Aquaculture

Operation Phakisa: Unlocking the Economic Potential of South Africa's Oceans

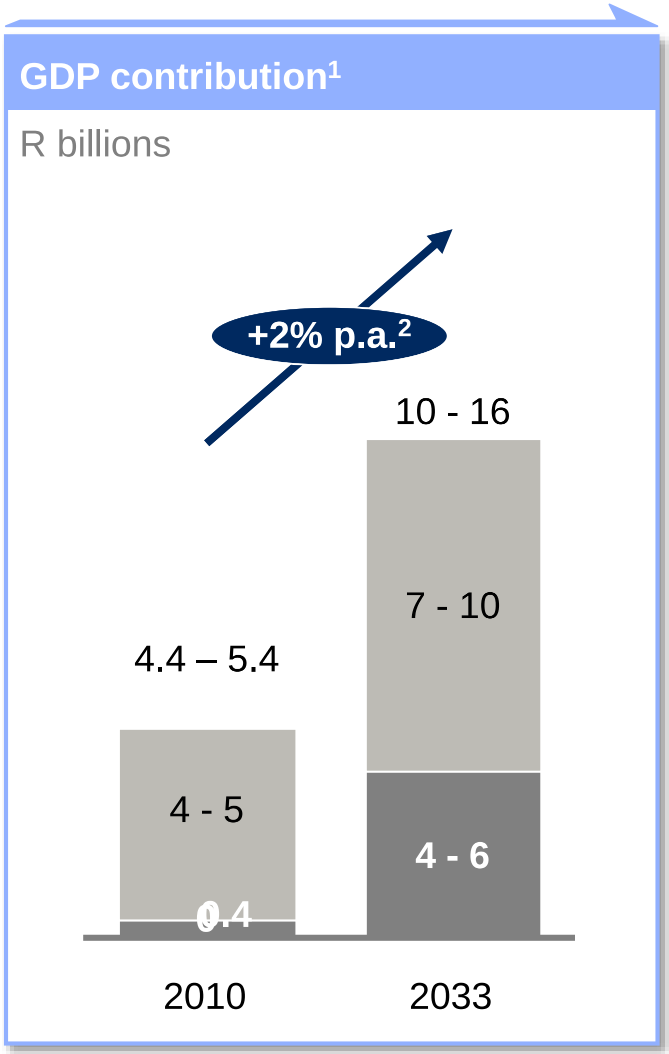
3rd August 2014

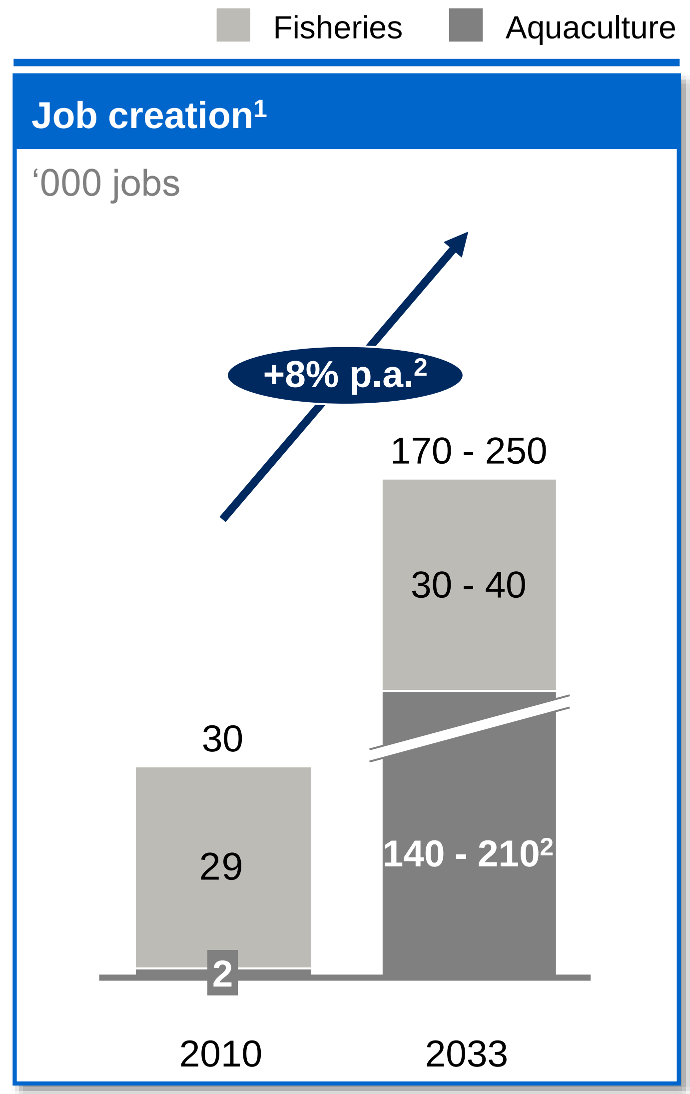







Marine Aquaculture could contribute R4 to 6 bn to GDP and 140,000 to 210,000 jobs by 2033





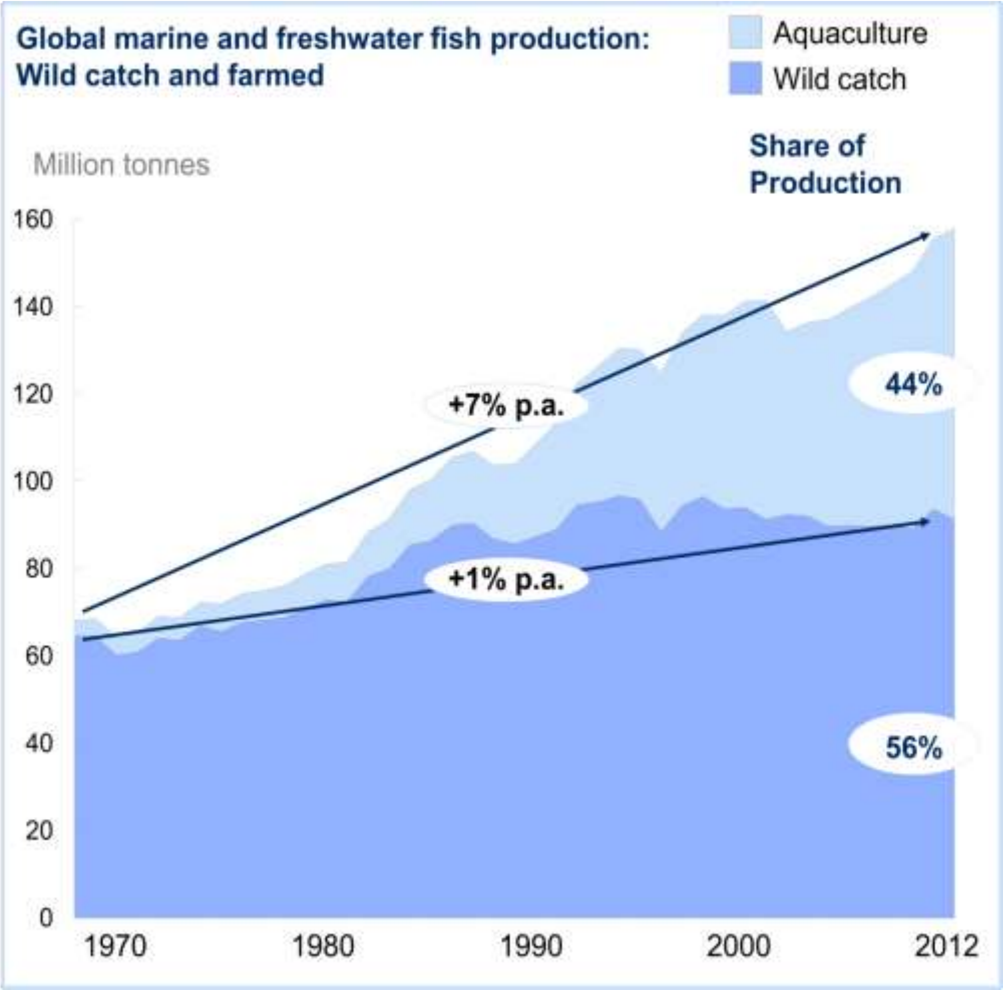
1 Only direct potential (excl. multiplier effect) from the EEZ considered; 2 Growth rate per annum (p.a.) is based on the projected base 2033 value

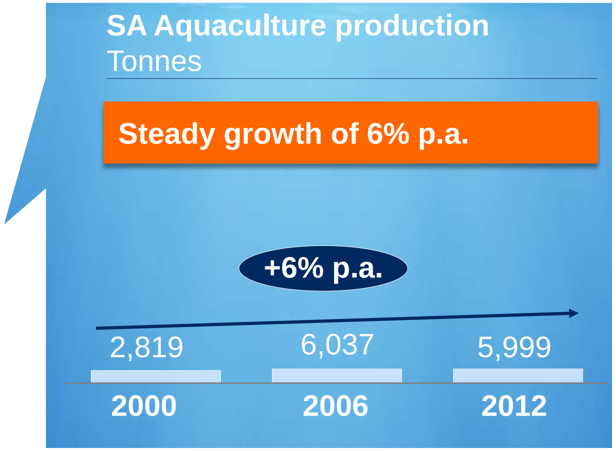
2 Based on 2033 catch / jobs ratios: Abalone – 1 MT / job, Mussel – 11 MT / job, Oyster – 2 MT / job, Marine finfish – 0.3 MT / job (obtained from expert interviews)

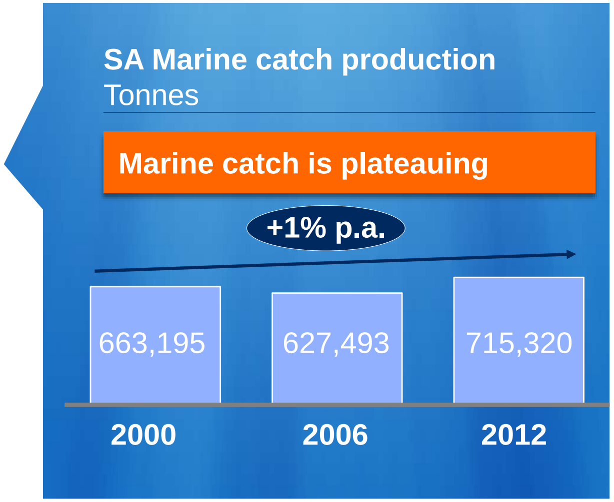
SOURCE: StatsSA; IHS Global Insight; Expert interviews; TNPA Port Development Plan 2011/2012; Transnet Corporate plan 2013/2014; NMMU estimates, AME; McCloskey; Platts; Press search

GLOBALLY FISH STOCKS ARE DECLINING

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



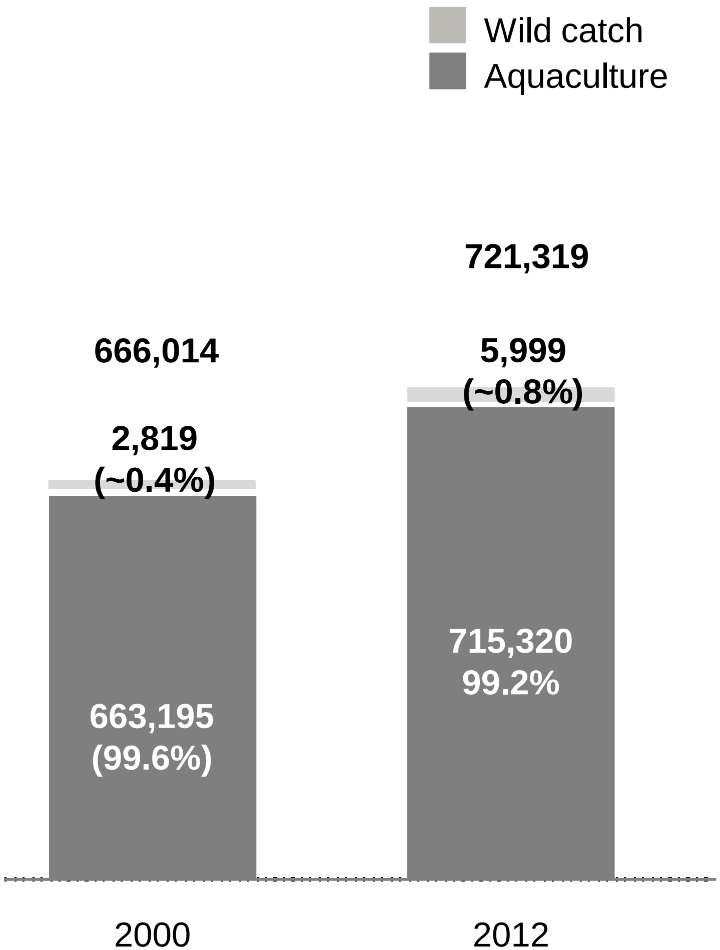


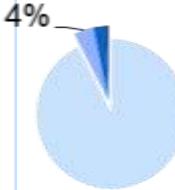
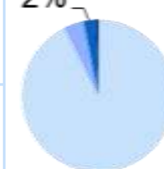
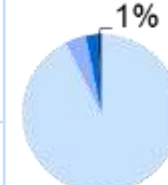


SOURCE: FAO State of World Fisheries and Aquaculture 2014; FishStatJ, DAFF

AQUACULTURE IN SOUTH AFRICA COULD CONTRIBUTE MUCH MORE

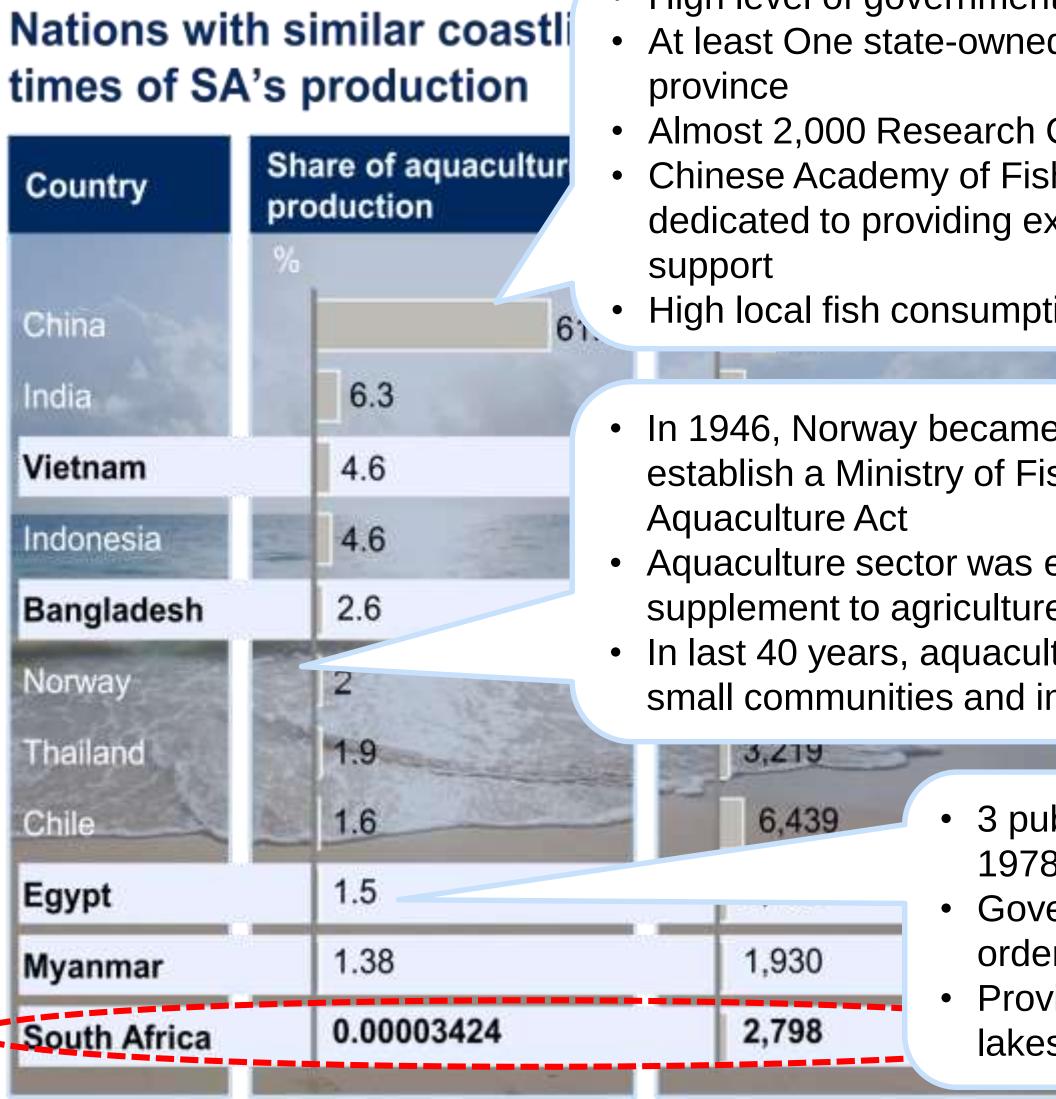
Aquaculture only contributes ~0.8% of SA fishery production

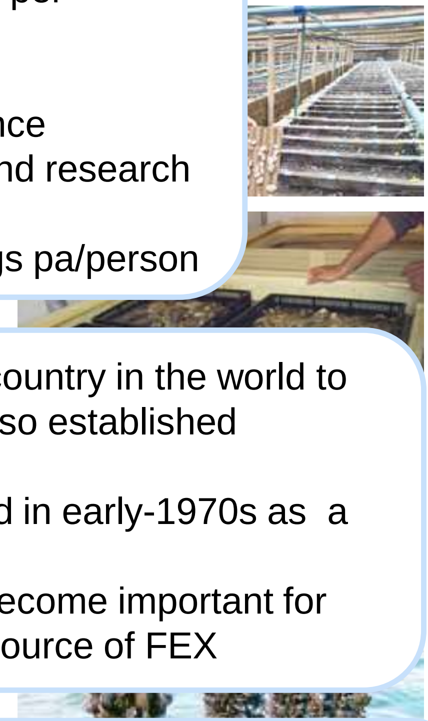


	Species	Appearance	Name	%/Σ value
1	Abalone		Perlemoen Abalone *Haliotis Midae*	
2	Oyster		Pacific Oyster *Crassostrea Gigas*	
3	Mussels		Mediterranean Mussel *Mytilus Galloprovincialis*	
			Black Mussel *Choromytilus meridionalis*	
4	Marine finfish		Dusky Kob *Argyrosoumus Japonicus*	
			Yellowtail amberjack *Seriola lalandi*	

SOURCE: FishStatJ, DAFF, FAO 2014 State of World Fisheries ; CIA World Factbook

SOUTH AFRICA HAS THE COASTLINE TO SUPPORT AQUACULTURE





- High level of government support
- At least One state-owned hatchery per province
- Almost 2,000 Research Centers
- Chinese Academy of Fishery Science dedicated to providing extension and research support
- High local fish consumption – 35kgs pa/person

- In 1946, Norway became the first country in the world to establish a Ministry of Fisheries. Also established Aquaculture Act
- Aquaculture sector was established in early-1970s as a supplement to agriculture
- In last 40 years, aquaculture has become important for small communities and important source of FEX

- 3 publicly-managed farms opened in 1978 in order to encourage private
- Government also opened 3 hatcheries in order to supply fry, fingerlings etc
- Provided ~600 sq km of land close to lakes at heavily subsidised rates

SOURCE: FishStatJ, DAFF, FAO 2014 State of World Fisheries ; CIA World Factbook

The Aquaculture Lab Aspiration 2019

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 accelerated growth**…"

Abalone

Oyster

Mussels

Finfish

EMERGING KEY ISSUES IN THE SECTOR

The challenges to growing the sector can be grouped and have cross-cutting implications

"...It's taken 28 months to get a single permit to expand my farm..."

"... The way the banks price risk is crazy... few people really understand the nature of our business..."

"...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..."

"...PDIs only make up less than 10% of the sector..."

"...I lost all my fish since there was no fish vet..."

"...Aquaculture isn't even on the radar when it comes to spatial planning..."

"...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..."

MARKETS – IMPORT SUBSTITUTION POTENTIAL

A typical seafood platter served in South Africa consists of mostly imported produce:

Mussels: From New Zealand

Prawns: From India

Squid: From Argentina

Linefish: Catfish From Vietnam

CATALYSTS FOR UNBLOCKING THE AQUACULTURE POTENTIAL

20,000 tonnes | **R3 bn** | **15,000 jobs** | **Transformation**

Aquaculture Sector Growth

A Expediting the execution of catalytic projects

1. Implementation of **3** "Ready-To-Operate" projects* **in 6 months** (Quick Wins)
2. Implementation of **10** "Ready-To-Operate" projects* in **12 months** (Phases 1 and 2)
3. Implementation of **10** Phase 3 and Phase 4 projects (24 months)

TOTAL OF 23 PROJECTS!

B Efficient and effective regulatory mechanisms

4. An efficient monitoring and certification system
5. Establish Intra-governmental Authorisations Committee within existing structure
6. Legislative reform to position the Aquaculture sector
7. Establish a funding platform (Aquaculture Development Fund)

C Creating access to markets locally & abroad

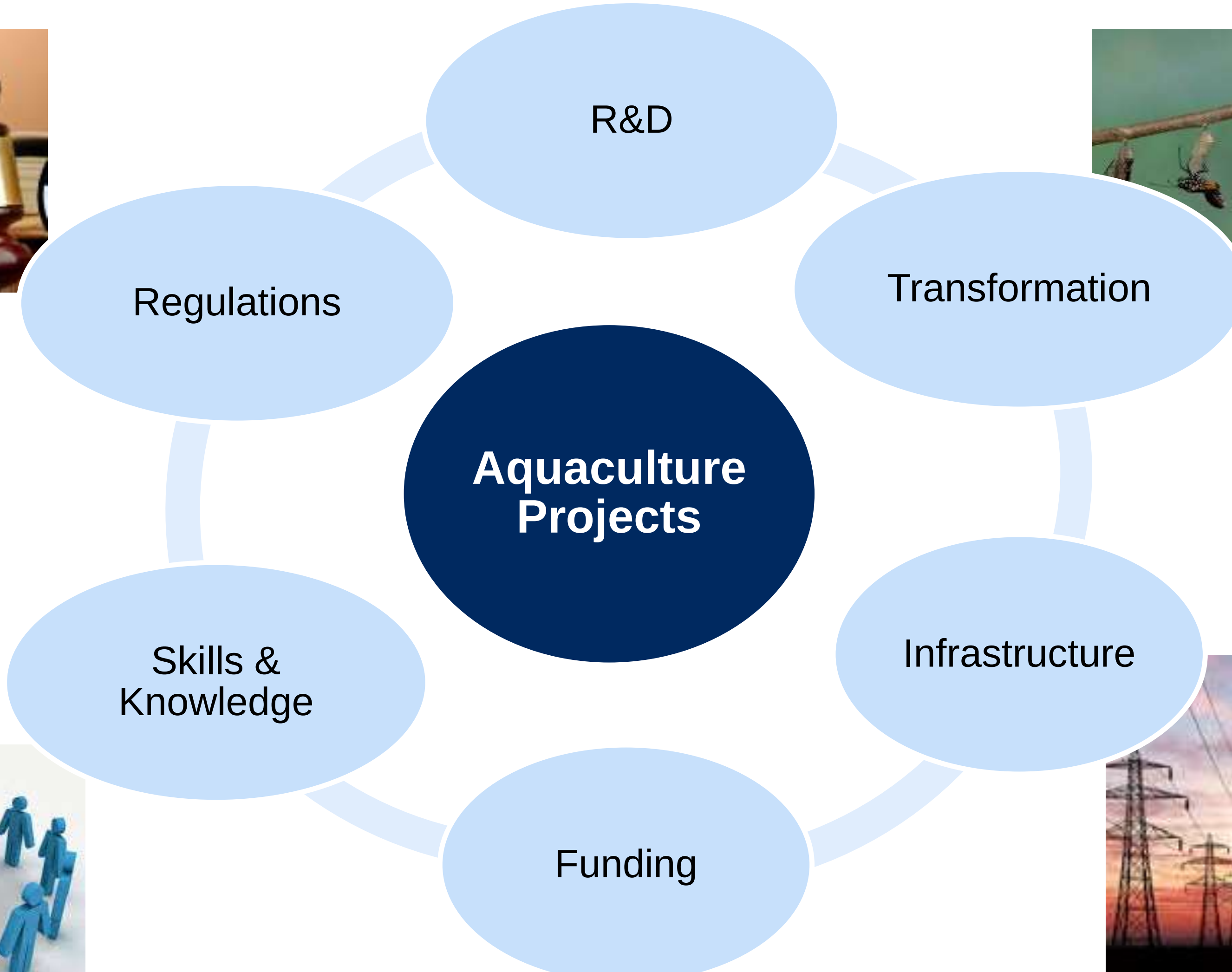
8. Industry-wide marketing efforts within existing structures
9. Value chain ownership and productivity

Information sharing mechanism:
- Within Government
- Within Industry
- Between Industry & Government

★ **Quick Win initiatives**

BEYOND THESE CATALYSTS, PROJECT SPECIFIC ENABLERS ARE BEING DEVELOPED

Key enablers are critical to the success and sustainability of projects implemented



PROJECTS WERE PHASED BASED ON CRITERIA

The approach taken was to phase projects based on its ability to start operations in the shorter term:

1

Identified and profiled projects:

- Expansion or New?
- Species – is it marketable in the short term
- Terrain suitability by species
- Current and potential Production Tonnage and Value
- Jobs created
- Availability of existing Technical capabilities

2

Assessed projects on readiness to start operations:

- Status on Regulatory requirements (EIA approved, permits received, etc)
- Existing infrastructure – primary and secondary (status of facilities)
- Accessibility of technical expertise
- Established value chains

3

Ready-to-operate in 6 months: Quick Wins

Ready-to-operate in 6-12 months: Phases 1 & 2

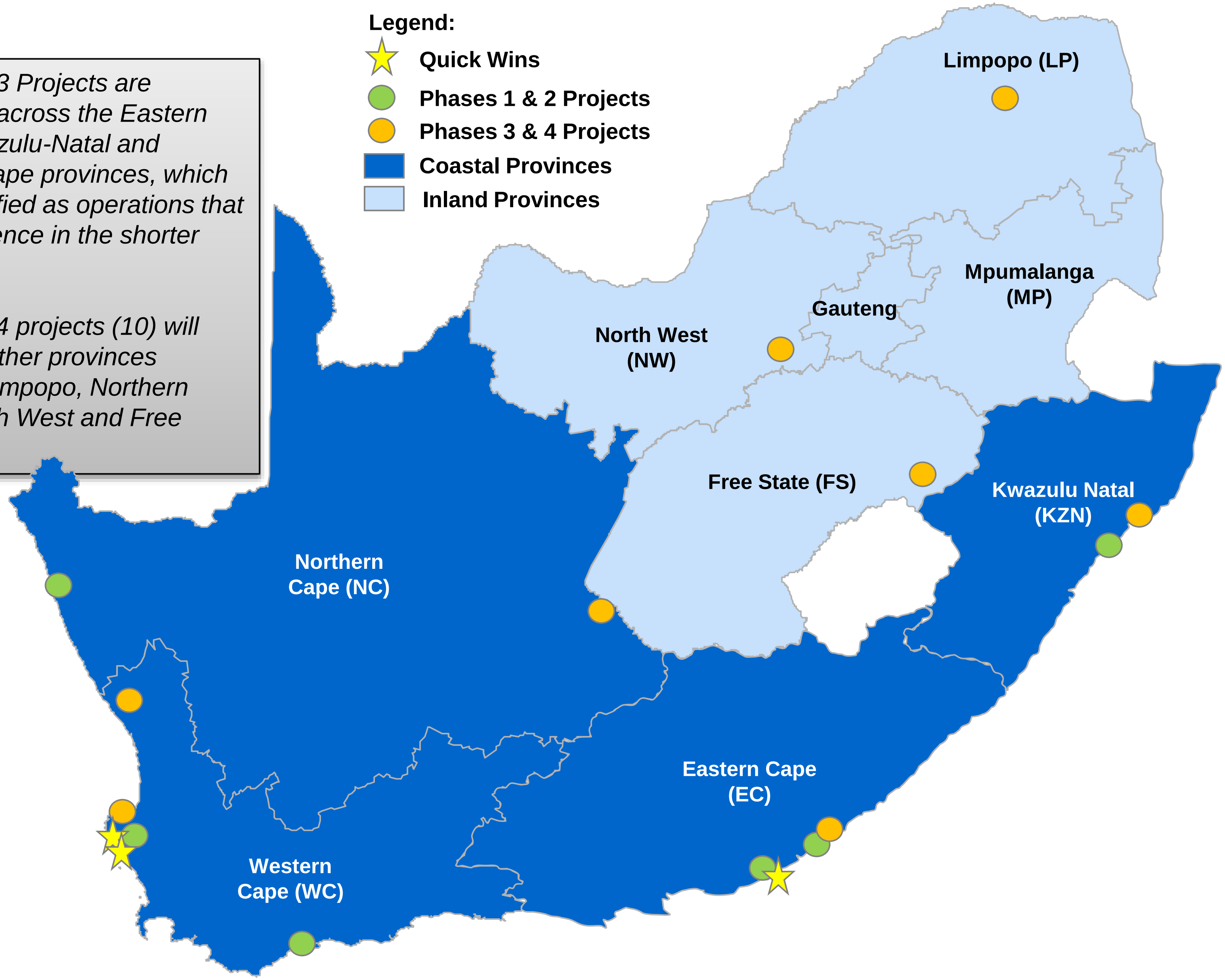
Ready-to-operate in 12-24 months: Phases 3 & 4

>24 months: Business Opportunities

Distribution of Projects by Phases

**The first 13 Projects are distributed across the Eastern Cape, Kwazulu-Natal and Western Cape provinces, which were identified as operations that can commence in the shorter term.*

Phases 3&4 projects (10) will extend to other provinces including Limpopo, Northern Cape, North West and Free State.



Initiative 1: Implementation of 3 "Ready-To-Operate" projects in 6 months

The sector faces many start-up and operational challenges due to a wide variety of blockages. In addition, Aquaculture does not have the economies of scale required to establish a strong position as a sector

Initiative concept/details/highlights:

- This initiative **aims to kick-start growth** in the sector with the scaling up of 3 "Ready-To-Operate" projects to achieve an initial level of scale for established species.
- Expediting the implementation of projects will also **test and refine the feasibility of mechanisms** developed for industry enablers in order to ensure effective implementation across the other Phases 1 and 2 projects.
- Targets for scale by species by 2019 is as follows:

Species	Additional production (T)	Additional value (Rmn)
Mussels	3,000	57
Oyster	2,063	63
TOTAL	**5,063**	**120**

Additional Production Value: R120 million / cycle & 570 jobs

Implementing agency:

Private Sector

Key stakeholders identified (not exhaustive):

- DAFF
- Industry associations
- The dti

Required resources

Investment (R mn): 99 million

Implementation timeframe

- Start date: October 2014
- End Date: March 2015

Key Performance Indicators (KPIs)

- Additional production of 5,063 Tons
- Additional jobs of 568
- Progress towards 50% representivity within 5 years

DAFF = Dept. of Agriculture, Forestry and Fisheries; DEA= Dept of Environmental Affairs; DPW= Dept. Publics Works; DWAS= Dept. of Water Affairs & Sanitation; DRDLR= Dept. Rural Development and Land Reform; DTI= Dept. of Trade and Industry; DPE= Dept. Public Enterprises; DFI= Development Finance Institutions; IDC= Industrial Development Corporation; NEF= National Empowerment Fund; DBSA= Development Bank of Southern Africa; PIC= Public Investment Corporation, WCADI=Western Cape Aquaculture Development Initiative

Initiative 2: Implementation of 10 "Ready-To-Operate" projects in 12 months

These projects will serve as a catalyst to spur the growth of the industry

Initiative concept/details/highlights:

- This initiative aims to scale up production across species with implementation of 10 "Ready-To-Operate" projects.
- Expediting the implementation of these projects will facilitate the development of value chains to sustain the sector's growth.
- Targets for scale by species by 2019 is as follows:

Species	Additional production (T)	Additional value (Rmn)
Kob	13,200	783
Abalone	2,000	650
Oysters	1,727	85
Salmon	1,240	108
Ornamentals	14	4
TOTAL	**18,181**	**1,630**

Additional Production Value: R1,6 billion / cycle & 3,423 jobs

Implementing agency:

Private Sector

Key stakeholders identified (not exhaustive):

- DAFF
- ELIDZ
- The dti

Required resources

Investment (R): 2,6 billion

Implementation timeframe

- Start date: Jan 2015
- End Date: Sept 2015

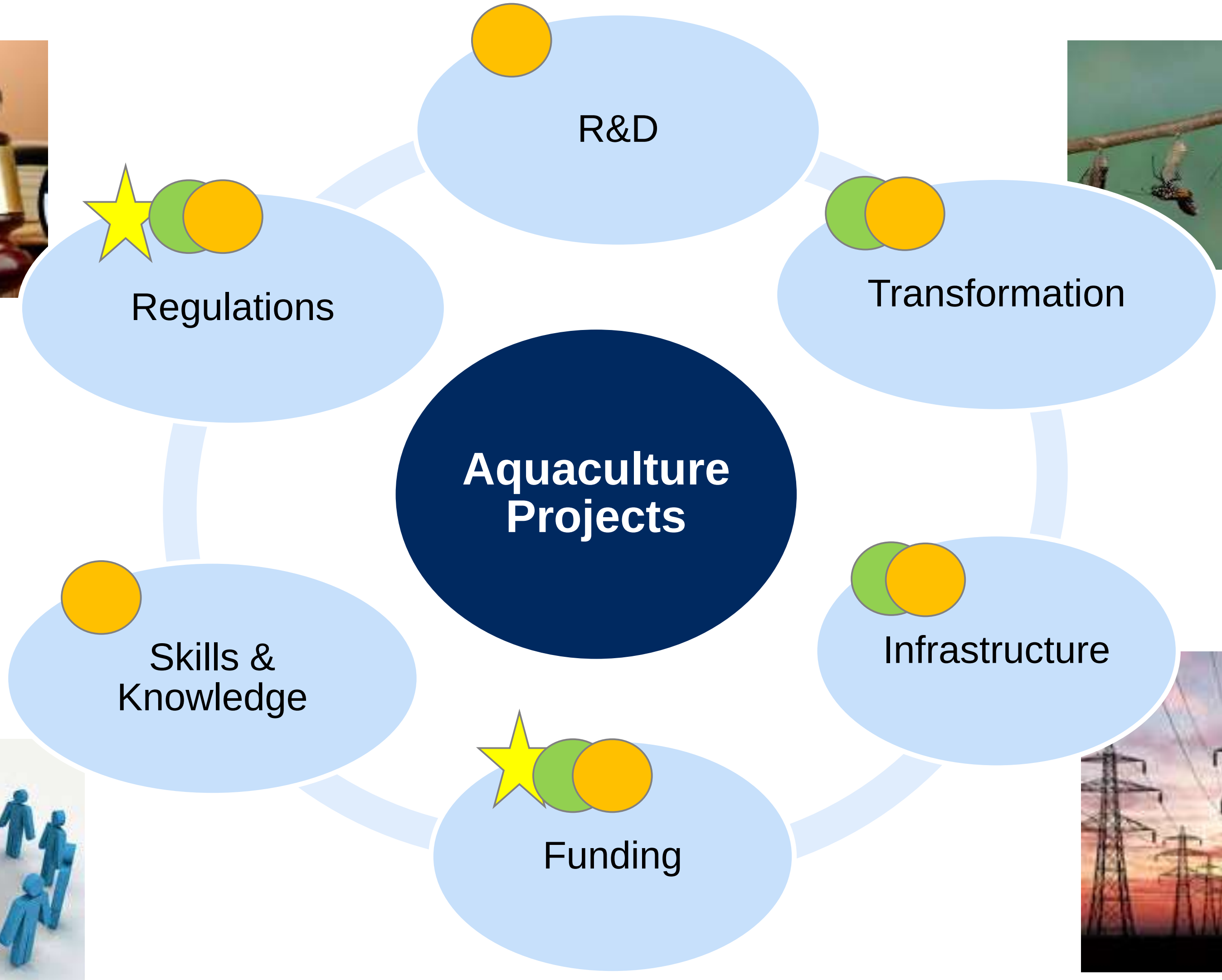
Key Performance Indicators (KPIs)

- Additional production of 18,181 Tons
- Additional jobs of 3,423
- Significant progress towards 50% representation within 5 years

DAFF = Dept. of Agriculture, Forestry and Fisheries; DEA= Dept of Environmental Affairs; DPW= Dept. Publics Works; DWAS= Dept. of Water Affairs & Sanitation; DRDLR= Dept. Rural Development and Land Reform; DTI= Dept. of Trade and Industry; DST= Dept. of Science & Technology; ECDC= Eastern Cape Development Corporation; ELIDZ= East London Industrial Development Zone

PROJECT SPECIFIC ENABLERS WILL BE TESTED

Legend:
- Quick Wins
- Phases 1 & 2 Projects
- Phases 3 & 4 Projects



Initiative 5: Intra-governmental Authorisations Committee

Co-ordinating authorities and process improves administrative efficiency and reduces cost and burden to the sector, new entrants and the state

The committee is to be constituted of **decision-making representatives**.

The Committee will be responsible for:

- Co-ordinating and **fast-tracking regulatory approvals** for phased projects and all other projects thereafter
- Implement retrospective approval of unlawful operations

Steps:

- Review and revise existing MoUs with competent authorities to streamline permitting; and if necessary, consolidate into a single multi-authority MoU
- Assign representatives and launch the Committee

***Replicating success stories such as the GMO Act and DMR & DEA arrangement for mining.**

Significant reduction in turnaround time for multiple approvals **(from 3 years to < 6 months)**

Implementing agency:

- DAFF

Key stakeholders identified (not exhaustive):

- DWAS
- DoH
- Transnet NPA (DPE)
- DRDLR
- DPW
- DEA
- The dti
- DST

Required resources

Investment: R0.9 mn

Implementation timeframe

- Start date: September 2014
- End Date: June 2015

Key Performance Indicators (KPIs)

- Number of days for approvals
- Number of permits
- Total approval costs

Key Constraints to Implementation

Project	Land	Water	Infrastructure	Regulatory
Aquaculture is not included in planning for spatial & coastal resources leading to the land and water access issues, which will impact the implementation of projects in Phases 1 & 2:				
Saldanha Bay	Leases (DPW)	Leases (Transnet)	Electricity Supply (Eskom)	
Hamburg	Land extension		Electricity Supply (Eskom)	EIA
Amatikulu	Leases		Infrastructure (DRDLR)	
Matzikama / Doornbaai	Lease (DPW)			
Qolora	Leases (DRDLR		Infrastructure (DRDLR)	
Algoa Bay				EIA

Source: Lab Discussion

The Ask

Processes and mechanisms established for Phakisa projects to be practiced for all future Aquaculture projects

Unblock the blockages on land, water, electricity and EIAs for key catalytic (and future) projects.

Commitment to a “One-stop Shop” for authorisations, aquaculture activities and funding

Aquaculture discussed a range of issues and raised valid points in the DG and Minister syndications

Issue/Points raised	Resolution	Next steps
Access to Land	▪ Specific issues for projects based in – Saldanha Bay – Hamburg – Amatikulu – Matzikama / Doornbaai – Qolora	▪ In the process of resolution with the DGs of: – DPW – DRDLR – DTI
Access to Water or Sea Space	▪ Specific issues for projects based in – Saldanha Bay – Algoa Bay	▪ In the process of resolution: – TPNA CEO – National Parliament / Sea Shore Act
Access to Infrastructure / Utilities	▪ Specific issues for projects based in – Hamburg – Amatikulu – Qolora	▪ Assistance required from: – Eskom CEO – DTI (SEZ)

Aquaculture discussed a range of issues and raised valid points in the DG and Minister syndication

Issue/Points raised	Resolution	Next steps
Understand if current incentive regime is sufficient	▪ To relook at effectiveness of current schemes	▪ Lab to evaluate and identify changes that will need to be made to current incentives
Aquaculture should be viewed as a new trade and industry – DTI is insufficiently involved in the process	▪ The dti to be involved in looking at taking this sector forward. Objectives of the sector should expand to promote food security	▪ To review data on trade deficit (assess potential for import substitution and export) ▪ DAFF will ensure the dti Minister is made aware of the process