



Introduction

A national benchmarking survey was conducted by the Aquaculture Institute of South Africa (AISA) in 2006. Subsequently, the Western Cape Provincial Department of Agriculture (Animal Production Section & the GIS Section) and AISA decided to register a project namely “Management of Aquaculture Development (Survey & Map)” that would, as a partnership between the Department and AISA, update the statistics every three years and that would map the relevant aquaculture information necessary to facilitate sustainable development.

Survey Purpose

The purpose of this survey is to update the aquaculture sector statistics in the Western Cape Province which feeds into the FAO statistics database. The main idea is to provide reliable statistics to industry and government in order to establish the developmental opportunities within the sector, provide insight into the sector’s contribution to economic development and insight into the aquaculture value chain.

Confidentiality

All information collected will be treated as confidential and only aggregated data will be publicised. Please click the preferred option(s) for displaying your farm on the map:

Project/Company/Farm name	
Contact person and contact details	
Farm coordinates	
Species farmed	

Indicate answer with “X”

Your time and co-operation is most appreciated.

1 RESPONDENT PROFILE

1.1 Your title:

Dr	Ms	Mrs	Mr
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First Name:

Last Name:

1.2 The name of the company / project

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

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1.4 Conduct details for your company / project?

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

2. COMPANY/ PROJECT PROFILE

2.1 Company/ Project registration

Pty Ltd	Close 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 operating?

<1	1-5	6-10	11-15	16-20	21-25	>25
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Indicate answer with "X"

2.3 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?

MARINE	Abalone		Marine 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	
	Lebeo		Marron	

	Mullet		Nile crocodile	
	Ornamental fish (other than Goldfish and Koi)		Tilapia	
	Shrimp		Water Hawthorne (Waterblommetjies)	
	Trout			
	Other (Please specify)			

Indicate answer with “X” or specify other species farmed

2.5 What method of culture do you practice in your company/ project?

Monosex	
Monoculture	
Polyculture	
Integration of fish and livestock	
Aquaponics	
Other (Please specify)	

Indicate answer with “X” or specify other culture method

2.6 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 other scale operation.

3. ENTERPRISE VALUE CHAIN

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 method of production does the company/ project use?

Basket		Recirculating	
Cages		Tanks	
Long line		Pump ashore	
Racks		Ponds	
Rafts		Raceways	
Trays in ponds		Circular ponds	

Earth ponds		Urban ponds	
Glass fish tanks			
Other (Please specify)			

Indicate answer with “X” or specify other

3.3 What is the size of production system you use in your project/ company ?

Surface area	
Depth	
Volume	

4. VALUE AND VOLUME OF PRODUCTION

4.1 What were the total volumes (in metric tonnes) and the total values (annual turnover) of production of species for the years 2000- 2006?

Year	Species	Volume (metric tonnes)*	Values (R's)	Total (%)

*In the case of ornamentals, please indicate number of individuals produced.

4.2 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%
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Indicate answer with “X”

5. MARKETS (DOMESTIC, EXPORT AND IMPORT)

5.1 Please indicate the percentage volume and value of production per species supplied to the domestic market:

Market	Species	% Volume (metric tonnes)/ Rand Value produced/ % of production/ no of individuals
Eastern Cape		
Free State		
Gauteng		
KwaZulu Natal		
Limpopo Province		
Mpumalanga		
Northern Cape		
North West		

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Western Cape		
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Indicate answer with "X".

If you export, when did you begin exporting?

Species	Year

5.3 Which exports markets do you supply product?

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

Do you import aquaculture products?

Yes	No

If yes, what products do you import?

6 EMPLOYMENT

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

*Definition: 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.

Year	Professional (incl owner/ manager)				Skilled				Middle Service				Semis killed				Unskilled				Total
	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	
2004																					
2005																					
2006																					
2007																					
2008																					
2009																					

Please indicate number of employees per category per year.

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

Year	Professional (incl owner/ manager)				Skilled				Middle Service				Semis-killed				Unskilled				Total
	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	B	C	I	W	
2004																					
2005																					
2006																					
2007																					
2008																					
2009																					

Please indicate number of employees per category per year.

6.3 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
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Indicate answer with "X"

7. HUMAN RESOURCE DEVELOPMENT AND SKILLS DEVELOPMENT

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

Yes	No
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7.2 If yes to 7.1, what programmes are offered? Please indicate whether the programme is conducted in house or outsourced to a training organisation.

Mentorship	In-house	Outsourced
Training	In-house	Outsourced
Skills development	In-house	Outsourced

Indicate answer with "X"

7.3 Please indicate your current training/ skills requirement:

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7.4 Please indicate your future training/ skill requirements for 2007- 2009:

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7.5 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 positions listed below?

Postgraduate	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”.

8. BLACK ECONOMIC EMPOWERMENT (OWNERSHIP)

8.1 What is the BEE status of your company?

Black owed (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”

8.2 Does your company have a BEE rating?

Yes	No
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8.3 Do you know how/where to obtain a BEE rating?

Yes	No
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9. ENVIRONMENTAL MANAGEMENT

9.1 Please describe the source of your water supply.

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

Please rate the importance of the following environmental issues to the operation of your company

9.2 Do you aerate your production system?

Yes	No
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9.3 If yes what type aerator is used in your company or project?

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9.4 Do you filtrate your production system?

Yes	No
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9.5 If yes what type of filter used in your company or project?

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9.6 In order to understand aquaculture’s non-consumptive use of water supply, how much water (in kiloliters) flow in and out of your operations.

Maximum	In (KI)	Out (KI)
Marine		
Freshwater		

Minimum	In (KI)	Out (KI)
Marine		
Freshwater		

9.7 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 quality					
Water quality					
Water use permits					
Water pollution (effluent)					
Impact of species on environment					
Feed practice					
Chemical use					
Disease management					

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

9.8 Do you measure water quality in your company or project?

Yes	
No	

9.9 If yes can you fill in the level of water quality that you measure in your company or project?

Temperature	
Dissolved Oxygen	
pH	
Turbidity	
Ammonia	
Nitrite	
Nitrate	
Other	

9.10 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. ENTERPRISE DEVELOPMENT

10.1 Please indicate your current sources for financing

Domestic Investment and Loans	Foreign investment	Foreign aid	Government Assistance	Private Capital
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Indicate answer with “X”

10.2 Have catch fishing industry owners invested in your company/ project to prevent loss of running an aquaculture operation.

Yes	No
Nature of investment:	

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

Barrier 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 (SAB 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.

10.4 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.

11. SECTOR DEVELOPMENT

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

Aquaculture industry bodies	Yes
Abalone Farmers Association of Southern Africa	
Aquaculture Association of Southern Africa	
Marine Finfish Association	
Catfish South Africa	
Mussel and Oyster Forum	
South Africa Koi Keepers' Society	
South Africa Koi Traders Association	
South Africa Pet Traders Association	
Tilapia Association of South Africa	
Western Cape Tilapia Growers Association	
Western Cape Trout Farmers Association	
Ornamental Fish Producers	
Other (please specify)	

Indicate answer with "X"

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

Sector development Activities	1	2	3	4	5
Promote Aquaculture (national and international)					
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, policy, strategy & implementation					
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.

11.3 What kind of Feed source is used in your company/ project?

Live feed	
Frozen feed	
Dried feed	
Artificial feed	
Other (Please specify)	

12. SUSTAINABILITY OF THE AQUACULTURE

12.1 Problems faced by your company / project?

Lack of fry/ fingerlings /seed	Yes	No
Poor infrastructure	Yes	No
Disease occurrence	Yes	No
Insufficient water	Yes	No
Poor water quality	Yes	No
Lack of feed	Yes	No
Poor feed management	Yes	No
Predator	Yes	No
Regulatory approvals	Explain	
Financial support	Explain	
Technical support	Explain	
Information access	Explain	
Market access	Explain	
Other	Please specify	

Indicate answer with “X” or specify other

12.2 Do you have any intention to close your operation in the near future?

Yes	
No	

12.3 If yes, please elaborate/explain with a short description of reasons.

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13. FURTHER COMMENTS/SUGGESTIONS