

AQUACULTURE AND INVESTMENT OPPORTUNITIES IN SOUTH AFRICA

By

DEPARTMENT OF AGRICULTURE FORESTRY AND FISHERIES, BRANCH FISHERIES

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agriculture,
forestry & fisheries

Department:
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA

PRESENTATION OUTLINE

- Operation Phakisa
- Global status of aquaculture
- Aquaculture Aspirations & Interventions in South Africa
- Aquaculture interventions
- Aquaculture projects
- Investment Opportunities in the aquaculture sector in South Africa



Operation Phakisa was first publicly mentioned in the State of the Nation Address response...

“ *The first implementation of Operation Phakisa will be led by the Department of Environmental Affairs. It will focus on unlocking the economic potential of South Africa’s oceans, which are estimated to have the potential to contribute up to one hundred and seventy seven billion rand (R170b) to GDP by 2033 compared to fifty four billion rand (R54b) in 2010.* ”

H.E. President J.G. Zuma,
July 2014



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Why Operation Phakisa

...

BRINGING TOGETHER Government, State Owned Entities, Industry, Labour, Civil Society and Academia to collaborate in unlocking the economic potential of South Africa's Oceans.



...**UNLOCKING** the economic potential of South Africa's Oceans

...**DELIVERING** on the aspirations of the National Development Plan 2030



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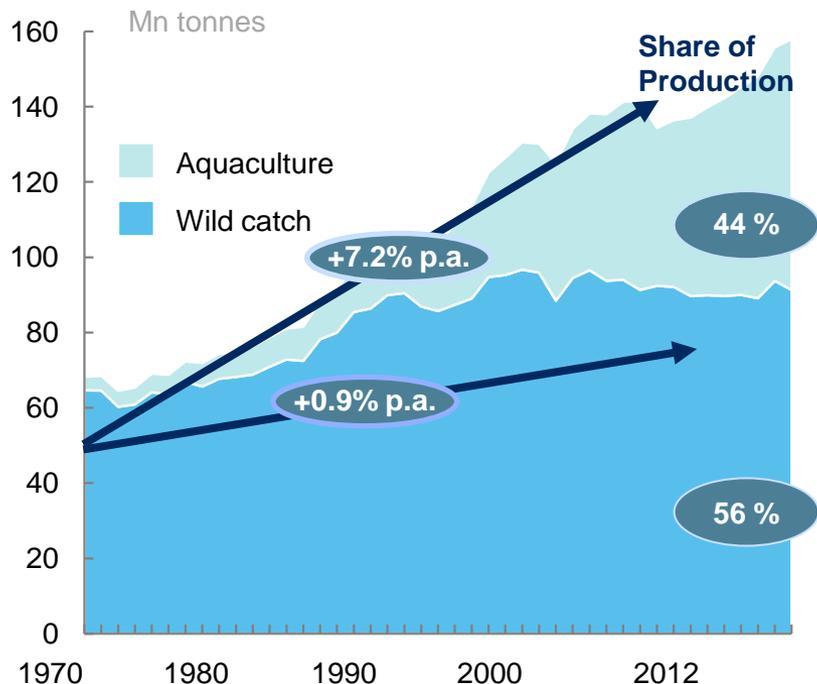
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Operation Phakisa: Oceans Economy Focus Areas



Globally, Aquaculture contributes to almost half of total supply

Global total fish production – wild catch and farmed (reported)



- Aquaculture production has shown strong growth of 7.2% p.a. from 1970 to 2012.
- Of the 141 million tonnes of fish consumed, over 70 million tonnes come from aquaculture which about 50%
- An additional 50 million tonnes of fish is required to feed the world population by 2030 and this production will come mainly from aquaculture

Factors influencing supply

Supplementing wild capture within maximum sustainable yields

- The need to employ sustainable fishing methods has become more important due to dwindling stocks of certain species
- FAO has classified most wild fisheries as either fully exploited or over exploited
- Increasing demand for fish products

Better technologies and production methods

- New technologies and breeds e.g. RAS system and GIFT strain for tilapia has enabled better yields and lower long term input costs
- Higher stocking capacity for shrimps which allows for higher yield
- Investment in research and development

Food Security

- Governments have a responsibility to ensure that everyone has enough to eat.
- Food needs to be available, accessible and affordable through a resilient and reliable supply system
- Fish is regarded as an essential part of a healthy and nutritious diet

AQUACULTURE SECTOR ASPIRATIONS

HEADLINES 2019: SA economy reaps the rewards of Operation Phakisa

“...to Aquaculture in South African has shown strong growth in 5 years, with **production from 2014 up 5 fold to 20,000 tonnes...**”

“...The Aquaculture sector in South Africa now **employs 15,000 people in direct and full time jobs.....**”

“Jobs in Aquaculture sector seen as **quality jobs, improving livelihoods in rural communities....**”

“...experts estimate the **revenue contributed by Aquaculture** to South Africa's economy **to be as much as R 3 Bn...**”



“...exciting momentum built in Operation Phakisa evidenced by **Aquaculture's inclusive growth...**”

Abalone



Oyster



Mussels



Finfish



KEY INTERVENTIONS

1

Selection and Implementation of Catalyst Projects



2 Legislative reform

3 Inter-Departmental Authorisations Committee

4

Globally recognised monitoring and certification system

Regulations



5 Aquaculture Development Fund

Funding



6 Capacity building for support services and skills development

Skills



7 Coordinated industry-wide marketing efforts

8

Preferential Procurement

Market

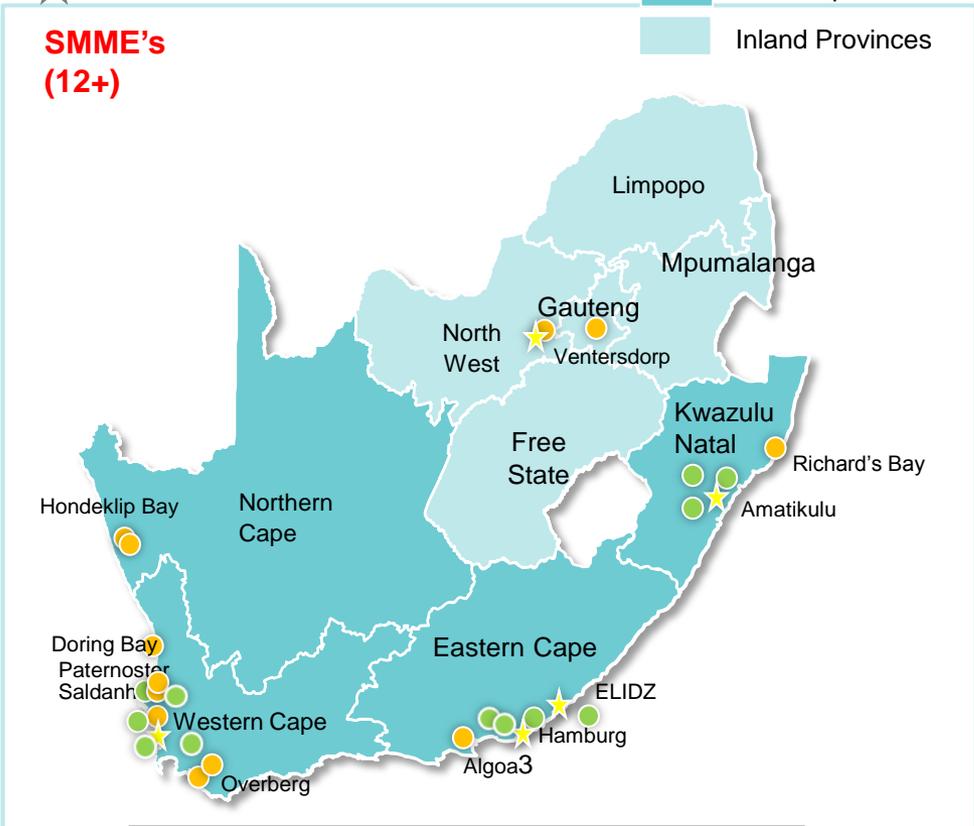


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Location and Species of 32 Aquaculture Projects

★ Phase 1 ● Phase 2 ● Phase 3 Coastal provinces Inland Provinces

SMME's (12+)



12 New Projects

● Really Useful Investment	● Aqua Food
● Blue Sapphire Pearls	● Southern Atlantic sea farms
● Imbaza Mussels	● West Coast Oyster Growers
● Hermanus Salmon	● Requa Mussels
● African Olive Trading	● Chapmans Mussels
● Oystercatcher Oysters	● Vaal fisheries Tilapia

Original 24 Projects

- ★ Hatchery expansion- Paternoster- Oyster
- ★ Expansion- ELIDZ Oceanwise- Kob
- ★ Expansion- Hamburg cluster- Oyster
- ★ Expansion - Roman Bay – Abalone
- ★ Expansion - Abagold
- ★ Expansion - HIK Abalone
- ★ Expansion - Amatikulu - Ornaments
- ★ Expansion - Wild Coast Abalone - Abalone

- New- Wild coast abalone ranching cluster - abalone
- New- Hamburg cluster - Kob
- New- Saldanha Molapong Cages - Trout and Salmon
- New - Amatikulu - Kob
- Expansion - Marine Growers - Abalone
- Expansion - Doring Bay Abalone - Abalone

- Expansion- Saldanha Blue Ocean Mussels - Mussel
- Expansion- Saldanha Bay Oyster Company - Oyster
- New- Richards Bay Sea Cage Farming - Dusky Kob
- New- Diamond Coast Abalone Ranching - Abalone
- Expansion - DST Abalone Hatchery
- Expansion - Jacobsbaai Sea Products - Abalone

Note: 4 Projects moved to business opportunities

Ventersdorp catfish
Adz Vanterdorp

Algoa Bay Yellowtail
Southern Atlantic

INVESTMENT OPPORTUNITIES

Investment Opportunities

Aquaculture Development Zones

What is An Aquaculture Development Zone?

- An area or site either on land or at sea set aside exclusively for aquaculture use or development
- Aquaculture Development Zone (ADZ) may have bulk infrastructure(reservoir, water pump) to attract investors
- ADZ are supported by key government policies such as Industrial Policy Action Plan, draft Agricultural Policy Action Plan, Agriculture Policy Action Plan, National Aquaculture Policy Framework, etc.
- Department of Agriculture, Forestry and Fisheries identified suitable Aquaculture Development Zones based on:
 - Locational advantages of the site
 - Availability of quality water (freshwater or seawater)
 - Carrying capacity of the ecosystem
 - Accessibility to markets (Infrastructure and logistical)
 - Potential socio-economic impacts (job creation, rural development, etc.)

Investment Opportunities

Aquaculture Development Zones

Benefits of Aquaculture Development Zones

- Minimising the cost of obtaining Environmental Impact Assessments authorisation due to the economies of scale
- Minimising the costs of infrastructure development (e.g. access roads, electricity, water intake and discharge)
- Easily coordinated support systems such as Extension Services, Veterinary Services, Hatcheries, etc.
- Coordinated marketing
- Associated benefits of agricultural zone of the sites
- Investment attraction
- Job creation

Eastern Cape Province: Coega Industrial Aquaculture Development Zone

Location & Size

- Situated approximately 20km east of Port Elizabeth
- Land based zone

Targeted Species

- Marine and Freshwater Finfish and Abalone

Current Status

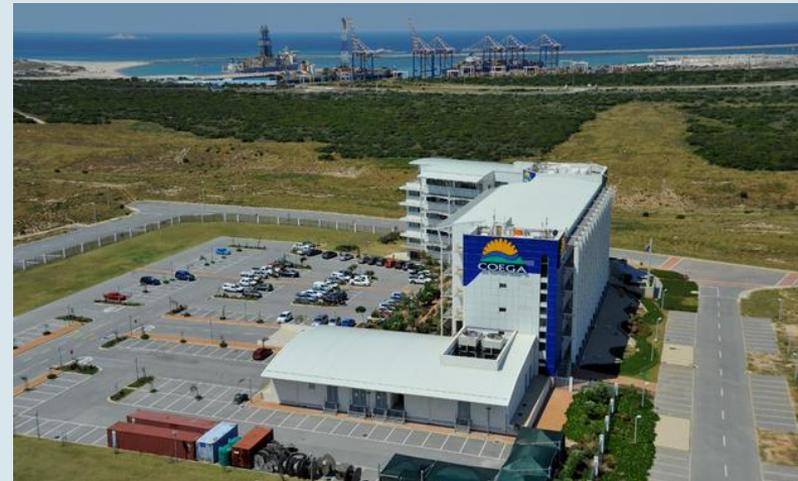
- No fish farming is taking place at the moment
- Project driven by the Coega Industrial Development Zone
- Department of Agriculture, Forestry & Fisheries provides technical support

Potential Production and Job Creation

- Production of **20 000 tons** per annum
- Direct Jobs - **10 000** & Indirect Jobs **15 000**

Progress

- Feasibility study conducted.
- Process for an Environmental Impact Assessment is initiated.





Queenstown

Eastern Cape

Fort Beaufort

Grahamstown

Coega IDZ

Algoa Bay ADZ (Sea Based)

Port Elizabeth

East London East London IDZ

Qolorha ADZ



Coega

Coega ADZ



Eastern Cape Province: Algoa Bay Aquaculture Development Zone

Location & Size

- Algoa Bay, Port Elizabeth
- Area is 285 hectares
- Sea based zone

Targeted Species

- Finfish (yellowtail)

Current Status

- No farming activities are taking place currently

Potential Production and Job Creation

- Production of **1 000 tons** per annum
- Direct Jobs **220**
- Indirect Jobs **780**

Progress

- Environmental Authorisation granted
- Environmental Authorisation has been advertised in the local newspapers as per requirements
- Appeals have been submitted to Department of Environmental Affairs
- Department of Agriculture, Forestry & Fisheries to respond to appeals to enable Environment Affairs' Minister to make a decision in light of the submitted





Port Elizabeth

Bethelsdorp

Motherwell

Coega ADZ

Port Elizabeth

Algoa Bay ADZ (Sea Based)

Eastern Cape Province: East London Industrial Development Zone

Location & Size

- Situated in the west bank of East London adjacent to the East London Airport.
- Area is 32 hectares
- Land based zone

Targeted Species

- Marine and Freshwater Finfish (salmon), Abalone and Seaweed

Current Status

- Currently two farms in the zone
- Current production of 200 tons

Potential Production and Job Creation

- Production of **10,000 tons** per annum
- Direct Job Creation: **2 000 jobs**
- Indirect Job Creation: **3 000 jobs**

Progress

- Zone driven by the East London Industrial Development Zone
- EIA granted for finfish and abalone culture
- One farm identified under Operation Phakisa
- Continuous marketing of the zone and identification of potential investors
- Two new farms to be established
- Department of Agriculture, Forestry & Fisheries provides technical support
- **Recently zoned for the culture of Barramundi, Rainbow trout and Atlantic salmon**





Queenstown

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Qolorha ADZ





Fullers Bay

East London Aquaculture Development Zone

Mlungu Rd
Langa Ave
Nisikizi Rd
Nkwilla Rd
Chester Rd

Prince George Circuit



Recent Sigdown

Finfish Farmer

Finfish Farmer

Bulk Seawater Reservoirs

Possible Incubator

Recent Sigdown

Finfish Farmer

Seawater Reticulation Path

Seawater Pumphouse

Image © 2015 DigitalGlobe

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© 2009 Google

Imagery Date: Apr 25, 2015

33°03'35.86"S 27°51'13.49" E elev 24 m

Eye alt 1.66 km

Eastern Cape Province: Qolora Aquaculture Development Zone

Location & Size

- Situated 60km northeast of East London
- Area is 26.4 hectares
- Land based zone

Targeted Species

- Marine Finfish, Abalone and Seaweed

Current Status

- Facilitating funding for support of infrastructure development
- Department of Agriculture, Forestry & Fisheries initiated process of identifying potential investors

Potential Production and Job Creation

- Production of **2 000 tons** per annum of Dusky kob or **700 tons** per annum Abalone
- Direct Jobs (**1000**); Indirect Jobs (**2000**)

Progress

- Environmental Impact Assessment approved
- Waste Management permit issued
- Community resolution issued
- Department of Agriculture, Forestry & Fisheries has developing zone designs, architectural and management plans
- Progress on obtaining lease from Dep. Rural Development and Land Reform

Challenges

- Access to funding for infrastructure development.



Queenstown

Eastern Cape

Fort Beaufort

Grahamstown

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Algoa Bay ADZ (Sea Based)

Port Elizabeth

East London East London IDZ

Qolorha ADZ



Kiwane

KwaVaku

Qolorha ADZ

Amatikulu Aquaculture Development Zone

Location & Size

- Situated approximately 130km from Durban and 7km from Amatikulu River
- Targeted area is 108 hectares
- Land Based Zone

Targeted Species

- Ornamentals, Prawns, marine and freshwater Finfish

Current Status

- Currently only 2 hectares are utilised for Ornamental fish farming
- 2 ornamental farms in operation

Potential Production and Job Creation

- Production of **15 000 tons** per annum
- Direct Job Creation: **6 000** jobs
- Indirect Job Creation: 10 000 jobs

Current Status

- Two projects identified under Operation Phakisa for the Amatikulu ADZ
- Department of Agriculture, Forestry & Fisheries are in negotiation with the Ingonyama Trust Board to obtain a letter of consent to utilise the identified site
- Department of Agriculture, Forestry & Fisheries initiated the process of obtaining Environmental Impact Assessment. The BID has been advertised.
- Department of Agriculture, Forestry & Fisheries, KwaZulu- Natal Wildlife & Trade Investment KwaZulu- Natal started engaging potential investors (one new investor for prawn farming)

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Amatikulu ADZ

Richard's Bay



Top view of sea cage

PROJECT PROGRESS

- Potential for 600 tons production
- Prioritised through Operation Phakisa to receive DST funding
- Deployment of first cages (four)
- Transfer of 25 000 fingerlings
- Rigorous environmental monitoring



Fingerlings



Tsepo on his workboat
"Lucky Too"

Western Cape Province:

: Saldanha Bay Aquaculture Development Zone

Location & Size

- Saldanha Bay is situated on the west coast of South Africa, approximately 100km north of Cape Town

Targeted Species

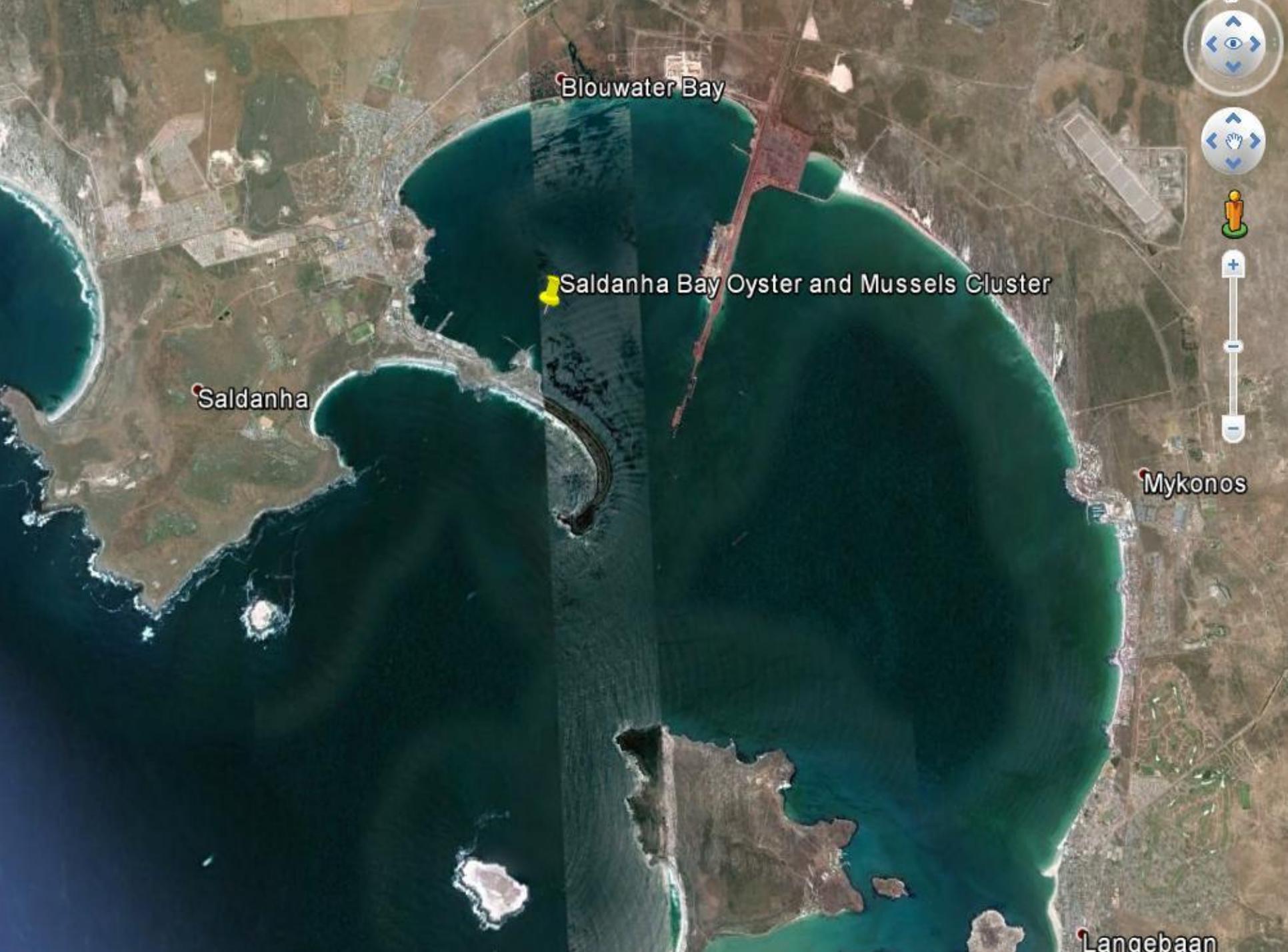
- Mussels
- Oysters
- Finfish (Salmon/trout)

Current Status

- 10 aquaculture farms in operation in Saldanha Bay

Progress

- Currently working on conducting blanket EIA for new entrants into the industry
- Currently have 4 phakisa projects in Saldanha Bay
- 6 new projects situated in Saldanha Bay applying for phakisa status



Blouwater Bay

Saldanha Bay Oyster and Mussels Cluster

Saldanha

Mykonos

Langebaan



Northern Cape Province:

Vanderkloof Trout Aquaculture Development Zone

Location & Size

- The Vanderkloof Dam is situated in the Northern Cape approximately 130 km downstream from Gariep Dam and is fed by the Orange River.
- Vanderkloof Dam is the second-largest dam in South Africa (in volume).

Targeted Species

- Freshwater Finfish (trout).

Current Status

- No farming activities are taking place currently.

Potential Production and Job Creation

- Production of **11518 tons** per annum
- Direct Jobs **1000**
- Indirect Jobs 1000

Progress

- Feasibility study complete
- Environmental Impact Assessment Authorisation to be obtained
- Commencing trout pilot project



Vandekloof Trout ADZ

Van Der Kloof

Vanderkloof Dam



THANK YOU