of financing:

Domestic Investment and Loans	Foreign investment	Foreign aid	Government Assistance	Private Capital

Indicate answer with "X".

11.3 Have catch fishing industry owners invested in your aquaculture company / project (in the context preventing the loss of natural resources)? If yes, please describe the nature of this investment:

Yes	No
Nature of investment:	

Indicate answer with "X" and/or indicate nature of investment.

11.4 Please rate the importance of the following barriers to entry your company / project currently faces in running an aquaculture operation:

Barriers to entry	1	2	3	4	5
Environmental regulatory requirements (e.g. EIAs)					

Site selection (zoning, leasing, discharge permits)					
Extension services					
Genetic modified organisms and exotics (importing permits, disease and pest control)					
Processing (SABS approval, public health issues, bans on exports)					
Tariffs for imports (protect domestic market)					
Permitting (time takes to issue, farming and capture of fish)					
Access to finance					
Access to skilled labour					
Access to Research and Technology Development					

Rating: 1 = not important, 2 = little importance, 3 = neutral, 4 = some importance, 5 = very important.

11.5 Please rate the importance of the following government support measure for your company / project:

Government support	1	2	3	4	5
Permitting					
Technology development and transfer					
Extension services					
Facilitate finance and investment					
Strategic plan for sector					
Infrastructure support					
Capacity building					
Promotion of aquaculture industry					

Rating: 1 = not important, 2 = little importance, 3 = neutral, 4 = some importance, 5 = very important.

12 SECTOR DEVELOPMENT

12.1 Have you ever collaborated with other aquaculture firms to collectively overcome an obstacle in the sector? Please explain the nature of this inter-firm collaboration.

Yes	No
Inter-firm collaboration	

Indicate answer with "X" and explain answer.

12.2 Please indicate which aquaculture industry bodies you are affiliated to:

Aquaculture Industry Bodies	Yes
Abalone Farmers Association of SA	
Aquaculture Association of Southern Africa	
Catfish SA	
Mpumalanga Trout Producers Forum	
Mussel and Oyster Forum	

South African Koi Keepers' Society	
South African Koi Traders Association	
South Africa Pet Traders Association (SAPTA)	
Tilapia Association of South Africa	
Western Cape Trout Farmers Association	
Western Cape Tilapia Growers Association	
Other (please specify):	

12.3 Please indicate which business associations (e.g. chamber of commerce, WECBOF) you are affiliated to:

Business Associations

12.4 Please rate the importance of the role of sector development activities to the running of your company / project today:

Sector Development Activities	1	2	3	4	5
Promote South African aquaculture (nationally and internationally)					
Provide an enabling environment for increase participation in industry					
Act as a one-stop-shop (offering a range of non-commercial services to industry)					
Act as an advisor to government on legislation and policy					
Enhance industry-led development initiatives					
Promote best practice management guidelines (environment and social)					
Identify and zone areas for aquaculture development					
Investment promotion					
Promote trade in aquaculture products					
Monitoring the supply of aquaculture product (safe and high quality)					
Monitoring of food and water quality to ensure export of aquaculture product					
Identify new species production (natural resource replenishment, market demand)					
Co-ordinate research (national and international)					
Ensure education, training and skills development of aquaculture know-how					
Other (please specify)					

Rating: 1 = not important, 2 = little importance, 3 = neutral, 4 = some importance, 5 = very important

12.5 In your opinion, what are the challenges with regards to access to finances for starting an aquaculture venture?

12.6 How do you think regional government can intervene to assist enterprise development among small and medium enterprises (SMEs)?

12.7 In your opinion, what government support should be provided to assist SMEs that are in pre-production / start-up phase?

12.8 In your opinion, what government support should be provided to assist SMEs that are in early stage enterprise development?

12.9 In your opinion, what government support should be provided to assist SMEs that which to grow the venture (turnover, staff, assets, markets)?

12.10 Do you think integrated aquaculture (other aquaculture and/or agricultural activities) can overcome the effects of seasonality? Please explain your answer.

Yes	No

12.11 Do you think linking with other sectors, such as tourism, can assist in developing the aquaculture sector? Please indicate which other sectors that could assist in sector development.

12.12 Please indicate how you think that drop in natural fishing resources globally will affect the development of the sector.

12.13 What do you think are the strengths of the aquaculture industry locally (Western Cape)?

12.14 What do you think are the strengths of the aquaculture industry in South Africa?

12.15 What do you think are the strengths of the aquaculture industry internationally?

12.16 What are the main weaknesses of the aquaculture industry locally?

12.17 What are the main weaknesses of the aquaculture industry in South Africa?

12.18 What are the main weaknesses of the aquaculture industry internationally?

12.19 What do you think is the greatest challenge facing the aquaculture industry today?

13 Further Comments

Please provide any additional comments on industry issues that you would like to draw to our attention:

THANK YOU FOR YOUR TIME

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Survey No.		Researcher	
Date surveyed		Approval (survey status)	*

Date captured		Approval (capture status)	

* Code
01 – Completed
02 – Pending, additional data required
03 – Incomplete
04 – Not completed as respondent not willing to participate in survey