

Mandela Bay
MARITIME CLUSTER



Union Chamber
of Commerce
and Industry of
Primorsky
Territory in
Vladivostok



MARITIME OPPORTUNITIES

*The Ocean Economy of the Bay,
& Local Maritime Opportunities*

Derek Zimmerman (Deputy Chairperson)

6 December 2021

MB Maritime Cluster Overview:



1. Mandela Bay Maritime Cluster (MBMC) – [NPC],
 - a. Represents the NMB Maritime Industry,
 - b. Broad range of Members & Strategic Projects,
 - c. Assist and leverage projects.....
2. Assistance with Maritime Strategic Projects:-
 - a. Advice, advocacy, knowledge, connectivity, facilitation,
 - b. Public & Private sector representation – unique blend..
3. What 'Projects & Opportunities' are available?
4. How do we get involved?
5. The 'Way Forward'....

Capt. Faisal Sultan	Derek Zimmerman	Odwa Mtati	Prince Matonsi
Senior manager: Port operations Transnet National Ports Authority	Ocean economy expert (Oxfordshire)	CEO: South African International Maritime Institute	Acting CEO, Nelson Mandela Bay Business Chamber



MBMC Delivering Opportunities....



The mission and purpose of the Mandela Bay Maritime Cluster are to:

- Act as a **facilitator** & **incubator** of business opportunities,
- Provide opportunities for **employment**,
- Enhance **competitiveness** in the manufacturing sector,
- Promote **innovation**, research and technology,
- Offer education, **skills** and expertise in the maritime fields,
- Ensure **economic development** of the area,
- Facilitate joint efforts for the **protection** of the vulnerable **marine environment**, and
- Promote regional **cooperation** and integration.

Strategic Goals & Objectives:

Going forward, the service offering and benefits to MBMC members and funders, will arise from the implementation of the strategic goals and objectives alongside:-

Strategic Goal [Project Leader]		Strategic Objective	
1	Promote Sectoral Development through Expansion of <i>Marine Sub-Sectors</i> [Riedau DeMaine]	1.1	Development of the Marine Tourism and Leisure Sub-Sector
		1.2	Expansion of Marine Manufacturing & Boat Building
		1.3	Support Development of Marine Energy Supply and Production, particularly Offshore Oil & Gas and the emerging 'Gas Industry', with Hydrogen potential.
		1.4	Development of Commercial and 'Small Fishers' fishing industry
		1.5	Development of the Aquaculture Industry & Value Chain
2	Enhance <i>Enterprise Development</i> through the Promotion of Small Business, B-BBEE, woman and the Provision of Funding [Lusanda Fibij]	2.1	Creating Meaningful Transformation within the Maritime Sector
		2.2	Enhancing the Contribution of Small Enterprises in the Maritime Sector
		2.3	Promote Funding and Incentive Support for Maritime Enterprise Development (ED), enhance maritime Capacity Building to achieve development objectives
3	Develop <i>Human Resources</i> through <i>Education, Skills Development and Training</i> , and Knowledge Development [Odwa Mtati & Tasneem Wesley]	3.1	Promotion and awareness of Maritime Education and Training
		3.2	Ensure Skills Development and Training is aligned to industry needs
		3.3	Develop Maritime and Marine Research, Innovation and Development Expertise
		3.4	Liaise with NMU, CMR, SAIMI and SAMSA for constructive alignment with their programs and strategies
4	Align Government, Industry, Academia, Environment & Civil Society in the <i>Quintuple Helix Model</i> . [Prince Matonsi & John Lawlor]	4.1	Engage with public entities such as SAMSA, SAIMI, DEFF, DoT and Transnet
		4.2	Engage with Academic entities such as NMU, CMR and Rhodes University
		4.3	Broaden the private sector membership base to all maritime sectors
		4.4	Keep abreast of Operation Phakisa 'Ocean Economy' initiatives under the Department of Environmental Forestry and Fisheries (DEFF), & internationally
5	Support the <i>Freight and Logistics</i> activities of the locationally close two national ports, Ngqura and Port Elizabeth. [Faisal Sultan]	5.1	Support and influence Port Development Projects
		5.2	Assist with improving efficiencies along port value chains and intermodal connections, aware of global changes and influences
		5.3	Engage with Transnet on all its logistical spheres in order to participate or facilitate projects or research and development
		5.4	Involve the private sector in all of these activities
6	Connect the MBMC with Africa, Europe and the rest of the world via an <i>International Network of Maritime Clusters</i> . [Derek Zimmerman]	6.1	Engage with most international clusters including the European Cluster Collaboration Platform (ECCP), ENMC, and World Oceans Council (WOC)
		6.2	Facilitate the development of an African Network of Maritime Clusters (ANMC), support the AU '2050 Africa's Integrated Maritime (AIM) Strategy.
		6.3	Engage with all entities on current issues: Global Warming & Climate Change; Energy & Carbon Abatement; Ocean & Satellite Accounts, Biodiversity Protection.
		6.4	Assist in developing the South African Maritime Cluster Alliance (SAMCA) and strategy for all South African provinces.

Nelson Mandela Bay Municipality



A 'Mid-Sized' City with Strong Global & Hinterland Connections:-

- A diverse & productive population of 1.3 million,
- Two globally competitive commercial ports,
- An 'Automotive Hub' in Africa,
- Best 'Beach Tourism' in Africa,
- Great climate and place to 'Live, Work & Play',
- World class education & learning institutions,
- And much more.....



Operation Phakisa: Ocean Economy in the EC & SA.



Operation Phakisa ("Hurry Up") – Unlocking the Potential of the Oceans Economy:-

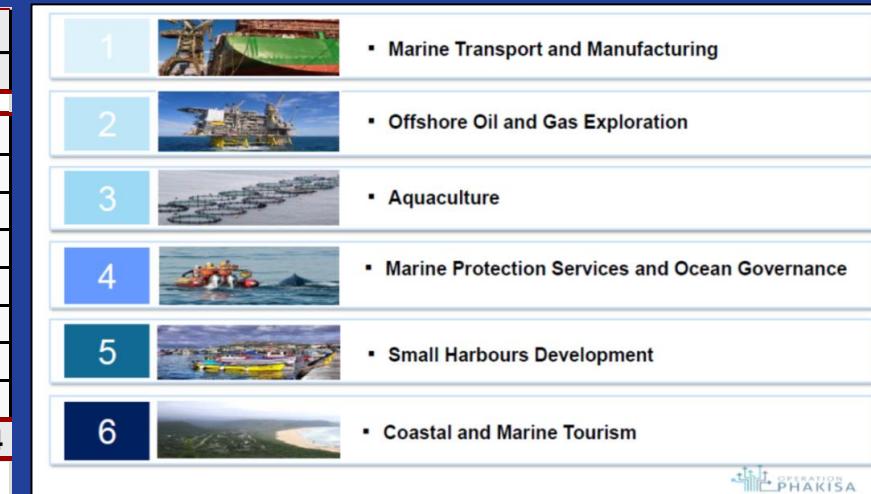
Officially launched by Former President JG Zuma in **July 2014**, with the strategic intention of **unlocking** our ocean economy, creating **new growth areas** for the economy and integrating a **marine governance** and **protection service**.
[Developed to address the “Triple Threat” of Poverty, Inequality and Unemployment...]

Operation Phakisa is expected to:

- Contribute between R129 and R177 billion by 2033 to the economy (GDP),
- Stimulate economic growth to +/-4% per annum during this period (GDP),
- Create between 800,000 to 1 million direct jobs,
- There are six main OE focus areas, and
- Two enablers:- Skills Development; R & D + Innovation.
[Missing Four: Skills & Trg, R&D/Inno, MPS/OG, Small harbours.]

Operation Phakisa Ocean Sectors Considered	GDP Growth (R'bn)		Job Creation ('000)	
	2010	2033	2010	2033
Marine Transport & Manufacturing	16	42 - 61	15	40 - 56
Tourism	15	25 - 35	90	150 - 225
Offshore Oil & Gas	4	11 - 17	0.4	0.8 - 1.2
Construction	8	20 - 21	162	390 - 407
Renewable energy	0	14 - 17	0	0.9 - 1.1
Fisheries & aquaculture	7	10 - 16	30	170 - 250
Communication	4	7 - 10	19	32 - 52
Desalination	0	0.1 - 0.1	0	1.6 - 1.6
Total	54	129 - 177	316	788 - 1004

Source: Department of Environmental Affairs, 2014.



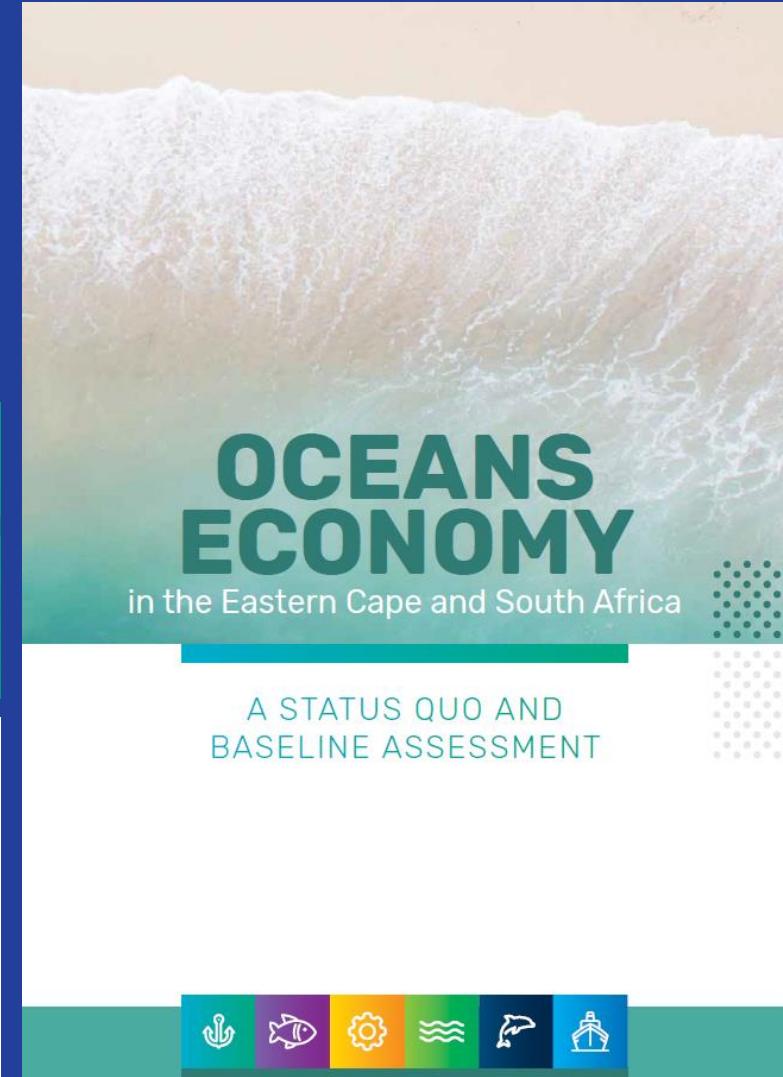
Ocean Economy in the EC & SA: Status Quo & Baseline Assessment



Developed for the EC Office of The Premier (OTP) [March 2020]:-

- Recognises the importance of the Ocean Economy,
- Assess the current situation and formulate an accurate 'Baseline',
- Understand various sector dynamics, weaknesses & opportunities,
- Take stock of opportunities and 'Levers' needed,
- Measure the employment & GDP impacts,
- Prepare a Road Map for project implementation,
- Present to stakeholders for implementation.....

**Globally and nationally
the Oceans Economy
is taking on increasing
importance in the policy
and economic realm.**



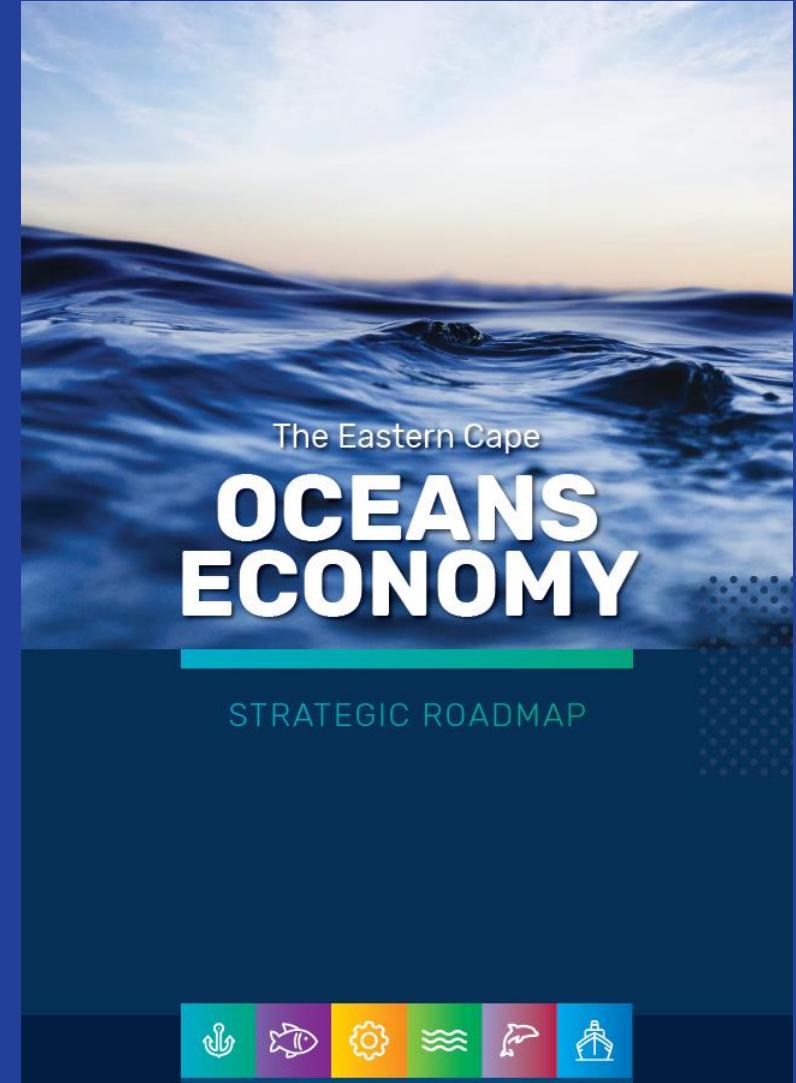
EC Ocean Economy: Strategic Roadmap



Developed for the EC Office of The Premier (OTP):-

- Strategic context and focus areas: Six focus areas (Operation Phakisa)
- Problem statement and who will benefit (East vs West...) ,
- Strategic thrusts developed (Textbook 'Strategic Plan'):
 - Establish, attract, consolidate, implement, expand, recalibrate, research & innovation....
- Strategic Roadmap Implementation Plan:
 - Portfolio initiation, directing, controlling, delivering, completion.
 - Portfolio Scope, establish, attract, expand, research + innovation + capacity building and training.
 - Communication Plan
 - Performance Plan.
 - Implementation Plan & Timeframes, and
 - Risk Log.
- Portfolio Performance Plan.

SMART:
Specific
Measurable
Achievable
Relevant
Timebound



Ocean Economy in the EC & SA: Status Quo & Baseline Assessment



What all of this research told us:

- 61 significant projects across 8 sectors,
- Capex potential of R 67 billion,
- GDP of R 19.5 billion in 20 years time,
- Employment potential of 132,000 FTE,
- Priority Projects that are 'Shovel Ready':
 - Maritime Tilapia and Feedstock Supply,
 - Fuel bunkering in the Bay, Chandling,
 - Gas pipelines & infrastructure,
 - Gas-To-Power & Value Chain,
 - Marine ship & boat construction,
 - Waterfront development..... and,
- Political will to support these initiatives,
- Public sector funding and infrastructure needed for certain of these,
- Private sector – step in & collaborate.....

Eastern Cape Oceans Economy Priority Projects Per Sector	Total CAPEX Rm	Year 20 Direct GDP - Rm	Year 20 Direct Jobs / FTE	Year 20 All EC Projects
New EC Ocean Projects - Totals	66,958	19,457	132,659	61
1. Marine Transport & Manufacturing	1,587	604	651	8
2. Offshore Oil & Gas	49,665	11,685	14,170	8
3. Aquaculture	2,445	3,932	110,325	11
4. Marine Protection & Governance	103	124	115	4
5. Small Harbour Development	2,602	881	1,074	12
6. Coastal & Marine Tourism	10,505	2,146	6,104	9
7. Skills Development	28	62	195	7
8. Research & Innovation	22	22	22	1
9. Other Ocean Economy	1	1	2	1
New EC Ocean Projects - %	100.0%	100.0%	100.0%	100.0%
1. Marine Transport & Manu.	2.37%	3.11%	0.49%	13.11%
2. Offshore Oil & Gas	74.17%	60.06%	10.68%	13.11%
3. Aquaculture	3.65%	20.21%	83.16%	18.03%
4. Marine Protection & Govt.	0.15%	0.64%	0.09%	6.56%
5. Small Harbour Development	3.89%	4.53%	0.81%	19.67%
6. Coastal & Marine Tourism	15.69%	11.03%	4.60%	14.75%
7. Skills Development	0.04%	0.32%	0.15%	11.48%
8. Research & Innovation	0.03%	0.11%	0.02%	1.64%
9. Other Ocean Economy	0.00%	0.01%	0.00%	1.64%

Source: Nelson Mandela University, 2020. *Oceans Economy in the Eastern Cape and South Africa. A Status Quo and Baseline Assessment*

Ocean Economy in the EC & SA: Status Quo & Baseline Assessment



- The Methodology Adopted:
 - Operation Phakisa Sectors [6 + 2],
 - Current Situation & Opportunities,
 - Measure the 'Opportunities'
 - Compile an 'Opportunity Database'
- Evaluate for 'Project Readiness'
- Find 'Levers' and 'Blockages'
- Prepare 'Roadmap' for 'Priority Project' Implementation.



Source: Operation Phakisa website: www.operationphakisa.gov.za

Marine Transport & Manufacturing (MT&M):- Opportunities for the Eastern Cape

Current Situation:-

1. Nationally:-

SA is ideally positioned to serve the east-west cargo traffic and African offshore oil and gas industry, through marine engineering and manufacturing which includes ship and rig repair, refurbishment and boat building.

2. Provincially:-

The Eastern Cape is home to three of the eight major industrial ports, with world class logistics facilities, dry-dock and slipway facilities and a skilled and experienced workforce.

3. Plans to unlock economic potential:-

- Oil and gas port infrastructure,
- Maintaining and refurbishing existing port and ship repair facilities,
- Fast tracking of decisions for the issuing of trading licenses,
- Skills and capacity building.

4. Next Steps:-

- Liaise with Transnet and evaluate their Port Development Framework (PDF) Plans for transport & manufacturing opportunities.

Opportunities for EC:-

1. Projects & Location:-

- The two Special Economic Zones (SEZs) at East London and Coega,
- The new liquid fuel terminal at the Port of Ngqura – value chain opportunities,
- Unlock investment in new and existing port facilities,
- Support a local registry of vessels to encourage SA Flagged Ships & construction,
- Encourage Transnet local procurement,
- Establish a new manganese terminal at the Port of Ngqura, Section 79 approval granted
- Encourage the 'Composites Cluster' in PE,
- Facilitate specialist boat building in the PoPE (Sailing Catamarans, Buttcats etc.)
- Tugboat manufacture in PoPE, and
- Fishing fleet recapitalisation in PoPE.

2. Drivers or Champions:-

- Collaborate with Transnet & SEZs,
- Work with fishing industry and Maritime Clusters, and
- Collaborate with tertiary learning institutions for research & opportunities.



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Source: Nelson Mandela University, 2020. Oceans Economy in the Eastern Cape and South Africa. A Status Quo and Baseline Assessment

Ocean Economy in the EC & SA: Status Quo & Baseline Assessment



Opportunities for NMBM:

- Fuel storage facility at Ngqura,
- Offshore Bunkering & Chandling,
- Natural Gas Infrastructure,
- Gas-To-Power.....LNG & Hydrogen
- 'Project Mthombo', Oil Refinery has been lost to KZN.....???

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Source: Operation Phakisa website: www.operationphakisa.gov.za

Source: Nelson Mandela University, 2020. Oceans Economy in the Eastern Cape and South Africa. A Status Quo and Baseline Assessment

Oil & Gas:- Opportunities for the Eastern Cape

Current Situation:-

1. Nationally:-

The Integrated Resource Plan (IRP) provides the planning for the supply and demand of the energy mix in SA.

In terms of recent investments:-

- Approximately R7.643 billion has been invested by the private sector
- Approximately R10,806 billion has been invested by government

2. Provincially:-

The Port of Ngqura has the advantage of having technical readiness for the creation of the 1000MW gas-to-power project.

The development of the strategic framework has been directed to formulate an important set of actions to enable development in each of the sub-sectors as follows:

- Trigger key infrastructure processes which will in turn have a catalytic effect on the provincial petrochemical, chemical and energy industry,
- Attract key investments to support or unlock upstream, midstream and downstream value chains, and
- Attract anchor projects to the Eastern Cape.

Opportunities for EC:-

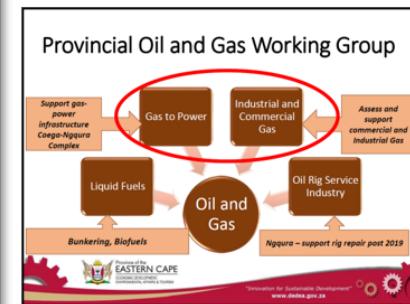
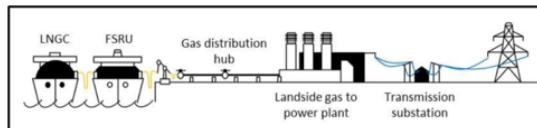
The Eastern Cape and Southern Coastline have the highest potential reserves of natural gas in South Africa. As such, the following projects have been proposed in the hopes of creating a gas economy in the province

1. Oil refinery at the Port of Ngqura,
2. Fuel storage facility at the Port of Ngqura,
3. Offshore bunkering at Algoa Bay,
4. Fuel Bunkering 'Value Chain' facility,
5. Liquid natural gas (LNG) terminal at the Port of Ngqura, and
6. 1,000 MW gas-to-power project at the Port of Ngqura.

The projects are currently being steered by the Department of Economic Development, Environmental Affairs and Tourism (DEDEAT), Eastern Cape. Presently the commencement of these projects is dependent on government's decision to invest in 'Oil & Gas' in Kwa-Zulu Natal (which is deemed to be the better decision in the short term), or the Eastern Cape (which is seen as the better decision in the long term, due to the higher potential reserves in the province).

This discussion and debate is current.

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Ocean Economy in the EC & SA: Status Quo & Baseline Assessment



Opportunities for NMB:

- Waterfront Development in PoPE:
 - Feasibility studies complete,
 - Tank farm and Manganese moving,
 - Civil Society & Business support,
 - Significant linkages / Opportunities....
- ACSA Airport Expansion:
 - International airport status
 - International flights directly in/out
 - Better national / regional connections.
- Beachfront & Cultural Tourism:
 - 'Blue Flag Beaches'....
 - Bayworld Redevelopment.....



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Coastal & Marine Tourism:- Opportunities for the Eastern Cape

Current Situation:-

1. Nationally:-
 - Tourism is recognised as a priority sector in SA to be pursued as an industry with deep value chains and the potential for SMME development and rural community enhancement.
2. Provincially:-
 - The EC has rich biodiversity and some of the most popular game reserves and beaches – these need to be promoted.

World Travel & Tourism Council (WTTC)

The WTTC Methodology has been applied for Comparison and the Compilation of ten-year forward projections. The methodology is as follows:

1. WTTC recognise the entire tourism value chain and include Indirect and Induced impact with Direct impact when they consider Jobs and GDP,
2. The 'Tourism Industry' is seen to be the 'Direct' impact and comprises of establishments whose principle productive activity is tourism (Hotels, taxi's etc.).
3. The 'Tourism Economy' includes 'Indirect' and 'Induced' tourism activities which are further down the value chain, but still an integral part – such as capital goods, food and products supplied, clothing and uniforms etc.
4. Use these ratios for **regional multipliers** and ten-year **bench marks**.



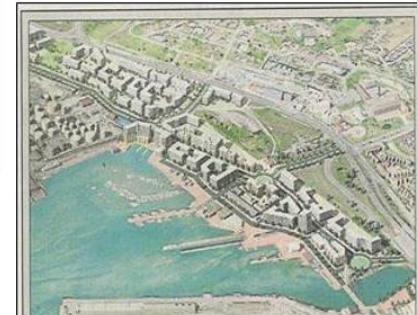
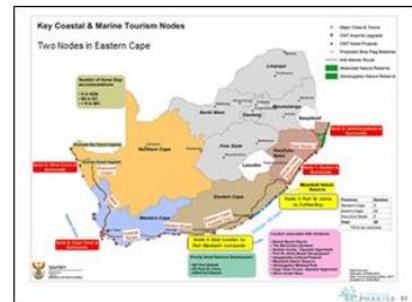
Opportunities for EC:-

1. Projects & Location:-
 - 'Indi-Atlantic Route' to be developed,
 - Cruise Ship Tourism needs to be pursued,
 - Waterfront Developments in EL & PoPE,
 - Linkages with the 'Big 7' and game reserves,
 - Annual 'Sardine Run' as an 'Event',
 - Celebrate rich bio-diversity with culture,
 - Promote the N2 Wild Coast tourism route,
 - Connect the Wild Coast tourism resorts to the N2,
 - Port St Johns as a small harbour and tourist destination,
 - Infrastructure upgrades - selected beaches,
 - Promote Blue Flag Beaches,
 - Promote game farms and AENP,
 - Capacitate municipal & provincial 'Tourism' Departments,
 - Development of the Port St Johns – Coffee Bay Master Plan,

2. Drivers or Champions:-

- Regional Tourism Departments,
- Project specific champions.

Source: Nelson Mandela University,
2020. Oceans Economy in the Eastern
Cape and South Africa. A Status Quo
and Baseline Assessment



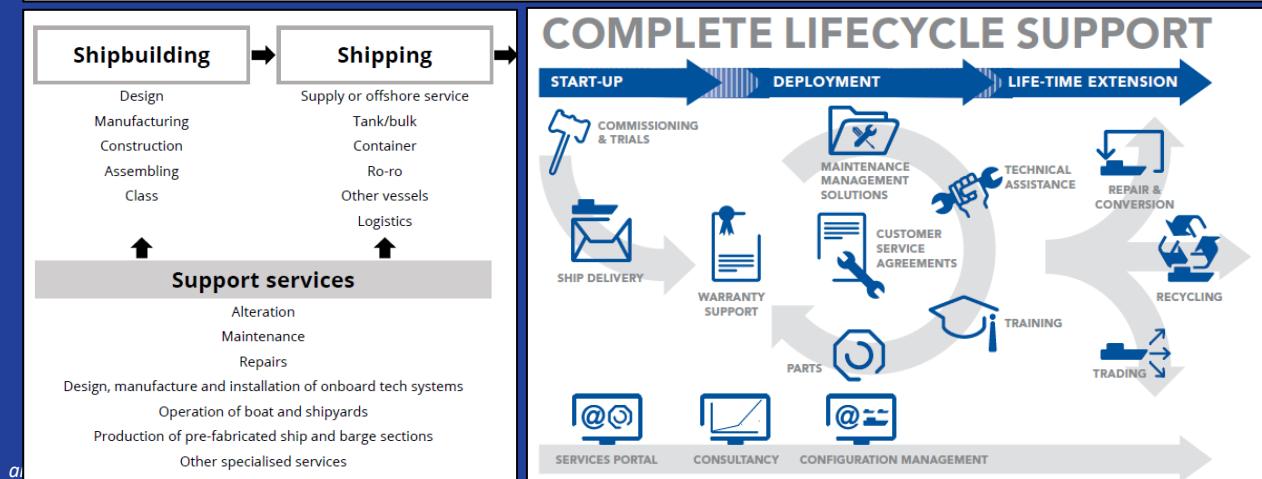
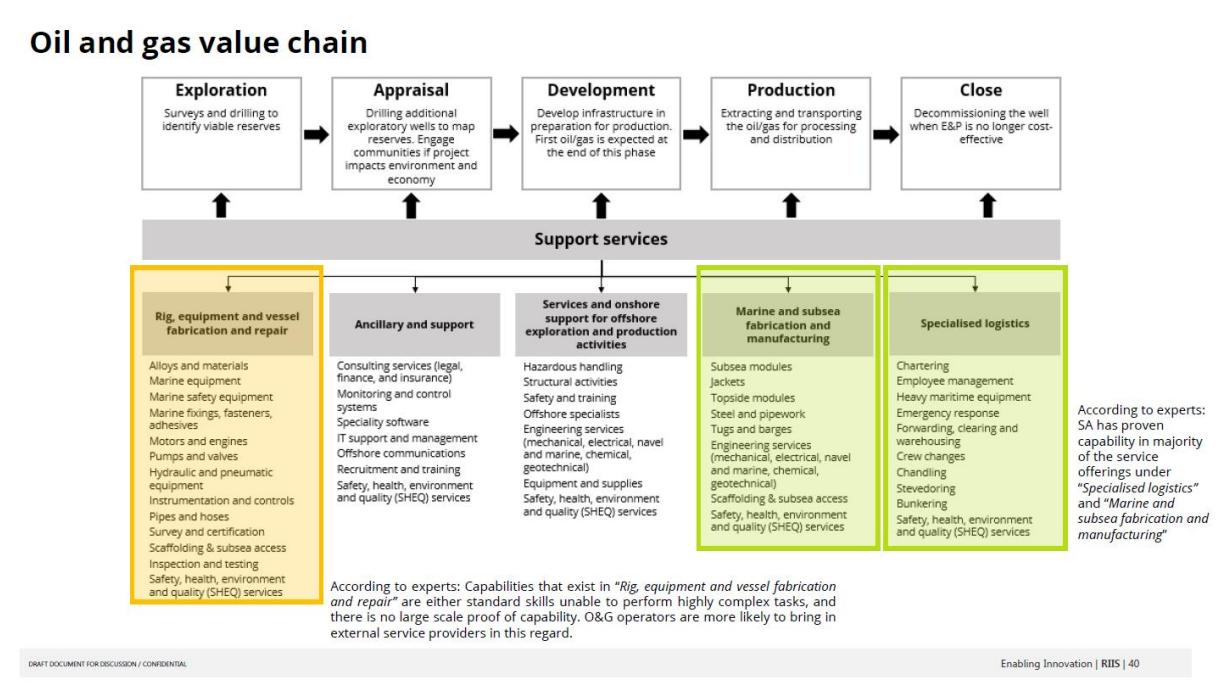
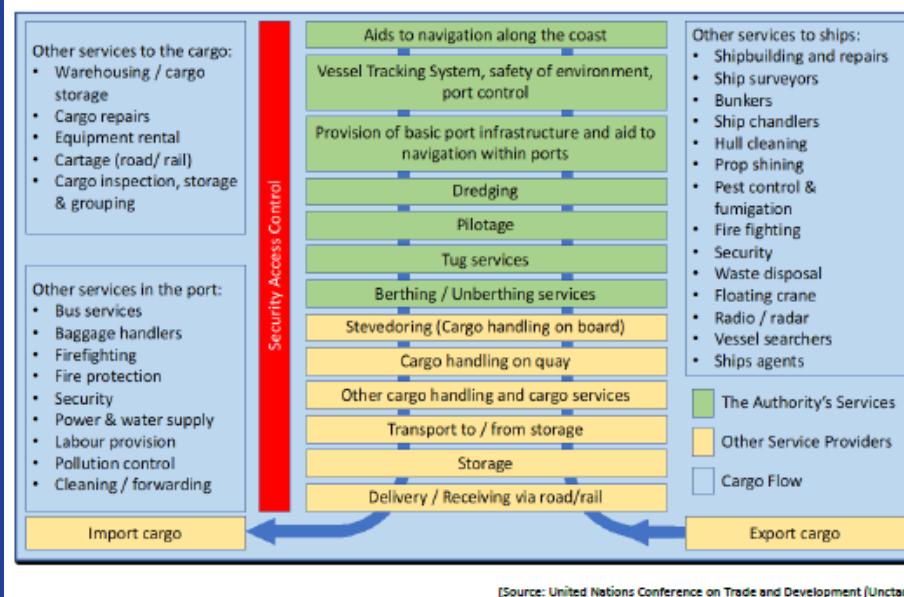
Oil & Gas – Marine Manufacturing & Services Opportunities and Value Chain



Value Chains Overlap and Create Synergistic Opportunities:

1. Oil & Gas sector has long complicated value chain (VC),
2. Significant O&G VC overlap and common areas with Marine,
3. Support Services could be common to both activities:
 - Cargo, logistics and warehousing,
 - Metal fabrication, pipe and boiler services & support,
 - Engineer, Procure, Construct (EPC), alter, maintain, refurbish....
 - Warranty, finance, support, HR, training, recycling.....

Figure 1: Maritime Services Value Chain



Global and National Demand: Ocean Economy, Maritime Boatbuilding & Services

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Global Overview:

- OECD values the Ocean Economy at **US \$ 1.5 trillion** 2010.
- Global **ship building** industry has had a tumultuous post-recessionary period.
- Decline of -4.8% revenue year-on-year for 5 years to **US\$ 144 billion** in 2018 [9.6% of 2010 Ocean Economy].
- The global **boat building** industry has also suffered a similar fate but has shown a faster recovery.
- It is estimated that the boat building industry will grow in the future, especially the leisure boat manufacturing industry which will grow from **US\$ 40 billion to US\$ 51.3 billion in 2025**.
- Greater growth is expected for boat building compared to ship building.



Source: Derek Zimmerman, 2020. Collage of Ocean Economy Images.

South African Overview:

- Ship and boat building industry is ***export orientated*** but there has been a shift into local ship procurement (Government policy).
- South African boat building industry has developed a ***strong worldwide reputation*** and developed into niche markets and products.
- The industry has undergone industrial restructuring which makes it ***competitive on price, quality and durability***.
- Still only contributes ***1% to global exports*** of recreational vessels, yachts, etc.
- The ship building industry is small in South Africa ***dominated by few large companies*** located in Cape Town and Durban.
- **South Africa** only nominally contributes to the global ship building industry and is ***ranked 54*** in the world.
- The ***Western Cape is the largest*** maritime manufacturing centre within South Africa which houses approximately ***70% of boat*** and ship builders.
- Approximately 18% of boat and ship builders are based in KwaZulu-Natal and 8% in the Eastern Cape (MIASA, 2016).
- The total value of South Africa's ***export market*** for ships, boats and other floating craft was **R 2.6 billion in 2017** (US \$ 0.17 bn) while the total ***import value*** was **R 919 million** (Urban Econ, 2019).

Market Demand: 'Marine Manufacturing & Services' – Leisure & Commercial



Current 'Commercial Marine' industry study for dtic and IDC:

1. A current and detailed overview of the SA trends and values.
2. Major sectors investigated:
 - Boat and ship building:
 - ⇒ Leisure industry
 - ⇒ Commercial industry
 - Component and equipment manufacture
 - Specialist services
 - Sales and distribution.....

Key trends shaping the future opportunities in these market segments:

- Sustainability and the environment – low carbon footprint, electric & solar, carbon & composites,
- 4IR – the *Fourth Industrial Revolution*,
- New technologies, engines, sails and hydrofoils as examples,
- New buyer types – merging of social life and business,
- New uses – more remote locations, amphibious boats, and
- Covid and virtual marketing.

Metric	Value
Production value Production and GDP contribution (2019)	R4.4bn (extrapolated from the survey findings of R4.2bn) Leisure and commercial boat manufacturing estimated at ~0.14% of manufacturing production; a rough estimate is that the share of manufacturing GDP could be similar, which would equate to <0.016% contribution to total national GDP
Production units	1,656 for 2019, of which 656 were boats and 1,000 units were kayaks (survey responses)
Employment	3,382 full-time and permanent staff (excluding contract workers) Estimate 0.2% of the ~1.7m in manufacturing employment and 0.03% of the estimated 10.2m total national employment.
Local value content	Survey responses on % inputs imported: Leisure boats: 52.9%; commercial boats: 39.6%; component manufacturers: 46.3%
Number of companies	Previous estimates of about 68 companies with a further 200 companies in the wider value chain; 65 completed the survey
Exports and export orientation	Survey respondents exported R2.6bn in 2019 (excluding services), trade analysis shows exports of R2.9bn of vessels Export orientation for leisure boat builders of 78.7% vs. 39.6% for commercial boatbuilders, and 46.3% for component manufacturers
Leisure mooring facilities	Estimated 3,360 moorings across 20 yacht clubs
Number of vessels in South Africa	SAMSA data on annual certificates of fitness estimate of 11,252 in 2019/20 financial year (no complete boat register available)
Transformation	Survey findings: 10 out of 65 respondents were 100% black owned (15.4%), and 12 respondents (18.4%) had BBBEE Level 1
Women-owned companies	12.7% women-owned, 5.5% black women-owned (survey findings)

SA Maritime Leisure & Commercial Market	Firms	Turnover - R	Jobs	TO / Job	Exports - R	% Exports
a Boat or ship building:	28	3,295,079,362	2,723	1,210,092	2,501,601,933	75.9%
- Leisure industry	9	2,163,749,362	2,419	894,481	2,089,771,933	96.6%
- Commercial industry	13	1,131,330,000	304	3,721,480	411,830,000	36.4%
b Components & equipment manufacture	20	115,920,000	212	546,792	79,260,800	68.4%
c Specialist services	18	442,991,000	141	3,141,780	47,184,500	10.7%
d Sales and distribution	7	366,421,257	306	1,197,455	0	0.0%
Grand Total:	67	4,220,411,619	3,382	1,247,904	2,628,047,233	62.3%

Source: Kaiser EDP, 2020. Research on the economic overview of the South African leisure and commercial marine market. A report prepared for the dtic and IDC

'Marine Manufacturing & Services' Global Market Opportunities.....



The
Economist

An undersea change

The booming business of knitting together
the world's electricity grids

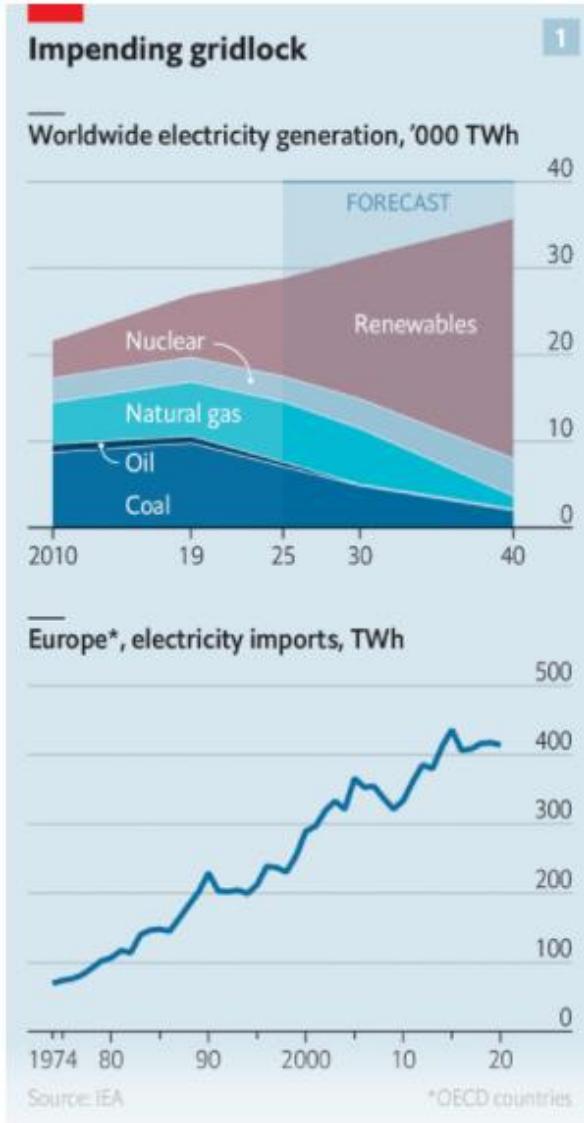
Green and stable electricity grids will only be possible when linked together

IMAGINE, IF YOU will, a toy boat that might fit in the palm of your hand. At midship add a squat spool of sewing thread lying on its side. Scale that up about a thousand-fold and the result is the 150-metre-long *Nexans Aurora*. The thread in question is kilometres of high-voltage power line ready to be deployed from the aft of the ship across the sea floor. Each cable, weighing a hefty 150kg per metre and thick as a tree trunk, is a woven mix of aluminium, steel, lead and insulating material. The single stretch loaded up in a bobbin nearly 30 metres across is as heavy as the Eiffel Tower.

The ways electricity is both consumed (more of it, notably by cars) and produced



Bertrand Rieger



Source: The Economist, 11 October 2021.

'Marine Manufacturing & Services' Hydrogen Economy – 'Ship Building.....'



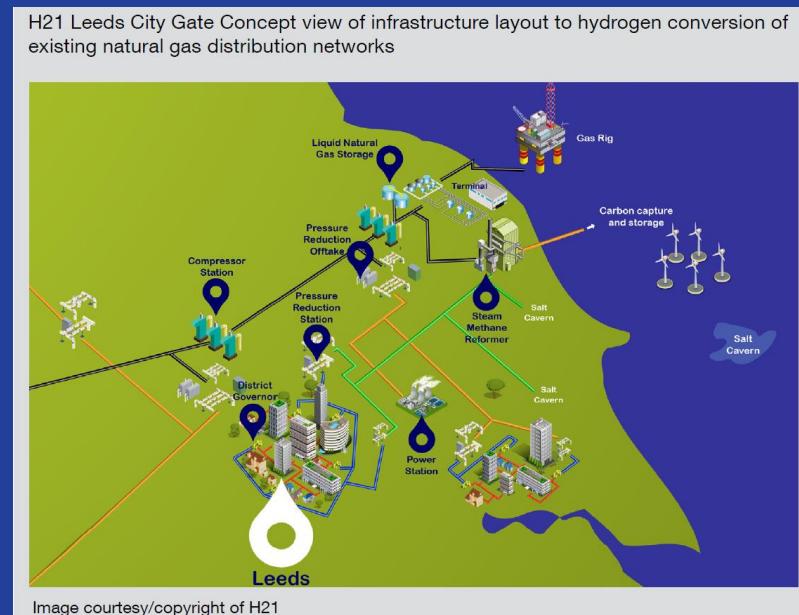
Progress is being made in the South African hydrogen space, with the first government led hydrogen roadmap under development and the Green Hydrogen Atlas-Africa initiative highlighting South Africa's potential to the global community.

However, in order to fully realise the benefits of the hydrogen economy the following steps need to be taken:

- Finalise the South Africa Hydrogen strategy and roadmap – where to play, how to start, how we support and incentivise (Currently under development),
- Clear Ministerial direction around which government department will champion hydrogen (e.g. Energy or Trade and Industry),
- Assess the need for regulation in enabling a competitive market (regulatory hurdles need to minimised and processes streamlined),

- Incentivise early investment and just transition from red, to blue, to green Hydrogen (e.g. sector specific Special Economic Zones, tax credits, policy certainty),
- Fast tracking of renewable energy licensing used for hydrogen production,
- Review and strategy for local content and local skills development, and
- Signing of collaboration agreements between hydrogen producers, off takers and technology players (similar to the Japan-Australia and Germany-Morocco MoUs signed in recent years).

If South Africa commits to a certain, transparent, stable and accountable policy environment for hydrogen, the country can reap the significant rewards on offer. The country stands in an unprecedented position to benefit from the global energy transition and transform itself in one of the green energy majors of the world.



Transnet EC Ports & PDFPs

(Port Development Framework Plans)



Port Elizabeth
Current Layout



Long-term Layout



Ngqura (Coega)
Current Layout



Long-term Layout



East London
Current Layout



Long-term Layout



Source: Transnet, 2017. National Ports Plan. 2017 Update.

Transnet Opportunities - 2015



Port	Opportunities
Port Elizabeth	<ul style="list-style-type: none"> Marine / Waterfront linked to the relocation of the Manganese Ore Terminal and Tank Farm Casino / Retail / Entertainment will help to encourage sustainable tourism Automotive Logistics Park driven by Volkswagen South Africa
Ngqura (Coega)	<ul style="list-style-type: none"> Linkages to IDZ / SEZ specialist clearing facilities Container cleaning and storage Oil & Gas Hub, Power Generation, Value chain opportunities Distribution centers Cold storage and pack house facilities for meat product exports
East London	<ul style="list-style-type: none"> Ship building / Repair – Dry Dock Marina / Waterfront Casino / Retail / Entertainment Automotive Logistics Park Maritime School / Institution

Source: WSP, 2015. *Maritime Commercial Position Paper*

Source: Transnet, 2017. National Ports Plan. 2017 Update. Current author has added to these in 2020.

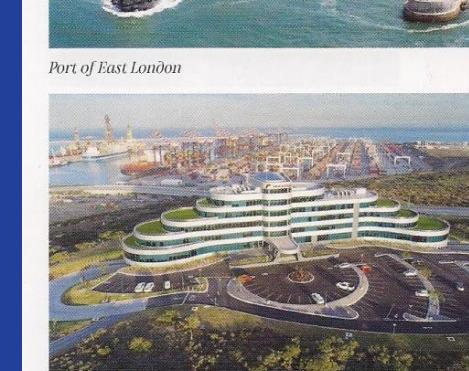
Many of these opportunities have been available for a number of years....
Need to unlock the required processes / enabling environment through institutional & governmental support.



Port of East London



Port of Ngqura



"In Port Elizabeth, VWSA is forecasting higher units this year, while Ford Motor Company is now optimising the use of rail wagons returning from Gauteng and has begun to export new volumes out of PE as per their multi-port strategy. We are also expecting BAIC to come online next year. In East London Mercedes Benz will invest R10-billion over the next five years expanding its South Africa plant and TNPA is committed to enabling the port to support the city's positioning as a manufacturing hub anchored by its strong automotive sector," said Lekala.

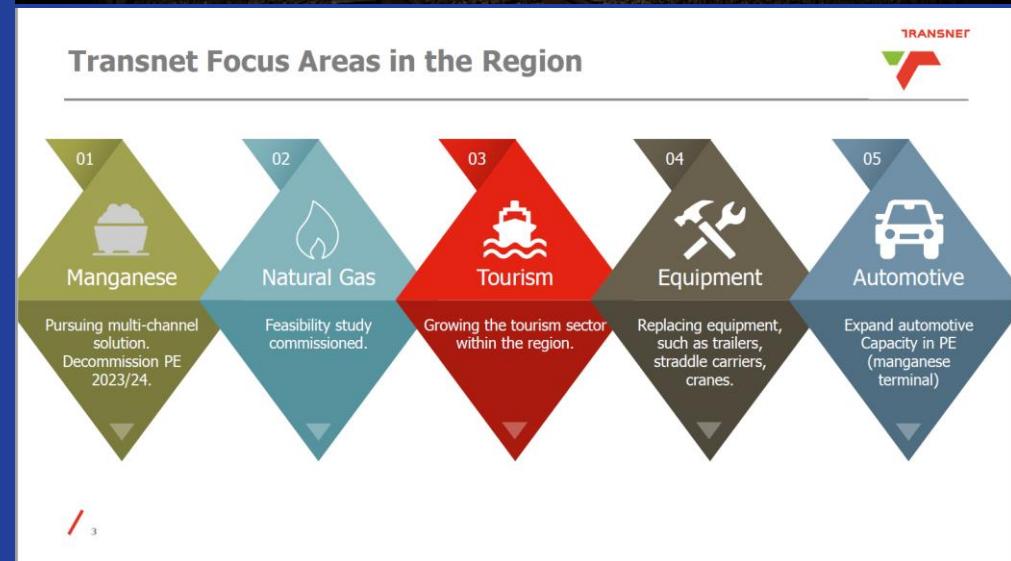


national ports authority

Transnet Strategic Projects



- New CE and leadership structures.....
- Manganese
 - Pursuing a multi-channel solution:
 - Decommission current PE facility during 2023/24
 - Have a replacement facility in place at the Port of Ngqura
- Natural Gas
 - Gas infrastructure from Mossel Bay (Brulpadda / Total)
 - Gas hub at the Coega SEZ (Gas-To-Power, whole Value Chain)
- Tourism
 - Growing the tourism sector within the region:
 - Using Transnet assets for development – PoPE Waterfront, Apple Express,
 - Revitalising heritage assets for tourism purposes, reverse Urban Decay.
- Equipment
 - Capital projects to replace and upgrade operational equipment
- Automotive
 - Expand automotive capacity in PoPE (Manganese Terminal Area)
 - Secure Gauteng Based OEMs through PoPE terminal (Currently via Durban)
 - Provide world class state of the art facilities to encourage further use.....

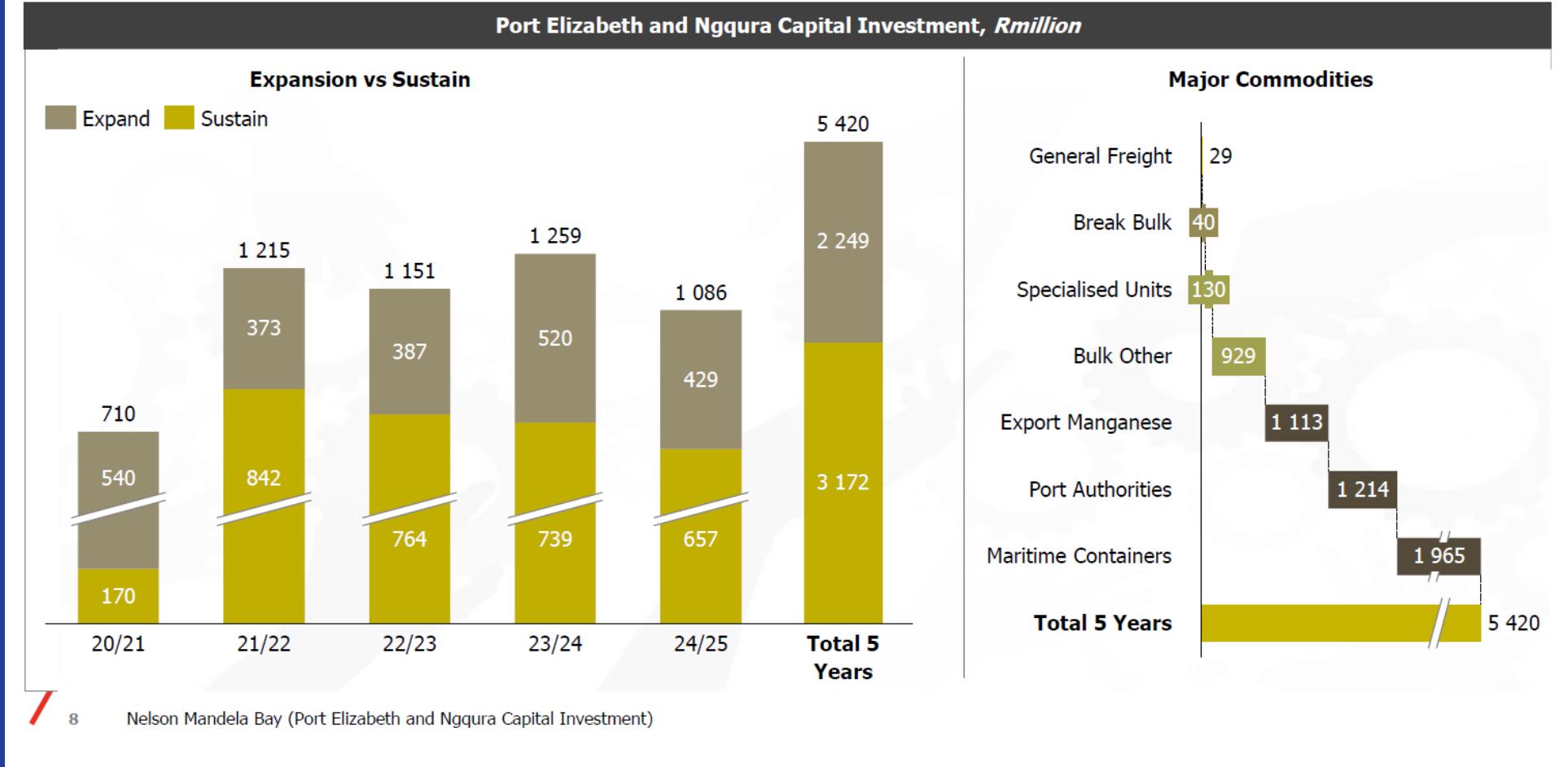


Transnet Strategic Projects



- Complementary 'Twin-Port' strategy,
- Full commitment,
- Sustaining existing,
- Expansion,
- Waterfront in 'Port Authorities',
- Manganese for Ngqura,
- Containers for Ngqura.

Transnet will be investing **R5.4bn** in the next 5 years on Port Elizabeth and Ngqura , with **R3,2bn** allocated for sustaining current business and **R2,2bn** for expansion initiatives



Port of Ngqura as a Transhipment Hub

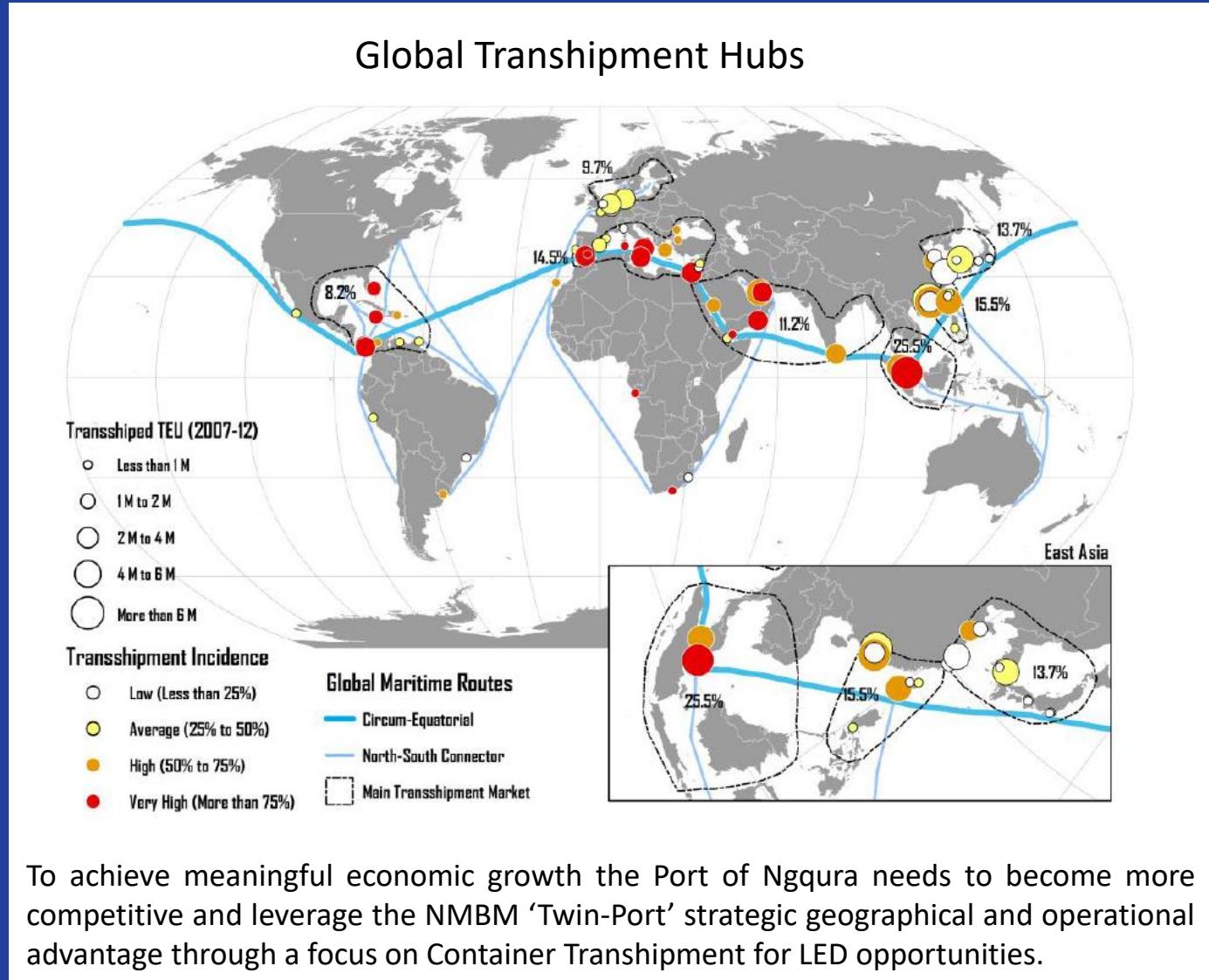
Mandela Bay
MARITIME CLUSTER

Ngqura Transhipment Hub Potential:

- Current well below capacity of 1.2 million TEU,
- Potential capacity of 2.8 million TEU – Fourth Berth,
- Target Europe-East Asia flows around Africa,
- Vulnerable Suez Canal and congestion.....

Container Volumes in the Port of Ngqura in 2018.

<u>CONTAINERS</u>	<u>FULL</u>	<u>EMPTY</u>	<u>TOTAL</u>
<u>INVOICED</u>			
<u>LANDED</u>			
Deepsea	129 873	45 096	174 969
Coastwise	370	-686	-316
Transhipped	176 671	45 238	221 909
<i>Total Landed</i>	<i>306 914</i>	<i>89 648</i>	<i>396 562</i>
<u>SHIPPED</u>			
Deepsea	88 237	68 104	156 341
Coastwise	-10	369	359
Transhipped	168 295	53 342	221 637
<i>Total Shipped</i>	<i>256 522</i>	<i>121 815</i>	<i>378 337</i>
<i>Grand Total</i>	<i>563 436</i>	<i>211 463</i>	<i>774 899</i>



NMBM Port's Value Chain Opportunities

Figure 2: Competitiveness Diamond



Value Chain Thinking

Traditional supply push



Value chain demand pull

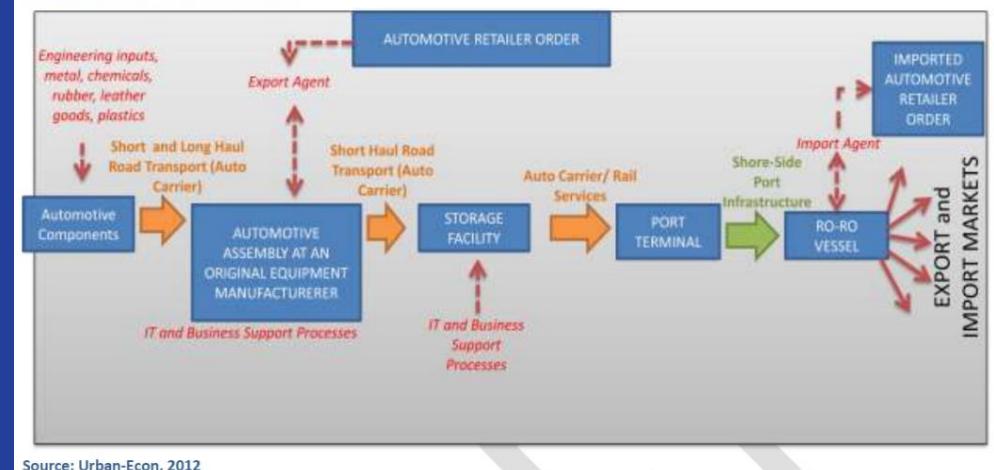


Courtesy of Prof Andrew Fearnie

Figure 5: KZN Break-bulk Commodities (Citrus) Export Value-Chain



Figure 7: KZN Automotive Value-Chain



Source: Urban-Econ, 2012

Figure 4: KZN Bulk Commodities Value-Chain

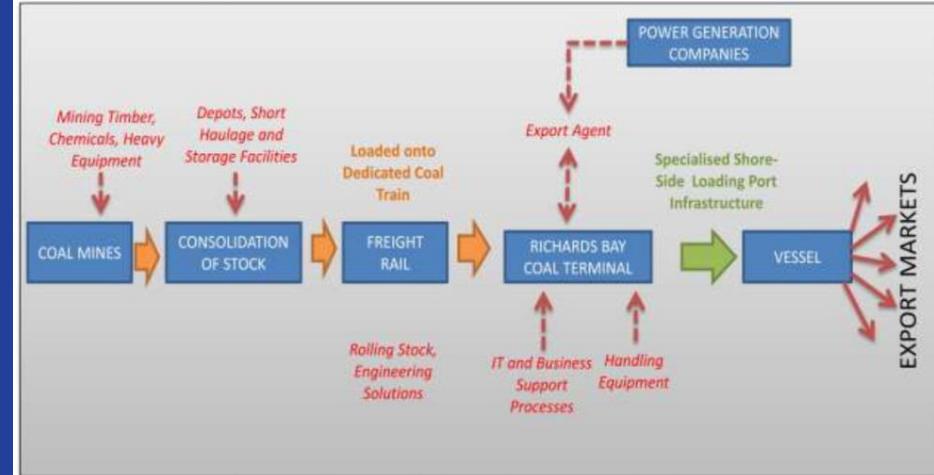


Figure 6: KZN Containerised Commodities Value-Chain



Coega Special Economic Zone (SEZ) & Aquaculture Development Zone (ADZ)



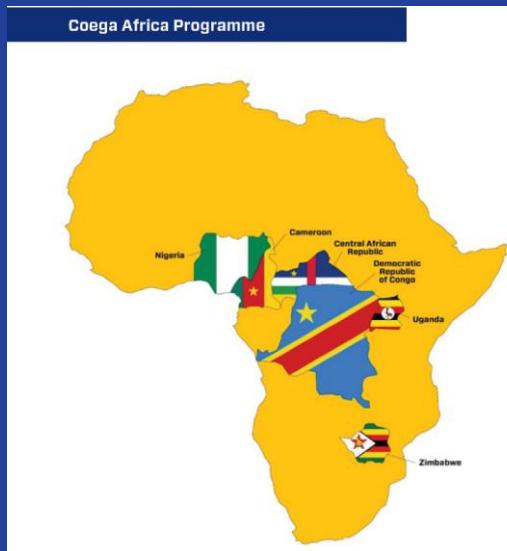
Mandela Bay
MARITIME CLUSTER

Coega Development Corporation (CDC) – 20 Years...

- Establishing an Aquaculture Development Zone (ADZ) of 400 hectares on Zone 10, with full coastal access,
- Potential for 1.000 ton abalone and 1.000 ton finfish p.a.,
- This would create 700 and 200 FTE jobs respectively,
- Constructions Jobs: 500,
- Oceans Economy Strategy
- Off Ports Limits (OPL) Vessel,
- Africa Programme.....Three SEZ / Logistics consultancies.

Off Ports Limits (OPL) Vessel

- Increased shipping activities in Algoa Bay;
- Need for a Modern Off Port Limits (OPL) Service Vessel;
- Service needed for different cargo & service-vessels on a continued basis in different sea conditions; and
- By participating in this industry the CDC will further participate in the development of maritime sector, further entrench itself in the industry and be able to generate income.



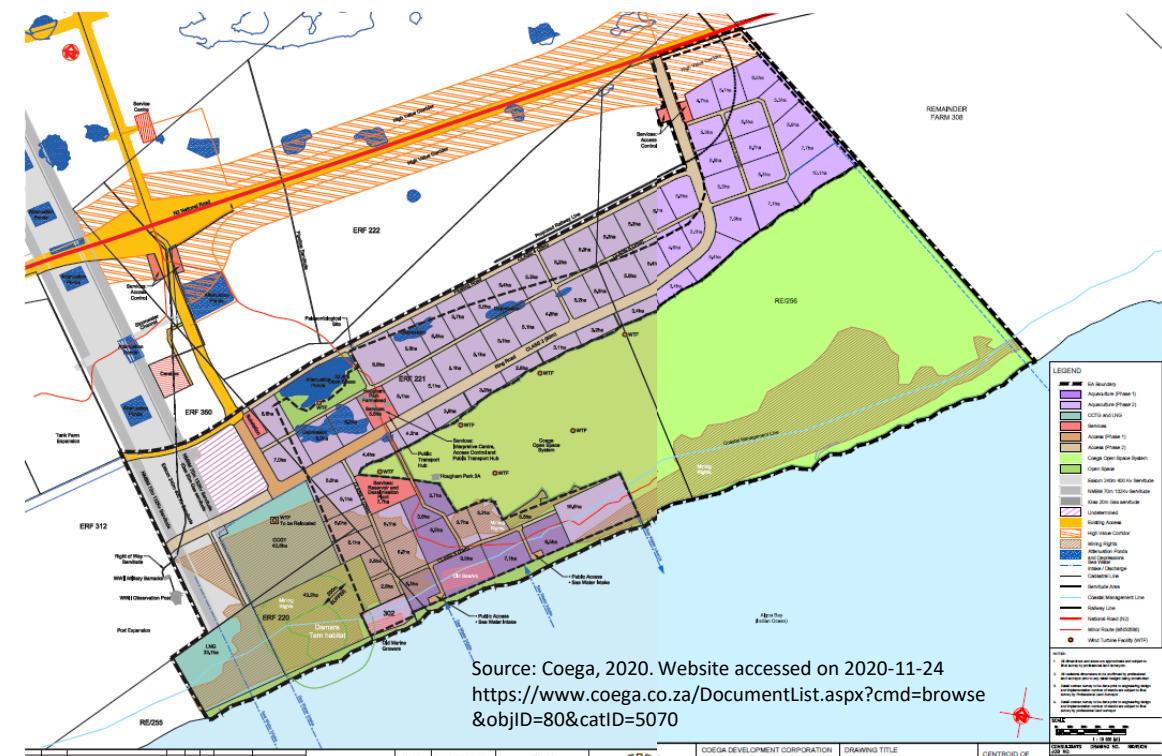
Oceans Economy Strategy - Progress thus far

- SA Coast line close to 4000 km;
- Exclusive Economic Zone (EEZ) of 1.5 million square km;
- About 30 000 vessels pass through the SA coast per annum;
- Potential contribution of approximately R180 Billion to SA economy;
- STS bunkering grown since April 2016 to 3 operators;
- STS bunkering - pivotal enablers for growing EC maritime industry; and
- Estimated 100+ extra vessels a month calling for bunker services.



AQUACULTURE
DEVELOPMENT
ZONE AND
OPL & OFFSHORE
SERVICES

Coega Aquaculture Development Zone (ADZ) - Town Plan

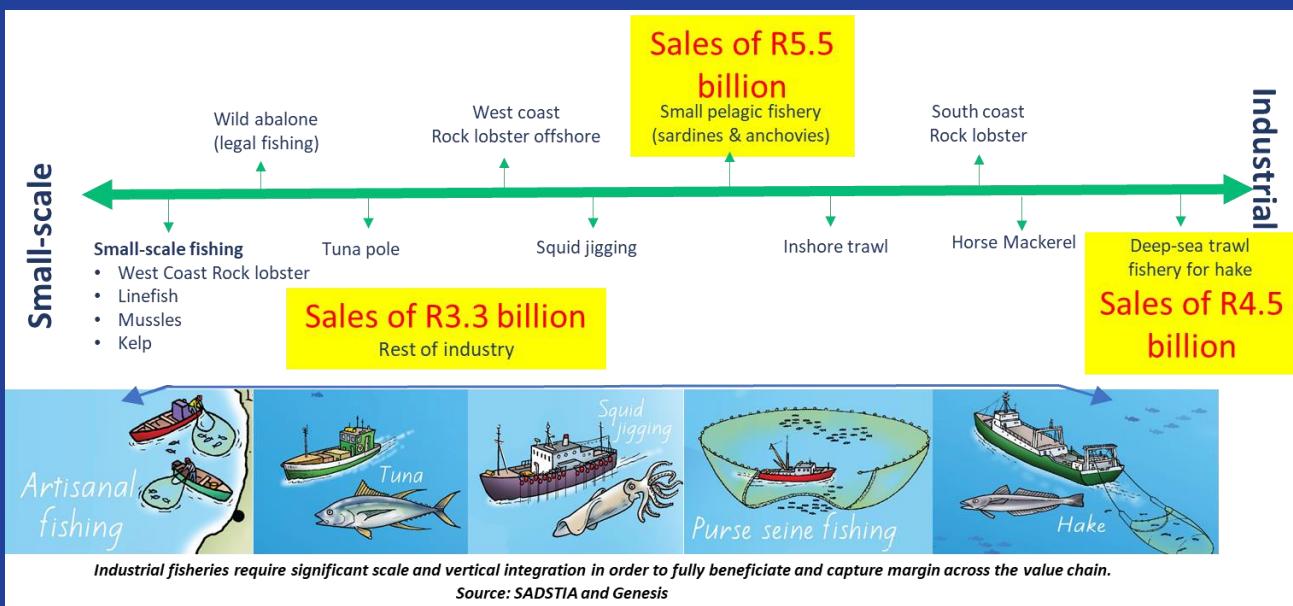


Fishing Opportunities.....FRAP (Fishing Rights Allocation Process)



Fishing Opportunities in the Eastern Cape:

- Fishing not included in Operation Phakisa initially (well established)
- Hake & Small Pelagic's = 75% of SA Fishing GVA.
- Eastern Cape (EC) Regional allocation of 'Total Allowable Catch (TAC)' is disproportionate to the EC 'Biomass Contribution':- (See table).
 - Reasons: WC industry well developed and entrenched,
 - EC does not have sufficient capacity: Boats, Plant, Logistics, Entrepreneurs.
- REMEDY: Advocacy required, collaboration, FRAP closes December 21



STAATSKOERANT, 26 JUNIE 2020 No. 43477 3

GOVERNMENT NOTICES • GOEWERMENTSKENNISGEWINGS

DEPARTMENT OF ENVIRONMENT, FORESTRY AND FISHERIES

NO. 715 26 JUNE 2020

MARINE LIVING RESOURCES ACT, 1998 (ACT NO. 18 OF 1998)

COMMENCEMENT OF THE 2020/21 FISHING RIGHTS ALLOCATION PROCESS ("FRAP2020/21") FOR THE GRANTING OF COMMERCIAL FISHING RIGHTS IN TERMS OF SECTION 18 OF THE MARINE LIVING RESOURCES ACT, 1998 (ACT NO 18 OF 1998) ("THE MLRA").

No. 2020

On 2 August 2019, the Minister of Environment, Forestry and Fisheries (now the Minister of Forestry, Fisheries and the Environment), by Government Notice No. 1019 published in Government Gazette No. 42608, withdrew Government Notice Government Notice No. 637, published in Government Gazette No. 41781 on 20 July 2018 relating to the commencement date of the next Fishing Rights Allocation process ("FRAP"). Cabinet supported the decision to extend the timeframes for dealing with the fishing rights allocation process in commercial fishing sectors, which will expire on 31 December 2020. The timelines were accordingly extended to 31 December 2021.

Eastern Cape Contribution to the National Biomass:

EC % of National Biomass	vs	EC Rights %
Anchovy		55 % (7.9%)
Sardine		70 % (13.6%)
Hake		27 % (5.0%)
South Coast Rock Lobster		75 % (40.0%)
Squid		100 %
Horse Mackerel		93%

Experience, Research & Capacity

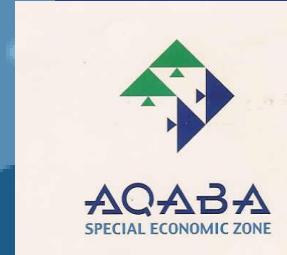


NELSON M[▲]ANDELA
UNIVERSITY



nelson mandela bay
BUSINESS CHAMBER

Connecting business. Stimulating progress.



NMBM – Cost of Doing Business



TABLE 1.1 *Doing Business in South Africa 2018*—where is it easier?

Location	Dealing with construction permits		Getting electricity		Registering property		Enforcing contracts	
	Distance to frontier score (0–100)	Ranking (1–9)	Distance to frontier score (0–100)	Ranking (1–9)	Distance to frontier score (0–100)	Ranking (1–9)	Distance to frontier score (0–100)	Ranking (1–9)
Buffalo City (East London)	71.66	6	59.40	5	57.81	6	51.48	9
Cape Town (Cape Town)	75.48	1	↑ 79.81	1	54.69	7	54.71	7
Ekurhuleni (Germiston)	71.81	4	52.09	6	58.48	4	55.58	5
eThekweni (Durban)	73.65	2	↑ 69.40	2	54.58	8	55.74	4
Johannesburg (Johannesburg)	↑ 68.16	8	↑ 68.77	3	59.68	2	54.10	8
Mangaung (Bloemfontein)	↑ 71.25	7	59.82	4	↑ 59.73	1	59.01	1
Msunduzi (Pietermaritzburg)	↑ 73.17	3	↑ 47.59	8	52.78	9	58.78	2
Nelson Mandela Bay (Port Elizabeth)	↑ 71.70	5	↑ 42.19	9	57.93	5	54.85	6
Tshwane (Pretoria)	↑ 66.25	9	51.24	7	59.39	3	56.14	3

Source: *Doing Business* database.

Note: Rankings are based on the distance to frontier score (DTF), which shows how far a location is from the best performance achieved by any economy on each *Doing Business* indicator. The score is normalized to range from 0 to 100, with 100 representing the frontier of best practices (the higher the score, the better). Arrows indicate an improvement in the DTF score between 2015 and 2018. For more information, see the chapter "About *Doing Business* and *Doing Business in South Africa 2018*" and the data notes.



NMBM – Cost of Doing Business



DOING BUSINESS IN SOUTH AFRICA 2018

NELSON MANDELA BAY (Port Elizabeth)

	2015	2018
Dealing with construction permits (rank)	6	5
Distance to frontier score (0–100)	71.10	71.70
Procedures (number)	20	20
Time (days)	101	96
Cost (% of warehouse value)	2.8	2.6
Building quality control index (0–15)	12	12
Getting electricity (rank)	9	9
Distance to frontier score (0–100)	35.69	42.19
Procedures (number)	6	6
Time (days)	347	190
Cost (% of income per capita)	587.7	523.8
Reliability of supply and transparency of tariffs index (0–8)	0	0

	2015	2018
Registering property (rank)	5	5
Distance to frontier score (0–100)	59.10	57.93
Procedures (number)	8	8
Time (days)	25	20
Cost (% of property value)	6.3	7.6
Quality of land administration index (0–30)	14.5	15
Enforcing contracts (rank)	6	6
Distance to frontier score (0–100)	54.85	54.85
Time (days)	611	611
Cost (% of claim value)	30.4	30.4
Quality of judicial processes index (0–18)	7	7



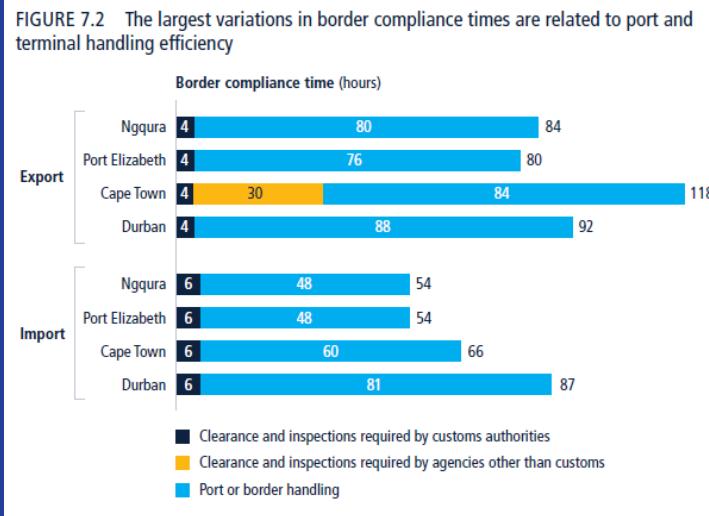
Source: World Bank, 2018. Doing Business in South Africa 2018. World Bank Group:
https://www.doingbusiness.org/content/dam/doingsBusiness/media/Subnational-Reports/DB18_South-Africa.pdf

NMBM – Cost of Doing Business



Competitiveness:

- World Bank 2018,
- Doing Business in SA,
- No. 65 out of 100....
- New TNPA structure
- Improvements....



PORT OF PORT ELIZABETH	
TRADING ACROSS BORDERS	
INDICATOR SNAPSHOT	
Distance to frontier score (0–100)	69.25
Time to export	
Documentary compliance (hours)	68
Border compliance (hours)	80
Cost to export	
Documentary compliance (US\$)	55
Border compliance (US\$)	451
Time to import	
Documentary compliance (hours)	36
Border compliance (hours)	54
Cost to import	
Documentary compliance (US\$)	73
Border compliance (US\$)	676

Comparing Business Regulation for Domestic Firms in 9 Urban Areas and 4 Maritime Ports with 189 Other Economies

	Distance to frontier score (0–100)	Export				Import			
		Border compliance		Documentary compliance		Border compliance		Documentary compliance	
		Time	Cost	Time	Cost	Time	Cost	Time	Cost
	(hours)	(US\$)	(hours)	(US\$)	(hours)	(US\$)	(hours)	(US\$)	(US\$)
OECD high income	93.92	13	150	2	35	9	112	4	26
OECD high income (by sea)	84.37	31	325	5	65	34	376	12	64
East Asia & Pacific	69.97	56	388	68	112	70	431	66	111
East Asia & Pacific (by sea)	69.69	60	428	60	111	77	462	53	112
South Africa average (by sea)	65.07	94	666	75	60	65	676	36	73
BRIC	64.36	63	623	24	124	115	711	54	141
BRIC (by sea)	62.66	63	623	24	124	140	753	58	138
Sub-Saharan Africa	52.56	100	592	88	215	136	687	103	300
Sub-Saharan Africa (by sea)	46.54	121	790	104	266	159	880	105	312
Spain	100.00	0	0	1	0	0	0	1	0
United Kingdom	93.76	24	280	4	25	3	0	2	0
Malaysia	82.75	45	321	10	45	69	321	10	60
Mexico	82.09	20	400	8	60	44	450	18	100
Chile	80.56	60	290	24	50	54	290	36	50
Rwanda	72.44	97	183	42	110	86	282	48	121
Australia	70.65	36	749	7	264	39	525	4	100
Port Elizabeth	69.25	80	451	68	55	54	676	36	73
Ngqura	68.93	84	451	68	55	54	676	36	73
Kenya	67.63	21	143	19	191	180	833	60	115
Cape Town	62.47	118	503	96	73	66	676	36	73
Namibia	61.47	120	745	90	348	6	145	3	63
Durban	59.64	92	1257	68	55	87	676	36	73
Brazil	59.78	49	959	12	226	63	970	48	107
Ghana	52.32	108	490	89	155	89	553	76	474

Source: Doing Business database.

Note: The distance to frontier score (DTF) is normalized to range from 0 to 100, with 100 representing the frontier of best practices (the higher the score, the better). The ranking of economies on the ease of trading across borders is determined by sorting the DTF scores for this category. These scores are the simple average of the DTF scores for border compliance and documentary compliance. The time and cost for domestic transport do not affect the ranking on the ease of trading across borders. For more details, see the chapter "About Doing Business and Doing Business in South Africa 2018." The OECD averages are based on economy-level data for the 33 OECD high-income economies, 13 of which export by sea and 8 of which import by sea. The East Asia & Pacific averages are based on economy-level data for the 25 economies of East Asia and the Pacific, 22 of which export and import by sea. The BRIC averages are based on economy-level data for Brazil, Russia, India and China, all of which export by sea and of which Brazil, India and China also import by sea. The averages for Sub-Saharan Africa are based on economy-level data for the 48 economies in the region, 29 of which export by sea and 29 of which import by sea.



Export Trade Analysis – SA Ports

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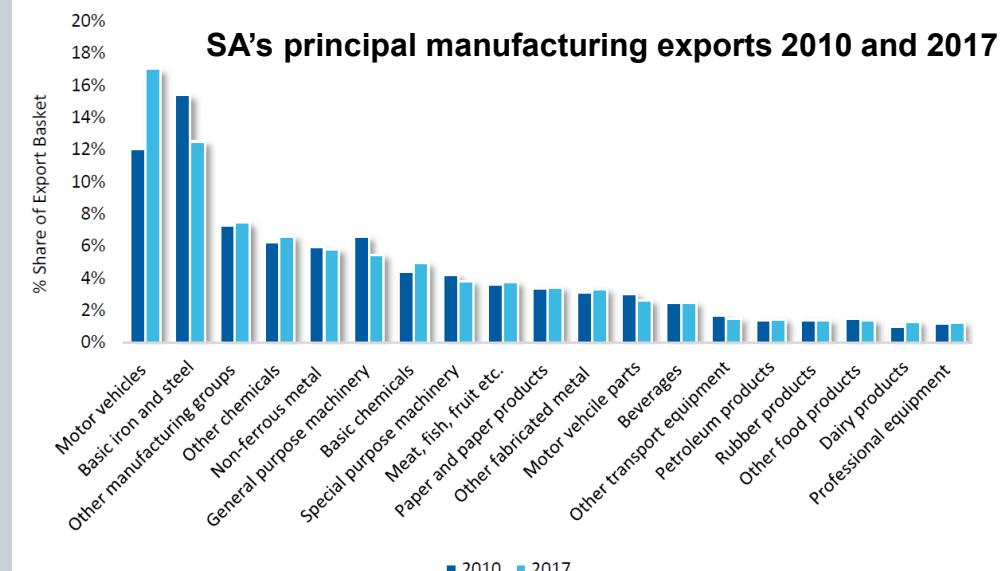
SA's Principal Manufacturing Exports

South Africa's export basket has become more diversified in terms of its sectoral composition since 2010. The merchandise export basket, however, is still concentrated in a few sectors, especially within manufacturing.

The manufacturing sector accounted for 57.2% of South Africa's overall export basket in 2017, a similar level to that recorded in 2010. The composition of the country's manufacturing export basket however has changed over the years, with a consistent rise in the relative share claimed by the motor vehicles sub-sector.

Export sales of motor vehicles, parts and accessories were 4.7% lower (or R6.9 billion) in nominal value terms in 2017. This negative growth in South African vehicle and parts exports illustrates the challenging trading environment that has characterised the global automotive sector over the last year. Despite this negative-year-on-year growth, the value of South African motor vehicles, parts and accessories exports has had a compounded annual growth rate of 12.4% in nominal terms since 2010.

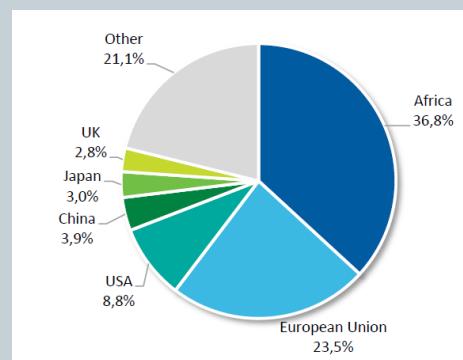
This growth has seen the motor vehicles, parts and accessories sub-sectors combined share of the overall merchandise export basket increase from 8.6% in 2010 to 11.2% in 2017. The sub-sectors importance within the broader manufacturing sector is even more pronounced, with the sub-sectors share of total manufacturing exports increasing from 15.1% in 2010 to 19.6% in 2017.



Source: Quantec RSA Regional Trade Database (2019)

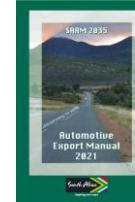
Manufacturing Exports Destinations

The geographical distribution of South Africa's manufactured exports has become more diversified over time, with emerging markets like China and India, and the rest of the African continent featuring more prominently over the last several years.



Source: Urban Econ, 2019. *Manufacturing and Port Capacity. Socio-economic Port Export Study.*

Automotive Exports from South Africa



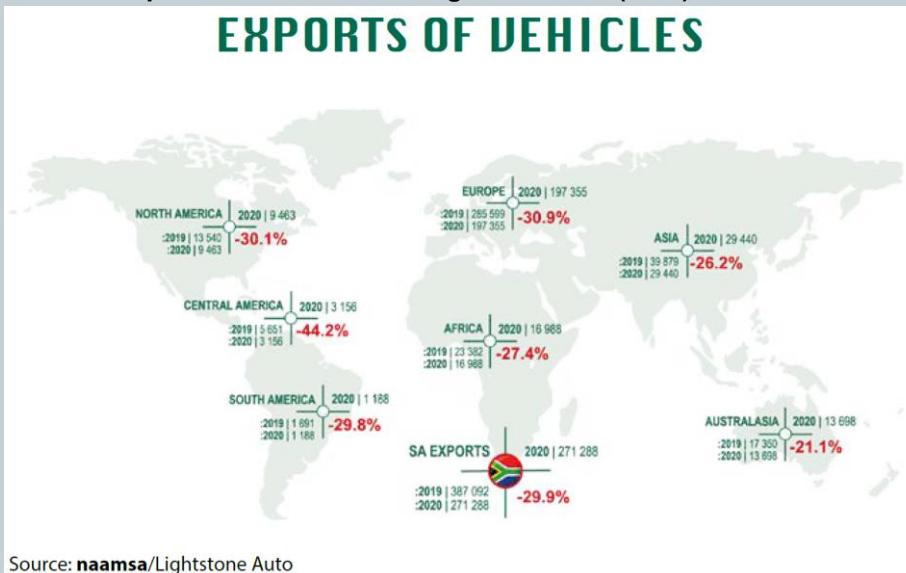
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South Africa has a solid track record as a reliable manufacturer and supplier of high-quality vehicles and automotive components to world markets. However, South African automotive export prospects are dependent on the health of the global economy.

Since COVID-19 has severely impacted economic activity in every region of the world, domestic vehicle exports have been significantly affected by the fall in global vehicle demand.

Consequently, 2020 vehicle exports registered a large decline of 115 804 units, or 29,9%, to 271 288 units in 2020, from the record vehicle export performance of 387 092 units in 2019.

Global Export Destinations for 'Light Vehicles' (LV's) 2019 & 2020



Source: NAAMSA, 2021. Automotive Export Manual 2021..

This data reveals that the top export destinations for passenger cars and LCVs in terms of number of units in 2020, were the UK, Germany, Japan, and France. VWSA, with its Polo model, remained the pacesetter in the country's vehicle exports in 2020.

In terms of the timeframe envisaged for a full recovery to the pre-COVID-19 vehicle export levels, much will depend on improvements in the economic climates of the South African automotive industry's main trading partners.

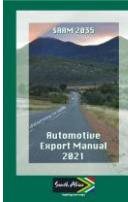
A rebound is projected for 2021, mainly spurred by mass vaccination campaigns in various countries.

Volumes & Destinations for 'LVs' exported from SA – 2016 to 2020

Country	2016	2017	2018	2019	2020
Total (R billion)	114,0	110,9	123,2	143,4	117,0
Ranking of exporters	MBSA VW BMW Ford Toyota	MBSA VW BMW Ford Toyota	MBSA VW BMW Ford Toyota	VW MBSA BMW Ford Toyota	VW MBSA BMW Ford Toyota
Number 1 to 5					
UK	110 356	98 358	119 578	101 401	67 798
Germany	12 297	10 423	25 513	37 152	25 736
Japan	33 296	42 492	44 027	33 435	23 645
France	19 204	19 055	23 400	25 629	13 956
Australia	21 446	23 336	21 594	16 284	13 041
Italy	6 238	5 088	8 870	14 624	10 546
Belgium	8 116	6 902	6 338	11 379	10 048
USA	47 627	40 414	11 440	12 437	8 584
Netherlands	601	397	1 481	12 146	8 321
Austria	2 317	2 105	2 749	12 675	6 376
Other	82 268	88 535	85 013	109 103	82 679
Total (units)	343 766	337 105	350 003	386 265	270 730
Light vehicle production	571 791	574 075	581 469	603 082	423 907
% of production exported	60,1%	58,7%	60,2%	64,1%	63,9%

Source: naamsa/Lightstone Auto, SARS

Automotive Exports from South Africa



31

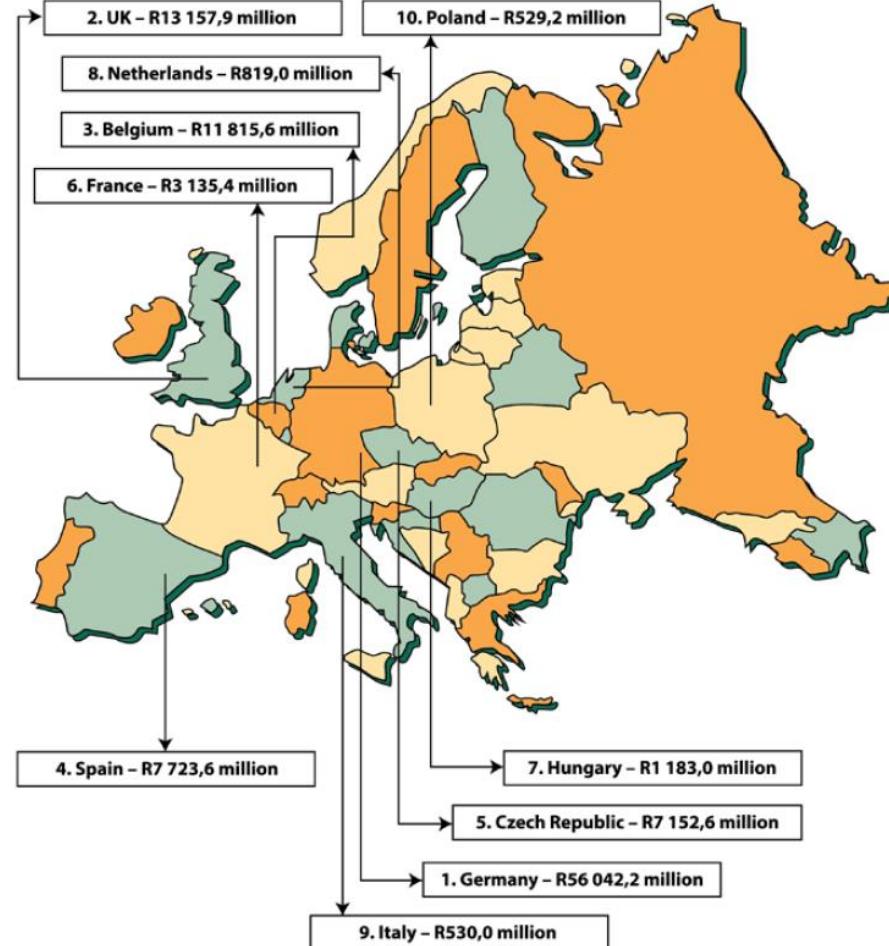
The EU remained the domestic automotive industry's most important regional export destination in 2020, accounting for R105,0 billion, or 59,8%, of total automotive exports of R175,7 billion.

The UK has been the domestic automotive industry's top destination for vehicle exports since 2014, up to 2020. Developments in the EU and the UK, therefore, have a measurable and direct impact on the South African automotive industry.

In this regard, Brexit and announcements on the banning of the sales of new internal combustion engine vehicles by countries in Europe, such as the UK, have been closely monitored by the domestic automotive industry.

Exports to the EU by product category – 2016 to 2020

Component	2016	2017	2018	2019	2020
Total (R million)	86 013,9	85 908,4	105 218,0	129 702,8	105 040,7
Total (average Euro million)	5 283,4	5 712,0	6 744,7	8 021,2	5 596,2
Air conditioners	4,2	2,8	3,9	0,8	7,2
Alarm systems	18,6	8,0	6,5	16,9	5,1
Automotive glass	383,8	349,4	418,8	413,7	423,5
Automotive tooling	286,0	258,6	217,4	208,3	210,5
Axles	281,5	300,2	268,2	406,4	309,2
Batteries	4,9	3,3	6,3	28,4	55,3
Body parts / panels	100,5	126,0	139,7	337,5	74,0
Brake parts	78,0	65,3	99,6	74,3	38,2
Car radios	1,3	3,9	0,8	0,2	0,3
Catalytic converters	14 951,1	13 769,4	14 129,6	15 153,2	18 801,8
Clutches / shaft couplings	271,5	386,6	372,4	347,8	345,0
Engines	78,0	64,8	64,9	35,2	47,6



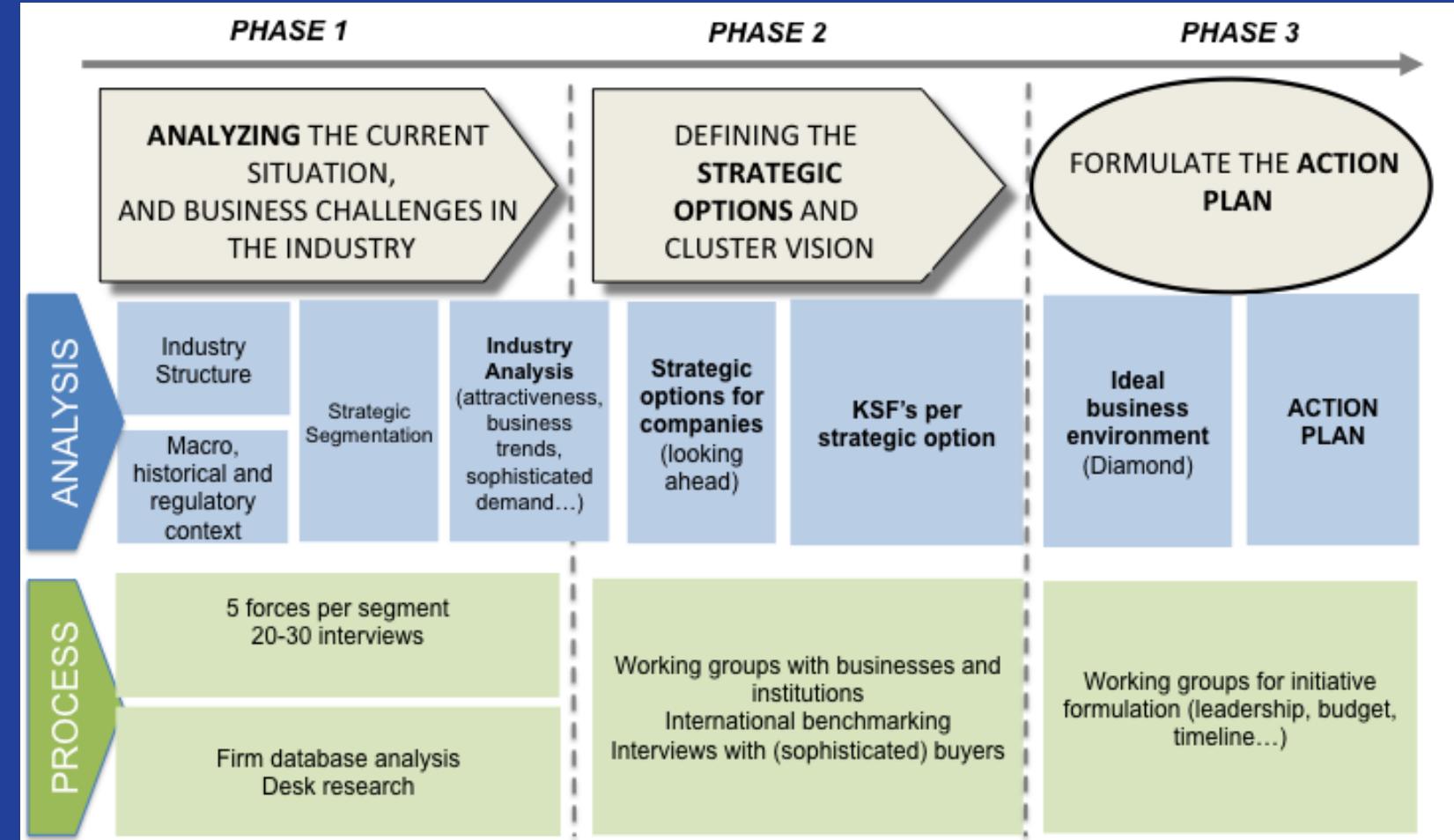
Source: NAAMSA, 2021. Automotive Export Manual 2021..

How we assist and engage with the Maritime Industry?

Mandela Bay
MARITIME CLUSTER

Next Steps & Way Forward:

- How does MBMC get involved?
- Which industry or opportunity is being considered?
- Who are the stakeholders and 'Gatekeepers'?
- Desktop research of all available data,
- Meet with Public & Private relevant parties,
- 'Broker' the deal from an independent perspective,
- Fulfill our 'Strategic Objectives'
-
- ... ☺
-



Part A: Aquaculture Potential & Support Services

Industry Potential:

- Operation Phakisa - DEFF Support
- Aquaculture Development Zones - ADZs
- Coega SEZ Aquaculture & EL SEZ
- Funding & services support
- WHO support
- SDGs and United Nations
- WC has an established sector
- EC needs to realise full potential
- Political & Institutional support
-

Funding & Services Available:

- Legal Guide for Aquaculture (DEA)
- Aquaculture Authorisation Process (DEFF)
- Guide to Authorisation (DAFF)
- Aquaculture Business Plan Guide
- Aquaculture in SA 2021 (DEFF)
- Aquaculture Yearbook SA - 2018
- Funding Opportunities for SMMEs
- ADEP, SEDA, SEFA, ECDC, DTI, IDC...
- MBMC → 

Part B: Aquaculture

Aquaculture Industry Overview:

- Included in SA Operation Phakisa – Fisheries, Aquaculture, Harbours,
- ‘Unlocking the Potential of the Aquaculture Sector’ - DEFF
- Make use of current initiatives and support
- Develop replicable ‘Aquaculture Models’ for ‘Franchising’.....
- Focus and Beneficiation Initiatives:- Biomass growth, Capital Investment, Meaningful and Sustainable Transformation, SMME Development, Increase Value Chain Integration, Training & Development, ***Support for Aquaculture & Small Scale Fisherman.***
- Actual and potential economic contributions – Value Chain Analysis
- Policy & financing initiatives to support Aquaculture & Fisheries....

Demand Assessment

Determine **Demand** for Aquaculture Products & Services in each value chain in SA – Local & International

- GDP: National, Provincial
- Define Sector, prospects
- Map out and analyze Value Chain – All industries...
- Demand for products:
 - Current situation
 - Future potential
 - Gap Analysis
- Industry assessments
- Discussions, Interviews, Meetings - Stakeholders

OUTPUT: Current & future **Demand**, sectors & industries

Supply Assessment

Ability of SAs Aquaculture Sector to **Supply** the products, value chain services, skills, & equipment for demand:

- Current situation - Supply:
 - Markets, Tons & Prices
 - Shortfalls – Deficits
 - Gap Analysis
- SARS, Customs, Imports
- Volume & Price analysis
- Operational Budgets
- Skills and People
- Public sector, private sector & service providers
- Finance & Policy support

OUTPUT: Current **Supply** of Aquaculture, Industry, Services

Part C: Action Plan

Current Opportunities

Type, extent, quality and quantity of opportunities for the sector – evaluated for meaningful participation:

- Current state of industry
- Barriers and constraints
- SWOT, PESTLE & ‘Canvass’
- Market potential – Tons & Price
- Policy, Licenses & Initiatives
- Commercial feasibility, viability
- Financial & Business Plans
- Public sector, private institutions and independent service providers

OUTPUT: High level feasibility study, ready to move to **‘Business Plan’** with full financial analysis.

Action Plan

Realistic and achievable recommendations & action plans for development of a feasible Business Plan:

- Distil a cogent set of recommendations
- Identify the key public and private sector role-players
- Compile a matrix of actions, measurable deliverables
- Clearly defined actions and realistic target dates
- Present preliminary findings
- Implementation Plan, Action

OUTPUT: Final Report & **Implementation / Action Plan**





Thank you

Derek Zimmerman - Biography



'Derek has been involved in the Development Finance and Economics realm for the past thirty years, with a strong emphasis on infrastructure, industrial development, renewable energy and the Ocean Economy.

Derek lectures Maritime Economics at Nelson Mandela University at a masters level, and is Deputy Chairperson of the MBMC.

Projects of relevance to our Maritime Cluster are as follows:

1. South African Ocean economy within the Operation Phakisa framework on behalf of the Department of Forestry, Fisheries and Environment (DFFE),
2. The Business Plan for the East London Industrial Development Zone, which included rail upgrades, port logistics and development,
3. The Masterplan for the Coega Industrial Development Zone, including Aquaculture and the logistics of the Deepwater Port of Ngqura for the IDZ,
4. The preparation of a number of feasibility study reports and business plans for port infrastructure and developments in SA, Africa and the Middle East,
5. The Feasibility Study and Business Plan for the Waterfront in the Port of Port Elizabeth,
6. The Eastern Cape Ocean Economy and Road Map to highlight commercial opportunities, and
7. The preparation of the maritime cluster support framework for this cluster, the Mandela Bay Maritime Cluster.'



Derek Zimmerman.
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