Aquaculture is a sector that presents a good opportunity to diversify fish production



Satisfy local demand



Contribute to food and nutritional security



Create sustainable job opportunities



Foster economic development



Capitalise on export opportunities



Stimulate rural development and livelihoods



Attract foreign direct investment



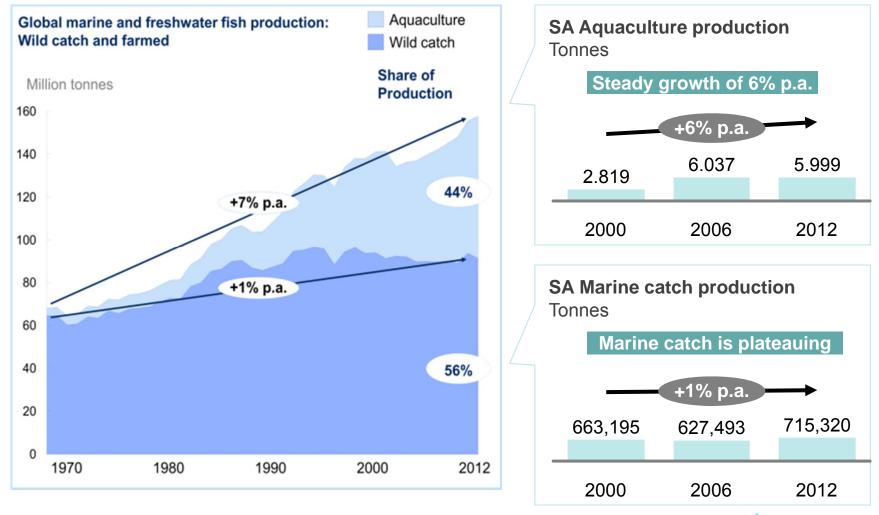
Safeguard sustainable environmental integrity



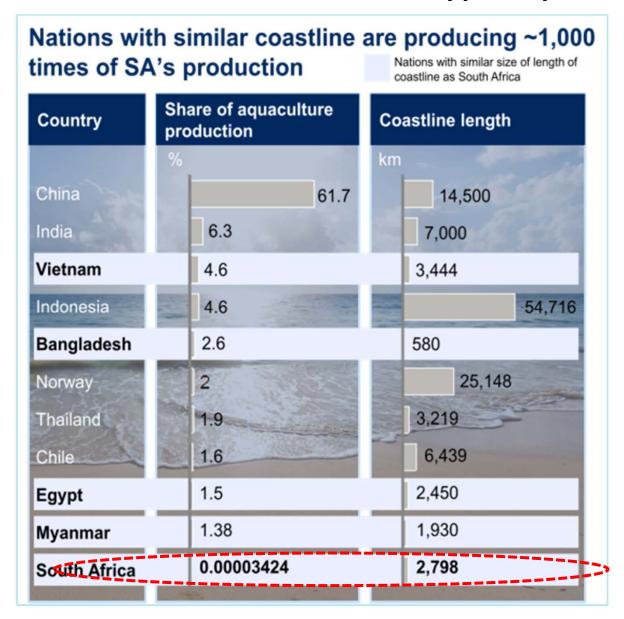
Create SMMEs and wealth generating opportunities through Aquaculture

Globally fish stocks are declining and wild capture will not be able to meet the increasing demand for fish products

Global trends point to an increasing role for Aquaculture in fish production



South Africa has the coastline to support aquaculture











The Lab aspires to catalyse growth in the sector by scaling up the sector as an initial step to sector development

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......"

"...experts estimate the revenue contributed by Aquaculture to South Africa's economy to be as much as R3 bn..."

""...exciting momentum built in Operation Phakisa evidenced by Aquaculture's inclusive growth..."

"...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...."

Abalone





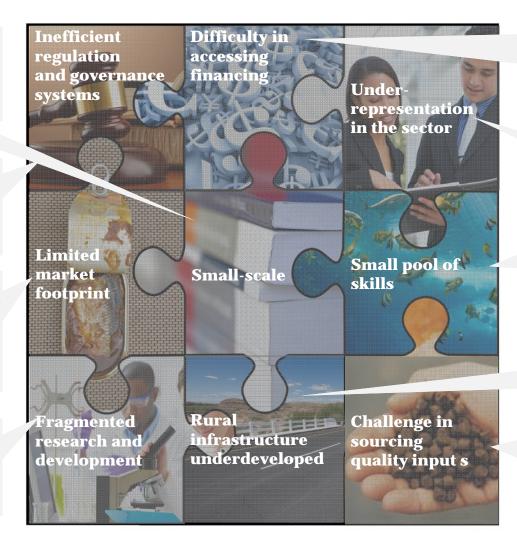
Ovster





The Aquaculture sector in South Africa has incredible potential and yet remains at a small-scale leading to many challenges for producers

- "...We don't have the economies of scale to be commercially viable ...
- "...It's taken 28 months to get a single permit to expand my farm..."
- "...we should be supplying salmon and trout instead of importing 1000s of tonnes..."
- "...our R&D should focus on meeting market demand in South Africa..."



- "... The way the banks price risk is crazy... few people really understand the nature of our business..."
- "...PDIs only make up less than 10% of the sector..."
- "...I lost all my fish since there was no fish vet..."
- "...High set-up costs are a huge barrier to entry in this sector..."
- "...We don't have the economies of scale to get quality feed from suppliers..."



Scenario: Current challenges in setting up an aquaculture farm

Mrs Nkosi and Mrs Sibiya grew up fishing in the Tugela River. Due to the depleted fish stocks, they cannot access affordable fish and would like to start a kob farm in the KwaZulu Natal:

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Gather information

Source government funds

Secure private funding

- There is no single authority on South African aquaculture market data
- 2. Export/ import trend data is not easily available
- Few state-sponsored funds are exclusively for Aquaculture ventures
- 2. Sector specific incentives require will typically only match the entrepreneurs own contribution
- 1. Aquaculture is highly capital intensive relative to its scale
- 2. Significant delay time delay (up to 5 years) before return on investment is realised

Apply for land and sea space



Start operation...

- Operations are challenging and very sensitive to production technology
- 2. Imported systems typically outperform locally available technologies

- Formalise intent to operate
- Cost of permit applications can be prohibitive
- 2. Sluggish permitting process due to multiple stakeholder departments
- 1. State-owned land has potential user conflicts
- 2. Access to privately-owned requires lengthy negotiations with multiple stakeholders



Scenario: Challenges to operating an aquaculture farm

Mrs Nkosi and Mrs Sibiya met all their infrastructure and legal requirements. Mrs Nkosi and Mrs Sibiya managed to grow their finfish and are trying to access the market



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Operate facility

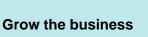
Harvest product

- 1. They cannot find good quality feed—the sector is too small for processors to produce to a consistent quality
- 2. Finding staff is a challenge, with minimal diversity 2. To cover the cost of in terms of women and youth, PDIs in management positions
- 3. Skilled labour requires very high salaries and is likely to be poached by larger commercial entities
- 4. Limited access to information and support services regarding best practice

- 1. Disease control and prevention is crucial to quality product
- production the retail price is uncompetitive

Sell or market produce

- 1. Local restaurants have separate and inconsistent changes
- 2. Under developed supply chain means farmers sell their own product
- 3. Consumer pool is small and is not aware of buying aquaculture products

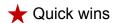




- 1. The Venture Capitalist cuts his losses and pulls out
- 2. Many farmers end up pulling out of the industry



Solutions developed focuses on priority initiatives that support the implementation of the 24 catalytic projects





Selection and Implementation of 24 Projects

Select and implement 24 aquaculture projects over 3 phases in order to increase the scale of the aquaculture sector; projects comprise both new farms and the expansion of existing farms







Legislative reform

Amend legislation to harmonise the assortment of existing regulations and promote aquaculture sector growth



Inter-departmental authorisations committee

Establish a committee that will streamline and coordinate applications and approvals in the aquaculture sector



Globally recognised monitoring and certification system

Establish a recognised monitoring and certification system to boost exports of South African aquaculture products







Aquaculture development fund

Establish an integrated pool of existing funds in order to finance all phases of aquaculture projects (including pre-production) and encourage new entrants to participate in the aquaculture sector







Capacity building for support services

Increase and up-skill technical resources (e.g., extension officers) available to support aquaculture sector growth







Coordinated industry-wide marketing efforts

Launch coordinated industry-wide marketing efforts to increase local consumption of aquaculture products, and encourage the growth of small-scale farmers / new entrants



Preferential Procurement

Partner with government institutions to procure aquaculture products, thereby increasing local consumption and improving nutritional levels in South Africa





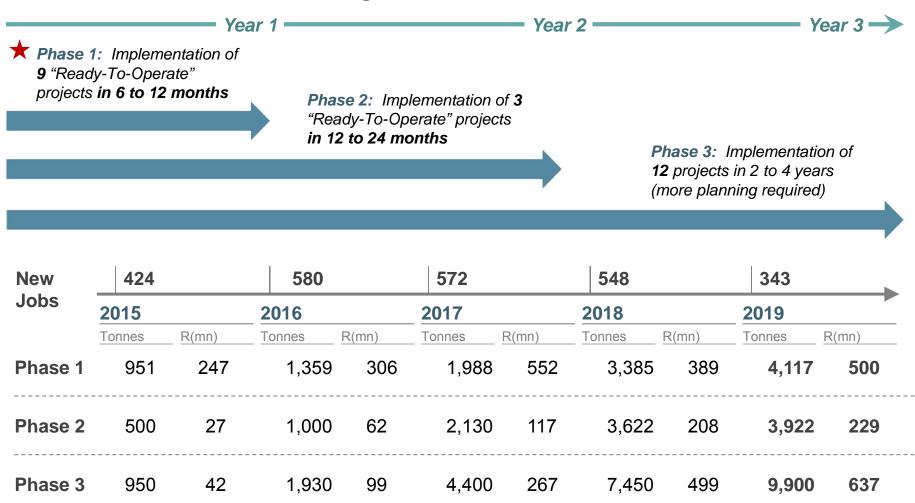
Deep dive: 24 projects have been selected and sequenced for

implementation across 3 phases Project/enterprise Phase 1 Hatchery expansion- Paternoster- Oyster Phase 2 Expansion- East London IDZ- Kob Phase 3 Expansion- Hamburg cluster- Oyster Coastal provinces Expansion-Ventersdorp- Catfish Inland Provinces Expansion - Jacobsbaai Sea Products Expansion - Abagold Expansion - HIK Abalone New - Amatikulu - Kob Limpopo Expansion - Amatikulu - Ornamentals Expansion - DST Abalone Hatchery Mpumalanga New- Hamburg cluster- Kob Gauteng North West New- Saldanha Viking Cages- Trout ADZ-Ventersdorp- Catfish Doring Bay Abalone Free State Kwazulu Natal Richard's Bay New - Saldanha Viking Cages - Salmon Northern Cape Amatikulu Expansion- Saldanha Blue Ocean Mussels- Mussel Hondeklip Bay Expansion- Saldanha Bay Oyster Company- Oyster Van der Kloof New-Saldanha Southern Atlantic Sea Cages-Salmon New- Algoa Bay Sea Cage Farming- Yellowtail Doring Bay Eastern Cape New- Richards Bay Sea Cage Farming- Dusky Kob Saldanha New- Diamond Coast Abalone Ranching- Abalone Matzikama Western Cape New - Van der Kloof - Trout New - Matzikama Brenner Dietrichs - Abalone New - Buffeljachts - Abalone

Deep dive: Phase 1 aims to implement Catalytic Projects

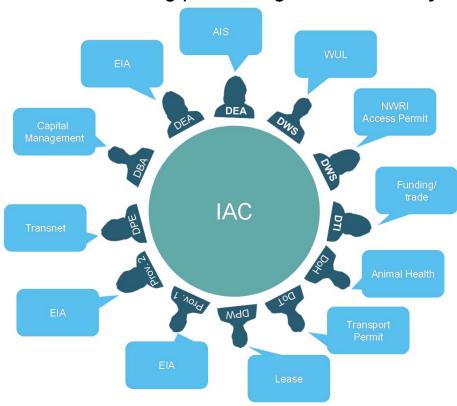


The challenges presented by the production scale of the sector will be addressed by the expedited implementation of Aquaculture projects, which will serve as a catalyst to the growth of the sector

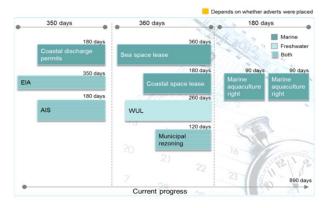


Deep dive: Establishment of an Inter-Departmental Authorisations Committee

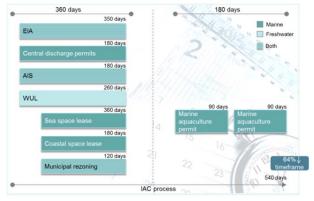
Currently, there is an uncoordinated approach to processing of applications for Aquaculture, approvals of which can take up to **890 days**. The establishment of the Inter-Departmental Authorisations Committee ("IAC") aims to co-ordinate applications and approvals, with the expectation of reducing processing time to **240 days**.



Representation at the IAC by all relevant departments



890 days to 240 days!





Deep dive: Establishment of an Aquaculture Development Fund

The Aquaculture sector faces difficulty in accessing finance as the sector is small and not well understood by financing institutions.

ADF aims to fast-track growth, while meeting transformation objectives

- Funding pool to assist end-to-end Aquaculture projects
- Coordinates funding from various government departments and DFIs through an MoC
- Initial proposal for ADF to be managed by Land Bank/DFI
- Key focus of ADF to drive transformation / inclusivity by providing new entrants with access to funding in pre-production phase

			ADF involvement and leadership		
ADF will receive financing requests from projects and disburse funds to projects via Land Bank	Project lifecycle	Phase 1	Phase 2	Phase 3	Phase 4
	Description of support provided	 Develop concept, consult technical advisors 	Apply for permits, approvals etcBusiness plans	 Acquire and set- up primary and supporting infrastructure 	 Begin production
	The "Business as usual" support/ funders	DAFFthe dti	 DST/the dti NAMC SMME department Seda 	 The dti NEF IDC/ NYDA Private investors other 	-

DFI - Development Financial Institutions; DAFF - Department of Agriculture, Forestry & Fisheries; Seda - Small Enterprise Dev Agency
NEF - National Empowerment Fund; DST - Department of Science & Technology; ICD - Industrial Development Corporation;
NAMC - National Aquaculture Marketing Council; NYDA - National Youth Development Agency

SOURCE: Aquaculture Lab

for new projects

Where ADF will operate

Deep dive: A coordinated industry-wide marketing and industry-led effort needs to take place

(a) Market Intelligence

(b) Improve domestic markets

(c) Value chain ownership and product development







Evaluate a set of standards the retailers suggest as a minimum for their common interests



Negotiate with both retailers & producers to adopt the standards



The availability of good quality value-for-money products increases to consumers

(d) Promote responsible, fair regulation and environmental certification

Scenario: With implementation of Operation Phakisa initiatives, Mrs. Nkosi and Mrs. Sibiya will be able to expand their farm

They tried to gather information on current production and market status (volume, production systems, markets, etc.)

They approach financial institutions for funding



They approach government for authorisations relevant to fish farming



Starts
operations!
Mrs Nkosi
and Mrs
Sibiya
believe that
their dream
came true.

Mrs Nkosi and Mrs Sibiya pay off their loan and they expand their farm.

Mrs Nkosi and Mrs Sibiya sells their fish



Mrs Nkosi and Mrs Sibiya harvest their first batch of fish.





