The Eastern Cape



## PRIORITY PROJECTS FOR IMPLEMENTATION

BID BOOK

























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# **EXECUTIVE SUMMARY**

ESTABLISHING THE OCEANS ECONOMY

Globally and nationally the Oceans Economy is becoming more important in the economic realm. • •

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### 01 EXECUTIVE SUMMARY

Globally and nationally the Ocean Economy is taking on increasing importance in the policy and economic realm as land-based resources reach their extractive plateau, and the ocean is recognised as a resource. This resource, if responsibly managed, could provide a sustainable answer to many of the pressing issues facing humankind at present.

This baseline study establishes the potential of the Ocean Economy in South Africa at a national level, and in a provincial context for the Eastern Cape, using the Department of Environmental Affairs (DEA) 2014 Operation Phakisa for the Ocean Economy as the baseline framework and point of reference. A detailed analysis has been undertaken of the national and provincial economic trends, and thereafter a twenty-year economic forecast has been prepared which simulates the Ocean Economy and its various subsectors in the context of standard industrial classifications (SIC) for all economic sectors. The purpose of the Eastern Cape Ocean Economy Baseline is to accurately formulate the current situation and understand the sector dynamics, take stock of the current and future ocean economy opportunities within a regional context, and be able to formulate a cogent 'Road Map' for the way forward linked to a demonstrable strategy. This required an in depth analysis of the work undertaken by the Operation Phakisa Laboratories, extensive engagement with national and regional stakeholders, public and private entities as well as academia, and the compilation of a baseline of implementable ocean based projects.

The process undertaken in the formulation of this baseline is detailed in this report and its appendix, with a highlevel listing of all of the projects considered hereafter. Certain of these are described in more detail in the report. A succinct summary of these fifty-nine projects and their establishment values, contribution to Gross Domestic

#### Product and potential to create employment opportunities is outlined in the following table:

#### Table 1: Eastern Cape Ocean Economy sector potential over twenty years

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	651.000	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



By year twenty in 2039 this represents 138% of the anticipated Eastern Cape's ocean economy GDP, and 217% of the employment opportunities. This preliminary analysis indicates that more labour-intensive projects need to be pursued, possibly at the expense of the capital intensive projects included. Following on from this baseline study has been a series of stakeholder engagement sessions to showcase the preliminary findings and start preparing the implementation plan in the form of a Road Map and Strategy, to be presented at an investor's conference early in 2020.



# PROJECT RANKING FOR PRIORITY

ESTABLISHING THE OCEANS ECONOMY

The ranking process determines the most suitable projects for early implementation. • •

## 02 PROJECT RANKING FOR PRIORITY AND IMPLEMENTATION

#### 2.1 'TOP TEN' PROJECT SELECTION BASED ON GDP AND EMPLOYMENT

A series of criteria have been applied to sort and rank projects which are 'Project Ready' and can be implemented within the current Medium Term Expenditure Framework (MTEF), which extends from March 2019 to February 2024, together with providing the highest economic impact through Gross Domestic Product and employment contributions. The outcome of this process and project ranking is indicated in the following figure:

The 'Top Ten' ranking assessment has been undertaken for Capital Expenditure (Capex) per project, operational turnover and Gross Domestic Product (GDP), and Full Time Employment (FTE) or sustainable employment creation from one year to the next.

This has resulted in the Marine Tilapia Feedstock Production project attaining top position for employment creation in both the short and long term, with Project Mthombo Oil Refinery attaining top position in the short term because of the high Capex costs, and Gas-to-Power attaining top position in the longer term for operational turnover and GDP.

#### Figure 1: Top Ten Project Ranking - Eastern Cape Ocean Economy

Ranked the 61 projects according to the GDP impact and Employment creation potential. A major challenge for implementation are the low levels of project maturity and implementation readiness.

TEN TOP PROJECT RANKING	JOBS	2024	2039
YEAR FIVE USED AS THE BASE YEAR		YEAR 5	YEAR 20
Marine Tilapia - Feedstock Production		16.945	104.750
Gas Disribution Network		4.301	5.994
Gas-to-Power		4.200	5.854
Marine Tilapia - Processing & Sales		500	3.606
Port Elizabeth - Waterfront Development		3.072	4.282
Project Mthombo Oil Refinery		1,000	1.394
East Londond - Waterfront Development			1.089
Fuel Storage Facility - Ngqura		322	449
Marintime Waste Reception Facility (Oily Slops)		210	292
NW Wild Cost Toll Road - Tourism		157	219
Total - Top Ten		30.707	127.929
		OADEV 0	
		CAPEX &	
RAND MILLIONS & JOBS (FTE).		GDP	JUST GDP
RAND MILLIONS & JOBS (FTE). Top Ten Projects Ranking		GDP 2,024	<b>JUST GDP</b> 2,039
RAND MILLIONS & JOBS (FTE). Top Ten Projects Ranking Year Five used as the base year		GDP 2,024 To Year 5	JUST GDP 2,039 Year 20
RAND MILLIONS & JOBS (FTE). Top Ten Projects Ranking Year Five used as the base year Project Mthomho - Oil Refinery		GDP 2,024 To Year 5 17.692	JUST GDP           2,039           Year 20           2.308
RAND MILLIONS & JOBS (FTE). Top Ten Projects Ranking Year Five used as the base year Project Mthomho - Oil Refinery Gas-To-Power		CAPEX & GDP 2,024 To Year 5 17.692 14.468	JUST GDP           2,039           Year 20           2.308           4.212
RAND MILLIONS & JOBS (FTE). Top Ten Projects Ranking Year Five used as the base year Project Mthomho - Oil Refinery Gas-To-Power Gas Distribution Network		GDP 2,024 To Year 5 17.692 14.468 11.282	JUST GDP           2,039           Year 20           2.308           4.212           1.050
RAND MILLIONS & JOBS (FTE). Top Ten Projects Ranking Year Five used as the base year Project Mthomho - Oil Refinery Gas-To-Power Gas Distribution Network Port Elizabeth - Waterfront Development		GDP 2,024 To Year 5 17.692 14.468 11.282 6.647	JUST GDP           2,039           Year 20           2.308           4.212           1.050           619
RAND MILLIONS & JOBS (FTE). Top Ten Projects Ranking Year Five used as the base year Project Mthomho - Oil Refinery Gas-To-Power Gas Distribution Network Port Elizabeth - Waterfront Development East London- Waterfront Development		CAPEX & GDP 2,024 To Year 5 17.692 14.468 11.282 6.647 2.551	<b>JUST GDP</b> 2,039 Year 20 2.308 4.212 1.050 619
RAND MILLIONS & JOBS (FTE).         Top Ten Projects Ranking         Year Five used as the base year         Project Mthomho - Oil Refinery         Gas-To-Power         Gas Joistribution Network         Port Elizabeth - Waterfront Development         East London- Waterfront Development         Maritime Waste Reception Facility (Oily Slops)		CAPEX & GDP 2,024 To Year 5 17.692 14.468 11.282 6.647 2.551 1.769	JUST GDP           2,039           Year 20           2.308           4.212           1.050           619           -           242
RAND MILLIONS & JOBS (FTE).         Top Ten Projects Ranking         Year Five used as the base year         Project Mthomho - Oil Refinery         Gas-To-Power         Gas Distribution Network         Port Elizabeth - Waterfront Development         East London- Waterfront Development         Maritime Waste Reception Facility (Oily Slops)         Fuel Storage Facility - Ngqura		CAPEX &           GDP           2,024           To Year 5           17.692           14.468           11.282           6.647           2.551           1.769           1.692	JUST GDP           2,039           Year 20           2.308           4.212           1.050           619           -           242           165
RAND MILLIONS & JOBS (FTE).         Top Ten Projects Ranking         Year Five used as the base year         Project Mthomho - Oil Refinery         Gas-To-Power         Gas Distribution Network         Port Elizabeth - Waterfront Development         East London- Waterfront Development         Maritime Waste Reception Facility (Oily Slops)         Fuel Storage Facility - Ngqura         N2 Wild Coast Toll Road - Tourism		CAPEX & GDP 2,024 To Year 5 17.692 14.468 11.282 6.647 2.551 1.769 1.692 1.477	UUST 6DP 2,039 Year 20 2.308 4.212 1.050 619 242 165 141
RAND MILLIONS & JOBS (FTE). Top Ten Projects Ranking Year Five used as the base year Project Mthomho - Oil Refinery Gas-To-Power Gas Distribution Network Port Elizabeth - Waterfront Development East London- Waterfront Development Maritime Waste Reception Facility (Oily Slops) Fuel Storage Facility - Nggura N2 Wild Coast Toll Road - Tourism Marine Tilapia - Feedstock Production		CAPEX & GDP 2,024 To Year 5 17.692 14.468 11.282 6.647 2.551 1.769 1.692 1.477 855	JUST GDP           2,039           Year 20           2.308           4.212           1.050           619           -           242           165           141           46
RAND MILLIONS & JOBS (FTE).         Top Ten Projects Ranking         Year Five used as the base year         Project Mthomho - Oil Refinery         Gas-To-Power         Gas Distribution Network         Port Elizabeth - Waterfront Development         East London- Waterfront Development         Maritime Waste Reception Facility (Oily Slops)         Fuel Storage Facility - Nggura         N2 Wild Coast Toll Road - Tourism         Marine Tilapia - Feedstock Production         Marine Tilapia - Processing & Sales		CAPEX & GDP 2,024 To Year 5 17.692 14.468 11.282 6.647 2.551 1.769 1.692 1.477 855 774	UUST 6DP 2,039 Year 20 2.308 4.212 1.050 619 - 242 165 141 46 394

50% 13% 12% **75%** 

CAPEX COST	
Project Mthombo - Oil Refinery	15,384
Gas-to-Power	10,256
Gas Distribution Network	10,231
Marine Tilapia - Feedstock Production	6,028
Marine Tilapia - Processing & Sales	2,551
Total	44,451

Top 10: 50,029 Full portfolio: 70 685



Strategic Roadmap would need to create a mechanism to increase readiness and investor attractiveness of the Ocean's Economy portfolio, whilst not losing implementation momentum.



#### **2.2 STRATEGIC ROADMAP FOR PROJECT IMPLEMENTATION**

An Eastern Cape Ocean Economy 'Strategic Roadmap' has been produced which defines the strategic approach and path to achieve the sustained economic growth and employment creation that is required to address the triple scourge of inequality, unemployment and poverty.

Therefore the Eastern Cape Ocean's Economy's strategic context is firstly defined by the dual strategic requirements of Operation Phakisa to increase South Africa's Gross Domestic Product (GDP) by between R129 to 177 billion; and to create one million new jobs within the Ocean's Economy by 2033. Thereafter the Eastern Cape Ocean Economy projects are considered in relation to the baseline for the province in terms of Operation Phakisa, with the baseline established over a twenty year forecast and then the identified Eastern Cape Ocean Economy project juxtaposed against this to evaluate performance against these targets.

#### In order to achieve their provincial share of these targets, the Eastern Cape Oceans Economy would have to achieve the following strategic goals;

- Establish an effective and efficient transversal implementing capability to manage and drive implementation of the Eastern Cape Ocean's Economy portfolio.
- Establish a catalytic Ocean's Economy Eco-system through the implementation of ready or near-ready implementable projects to fast-track the achievement of strategic goals and create an enabling environment to secure future investments.

- Increase the competitive and comparative advantage of the Eastern Cape Oceans Economy through capacity and training interventions supported by an integrated research and innovation portfolio.
- Leverage off the success of catalytic projects to secure new investments into the Eastern Cape Oceans Economy to consolidate the establishment of a sustainable Eastern Cape Ocean's Economy.

The strategic approach that is to be employed to ensure that the goals, objectives and targets that have been established are achieved, consists of five strategic thrusts that will drive the creation of a sustainable Eastern Cape Ocean's Economy.

#### These strategic thrusts are:

- 1. Establishment of a transversal provincial implementing authority, a Project Management Office (PMO),
- 2. Establishment of a portfolio of high impact projects which are implementation ready and demonstrate high potential to achieve the Operation Phakisa targets,
- 3. Implementation of a dual innovation and research process together with a capacity building and training intervention in the Province,
- 4. The creation of a sustainable and well supported investor pipeline which will secure the investment and technical support to implement the projects, and
- 5. Based upon the investments secured, leverage and expand the Eastern Cape Ocean Economy to increase economic stability and increase sustainability.





In order to achieve these strategic goals, several strategic objectives would have to be achieved. These are indicated in the figure below:

Figure 2: Strategic Objectives: Eastern Cape Ocean Economy Projects



Research Agenda: Decision-and Implementation Support



## PRIORITY EASTERN OCEAN ECONOMY PROJECTS

The ranking process determines the most suitable projects for early implementation.

#### 

## 03 PRIORITY EASTERN CAPE OCEAN ECONOMY PROJECTS

In order to be able to prepare for an investors conference, provisionally being considered for September 2019, it is preferable to have prepared a suite 'Information Memorandum' or 'Bid Books' for evaluation by potential investors, project partners, stakeholders or funders of the various Eastern Cape Ocean Economy projects. These projects should be 'investment ready' and merely need the correct stakeholders and funding in order to form the required partnerships or institutional arrangements to move towards implementation.

#### **3.1 CATALYTIC PROJECTS - IMPLEMENTATION READY**

The catalytic projects selected are deemed to be investment ready and able to meet the requirements for equitable socio-economic development by being spatially diverse and creating opportunities for gross domestic product formation and creating sustainable employment.

#### The five projects which have been selected as catalytic projects are as follow:

- 1. Oil Refinery at Coega Special Economic Zone (SEZ) 'Project Mthombo',
- 2. Gas-To-Power Electricity Generation at Coega SEZ,
- 3. Gas Transportation & Processing Infrastructure in the Eastern Cape,
- 4. Marine Tilapia Food Production in the eastern side of the Eastern Cape, and
- 5. Marine Tilapia Feedstock Production to support production..

Investment detail is provided for these catalytic projects in an 'Investment Memorandum' format which highlights the key features of each project and allows them to be comparable.

More detailed information and business plans or feasibility studies are available for all of these projects upon request.





#### 3.1.1 OIL REFINERY AT COEGA SEZ - 'PROJECT MTHOMBO'

#	LABEL	NARRATIVE
1	Project Name	Coega Oil Refinery – 'Project Mthombo' [400,000 barrels per day]
2	Project Location	Coega Special Economic Zone (SEZ)
3	Project Owner / Driver	Coega Development Corporation (CDC) is facilitating the project in their SEZ, whilst seeking a private sector operator to potentially partner with PetroSA, the South African energy parastatal, or the Department of Energy.
4	Brief Project Overview [Nature or function, primary purpose, service or clients, rationale]	The CDC wishes to participate in the South African Integrated Resource Plan (IRP) with both generation and enabling projects. As at 2016 CDC had eight transformational energy projects with a combined investment value of R 183 billion with potential for direct and indirect job creation of 73,445. The proposed Oil Refinery had an investment value of R 100 billion and the potential to create 24,000 jobs, direct and indirect, including construction. PetroSA has conducted a locational assessment and found Coega to be an ideal location, even though it does not have primary market access to the Gauteng hinterland yet. (PetroSA, 2019) The refinery would also stimulate the CDC petro-chemicals initiative. The crude supply would be 'heavy crudes' which would be refined to comply with international 'Clean Fuel' requirements. (PetroSA, 2019) PetroSA states the strengths of the project as follows: "The project strengths vary from a financial perspective, technical perspective, operationally and environmentally. Not only is the project economically viable and able to attract investors because of its high returns and low operational costs per barrel, but it environmentally friendly and flexible to meet current and future fuel specs. The flexibility also extends to its ability to process a wide range of feedstock and its diesel/petrol production. This refinery will utilise existing technology thus has low technical risk. Additionally, the refinery products will be supported by the growth in local fuels demand and it will generate additional revenue from sales of electricity." (PetroSA website, 2019)
5	Capital Value [R m]	R 100 billion (CDC, 2016)
6	Construction Start Date	When a private sector investor is secured.
7	Constructions Jobs p.a.	Approximately 23,000 construction jobs at peak (CDC, 2016)
8	Operation Start Date	When a private sector operator is secured.
9	Operating Costs p.a.	The operational costs would be approximately 94.6 billion per annum including feedstock costs (CDC, 2016)



#	LABEL	NARRATIVE
10	Operating Jobs p.a.	1,000 operational jobs on site.
11	Turnover or Value (GVA)	The revenue would need to be in excess of the operational costs of approximately 94.6 billion per annum including feedstock costs (CDC, 2016)
12	Economic Linkages	The operational employment would be 1,000 FTE Jobs with the potential for 18,000 indirect jobs through the entire value chain.
13	Private sector appetite	The Chinese company Sinopec has expressed an interest during 2012 to 2014. Various local entities and consortia have expressed an interest over the years, but have not been able to proceed due to policy uncertainty.
14	Government input	Policy certainty with regard to offtake, infrastructure support, pipelines and market linkages, downstream economic projects.
15	'Lever' to 'Unlock'	Policy certainty and support at a national government level.
16	Any Other Points	The project has been considered since 2007 and has suffered from policy uncertainty, fluctuating crude oil prices, Rand to US Dollar price fluctuations and a lack of political will.



#### Oil Refinery: Project Mthombo



-Construction phase Up to 23,000 at peak 5.000 to 10.000 highly skilled artisans. -Operation phase Approx. 1,000 permanent refinery jobs; 18,000 indirect jobs

New crude oil refinery for PetroSA to be based in Coega, Port Elizabeth.

Macroeconomics \$10 b to be spent during construction; - R94,6b per annum operational costs (including feedstock); - 83% of economic impact will accrue to the Eastern Cape; - Household income in the Eastern Cape could rise R1.8b per annum; - 5.5% p. a possible economic growth for the Eastern Cape province; - Spin-offs from the localisation initiative amounting to about R20bn could come to the province.



#### TRANSFORMATIONAL MEGA PROJECTS AT COEGA

#	Project Name	Description	Investment Value	Jobs created (direct and indirect)
1	Gas-to-Power Project	An additional IPP - driven power generation solution (2500MW) that is linked to an imported LNG	R40 bn	8140
2	Aqua-culture Complex	Development of an Aquaculture. Development Zone at Coega	R2 bn	5605
3	Return Effluent	Recycle water for industrail use	R102 bn	1500
4	Manganese export & Rail Upgrade	To increase Manganese export capasitybto 16mtpa by upgrading the rail infrastructurebetween Hotazeland Coega	R27bn	5000
5	Renewable Energy	Renewables	R2,8 bn	2500
6	PMG Manganese Smelter	Manganese Smelter to assist SA minerals	R7 bn	1500
7	Biodiesel Plant	Green fuels, Environmental Friendly	R3,2 bn	25200
8	Project Mthombo	Oil Refinery	R100bn	24000
	TOTAL		R183,5 bn	73445

#### **COEGA ENERGY VISION**

- Easterrn Cape endowed with resources for a diverse energy mix
- Locate LNG & Gas-to-Power solution at Coega
- Leverage lessons from Dedisa PPP & REIPPPP experience of the region
- Build socio economic linkage to Shale Gas prospect & Deepwater Gas
- Central in Nuclear Readiness Programme to support the New **Build Programme**
- Development of an Oil Refinery at Coega
- Unlock Biofuels & other clean energy projects
- · Expand RE implementation to drive socio-economic growth
- Incorportation of Inclusive Growth imperatives
- · Remain relevant to the developmental trajectory of South Africa



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#### 3.1.2 GAS-TO-POWER FOR COEGA SEZ

The Eastern Cape Ocean Economy high level profile and economic summary of this project is contained in the table hereafter.

#	LABEL	NARRATIVE
1	Project Name	1,000 Megawatt (MW) Gas-to-Power (GTP) project
2	Project Location	Coega Special Economic Zone (SEZ), near the Port of Ngqura
3	Project Owner / Driver	Department of Economic Development, Environmental Affairs and Tourism (DEDEAT), Eastern Cape
4	Brief Project Overview [Nature or function, primary purpose, service or clients, rationale]	The Eastern Cape and the Southern Coastline currently has the highest potential reserves of natural gas in South Africa. The most desired outcome would be to beneficiate the gas locally before exporting it elsewhere. Large reserves have been found at Brulpadda of the southern coast.
		Coega / Ngqura currently has the advantage of having technical readiness for the creation of a 1,000 MW gas-to-power project, however national decision making seems to be aligned towards Richards Bay for a 3,000 MW power plant and multi-purpose gas hub.
5	Capital Value [R m]	R25 billion investment value
6	Construction Start Date	Awaiting information from DEDEAT
7	Constructions Jobs p.a.	8,500 jobs at construction (Duration not specified)
8	Operation Start Date	Awaiting information from DEDEAT
9	Operating Costs p.a.	Awaiting information from DEDEAT
10	Operating Jobs p.a.	Awaiting information from DEDEAT
11	Turnover or Value (GVA)	Awaiting information from DEDEAT
12	Economic Linkages	The establishment of the 1,000 MW Gas-to-Power plant will lead to security of power supply both locally and nationally. The project will have a positive impact on the economic contribution of the region.



#	LABEL	NARRATIVE
13	Private sector appetite	Yes.
14	Government input	Policy certainty, the Gas Act and gas logistics infrastructure.
15	'Lever' to 'Unlock'	The key to unlocking the project would be to create a gas hub at Coega/Ngqura which would be anchored around the 1,000 MW Gas-to-Power project. This would also involve the short-term imports of LNG.
16	Any other points	DEDEAT and the CDC have undertaken market research



	POWER PLANTS	GAS FOR ELECTRICITY GENERATION/ POWER PLANTS
URAL GAS	DIRECT HEATING	INDUSTRIAL ENERGY / HEATING COMMERCIAL ENERGY / HEATING DOMESTIC ENERGY/ HEATING
	GAS FEEDSTOCK- CONVERSION	PETROCHEMICALS ETHYLENE CRACKERS GAS TO LIQUIDS - GTL PLANTS FUELS/ CHEMICALS / LUBES. METHANOL PLANT FERTILISER PLANTS
NAT	TRANSPORTATION FUEL - CNG	VEHICLE FUEL, CARS, BUSSES AND TRUCKS
	TRANSPORTATION FUEL - LNG	SHIPS FUEL / LOMCOMOTIVE FUEL





#### TABLE 1: PUBLISHED DRAFT IRP 2018 (APPROVED BY CABINET FOR CONSULTATION)

	COAL	NUCLEAR	HYDRO	STORAGE (PUMPED STORAGE)	PV	WIND	CPS	GAS / DIESEL	OTHER (COGEN, BIOMASS, LANDFILL)	EMBEDDED GENERATION
2018	39,126	1,860	2,196	2,912	1,474	1,980	300	3,830	499	Unknown
2019	2,155					244	300			200
2020	1,433				114	300				200
2021	1,433				300	818				200
2022	711				400					200
2023	500									200
2024	500									200
2025					670	200				200
2026					1,000	1500		2,250		200
2027					1,000	1600		1,200		200
2028					1,000	1600		1,800		200
2029					1,000	1600		2,850		200
2030			2,500		1,000	1600				200
TOTAL INSTALLED	33,847	1,860	4,696	2,912	7,958	11,442	600	11,930	499	2,600
Installed Capacity Mix (%)	44.6	2.5	6.2	3.8	10.5	15.1	0.9	15.7	0.7	



Committed/ Already Contracted Capacity

New Additional Capacity (IRP Update)



#### 3.1.3 GAS INFRASTRUCTURE FOR TRANSPORT AND PRODUCTION - EASTERN CAPE

#	LABEL	NARRATIVE
1	Project Name	Gas infrastructure to support an Eastern Cape gas initiative
2	Project Location	Along the southern and eastern coast between Mossel Bay and Port Edward, including the hinterland.
3	Project Owner / Driver	Various national government departments and private sector participants, PetroSA, Department of Energy, CDC, EC Government.
4	Brief Project Overview [Nature or function, primary purpose, service or clients, rationale]	<ul> <li>With the advent of large ocean based gas finds of the South African and Mozambique coast there are opportunities for the industrialisation of an integrated gas economy in the Eastern Cape, with dedicated logistics and infrastructure for the transportation and use of the various forms of gas, in order to support a multitude of downstream activities.</li> <li>The viable production of indigenous gas could support a carbon resilient future, cost effective power sector and help create better energy security.</li> <li>In the short to medium term the importation of Liquid Nitrogen Gas (LNG) builds readiness for indigenous gas and enables the development of the gas market infrastructure.</li> </ul>
5	Capital Value [R m]	Project extent dependent, in excess of R 100 billion.
6	Construction Start Date	Once the Gas Act has been promulgated and projects approved.
7	Constructions Jobs p.a.	Extensive, up to 25,000 construction jobs for ten years.
8	Operation Start Date	Undetermined at this early stage, probably ten years' time.

#	LABEL	NARRATIVE
9	Operating Costs p.a.	Dependent on projects and project structures.
10	Operating Jobs p.a.	Dependent on projects and project structures.
11	Turnover or Value (GVA)	Dependent on projects and project structures.
12	Economic Linkages	Full gas value chain into industrial, petro-chemical, agro-industry.
13	Private sector appetite	Yes, national and international gas participants, LNG, SNG H2, etc.
14	Government input	Policy certainty and project approval for the Eastern Cape.
15	'Lever' to 'Unlock'	The key to unlocking the project would be to create a gas hub at Coega/Ngqura which would be anchored around the 1,000 MW Gas-to-Power project. This would also involve the short-term imports of LNG.





Illustration of the anticipated extent of the physical infrastructure to be provided by the bidders for the LNG IPP programme.



#### 3.1.4 TILAPIA AQUACULTURE FOOD / FISH PRODUCTION

The Eastern Cape Ocean Economy high level profile and economic summary of this project is contained in the table hereafter.

#	LABEL	NARRATIVE
1	Project Name	Marine Tilapia Industry Incubator (MTII)
2	Project Location	Eastern Cape and KZN, trial in QholothaADZ
3	Project Owner / Driver	THAPI Aqua Kulcha (Pty) Ltd
4	Brief Project Overview [Nature or function, primary purpose, service or clients, rationale]	The raison d'être of the MTII is to promote and support the development of a large-scale and inclusive marine tilapia farming industry rurally-anchored along the sub-tropical coastal eastern seaboard of South Africa. There is an increase in the consumption of "whitefish" in SA and the aquaculture industry is able to make up the shortfalls in affordable whitefish supply. Increased exports of certified Cape Hake has precipitated increased price pressure on our finite marine fisheries resources in recent years, resulting in imports of sub-standard Chinese pond farmed tilapia and Pangasius spp. (tra/basa) into South Africa to fill the growing supply-demand gap for a more affordable (R20-30/kg at retail) whitefish species alternatives. Marine cultivated tilapia along the Eastern Cape coastline using Biofloc Technology (BFT) is aimed at import replacement targeting the supply of affordable fish in the whitefish category in Southern Africa where projected supply shortfalls are in the range 29,000 to 42,000 tonnes per annum by the
		early 2020's. The primary objective of the Marine Tilapia Vision 2032 addresses the following
		elements; food security, food sovereignty, job creation, inclusive development and improved rural and national nutrition.



#	LABEL	NARRATIVE
4	Brief Project Overview [Nature or function, primary purpose, service or clients, rationale]	The ultimate clients, users and beneficiaries are threefold; 1) National fish supply to supplement static capture fisheries, in particular Cape Hake, with a competitive farmed white fish species marine cultivated tilapia, 2) Rurally anchored implies high job impact and inclusive development in the rural Eastern Cape and KwaZulu-Natal. 3) Beneficiaries most impacted are rural coastal communities and inland rural small-scale famers producing feedstock crops to feed fish. A submission has been successfully submitted to National Treasury for GBS support via a competitive European Union grant fund for the establishment of the Marine Tilapia Industry Incubator (MTII).
5	Capital Value [R m] [The total value for the implementation over the whole project horizon until effective commissioning or opening of the project or facility.]	The MTII will be a public owned facility which will be run by a private partner in a PPP arrangement which defines Phase 1. An EU grant fund application for R59m for the MTII was successful, although not yet appropriated. The first two commercial farms (Phase 2) will require part state seed funding, possibly through Operation Phakisa and others, and partly by development banks such as the Land Bank, IDC etc. Preliminary estimates put the CAPEX at R230 to 260 million to establish one of two 5,000 tonne vertically integrated marine tilapia farms at Phase 2. Equity generation from the first two farms would be used for expansion into Phase 3 to improve the gearing ratios where a consolidated funding model will be embraced.
6	Construction Start Date	The MTII is currently running behind schedule and was originally planned for implementation by 1 <sup>st</sup> April 2019. It is hoped that the blockage at DAFF will be resolved soon and enabling a start date by 1 <sup>st</sup> February 2020.
7	Constructions Jobs p.a.	Estimates for the construction of the MTII are around 30 FTE.
8	Operation Start Date	Target start date is February 2020 depending on finalization and formalization of a verbal agreement between the ECRDA and DAFF/DEFF.



# 

#	LABEL	NARRATIVE
9	Operating Costs p.a.	OPEX for MTII operations excluding the Human Resource (HR) development program amounts to R8.4m p.a OPEX at Phase 2 will be approximately R132.3 million OPEX at Phase 5 will be approximately R1.33 billion
10	Operating Jobs p.a.	25 FTE for the MTII Approximately 4,700 FTE by the year 2032
11	Turnover or Value (GVA)	Approximately R 3.4 billion per annum by the year 2032 (100,000 tons of live weight marine tilapia)
12	Economic Linkages	An extensive value chain based on product flow from rural farmers through to processing, packaging targeting local and export markets.
13	Private sector appetite	Yes, proof of concept and seed funding required.
14	Government input	Policy and institutional framework to support.
15	'Lever' to 'Unlock'	The creation of the MTII to provide 1) demonstration, 2) HR development platform to feed into Phases 2 to 7 and 3) genetic resources and seed supply to initiate commercialization at Phase 2.



16       Any Other Points       Overall Objectives of the MTII An innovative, inclusive, rurally-focused marine aquaculture industry and value chain         16       Specific Objectives of the MTII: <ul> <li>To establish a public-private, cutting-edge enterprise incubator to transform the marine aquaculture industry and rural economy along the sub-tropical eastern seaboard of South Africa (Eastern Cape and KZN); and</li> <li>To develop and strengthen human and institutional capabilities for a sustainable marine aquaculture inclustry in South Africa</li> </ul> <li>Outcomes of the MTII:         <ul> <li>A catalytic aquaculture inclustor at the Qholorha ADZ, to seed and support a rurally-anchored, inclusive marine tilapia industry;</li> <li>Food sovereignty and food security through sustainable commercialization of the indigenous Orecohromis mossambicus genetic resource;</li> <li>Competencies and capabilities to grow and sustain the developing marine tilapia industry;</li> <li>Innproved rural livelihoods through jobs, income, skills and food security;</li> <li>Public and market appreciation of social and economic value of new marine tilapia industry</li> <li>Strengthened policy for the marine aquaculture sector.</li> </ul> </li> <li>The Marine Tilapia Industry Incubator (MTII) will be a publicly-owned, public-private facility that will demonstrate an efficient commercial marine aquaculture template for the industry. It will spearhead the development of genetic improvement of wild strains of Orecohromis mossambicus of reseawater culture, for the supply of improved seed stock to enable a major transformation of commercial marine tilapia value-chain, inclusive of non-fish commercial marine tilapia for the marine tilapia value-chain, inclusive of non-fish commercial marine tilapia value-chain, i</li>	#	LABEL	NARRATIVE
<ul> <li>Specific Objectives of the MTII:</li> <li>To establish a public-private, cutting-edge enterprise incubator to transform the marine aquaculture industry and rural economy along the sub-tropical eastern seaboard of South Africa (Eastern Cape and KZN); and</li> <li>To develop and strengthen human and institutional capabilities for a sustainable marine aquaculture industry in South Africa</li> <li>Outcomes of the MTII:</li> <li>A catalytic aquaculture incubator at the Qholorha ADZ, to seed and support a rurally-anchored, inclusive marine tilapia industry;</li> <li>Food sovereignty and food security through sustainable commercialization of the indigenous Oreochromis mossambicus genetic resource;</li> <li>Competencies and capabilities to grow and sustain the developing marine tilapia industry;</li> <li>Improved rural livelihoods through jobs, income, skills and food security;</li> <li>Public and market appreciation of social and economic value of new marine tilapia industry</li> <li>Strengthened policy for the marine aquaculture sector.</li> <li>The Marine Tilapia Industry Incubator (MTII) will be a publicly-owned, public-private facility that will demonstrate an efficient commercial marine aquaculture template for the industry. It will spearhead the development of genetic improvement of will strains of Oreochromis mossambicus for seawater culture, for the supply of improved seed stock to enable a major transformation of commercial marine tilapia farming. The MTII will also initiate the establishment of other elements of the marine tilapia value-chain, inclusive of non-fish commodites, community farming of fish-feed crops, processing and product development. The MTII will further more develop entrepreneurs, skilled workers and other practitioners across all levels of the aquaculture chain, inclusive of non-fish commodites, community farming of fish-feed crops, processing and product development. The MTII will further more develop entrepreneure, skilled workers and other practitioners across all levels of the</li></ul>	16	Any Other Points	<b>Overall Objectives of the MTII</b> An innovative, inclusive, rurally-focused marine aquaculture industry and value chain
<ul> <li>Outcomes of the MTII:</li> <li>A catalytic aquaculture incubator at the Qholorha ADZ, to seed and support a rurally-anchored, inclusive marine tilapia industry;</li> <li>Food sovereignty and food security through sustainable commercialization of the indigenous Oreochromis mossambicus genetic resource;</li> <li>Competencies and capabilities to grow and sustain the developing marine tilapia industry;</li> <li>Improved rural livelihoods through jobs, income, skills and food security;</li> <li>Public and market appreciation of social and economic value of new marine tilapia industry</li> <li>Strengthened policy for the marine aquaculture sector.</li> </ul> The Marine Tilapia Industry Incubator (MTII) will be a publicly-owned, public-private facility that will demonstrate an efficient commercial marine aquaculture template for the industry. It will spearhead the development of genetic improvement of wild strains of Oreochromis mossambicus for seawater culture, for the supply of improved seed stock to enable a major transformation of commercial marine tilapia farming. The MTII will also initiate the establishment of other elements of the marine tilapia value-chain, inclusive of non-fish commodities, community farming of fish-feed crops, processing and product development. The MTII will further more develop entrepreneurs, skilled workers and other practitioners across all levels of the aquaculture value-chain through applied, practice-based skills development, capacity-building, information, technical support, extension and advisory services.			<ul> <li>Specific Objectives of the MTII:</li> <li>To establish a public-private, cutting-edge enterprise incubator to transform the marine aquaculture industry and rural economy along the sub-tropical eastern seaboard of South Africa (Eastern Cape and KZN); and</li> <li>To develop and strengthen human and institutional capabilities for a sustainable marine aquaculture industry in South Africa</li> </ul>
development. The MTII will further more develop entrepreneurs, skilled workers and other practitioners across all levels of the aquaculture value-chain through applied, practice-based skills development, capacity-building, information, technical support, extension and advisory services.			<ul> <li>Outcomes of the MTII:</li> <li>A catalytic aquaculture incubator at the Qholorha ADZ, to seed and support a rurally-anchored, inclusive marine tilapia industry;</li> <li>Food sovereignty and food security through sustainable commercialization of the indigenous Oreochromis mossambicus genetic resource;</li> <li>Competencies and capabilities to grow and sustain the developing marine tilapia industry;</li> <li>Improved rural livelihoods through jobs, income, skills and food security;</li> <li>Public and market appreciation of social and economic value of new marine tilapia industry</li> <li>Strengthened policy for the marine aquaculture sector.</li> </ul> The Marine Tilapia Industry Incubator (MTII) will be a publicly-owned, public-private facility that will demonstrate an efficient commercial marine aquaculture template for the industry. It will spearhead the development of genetic improvement of wild strains of Oreochromis mossambicus for seawater culture, for the supply of improved seed stock to enable a major transformation of commercial marine tilapia farming. The MTII will also initiate the establishment of other elements of the marine tilapia value-chain, inclusive of non-fish commodities, community farming of fish-feed crops, processing and product
			development. The MTII will further more develop entrepreneurs, skilled workers and other practitioners across all levels of the aquaculture value-chain through applied, practice-based skills development, capacity-building, information, technical support, extension and advisory services.



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Source: The MARINE TILAPIA INDUSTRY INCUBATOR (MTII) Business Plan (approved funding from National Treasury and Parliament, October 2018)



ESTABLISHING A SUSTAINABLE OCEANS ECONOMY IN THE EASTERN CAPE

Source: THAPI Marine Tilapia Vision along the rural East Coast: Transforming the Marine Aquaculture Industry towards Inclusivity (Version 6 slide show).

How does BFT tilapia compare to broiler chicken farming in terms of feed use efficiency and cost ? How does BFT grown tilapia compare to a broiler chicken production metrics, 1) in terms of feed use, 2) nutrient recovery efficiency and 3) feed cost per unit of edible meat yield?

COMPARATIVE FEED USE, NUTRIENT RECOVERY EFFICIENCY AND FEED COST PER UNIT OF EDIBLE MEAT YIELD IN BFT GROWN TILAPIA VS. BROILER CHICKENS.	BFT GROWN TILAPIA (500G FISH)	BROILER CHICKEN
Feed Conversion Ratio (FCR) =	1.0 : 1.0	1.79 : 1.0
Net Protein Recovery, %/edible yield =	49.5%	21%
Net Energy Recovery, %/edible yield =	28.2%	10%
Edible meat yield, % =	62.5%	46.1%
Feed cost, US\$/tonne =	US\$ 244.00/t	US\$ 244.00 /t
Feed cost, US\$/kg edible meat yield =	US \$ 0.39/kg (R5,27/kg)	US \$ 0,95/kg (R12,83/kg)





#### **3.1.5 TILAPIA AQUACULTURE FEEDSTOCK PRODUCTION**

#	LABEL	NARRATIVE
1	Project Name	Marine Tilapia Industry Feedstock Programme
2	Project Location	Eastern Cape and KZN, trial in QholothaADZ
3	Project Owner / Driver	THAPI Aqua Kulcha (Pty) Ltd
4	Brief Project Overview [Nature or function, primary purpose, service or clients, rationale]	The Marine Tilapia Vision will draw a sizable demand for feed-stock raw material commodities which will be produced locally from Phase 3 and processed into oil cakes for fish feed manufacture and high quality cold-pressed cooking oil (preserved using extracts from rosemary) to output 15.7 million litres of very high quality soya and sunflower cooking oil per 5,000 tonne marine tilapia farm.
		Over 150,000 ½ hectare plots would eventually be required to produce adequate soybeans, sunflower and maize, the primary feed stock raw material commod- ities valued at R391.3 million by 2032 to reach targeted production levels for 100,000 tonnes of marine tilapia per annum.
		The MTII represents the first seeding step toward the development of a new sustainably farmed marine tilapia industry in South Africa along the rural eastern seaboard of the country.
		The most costly input in fish farming is feed. Key performance indicator monitor- ing on projected versus achieved Feed Conversion Ratio's (FCR's) using the same feed specifications as used in Malawi at Chambo Fisheries (the world's largest Biofloc Technology (BFT) fish farm will prove indicative of the potential of the technology demonstrated at the MTII.
		The business model for MTII is based upon insourcing feed for Phases 1 and 2 with a annual production output of 40,000 tons of processed tilapia by the year 2024.
		This production would require R 160.9 million worth of feedstock which would be produced by 67,779 small scale contractors producing a mixed range of soya, sunflower and maize based Tilapia feedstock.



#	LABEL	NARRATIVE
5	Capital Value [R m]	R 15 billion [150,000 plots @ R 100,000 each, including stock and basic infra- structure]
6	Construction Start Date	2023
7	Constructions Jobs p.a.	20,000 construction jobs
8	Operation Start Date	2024
9	Operating Costs p.a.	Reaching R 391 million by the year 2032.
10	Operating Jobs p.a.	33,890 FTE for Phase 3, increasing with each Phase.
11	Turnover or Value (GVA)	R 391 million by 2032
12	Economic Linkages	The full agriculture and agro-processing value chain with fertilisers, infrastructure provision, farming equipment, logistics and labour.
13	Private sector appetite	High, with a proven offtake from the successful Phase 2 of the Marine Tilapia THAPI operation.
14	Government input	Policy certainty and DAFF (Now DEFF) funding.
15	'Lever' to 'Unlock'	Policy certainty and Government support.
16	Any other points	



#### Elements of Marine Tilapia Value-Chain and Flows from Rural Farmers to Products and Markets



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Summarised feedstock commodity production detail: feedstock raw material value (ZAR millions) and number of small-scale contract farmers (n) producing soybeans, sunflower and maize

	ANNUAL YIELD MT TILAPIA (TONNES PER ANNUM)	ANNUAL VALUE OF MAJOR FEEDSTUFF RAW MATERIAL, ZAR (MILLIONS)	# OF 0.5HA SMALL-SCALE CONTRACT FARMERS (N)
Phase 1	400	1.6	0
Phase 2	10.000	40.2	0
Phase 3	40.000	160.9	67.779
Phase 4	60.000	241.4	101.669
Phase 5	100.000	402.4	169.448
Phase 6	120.000	482.8	203.333
Phase 7	140.000	563.3	237.228

Source: Kourie R. 2019. THAPI Marine Tilapia vision along the rural East Coast: Transforming the Marine Acuculture Industry towards Inclusivity. (PowerPoint <sup>™</sup> Presentation in PDF)

#### Linkages to small-scale crop farmer to supply fish feed raw materials

Socio-economic impacts of small-scale farmers in rural Eastern Cape and KZN

Raw material crop demand, value (Feb, 2018) and number of 0.5Ha farm plots at Phase 5 producing 100,000 MT of marine cultivated Mozambique tilapia (FCR 1:1 under BFT, 60% of national crop yield's 10% soya and 37% sunflower oil extraction and 3% losses/processing waste)

СКОР	GROWER FEED INCLUSION	USEFUL OIL CAKE/CROP YEILD	CROP Demand	60% OF NATIONAL YIELD, MT/HA	NO. OF 0.5HA FARM PLOTS	CROP VALUE (FEB. 2018)
Soya	28.2%	89.2%	31,614 MT	1.65 MT/Ha	38.320	R142.2m
Sunflower	13.3%	40.0%	33,250 MT	0.9 MT/Ha	73.889	R158.1m
Maize	45.9%	90.0%	51,000 MT	1.72 MT/Ha	57.239	R102.0m
		Total no. of 0.5Ha	a farm plots		169.448	
		Total value of cro	ps. R Million	5	R402.4m	

#### **3.2 EXPANSION OR PRIORITY PROJECTS - INTERVENTION REQUIRED**

The Eastern Cape Ocean Economy projects presented above are seen to be 'Project Ready', and as such they require minimal additional work with complete feasibility and viability studies, market assessments, institutional arrangements considered, public sector infrastructure requirements considered and a commercial business case in place. This means that the project is bankable and ready for the participation of private sector investors, partners and operators within a reasonably short period of time.

The projects presented hereafter are not at this stage of readiness, but have government and institutional support, are included in the 61 projects that have been evaluated for the Eastern Cape Ocean Economy during the year 2019 and are considered to be a significant contributor to the achievement of the Ocean Economy Baseline which is referred to in the afore going sections. These projects are therefore vitally important to the achievement of the economic objectives of the Eastern Province in the medium term. During the ranking and weighting process referred to earlier, factors such as spatial distribution within the province, project readiness, Gross Domestic Product impact, employment creation and linkages with other projects were considered. The projects which follow typically scored higher in these various categories cumulatively than the projects which have been omitted.

However, certain of these projects which are not necessarily the highest ranking in either employment or GDP, but have some other compelling or strategic reason for their early implementation, have also been included.

The full list of 61 Eastern Cape Ocean Economy projects considered is included as Appendix 6.1, and any of these are eligible to be considered for investment and private sector participation in terms of this document and process.



#### 3.2.1 N2 WILDCOAST TOLL ROAD (N2WCR)

#	LABEL	NARRATIVE	
1	Project Name	N2 Wild Coast Road (N2WCR)	
2	Project Location	Between East London and Port Edward – 410 km	
3	Project Owner / Driver	South African National Roads Agency Ltd (SANRAL)	
4	Brief Project Overview [Nature or function, primary purpose, service or clients, rationale]	The N2WCR forms part of the Governments Strategic Integrated Projects (SIP-3: South-Eastern node and Corridor Development), whose key purpose is to serve as a catalyst for the economic growth of the Eastern Cape and KwaZulu-Natal. The brownfields portion entails multiple upgrades of the N2 between East London and Mtatha through to Port St Johns. The greenfield portion entails 112 kilometres of new alignment between Ndwalane (near PSJ) and the Mtamvuna River (near Mzamba), including two mega-bridge structures on the Msikaba and Mtentu Rivers, seven additional major river bridges and three interchange bridges, approximately 96 km of new class 1 road and 17 km of brownfields class 1 road. Once completed, the route will be approximately 85 km shorter than the current one and could be up to three hours faster – particularly for heavy freight vehicles.	
5	Capital Value [R m]	Ongoing, estimated in excess of R 2 billion	
6	Construction Start Date	2016	
7	Constructions Jobs p.a.	Ongoing with SMME linkages.	
8	Operation Start Date	2023	
9	Operating Costs p.a.	To be determined	
10	Operating Jobs p.a.	To be determined	
11	Turnover or Value (GVA)		



#	LABEL	NARRATIVE
12	Economic Linkages	Both road and non-road users will benefit for decades to come from this project in a number of ways, including: the establishment of roadside enterprises such as service stations, food outlets, accommodation and tourist attractions; an increase in the value of real estate, expansion of water, electricity and telecommunications; savings of time and logistics costs; access to markets for agricultural producers, and a host of tourism opportunities.
13	Private sector appetite	Toll Road operators would respond to compelling business case.
14	Government input	Prepare the business case and put it out to PPP via RFP.
15	'Lever' to 'Unlock'	SANRAL currently implementing the project.
16	Any Other Points	A large saving in road accidents and fatalities. Extensive tourism opportunities through providing safe access to pristine natural areas







#### 3.2.2 PORT ST JOHNS SECOND BEACH TIDAL POOL AND WATERFRONT

#	LABEL	NARRATIVE	
1	Project Name	PSJ Second Beach Tidal Pool and Waterfront	
2	Project Location	Port St Johns (PSJ).	
3	Project Owner / Driver	Port St Johns Local Municipality	
4	Brief Project Overview [Nature or function, primary purpose, service or clients, rationale]	Second Beach is a popular recreational swimming and surfing spot near Port St Johns, which has the potential to encourage tourist revenue growth in the area. Unfortunately, Port St Johns has experienced an alarming number of shark attacks at Second Beach since 2004 which is reportedly discouraging tourism. In response, the Department of Environmental Affairs (DEA) working with the support of the Port St Johns (PSJ) Local Municipality has appointed PRDW South Africa (Pty) Ltd to undertake studies to investigate the development of beach infrastructure in Port St Johns that could alleviate the problems currently experienced at Second Beach and contribute to the economic development of Port St Johns from tourism. The pre-feasibility assessment has resulted in the decision to construct a tidal pool and upgrade various infrastructure at second beach.	
5	Capital Value [R m]	R 18.7 million in 2007	
6	Construction Start Date		
7	Constructions Jobs p.a.	To be supplied by the Project Sponsor,	
8	Operation Start Date	To be supplied by the Project Sponsor,	
9	Operating Costs p.a.	To be supplied by the Project Sponsor,	
10	Operating Jobs p.a.		
11	Turnover or Value (GVA)		
12	Economic Linkages	Tourism and all of its related commercial and retail linkages will be stimulated. The project will include upgrading the beach area, improving the beach access, ablution facilities, parking lot, landscaping and a commercial market area.	





# #LABELNARRATIVE13Private sector appetite14Government input15'Lever' to 'Unlock'16Any Other Points








#### 3.2.3 DESALINATION - BUSHMANS RIVER MOUTH, ALBANY, NDLAMBE LM.

#	LABEL	NARRATIVE
1	Project Name	Albany Coast Reverse Osmosis Plant Upgrade
2	Project Location	Bushman's River Mouth, Ndlambe Local Municipality
3	Project Owner/Driver	Amatola Water Board
4	Brief Project Overview (nature of function, primary purpose, service or client's rationale)	This project is the largest Reverse Osmosis (RO) plant in the Eastern Cape, producing potable water from seawater in an area with very limited land-based water resources.
		The Plant is under-capacity and unable to support the economy of the town, which relies substantially on the hospitality sector and peak visitors in summer and Easter.
5	Capital Value (R m)	R45 million
6	Construction Start Date	Preferable October 2019
7	Construction Jobs (Per Annum)	15
8	Operational Start Date	December 2019
9	Operating Cost (Per Year)	Additional cost of R 2,916,038
10	Operating Job (Per Year)	2
11	Turnover or Value (Gross Value Add)	R 5,755,320 in 2020
12	Economic Linkages	Will unlock residential development and further tourism initiatives in the Ndlambe Local Municipality area. The development of the residential and leisure markets can support job creation and the sustaining of service sector employment.
13	Private sector appetite	



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	-

NARRATIVE

- 14 Government input
- 15 "Lever" to "Unlock

The area is constrained substantially by the unavailability of sustainable water supplies. There are planned residential developments that cannot proceed. Also, the local residents needed augmented water supplies.





#### 3.2.4 DESALINATION BY REVERSE OSMOSIS - PORT ALFRED

#	LABEL	NARRATIVE
1	Project Name	Port Alfred Reverse Osmosis water augmentation project.
2	Project Location	Port Alfred, Ndlambe Local Municipality.
3	Project Owner/Driver	Ndlambe Local Municipality assisted by Amatola Water as Implementing Agent
4	Brief Project Overview (nature of function, primary purpose, service or client's rationale)	Completion of the Port Alfred Water Brackish Water Reverse Osmosis (BWRO) plant & the addition of a Sea-water Reverse Osmosis (SWRO) module. Completion of the BWRO plant in Port Alfred (to improve the quality of water to SANS 241 standards) & the addition of a 2.5Ml/day SWRO module (to increase the quantity of available water).
5	Capital Value (R m)	Total = R100.09 million (BWR0 = R30.11million & SWR0 = R69.98 million)
6	Construction Start Date	BWRO = November 2019 SWRO = October 2020
7	Construction Jobs (Per Annum)	40 Jobs
8	Operational Start Date	BWRO Component = May 2020 SWRO Component = April 2021
9	Operating Cost (Per Year)	R19.1 million
10	Operating Job (Per Year)	8
11	Turnover or Value (GVA)	To be determined
12	Economic Linkages	The objective is to ensure sustainable bulk water supply that will allow for socio- economic development in Port Alfred. One of the key socio-economic drivers in Port Alfred is Housing development (Thornhill = 5 000 mixed social housing). Currently, the provision of sustainable bulk water services is hampering this.



#	LABEL	NARRATIVE
13	Private sector appetite	Yes, with a compelling business case and clear RFP process.
14	Government input	Prepare a compelling business case and bid document.
15	"Lever" to "Unlock	Due the mild climate & natural beauty of Port Alfred and surrounding areas the area has tremendous potential to further develop as a tourist destination as well as a destination for people to retire to (housing development). Sustainable water supply will allow this potential to be unlocked.





3.2.5 SOMLOLO ABALONE FARM - ELIDZ

#	LABEL	NARRATIVE
1	Project Name	Somlolo Abalone Farm
2	Project Location	ELIDZ
3	Project Owner/Driver	Somlolo Investments / Wild Coast Abalone
4	Brief Project Overview (nature of function, primary purpose, service or client's rationale)	Abalone is a high value seafood product for the export market. The project proposes a 400 ton per annum abalone farm in the East London IDZ in four phases. It is based on proven technology in the Eastern Cape
5	Capital Value (R m)	R 600 million
6	Construction Start Date	January 2020
7	Construction Jobs (Per Annum)	80
8	Operational Start Date	June 2020
9	Operating Cost (Per Annum)	R40 million to R 160 million
10	Operating Job (Per Annum)	480
11	Turnover or Value (Gross Value Add)	R 50m to R 200m
12	Economic Linkages	Forward and backward linkages in spat purchases and processing.
13	Private sector appetite	Intense private sector interest in abalone farming.
14	Government input	Policy certainty and support.
15	"Lever" to "Unlock	Lease with ELIDZ, seawater usage agreements, upgrading of ELIDZ Pumphouse, environmental authorizations.









#### 3.2.6 FRESHWATER CATFISH (BARBIE) - KAROO CATCH

The Eastern Cape Ocean Economy high level profile and economic summary of this project is contained in the table hereafter.

#	LABEL	NARRATIVE
1	Project Name	Freshwater Catfish Farming [Karoo Catch (Pty) Ltd]
2	Project Location	Graaff-Reinet, Eastern Cape, South Africa
3	Project Owner / Driver	Department of Environmental Affairs (DEA)
4	Brief Project Overview [Nature or function, primary purpose, service or clients, rationale]	<ul> <li>Karoo Catch is a freshwater catfish aquaculture farm situated in Graaf Reinett in the Eastern Cape.</li> <li>Following 10 years of research, development and piloting, the current intervention focuses on the establishment of a commercially viable business unit (incubator) and long-term support for development, expansion and replication, aiming to supplement staple diets, decrease import requirements and simultaneously create employment opportunities. To date the project has grown to commercialisation phase with 102 full-time employees from the local community. It has completed the building of three new tunnels, bringing the total production capacity to 120 tons per month; new farm and hatchery management were appointed and the construction of a large processing factory on site will be completed in January 2019.</li> <li>Karoo Catch has developed a range of consumer products which are nutritious fish based products for everyday consumption that are easy to prepare, these include 'fish wors', 'braai wors' and 'fish burgers' made from catfish mince (clarias). The catfish is processed, packaged and sold to a range of customers, inclusive of retail, wholesale, traders, and bulk markets.</li> </ul>
5	Capital Value [R m]	For one commercially viable unit: Investment required – R 180 million Capital budget – R 131 million per production unit
6	Construction Start Date	
7	Constructions Jobs p.a.	To be supplied by the Project Sponsor,



#	LABEL	NARRATIVE
8	Operation Start Date	To be supplied by the Project Sponsor,
9	Operating Costs p.a.	To be supplied by the Project Sponsor,
10	Operating Jobs p.a.	2,358 total (direct, indirect and induced)
11	Turnover or Value (GVA)	For one commercially viable unit: Annual turnover: R 277 million
12	Economic Linkages	The primary aim of the project is to create sustainable self-employment of rural women and facilitate economic growth. This will be achieved through the establishment of aquaculture clusters, each consisting of a central management farm and a network of satellite farming systems.
13	'Lever' to 'Unlock'	
14	Any Other Points	The project places high emphasis on the empowerment of rural communities, specifically women and youth and previously disadvantaged





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#### Establish an Aqua-Culture incubator for sector development in the Eastern Cape

	GOALS/ IMPACTS Longer term & widespread effects and results of outcomes
Results	OUTCOMES Immediate effects and serults of outputs
	OUTPUTS Products & services producted
	SUB- ACTIVITIES
Implementation	ACTIVITIES Tasks undertaken which transform inputs into outputs
	INPUTS Financial, human & material resources





#### 3.2.7 N2 WILDCOAST BIODIVERSITY OFFSET PROJECTS

#	LABEL	NARRATIVE
1	Project Name	N2 Wild Coast Biodiversity Offset
2	Project Location	Wild Coast region (from uMtamvuna to uMzimvubu Rivers)
3	Project Owner/Driver	Eastern Cape Parks and Tourism Agency
4	Brief Project Overview (nature of the function, primary purpose, service or client's rationale)	As required by the Environmental Authorisation, in terms of the environment conservation act, 1989, The project aims to counterbalance any residual biodi- versity loss associated to the N2 Wild Coast Highway after appropriate preven- tion and mitigation measures have been taken.
5	Capital Value (R m)	R 373,881,852-00 investment value over 10 years.
6	Construction Start Date	01 June 2018
7	Construction Jobs (Per Annum)	To be determined after the project management have been completed, approx- imately in the year 2021.
8	Operational Start Date	To be determined after the project management have been completed, approx- imately in the year 2021.
9	Operating Cost (Per Annum)	Approximately R 15,000,00-00
10	Operating Job (Per Annum)	To be determined after the project management have been completed, approx- imately in the year 2021.
11	Turnover or Value (Gross Value Add)	To be determined after the project management have been completed, approx- imately in the year 2021.
12	Economic Linkages	Determine small businesses for socio-economic beneficiation opportunities linked to the rehabilitation programme. High natural endowment of the Msikaba & Mthentu Gorges, Vulture Colony and Magwa Falls linked with the N2 Wild Coast Highway for tourism opportunities.
13	Private sector appetite	Not required. Service providers only.



#	LABEL	NARRATIVE
14	Government input	Prepare the business case and implement.
15	"Lever" to "Unlock	Facilitate partnerships and investments required to achieve long-term sustain- ability of the offset-receiving sites by developing appropriate business plans where the applicable institutional and governance frameworks will support the sustainable operations.



MSIKABA GORGE



MAGWA FALLS



#### 3.2.8 MKAMBATHI COMMUNITY PROJECT NATURE RESERVE

#	LABEL	NARRATIVE
1	Project Name	Mkambati Community Public Private Partnership
2	Project Location	Mkambati Nature Reserve
3	Project Owner/Driver	Colin Bell (Mkambati Matters)
4	Brief Project Overview (nature of function, primary purpose, service or client's rationale)	The project is a partnership between Community (Mkambati Land Trust), Govern- ment (ECPTA) and Investor (Mkambati Matters) & is a 49 year lease. The purpose of the project for the local economic development which will provide jobs, capacity building and better livelihood through additional projects on the project rentals. This will be through Tourism facilities to be built which are the lodges and villas
5	Capital Value (R m)	R200m
6	Construction Start Date	August 2019
7	Construction Jobs (p.a.)	110 jobs
8	Operational Start Date	December 2020
9	Operating Cost (p.a.)	± R5 million
10	Operating Job (p.a.)	65 jobs
11	Turnover or Value (Gross Value Add)	± R10 million
12	Economic Linkages	N2 Toll Road, Wild Coast Development Initiatives, Operation Phakisa – Oceans Economy
13	Private sector appetite	
14	Government input	
15	"Lever" to "Unlock	Additional funding commitment. Improvement of access roads to the reserve. Unlocking of other complimentary facilities and activities











#### 3.2.9 COASTAL INFRASTRUCTURE DEVELOPMENT ON SELECTED BEACHES

#	LABEL	NARRATIVE
1	Project Name	Coastal Infrastructure Development on selected beaches
2	Project Location	Selected beaches, mainly on the eastern section of EC.
3	Project Owner/Driver	Local Municipalities at KSD, Ngquza Hill, Port St Johns and Ndlambe respectively.
4	Brief Project Overview (nature of function, primary purpose, service or client's rationale)	<ul> <li>The project seek to develop and upgrade the coastal infrastructure for selected beaches in order to enhance the tourism potential for the selected beaches as part of the legacy projects within the jurisdiction of the local municipalities (namely Mbizana, Port St Johns, Nyandeni &amp; Ndlambe Local Municipalities respectively). The proposed infrastructure development projects includes:</li> <li>6 day Eastern Cape hiking trail development project (hikers facilities at Hluleka, Mpande, Mngazana &amp; Mngcibe sites)</li> <li>Infrastructure development at selected beaches in Port Alfred (i.e. Krantz recreational area, Middle beach facilities &amp; Kowie river embarkment)</li> <li>Planning for beaches at Mbizana (i.e. Mzamba and Mthentu beaches)</li> </ul>
5	Capital Value (R m)	R 21 million
6	Construction Start Date	The project is awaiting the approval of project plans by National Department of Tourism.
7	Construction Jobs (Per Annum)	Approximately 50 jobs
8	Operational Start Date	Pending approval of project plans
9	Operating Cost (Per Year)	Not yet determined
10	Operating Job (Per Year)	Approximately 10 jobs
11	Turnover or Value (Gross Value Add)	Not yet determined



#	LABEL	NARRATIVE
12	Economic Linkages	The proposed tourism infrastructure development at the selected beaches will enhance the tourism potential of the selected sites and which will in turn results in economic spin offs for these sites. The construction phase of these projects will results in creation of temporary job opportunities for locals and SMMEs development in these areas.
13	Private sector appetite	
14	Government input	
15	"Lever" to "Unlock	Tourism potential of the coastal tourism infrastructure on the selected sites.





#### **3.2.10 INTERNATIONAL SHIPPING SERVICES HUB**

#	LABEL	NARRATIVE
1	Project Name	International shipping services hub in the Port of Ngqura.
2	Project Location	Port of Ngqura, on the outskirts of Nelson Mandela Bay
3	Project Owner/Driver	
4	Brief Project Overview (nature of function, primary purpose, service or client's rationale)	South Africa has one of the highest proportions of shipping passing its shores on an annual basis on the bi-directional east to west passage in the southern hemisphere. This shipping traffic is a potential market for a shipping services hub which could offer the following services:- • Bunkering and refuelling, • Re-crewing and crew training, • Maritime engineering & manufacturing and services, • Fishing industry recapitalisation, • Oil Rig service and repair, and • Removal and treatment of 'Oily Slops', These services and industries could be offered in a 'One-Stop-Shop' environment with a suite of services approach and economies of scale advantages harnessed and passed on to customers
5	Capital Value (R m)	Not yet determined.
6	Construction Start Date	As soon as possible.
7	Construction Jobs (Year)	Ongoing development over many years.
8	Operational Start Date	2020
9	Operating Cost (Per Year)	Extensive as the hub matures and diversifies.
10	Operating Job (Per Year)	Extensive as the hub matures and diversifies.
11	Turnover or Value (Gross Value Add)	Extensive
12	Economic Linkages	The full upstream and downstream value chains of all industries.
13	Private sector appetite	Yes, for all of the service, engineering and manufacturing.
14	Government input	Provide policy certainty and Transnet to provide land and leases.
15	"Lever" to "Unlock	Establish the Port of Ngqura and the Coega SEZ as Oil and Gas hubs for South Africa.







#### **3.2.11 COMMUNITY BASED ABALONE RANCHING**

#	LABEL	NARRATIVE
1	Project Name	Community Based Abalone Ranching
2	Project Location	Small scale fisheries co-op areas along EC coast.
3	Project Owner/Driver	Wild Coast Abalone / Lidomix / Small scale fisheries co-ops
4	Brief Project Overview (nature of function, primary purpose, service or client's rationale)	Abalone Ranching involves putting abalone spat back into the ocean, providing security for the resource, allowing it to recover and then harvesting sustainably.
5	Capital Value (R m)	R 100m
6	Construction Start Date	2020/01/15
7	Construction Jobs (Per Annum)	0
8	Operational Start Date	2020/01/15
9	Operating Cost (Per Annum)	R 24m
10	Operating Job (Per Annum)	400
11	Turnover or Value (Gross Value Add)	R 33m
12	Economic Linkages	Forward and backward linkages in spat purchases and processing
13	Private sector appetite	

- **14** Government input
- 15 "Lever" to "Unlock

Agreements with small scale fisheries co-ops, funding for projects, capacity building.



#### 3.2.12 MARINE MAMMAL HEALTH - PORT ELIZABETH

#	LABEL	NARRATIVE
1	Project Name	Marine Mammal Health
2	Project Location	Port Elizabeth, Eastern Cape.
3	Project Owner / Driver	Dr Stephanie Plon.
4	Brief Project Overview [Nature or function, pri- mary purpose, service or clients, rationale]	The project is to create a research hub for marine animal health (Whales, dolphins and seals) as indicators of ocean health in the Eastern Cape, which will facilitate capacity building in the area of marine mammal health in South Africa. The project will establish a bilateral network of researchers from Germany and South Africa (based upon the existing agreement between the State of Lower Saxony (Germany) and the Province of the Eastern Cape, (South Africa)), to enable knowledge transfer in this research area and thus facilitate cutting edge science. This would present the only facility of its kind on the entire African continent and thus would play a major role in capacity development for other African nations in view of the Blue Economy drive in the Indian Ocean.
5	Capital Value [R m]	R 19,030,000 (R20 mio) over five years (2020 to 2025)
6	Construction Start Date	2020
7	Constructions Jobs p.a.	Not applicable
8	Operation Start Date	2021
9	Operating Costs p.a.	R 7,110,000
10	Operating Jobs p.a.	5
11	Turnover or Value (GVA)	R 11,920,000



#	LABEL	NARRATIVE
12	Economic Linkages	Linkages will be established with Transnet National Ports Authority (TNPA) and the oil and gas industry (PetroSA, ExxonMobil, ENI, etc.)
		Collaborations with Port Elixzabeth Museum, Bayworld, SANParks, Eastern Cape Parks and Tourism Agency (ECPTA), the South African Environmental Observation Network (SAEON) and the South African Institute for Aquatic Biodiversity (SAIAB). Linkages will be established with the Department of Environment Forestry and Fisheries (DEFF)
		There is an existing 10-year collaboration with the Veterinary University of Hanover, Lower Saxony, Germany.
		Eligibility to apply for research funding through various European Union frameworks.
13	Private sector appetite	No, they are usually the transgressors that need to be investigated.
14	Government input	Policy support required.
15	'Lever' to 'Unlock'	The key to launch such a project would be to create a research institute that can liaise with various provincial, national and international partners and stakeholders, can conduct and coordinate research on iconic marine mammals as indicators of ocean health, and can assist with the science to policy interface.
16	Any Other Points Vision: To establish a resear	ch hub / research institute for marine mammal health in the Eastern Cape
Mission: To provide and facilitate innovative, cutting edge and globally relevant research on marir health as indicators for ocean health.		itate innovative, cutting edge and globally relevant research on marine mammal an health.

Objectives:

- To train and build capacity in South Africa in the area of marine mammal health as these species are prime indicators for ocean health,
- To create a bilateral research network between South Africa and Germany in the area of mammal health to facilitate knowledge transfer and cutting edge science.
- To seek dialogue with the industry sectors involved in 'Operation Phakisa' around the mitigation of potential impacts on marine mammals resulting from industrial development.







#### 3.2.13 CONTROL OF EFFLUENT / SEWERAGE DISCHARGE - WILD COAST

#	LABEL	NARRATIVE
1	Project Name	Control of effluent / sewerage discharge
2	Project Location	Amathole District Municipality and Wild Coast
3	Project Owner / Driver	Operation Phakisa Marine Protection Services
4	Brief Project Overview [Nature or function, primary purpose, service or clients, rationale]	
5	Capital Value [R m]	R 2,000,000
6	Construction Start Date	
7	Constructions Jobs p.a.	
8	Operation Start Date	April 2020 to 31 March 2025
9	Operating Costs p.a.	
10	Operating Jobs p.a.	50 FTE Jobs
11	Turnover or Value (GVA)	
12	Economic Linkages	
13	Private sector appetite	
14	Government input	
15	'Lever' to 'Unlock'	
16	Any Other Points	
17	Project Map or Image, or both.	

Project of ECPTA, provided by Sybert. (25.10.19)



#### 3.2.14 BAYWORLD OCEANARIUM AND MUSEUM COMPLEX

The Eastern Cape Ocean Economy high level profile and economic summary of this project is contained in the table hereafter.

#	LABEL	NARRATIVE
1	Project Name	Bayworld Precinct 2020
2	Project Location	Nelson Mandela Bay Municipality (NMBM), Humewood beachfront.
3	Project Owner / Driver	The Mandela Bay Development Agency (MBDA) Ms Dorelle Sapere (Project Manager) and Mr Ashraf Adam (CEO)
4	Brief Project Overview [Nature or function, primary purpose, service or clients, rationale]	The MBDA has been mandated by the Nelson Mandela Bay Metropolitan Munic- ipality as a transdisciplinary implementing agent for programmes, projects and events within its 6 mandated areas, which are to be aligned to the various plans of the NMBM. The Happy Valley Programme which includes Telkom Park, Bayworld and the green lung of Happy Valley itself, is one such programme which is located within the PE CENTRAL/BAAKENS/HAPPY VALLEY mandate area. The MBDA has recognised that the Happy Valley Precinct, when linked to the Baakens Valley Development and Proposed Waterfront, is uniquely positioned to become a new, inclusive heart for Nelson Mandela Bay and has approached the redevelopment with that objective. The intent is that the precinct should be socially, spatially and economically transformed into an inclusive, post-apartheid precinct that enables multi-generational, multi-cultural and mixed income usag- es. It is envisaged that a unique tourism opportunity will be created through the activation of the green lung, an ICC developed within the precinct, Bayworld be repurposed and that an inclusive housing development be part of a new model for the precinct. The opportunity of developing the precinct as a green, smart and off the grid destination will be pursued.
5	Capital Value [R m]	Awaiting estimates from Ms Dorelle Sapere
6	Construction Start Date	Awaiting estimates from Ms Dorelle Sapere
7	Constructions Jobs p.a.	Awaiting estimates from Ms Dorelle Sapere



LABEL	NARRATIVE
Operation Start Date	Awaiting estimates from Ms Dorelle Sapere
Operating Costs p.a.	Awaiting estimates from Ms Dorelle Sapere
Operating Jobs p.a.	Awaiting estimates from Ms Dorelle Sapere
Turnover or Value (GVA)	Awaiting estimates from Ms Dorelle Sapere
Economic Linkages	<ul> <li>A critical economic and social transformation asset as an integral part of the tourist experience:</li> <li>One more day from ADDO International Visitors</li> <li>Current international visitors to Addo = 216 000 visitors/annum</li> <li>Average spend per visitor = R5 000.(conservatively)</li> <li>Total direct spend = R1,080 billion</li> <li>Using a low factor of 3X direct spend = R3,240 billion</li> <li>Using a high factor of 7x direct spend = R7,560 billion</li> </ul>
Private sector appetite	Not required, government project. Only service providers and retail.
Government input	Support from Provincial Government required and received.
	LABEL         Operation Start Date         Operating Costs p.a.         Operating Jobs p.a.         Turnover or Value (GVA)         Economic Linkages         Private sector appetite         Government input



### LABEL

#### NARRATIVE

#### 15 'Lever' to 'Unlock'

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- A co-operative governance agreement was signed in June 2016 between EP DSRAC and NMBM until March 2021;
- In order to facilitate a World Class Tourist Attraction and Flagship Heritage Institution;
- "Project" means the redevelopment and management of the Oceanarium and Snakepark; EP SRAC will continue to fund existing personnel within the approved organisational structure of Bayworld;
- NMBM to recommend a sustainable operating model and provide additional funding for Bayworld's infrastructure;
- A steering committee was established on 11 September 2018:- SRACn NMBM, MBDA, NMU DoE, DST, ECDC, NMBBC, DEDEAT
- Funding has been secured in an amount of R \_\_\_\_
- 16 Any Other Points



#### COMPONENTS OF BAYWORLD

The Port Elizabeth Museum | The Snake Park | The Oceanatium | The Conference Centre (Old Tropical House) | Research and Education

#### POSSIBLE ADDITIONAL COMPONETS

ERF 3459 | Nelson mandela bay science and technology centre | Atr museum | South End Museum



#### 3.2.15 WATERFRONT FOR THE PORT OF PORT ELIZABETH (POPE)

#	LABEL	NARRATIVE
1	Project Name	Waterfront development for the Port of Port Elizabeth (PoPE)
2	Project Location	Port of Port Elizabeth
3	Project Owner / Driver	Transnet National Port Authority (TNPA)
4	Brief Project Overview	Transnet has unveiled plans to transform the Port of Port Elizabeth into a thriving "Peoples Port" with retail stores, restaurants and a maritime museum. The port will still operate as a service-driven harbour but with added arts and recreational landmarks and destinations.
		The parastatals vison for the Port Elizabeth marina is for a vibrant busy port that attracts domestic and international tourists (EPH,
5	Capital Value [R m]	Approximately R 9 billion.
6	Construction Start Date	Once an RFP has been concluded with TNPA.
7	Constructions Jobs p.a.	Undetermined, but would be high for a project of this nature.
8	Operation Start Date	After construction is completed.
9	Operating Costs p.a.	Significant, as tourism and commerce are high level enterprises.
10	Operating Jobs p.a.	Significant, as tourism and commerce are high level employers.
11	Turnover or Value (GVA)	Dependent on the form and scale of the tourism and other business entities established.
12	Economic Linkages	Strong economic linkages to all aspects of the NMB economy.
13	Private sector appetite	Very strong support from Business Chambers and the public.
14	Government input	Prepare the Request For Proposals after the infrastructure needs for a working work in the context of a Port Development Framework Plan (PDFP) have been finalised.
15	'Lever' to 'Unlock'	Transnet are the land owners and future project landlords.
16	Any Other Points	Transnet National Port Authority (TNPA) own the project.



## R26bn harbour developments

letsure purposes. Although the relocation of the manganese ore facility and tank farm has been pushed back by another two years to between 2016 and 2019, the Port Elizabeth harbour will be developed into an automotive and letsure hub. It will form a part of the 26billion capital investment plan for the province's three harbours, which is to be implemented over the next 10 years, [Heraid 2014/05/07]



MASSIVE PLAN: An artist's impression of how the Port of Port Elizabeth is set to be transformed over the next few years. The plan is to have residences, ship repair facilities, a marine engineering hub, retail and office space, a maritime museum, a pedestrian bridge and an urban park, among other features



## ADDITIONAL BID BOOK SUMISSIONS

ESTABLISHING THE OCEANS ECONOMY



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### 04 ADDITIONAL BID BOOK SUBMISSIONS



#### 4.1 SAIMI SKILLS DEVELOPMENT PROJECTS BEING IMPLEMENTED

The following projects either have been implemented, or are the process of being implemented by the South African International Maritime Institute (SAIMI)

#### 4.1.1 FADI ALTERNATIVE LIVELIHOODS PROJECTS

#	LABEL	NARRATIVE
1	Project Name	Fisheries and Aquaculture Development Institute (FADI) alternative livelihoods project.
2	Project Location	Port Elizabeth Metro, Eastern Cape
3	Project Owner / Driver	SAIMI offering skills training through the Fisheries and Aquaculture Development Institute (FADI), in the Western Cape and Eastern Cape
4	Brief Project Overview	The SAIMI funding will support a specified, time-bound and targeted programme to provide skills development to identified beneficiaries along with coaching and mentorship to ensure the sustainability of the intervention, which accords with SAIMI's objective of supporting lasting change.
		Seasonal fishing workers, fishers affected by fish stock availability and access, the unemployed and youth.
		Skills training in entrepreneurship and construction.
		This project is targeted at providing training, skills development and mentoring to seasonal and under-/unemployed fishers in coastal communities to assist them in identifying and establishing new enterprise opportunities and alternative sources of income.
		Empowerment of small-scale fishers from coastal fishing communities with alternate skills in entrepreneurship and construction. This new skills gain makes it possible for them to earn income as skilled construction workers as well as entrepreneurs (i.e. earn income beyond fishing).
		The project takes place against a global challenge of declining fish stocks which also affects South Africa, and presents challenges of food and income security, as well as environmental degradation. The project's aim to build capacity in these communities to earn income from alternative sources thus also supports the drive to maintain the sustainability of South Africa's fishery by diverting subsistence fishers into alternative livelihoods with lower environmental impact and meaningful income.



#	LABEL	NARRATIVE
5	Capital Value [R m]	R1 494 000 - 20 x PE beneficiaries (70 total in WC and EC) - over 7 months
6	Construction Start Date	N/A
7	Constructions Jobs p.a.	N/A
8	Operation Start Date	Started 1 April 2019
9	Operating Costs p.a.	N/A - this is a one-time training intervention at the cost indicated above, with continued mentoring and coaching support until successful they are either successfully employed or started their own businesses.
10	Operating Jobs p.a.	20 learners who will have skills to either be employed or start their own businesses
11	Turnover or Value (GVA)	In employment terms, it is projected that the project will generate 97 additional jobs within a two (2) year period. This includes direct, indirect and induced jobs.
12	Economic Linkages	Construction / Entrepreneurship
13	'Lever' to 'Unlock'	No, however the project success is subject to the release of funds from the National Skills Fund
14	Any Other Points	-
15	Project Map or Image, or both.	Port Elizabeth Metro, Eastern Cape



#### 4.1.2 SEASI SKILLS TRAINING IN THE SQUID INDUSTRY

#	LABEL	NARRATIVE
1	Project Name	SEASI Skills training in the Squid Industry
2	Project Location	Between Port Alfred and Tsitsikamma
3	Project Owner / Driver	SAIMI offering skills training through the SEASI (Small Employers' Association for the Squid Industry
4	Brief Project Overview	To support the implementation of a skills development programme for the economically important squid fishery in the Eastern Cape in order to address challenges of gaps in scarce and critical skills and an ageing officer class; to develop skills in vessel maintenance, and to provide the necessary sea-time for new sea-going personnel to be certified; to provide employment opportunities for youth from designated groups; and to position the squid industry as an attractive employment opportunity with associated benefits for community socio-economic development and poverty alleviation.
		Current fishermen and unemployed youth from designated groups recruited into the industry.
		Skills training. This project targets an economically important fishery sector; and will enable personnel who have long been working in the industry at low levels, to achieve formal qualifications (ie watchkeeper/ mate, motorman/driver, and skipper) and move up through the ranks, as well as broadening the sector's base of qualified skills by providing qualifications to new entrants.
		SEASI has a particular interest in training and skills development to improve the human resources capacity of the squid industry, in which the officer corps on vessels are ageing (and predominantly white) and there is a lack of sufficiently skilled and qualified people to replace them as they move on. The industry thus needs to upskill its current employees to move up through the ranks and attract new entrants by offering solid career prospects. SEASI has in turn identified the need for new entrants as an opportunity to address youth unemployment in the squid industry's main areas of operation, from Port Alfred to Tsitsikamma.
5	Capital Value [R m]	R8 956 311.15 over a period of 3 years
6	Construction Start Date	N/A
7	Constructions Jobs p.a.	N/A
8	Operation Start Date	To commence during 2019



#	LABEL	NARRATIVE
9	Operating Costs p.a.	N/A - this is training intervention at the cost indicated above.
10	Operating Jobs p.a.	1430 learners will be trained over the period
11	Turnover or Value (GVA)	Earning potential of learners will improve as they move up the ranks and new entrants will earn a living
12	Economic Linkages	Economic development - exports / retailers
13	'Lever' to 'Unlock'	The project needs to be approved by the NMU Tender Adjudication Committee
14	Any Other Points	-
15	Project Map or Image, or both.	Between Port Alfred and Tsitsikamma





4.1.3 TETA SMALL BUSINESS SUPPORT

#	LABEL	NARRATIVE
1	Project Name	TETA Small Business Support
2	Project Location	Eastern Cape
3	Project Owner / Driver	SAIMI is the Implementing Agent
4	Brief Project Overview	Small business support to TETA registered small companies, registered to maritime Standard Industrial Classification (SIC codes).
		Appointment of SDF's and provision of training, mentoring and coaching to learners of registered companies.
		To increase small maritime registered companies to submit ATR/WSP to TETA and includes support to companies currently submitting but not receiving support.
		Increased skills and economic activity.
5	Capital Value [R m]	R900 000 over a period of 2 years for 36 companies in the E.C. (R25 000 per company)
6	Construction Start Date	N/A
7	Constructions Jobs p.a.	N/A
8	Operation Start Date	Started 2018
9	Operating Costs p.a.	N/A - this is training intervention at the cost indicated above.
10	Operating Jobs p.a.	36 companies - employments stats per company is not available
11	Turnover or Value (GVA)	Improved skills of employees, which will translate into improved operations and ultimately improved profits for companies. TETA will also benefit from statistics for reporting purposes - for results generated by companies who will now be partici- pating in the ATR/WSP submissions to TETA.
12	Economic Linkages	Economic development - exports / retailers
13	'Lever' to 'Unlock'	N/A
14	Any Other Points	-
15	Project Map or Image, or both.	Eastern Cape



#### **4.1.4 CMBT ARTISAN TRAINING**

#	LABEL	NARRATIVE
1	Project Name	Competency Based Modular Training for Artisans
2	Project Location	Eastern Cape
3	Project Owner / Driver	SAIMI through TVET Colleges / Training Providers
4	Brief Project Overview	This intervention aims to provide training based on the Competency Based Modular Training (CBMT) Model to unemployed youth. This intervention aims to increase the employability of Trade related learners by completing the CBMT practical skills modules whilst completing their National Certificate (Vocational) Studies.
		The programme will be piloted in selected coastal TVET colleges and SAIMI will be responsible for the implementation, monitoring and evaluation of this programme. This will include the identification of merSETA approved workplaces. Companies in the Marine Manufacturing space will be targeted for work placement opportunities.
		Youth unemployment will be addressed.
		Competency Based Modular Training (CBMT) in the Plumbing trade The project will provide opportunities for learners to become skilled through various streams. The approach to the programme will be practical, with achievable and relevant activities in place for learners to obtain practical experience and where theory is practised in an actual workplace environment.
5	Capital Value [R m]	R774000 over a period of 9 months
6	Construction Start Date	N/A
7	Constructions Jobs p.a.	N/A
8	Operation Start Date	To start in 2019/2020
9	Operating Costs p.a.	N/A - this is a one-time training intervention at the cost indicated above, until successful they are either successfully employed.
10	Operating Jobs p.a.	15
11	Turnover or Value (GVA)	Earning potential of learners.
12	Economic Linkages	Maritime and Marine sector / boatbuilding and repairs
13	'Lever' to 'Unlock'	The project needs to be approved by the NMU Tender Adjudication Committee
14	Any Other Points	-
15	Project Map or Image or both.	Nelson Mandela Metro, Eastern Cape

Source: South African International Maritime Institute (SAIMI), 2019. Mrs. Soraya Artman.



#### 4.1.5 MARITIME MENTORSHIP TRAINING

#	LABEL	NARRATIVE
1	Project Name	Mentorship Training – Artisans
2	Project Location	Eastern Cape
3	Project Owner / Driver	SAIMI through training provider Skills Priority CC
4	Brief Project Overview	To enhance artisan development in the Maritime Manufacturing sector.
		Artisans who are currently employed in the marine manufacturing sector. The focus of the training is on soft skills which includes mentoring and coaching of qualified artisans and people qualified in the marine manufacturing related oc- cupations that have been identified. Candidates, which are currently employed in the marine manufacturing sector, will be trained to become skilled to mentor and coach staff, including artisanal candidates placed for experiential learning. The shortage of suitably qualified mentor artisans in the sector has been identi- fied as a challenge. Improved workplace skills to the benefit of junior artisans - skills transfer.
5	Capital Value [R m]	R92 000 - 8 x PE learners (32 total nationally)
6	Construction Start Date	N/A
7	Constructions Jobs p.a.	N/A
8	Operation Start Date	Started and ended 2018
9	Operating Costs p.a.	N/A
10	Operating Jobs p.a.	N/A
11	Turnover or Value (GVA)	N/A
12	Economic Linkages	-
13	'Lever' to 'Unlock'	None - project completed
14	Any Other Points	-
15	Project Map or Image, or both.	Eastern Cape

Source: South African International Maritime Institute (SAIMI), 2019. Mrs. Soraya Artman.



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# ADDENDUM

### ESTABLISHING THE OCEANS ECONOMY



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#### 06 ADDENDUM

#### 6.1 LIST OF ALL BASELINE PROJECTS FOR THE EASTERN CAPE OCEAN ECONOMY

		LOCATION	PROJECT COMMENCE YR 2020-29	CAPITAL VALUE (RM)	OPERATING JOBS P.A.	TURNOVER OR GDP VALUE P.A. (RM)
1	Marine Transport & Manufacturing Projects: Project Name					
1	Composites Cluster establish in PoPE	PoPE	2021	200	50	40
2	Tugboat manufacturing for SADC-per year	Ngqura	2020	150	60	50
3	SA Fishing fleet recapitalisation- per year	EL & PoPE	2023	350	100	150
4	Attract one luxury cruise boat/ catamaran manufacturer	Ngqura	2022	400	45	90
5	Establish a specialist 'Oil Rig' maintenance & refurbishment	EL	2024	500	45	150
6	Specialist sand blasting facility	EL	2021	220	15	30
7	Dry Dock specialist maintenance company	EL	2021	150	30	75
8	Marine Boat Building Cluster	EL	2022	500	100	250
	Totals		8	2470	445	835
2	Offshore Oil & Gas Projects: Project Name.					
1	Oil refinery at Coega SEZ [Project Mtombo]	Coega SEZ	2024	30.000	1.000	4.500
2	Fuel storage facility at Coega (Grindrod OTG)	Ngqura	2021	3.000	300	300
3	Offshore bunkering & Related (Chandling ect)	Ngqura	2020	150	45	50
4	Marine Service Centre- Bunkering Clients & Value Chain	Coega SEZ	2021	150	55	100
5	Liquid Natural Gas(LNG) import and export facility	Coega SEZ	2023	20.000	4.200	2.000
6	Gas-to-Power Plant (1,000 MW)	Coega SEZ	2024	20.000	4.200	8.213
7	Maritime Waste Reception Facility (Oily Slops)	Ngqura	2022	3.000	200	450
8	DEDISA Peaking Plant (500 MW)- Convert from diesel to gas.	Coega SEZ	2024	1.000	25	250
	Totals		8	77.300	10.025	15.863
3	Aquaculture Projects: Project Name					
1	Haga Haga Abalone farms- Expansion or Duplication	Haga Haga	2021	75	40	55
2	Community Based Abalone Ranching	EC	2020	80	320	33
3	Hamburg Oyster Farm- Expansion or Duplication	Hamburg	2022	50	30	35
4	Hamburg: Kob Finfish farming	Hamburg	2022	40	25	30
5	Karoo Catch; Catfish farming- Expansion (Success???)	Graff Reinet	2020	60	60	100
6	Algoa Bay Finfish Aquaculture Development Zone (ADZ)	NMB	2021	300	150	200
7	Coega Aquaculture Development Zone (ADZ)	NMB	2022	300	150	200
8	Qolora Aquculture Development Zone (ADZ)	Qolora	2022	300	150	200
9	Marine Tilapia Industry Incubator (MTII)- Fish Processing	Qolora & EC	2023	1.000	3.500	342
10	Marine Tilapia- Rural small scale agriculture - Feedstock	Qolora & EC	2026	1.000	16.945	482
11	ELIDZ Aquaculture- Somlolo Abalone Farm	BCM	2021	450	360	100
12	Coega Fish Farms/ Aquaculture [Non Responsive]	NMB				
	Totals		11	3.655	21.730	1.777

Note: Marine Tilapia has incremetal growth beyond thesestarting metrics.



		LOCATION	PROJECT COMMENCE YR 2020-29	CAPITAL VALUE (RM)	OPERATING JOBS P.A.	TURNOVER OR GDP VALUE P.A. (RM)
4	Marine Protection Services and Ocean Governance					
1	Ocean economy secretariat	EC	2021	30	15	20
2	National ocean and coastal information system (NOCIMS)	EC	2022	40	20	25
3	NOCIMS extending earth observation capacity	EC	2023	40	20	25
4	National oceans and coast water quality management	EC	2024	50	25	30
	Totals		4	160	80	100
5	Small Harbour Development Project Name.					
1	Port St Johns Small Harbour Development- New	PSJ	2024	500	50	150
2	Port Alfred Small Harbour Development- Upgrade	Ndlambe	2023	300	40	120
3	Port St Francis Small Harbour Development- Upgrade	Kouga	2022	250	30	100
4	Investigate Dept of Public Works land for suitability	EC	2020		10	2
5	Promote coastal & Marine tourism & build tourism infras.	EC	2021	200	50	50
6	Develop enabling public infra: ablutions, access, boardwalks	EC	2022	300	75	75
7	Develop small craft harbours- fishing & recreation	EC	2023	400	100	100
8	Small scale fishing & aquaculture development	EC	2024	500	120	110
9	Gonubie Small Craft Harbour	BCM	2025	500	120	110
10	Coffe Bay Craft Harbour	KSD	2026	400	100	90
11	Port Grovenor Small Craft Harbour	Ngquza LM	2027	350	75	85
12	Mzamba Small Craft Harbour	Mbizana LM	2028	350	75	85
	Total		12	4.050	845	1.077
6	Coastal and Marine Tourism Project Name.	007.014	0.001	40.0		15
1	Wild Coast Tiurism Corridor (PSJ to Coffe Bay)		2021	100	15	15
2	N2 Wild Coast Toll Road	EC	2022	2.000	150	200
3	Upgrading all beachfronts, waterfronts and marinas	EC	2021	300	35	150
4	Enhancing Coastal Nature reserves managed by ECPTA	EC	2020	400	50	100
5	Bayworld Aquarium & Museum Development	NMB	2021	350	/5	150
6	Waterfront Development- PoPE	NMB	2023	9.000	3.000	900
7	waterrront Development- East London	EL	2025	3.500	800	300
8	NMB as a 'Watersport Capital'[Ironman, Yachting, Diving]	NMB	2021	200	50	100
9	Iranskei Gap' Coastal infra. Devel (CID) Pre-Feasibility Study	EC	2022	500	120	250
	Totals		9	16.350	4.295	2.165



		LOCATION	PROJECT COMMENCE YR 2020-29	CAPITAL VALUE (RM)	OPERATING JOBS P.A.	TURNOVER OR GDP VALUE P.A. (RM)
7	Skill Development Projects: Project Name					
1	Fisheries and Aquaculture Development Institute (FADI)	NMB	2020	1.49	20	1.49
2	Skill traning in the Squid Industry (SEASI)	PA to Tsits	2020	8.95	20	1.79
3	Small Business Support- TETA (Transport & Education Traning)	EC	2020	1.8	20	0.9
4	Competency Based Modular Traning (CBMT) for artisans	EC	2020	0.77	15	0.77
5	Mentorship Training- Artisans	EC	2020	0.09	8	0.09
6	Maritime Traning College (EL TNPA)	EL	2021	10.00	20	25.00
7	Institute for Coastal & Marine Research (CMR) courses	NMB	2020	20.00	25	30.00
	Totals		7	43	128	60
8	Research, Development and Innovation Project Name.					
1	S.A. Marine Research and Exploration Forum (SAMREF)	EC	2021	35	15	20
2	Rhodes University-Ocean & Maritime Research	Makhanda	Ongoing			
3	Nelson Mandela University (NMU)- Ocean & Maritime Research	NMBM	Ongoing			
4	Walter Sisulu University (WSU) - Ocean & Maritime Research	EL	Ongoing			
5	Fort Hare University - Ocean & Maritime Research	Fort Hare	Ongoing			
	Totals		1	35	15	20
9	Other Ocean Economy Projects Project Name.					
	Small Towns Revitalisation (DPW-2018)		2020	1	1	1
	Waterfront Development (DPW- 2018)		2020			
	Totals		1	1	1	1
	Totals		61	104.064	37.564	21.989

#### **6.2 THE 'BID BOOK' STRUCTURE AND CONTENT ADOPTED FOR EC OE PROJECTS**

In order to be able to prepare for the investors conference a suite of 'Information Memorandum' or 'Bid Books' have been prepared for evaluation by potential investors, project partners, stakeholders or funders of the various Eastern Cape Ocean Economy projects. These projects should be 'investment ready' and merely need the correct stakeholders and funding in order to form the required partnerships or institutional arrangements to move towards implementation. The follow broad structure was adopted to formulate the 'Bid Book' structure and content.

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#	LABEL	NARRATIVE
1	Project Name	
2	Project Location	
3	Project Owner / Driver	Who is promoting the project.
4	Brief Project Overview [Nature or function, pri- mary purpose, service or clients, rationale]	What is the primary objective of the project? Who are the ultimate clients, users or beneficiaries? What goods or services is it seen as providing? Why is there this need, and what will the project ultimately achieve? What is the benefit to society, or a particular user or group? Any other relevant information
5	Capital Value [R m]	The total value for the implementation over the whole project horizon until effective commissioning or opening of the project or facility.
6	Construction Start Date	
7	Constructions Jobs p.a.	Full Time Equivalent (FTE) jobs, in other words, an employment position for the du- ration of a year. If that person does the same job for two years, then it is recorded as 'Two FTE'.
8	Operation Start Date	
9	Operating Costs p.a.	What the operating costs for the project are per year, once it is operational and in normal steady state.
10	Operating Jobs p.a.	The FTE operating jobs that are required to operate the project or facility in any one normal year of operations.
11	Turnover or Value (GVA)	The value that the project generates in any one normal and stabilised year. This would be the turnover in the case of a business, the gate fees for a museum, the marketing rights, the freight charges, or the tourism potential that it unlocks. A road may have many indirect benefits which need to be considered.
12	Economic Linkages	To any other industries. Supplier inputs, support industries, enabling industries

#### Table 2: Bid Book - Ocean Economy Project Description & Key Metrics



#### **6.3 'BANKABILITY' FOR INFRASTRUCTURE PROJECTS**

#	LABEL	NARRATIVE
13	Private sector appetite	To what extent is the private sector interested in investing or participating in this project, and in what amount / percentage?
14	Government input	To what extent does government need to provide infrastructure and / or further input to facilitate the project. Time and value?
15	'Lever' to 'Unlock'	Has the project or initiative become blocked or stuck in some form of bureaucratic, legislative or political impasse. Who, what or how can this impasse be resolved. What sort of an intervention is required.
16	Any Other Points	
17	Project Map or Image, or both.	Ideally a map to indicate where it is located with reference to a town, feature in the town, road network or the like. An image of the completed project. Ideally it should indicate its function or purpose.



Most infrastructure investment plans and government policies rely on the delivery of projects and programs. To achieve these and unlock the real benefits of infrastructure, it is vital that projects and programs are delivered well, and are 'bankable' and feasible, both from a private and public sector perspective.

## A structured approach to preparing, appraising and approving projects will help. This typically involves three steps:

- Early-stage pipeline screening and pre-feasibility assessment;
- 2. Rigour in feasibility evaluation; and
- 3. Periodic review and approvals.

Translating a policy or concept into a bankable project requires rigorous evaluation and appraisal of the project's feasibility.

Project feasibility needs to be considered from the outset. Decisions made at the start of the project preparation process, for example, on scope, technical solutions or procurement routes, are key to the success of a project. To avoid failure, it is important to make sure that project concepts are feasible and deliverable before specific commitments to delivery, including time, objectives and cost, are made.

A comprehensive feasibility report typically addresses a multitude of different dimensions. The G20 Principles for the Infrastructure Project Preparation Phase outline five critical aspects to be considered: project rationale, options appraisal, commercial viability, long-term affordability, and deliverability. (See Appendix 6.1 hereafter for further detail). By using the Five Case Model methodology for these G20 Principles, the business case is developed over time to provide a record of project development and decisions. The model provides a framework to enable more comprehensive and consistent project development and review, supporting informed and efficient decision-making as follows: • •

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- The Strategic Case demonstrates why the project is needed and how it fits with relevant infrastructure and development strategies;
- The Economic Case provides an analysis of all available options, including making better use of existing assets, and demonstrates the value for money of the preferred way forward;
- The Commercial Case demonstrates commercial viability and project 'bankability';
- The Financial Case demonstrates affordability and how the project will be funded over its life-cycle; and
- The Management Case demonstrates whether the project is deliverable and how risk will be managed.

Efficient and rigorous review and approval processes can not only ensure quality projects are developed, these processes can also help to avoid administrative delays that increase costs and time for project preparation.

#### **6.4 G20 PRINCIPLES FOR INFRASTRUCTURE PROJECT PREPARATION**

Quoted in its entirety from the Global Infrastructure Hub, 2019.

"The introduction of robust and transparent infrastructure planning and pipelines, improved business cases and project stage gate controls, and the development of business case methodologies have led to more productive infrastructure being built.

The following Principles for the Infrastructure Project Preparation Phase could be considered when preparing national and regional infrastructure projects. The Principles consist in a list of critical aspects to consider under the following dimensions:

- Project rationale
- Options appraisal
- Commercial viability
- Long-term affordability
- Deliverability

These 5 key dimensions and their respective headline questions present a way to achieve a high standard of business case development. The G20 is clear that to be effective, these Principles are expected to be more effective when supported by sound governance and public leadership, implemented in a transparent and accountable manner, and sponsored from the outset by government bodies (such as ministries, development agencies, centralised or specialised authorities, etc., according to the country framework) at different levels of administration with the capacity to move through the entire process.

The idea behind these Principles is that every infrastructure project or programme will benefit from having a reasonable and structured justification (i.e., business case analysis) or proposition to explain why it is needed and how it can be taken forward. The systematic implementation of good business case analysis can help bridge the infrastructure gap by building a pipeline of projects that are bankable and that satisfy investor requirements. It helps to create delivery confidence by ensuring and demonstrating that projects have been scoped robustly and planned realistically from the outset and over the entire life-cycle, with the associated risks taken into account.

#### A good business case methodology provides a framework for thinking around three issues:

- where are you now?
- where do you want to get to?
- how are you going to get there?

and provides:

- a structured format to allow government authorities at all levels to develop its proposals and explain and justify any
  project or programme;
- a framework to enable an approving body to decide whether or not to allow the project or programme to go forward;
- a process for preparing projects for market; and
- a record of transparent decision-making.



#### PROJECT RATIONALE

Underpinned by sound governance and public leadership, the Project Rationale establishes the need for the project, placing it within an overall strategic context and outlining the project scope and objectives. In short, it should present the "case for change".

#### Critical Issues to address are:

- Establish the rationale for the project and place the project within an overall strategic context, e.g. national, regional and local long-term plans. This should confirm project sponsors and government parties on their role.
- Outline the project scope and objectives, and the problems the project aims to solve or the benefits it should bring.
- Define the key risks, constraints and dependencies relating to the project e.g. Have planning, external approvals and issues related to cross-border projects been taken into account.
- Define the positive and negative externalities generated by the project, as well as potential linkages and alignment with other infrastructure projects and sectors, regional planning and other programs, networks and national and local policies.

#### **OPTIONS APPRAISAL**

The Options Appraisal should demonstrate that all relevant options have been considered involving the relevant stakeholders (including the private sector) at the national, regional and local level, and that social cost benefit analysis (SCBA), social cost effectiveness analysis (SCEA) or multi-criteria decision analysis (MCDA) has been conducted in an appropriate manner on a further short list (derived from all relevant options) to determine the option which offers best value for money over the entire life-cycle of the project (including its maintenance), taking externalities into account. In addition, for Public-Private Partnership (PPP) infrastructure projects, it should demonstrate that using private finance optimises value for money for the government, by comparing it to the same solution using public capital.

#### Critical Issues to address are:

- Have you established critical success factors against which you can test your options?
- Have you considered all relevant options to create a long list and short list?
- Have you subjected your short list to SCBA (if cost and benefits can be converted into monetary value) or SCEA (if benefits cannot be valued or the information required is too difficult to determine) in order to establish a preferred option? If comprehensive MCDA is instead used, does it incorporate SCBA or SCEA as an input and if not are there grounds for not performing them (lack of information, large pipeline of projects and insufficient resources to perform the analysis, etc.)?
- Are all the key modelling assumptions clearly articulated, backed up by sound sources and reflective of market conditions?
- Are cost and schedule estimates in line with the required output specifications and based on established national/ international benchmarks? Are social and environmental costs monetised where possible?
- Have risks been identified and quantified and a reasonable adjustment made for "optimism bias"?
- Have you tested resilience against natural disasters and other force-majeure risks?
- Have you tried to take account of non-financial risks and benefits in your short list evaluation?
- Have all relevant stakeholders been addressed, including the private sector and affected local communities?
- Does the project help achieve universal access to basic services, such as electricity and energy, water and sanitation, waste removal, transport, housing, health care and education?
- How does the project improve accessibility and inclusiveness for the most disadvantaged social groups?
- Do you have a robust justification for your preferred option?
- What are the weights one should attribute to the different aspects above in order to derive the preferred option?



#### COMMERCIAL VIABILITY

Showing Commercial Viability involves demonstrating that the project is feasible and deliverable for investors and contractors as well as the government and citizens, that the supplier market has been tested and that the procurement strategy and contract is well developed with an appropriate risk allocation.

#### Critical Issues to address are:

- Have you reviewed different contract options and chosen the one which offers best value for money? Is the contract bankable? In case it is not and the project targets low income users, carries positive social externalities or is viable from a socio-economic perspective, do these factors justify public sector support?
- Have you tested that the proposal is commercially feasible and that the supply market is likely to be interested in it?
- What is your procurement strategy?
- Do you have a risk matrix which allocates risks to the party best able to manage them?
- · Is this risk allocation stated in the contract?

#### LONG-TERM AFFORDABILITY

Long-term affordability analysis should ascertain the likely life-cycle costs, adequate and affordable maintenance funding and financing of the project. Accordingly, it should (a) demonstrate that the project is affordable and cost effective over its life, taking account of the public funding allocated to the project and allowing contingencies for unexpected occurrences; and (b) make clear what amounts are funded from public sources and what amounts are sought by way of other funding sources or are payable by users of the facility. Debt sustainability and transparency of project financing will also be taken into consideration.

#### Critical Issues to address are:

- Have you accurately assessed the project costs?
- · Have you accurately assessed all project revenues?
- Have you identified finance and funding sources?
- · Have you built relevant financial models?
- Have you performed a sensitivity analysis over the estimated financial results and rate of return?
- Are credit enhancement and risk mitigation products available to support project financing?
- Are there readily available and affordable mechanisms for interest rate and foreign currency hedging, if necessary for the project?
- · Have you tested affordability from a macroeconomic/fiscal sustainability perspective?



#### DELIVERABILITY

Deliverability analysis should demonstrate that arrangements are in place to ensure the successful delivery and maintenance/ operational management of the project, respecting existing environmental and social safeguards. It should show that the project is properly staffed and resourced over its lifetime, with appropriate governance arrangements, advisers and timetable, so that it can be procured on time and successfully operated as well as monitored.

#### Critical Issues to address are:

- Have you put in place project management and governance arrangements?
- Do you have a risk management plan, including an environmental and social risk assessment and its corresponding mitigation plan?
- How is responsibility assigned or delegated amongst the public sector and shared with private partners?
- How can each institution help with the project preparation?
- What is your assurance and approval structure?
- What advisers will you appoint and have you considered this expense in the budget?
- What project management methodology will you use?
- Do you have a detailed project plan and timetable?
- Are conflict assessment and resolution mechanisms in place?





#### 6.5 ASSESSMENT OF PROJECT ATTRACTIVENESS - MANUAL FOR THE IPP CHECKLIST

RSLF IPP PIPELINE ASSESSMENT	DRAFT MAY 2017
Underwriter	
Prospective Client	
Country	
Nme of the project	
Technology	
Nominal Capacity (MW)	
Total project cost (\$M)	
Expected date financial close	
Expected date of Commercial Operation	

#### Assessment of project attractiveness

#### Scored on a 1-5 basis Progress to Financial close

#### Experience of the investor/ sponsor

Experience of the developer with technology and developing projects Experience of the developer with IPP's in Africa / country Local partner strength

#### **Financial Viability**

Project return at attractive levels Equity sourced Debt secured or letter of confirmation from leader Business plan robust and thought through Creditworthiness of offtaker

#### Techical

Complexity of the project and the technical layout Technical layout defined Grid impact assessment (including transmission line) Resource assessment Identified EPC/ equip supplier with strong track record Logistics (Transport...)













Environmental risk Social risk Awareness of developer

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#### **Regulatory Environment of country**

Long Term Economic Sustainability

Support from the host country Support recived from the MoF

Support recived from the Minister of Energy Support received from the off-taker

Overall Country Risk

Comments

PPA agreed/ signed Quality of the PPA Procurement rules followed (Auction/ Fit or direct negotiation) Country track record with IPPs Legal framework (and its implementation)

Cost reflective tarriffs (highly subsised, does it cover opex and capex?) Country tariffs match or are similar to proposed tariff in PPA







Scored on a 1-5 basis				
Progress to Financial close				
	-	+/-	+	++



Final assessment



The Eastern Cape



PRIORITY PROJECTS FOR IMPLEMENTATION BID BOOK











NELSON MANDELA UNIVERSITY