



REPUBLIC OF SOUTH AFRICA



Unlocking the economic potential of South Africa's Oceans

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

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



Four growth areas were selected to be discussed in the Operation Phakisa Labs

1



- Marine transport and manufacturing

2



- Offshore oil and gas exploration

3



- Aquaculture

4



- Marine protection services and governance



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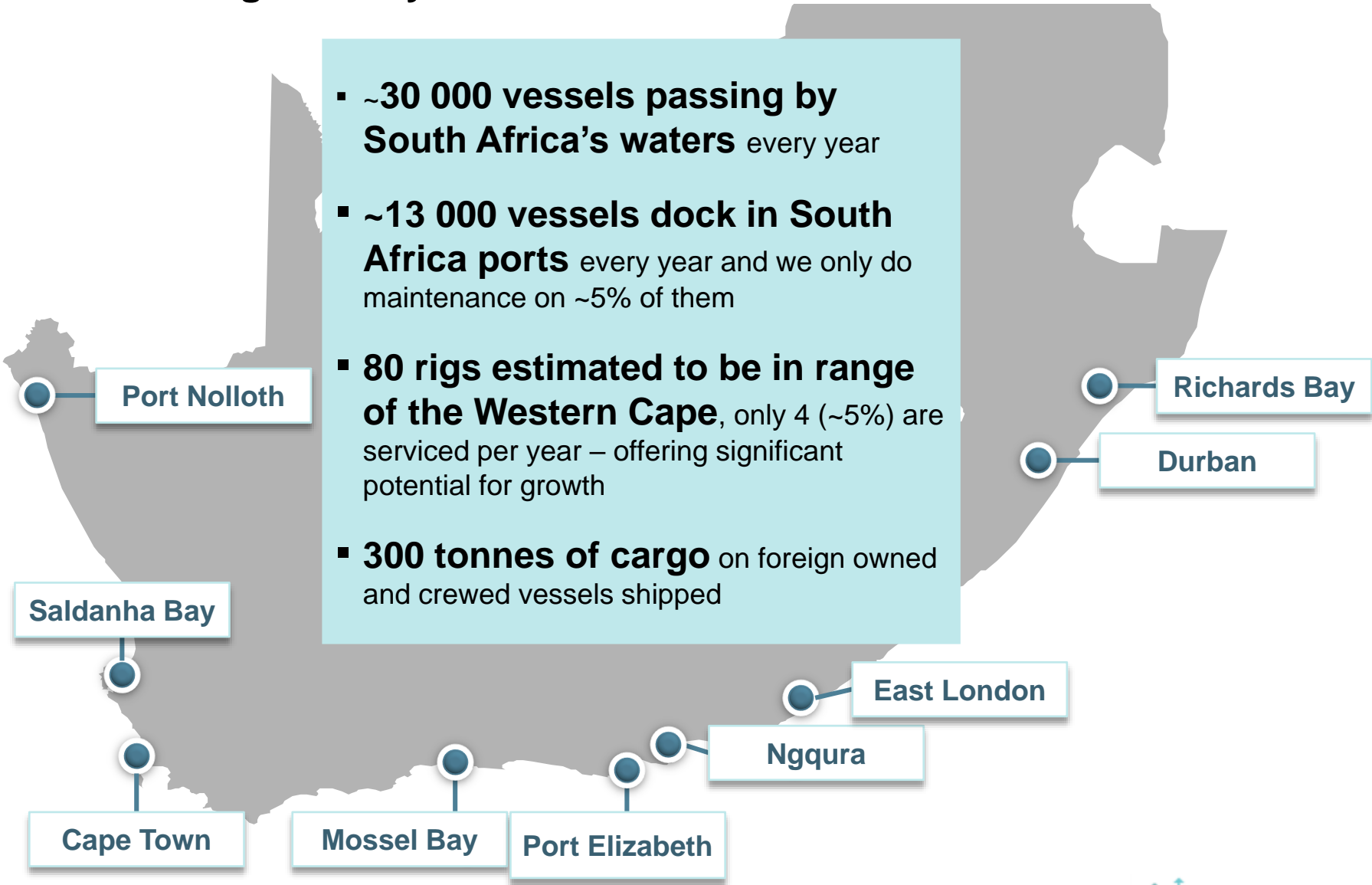


MARINE TRANSPORT AND MANUFACTURING





South Africa has an opportunity to develop the marine transport and manufacturing industry

- **~30 000 vessels passing by South Africa's waters** every year
- **~13 000 vessels dock in South Africa ports** every year and we only do maintenance on ~5% of them
- **80 rigs estimated to be in range of the Western Cape**, only 4 (~5%) are serviced per year – offering significant potential for growth
- **300 tonnes of cargo** on foreign owned and crewed vessels shipped



Through Operation Phakisa, our vision is to double the size of the Marine Transport and Manufacturing (MTM) sector

	Initial Lab vision	Baseline (2010)	Incremental target for interventions (2019)
 <p>GDP contribution</p>	<ul style="list-style-type: none"> Accelerate the sector's GDP contribution 	<ul style="list-style-type: none"> ~R15bn 	<ul style="list-style-type: none"> New revenue: ~R18.8bn in the first five years
 <p>Job creation</p>	<ul style="list-style-type: none"> Increase total employment 	<ul style="list-style-type: none"> ~15 000 jobs 	<ul style="list-style-type: none"> Direct jobs: ~15 220 (with an additional 39-46 000 more through the employment multiplier)



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OFFSHORE OIL AND GAS EXPLORATION



The oil and gas industry can create large value to host countries

1 Potentially enormous economic benefits...

Example 1: Abu Dhabi in 1960

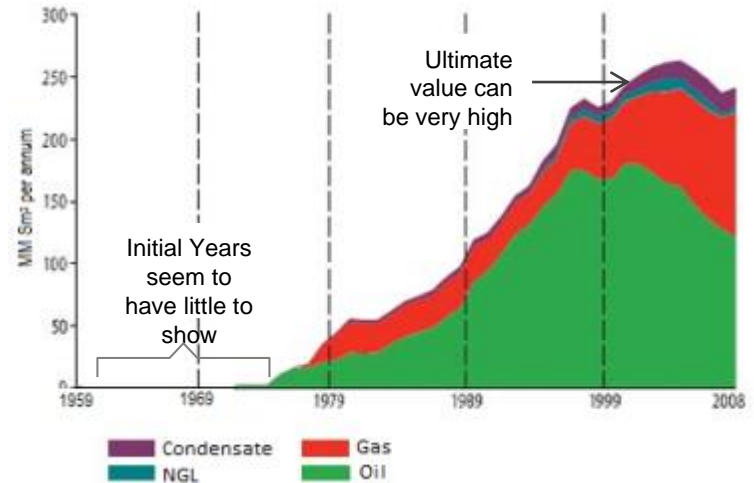


Example 2: Abu Dhabi today



2 Which take time to materialise

Norway oil and gas production



A Timeline of failure, patience and success

- **1958:** Norwegian Geological Survey says: “The chances of finding...oil...off Norwegian coast can be discounted”
- **1963:** Norway asserts rights over North sea acreage
- **1966:** Exploration drilling starts; initial wells are dry
- **1969:** Ekofisk found (enormous discovery)
- **1971:** Ekofisk begins production
- **2012:** Petroleum product exports ~US\$ 95bn p.a.

South Africa has possible resources of ~9 bn barrels of oil and ~60 tcf of gas offshore, but uncertainty is high

South Africa's offshore reserve basin

South African Coastal Province:
Coastal land and adjoining water to
depths of at least 2,000 m



Oil



9 bn barrels of oil



Equivalent to 40 years of South African oil consumption¹

Natural gas



60 tcf of gas



Equivalent to 375 years of South African gas consumption¹

¹ At current level: 595 kb/d oil consumption and 160 Bcf/y gas consumption

SOURCE: Petroleum Agency SA, EIA

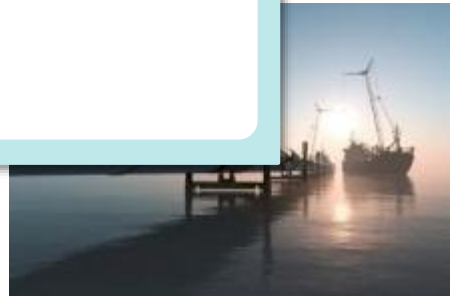
The lab aspired to determine the extent of South African offshore oil and gas reserves, through exploration

South Africa should ...

... create an environment that ***promotes exploration*** ...

... in order to ***drill 30 exploration wells*** in the next 10 years ...

... while simultaneously ***maximising the benefits for South Africa***





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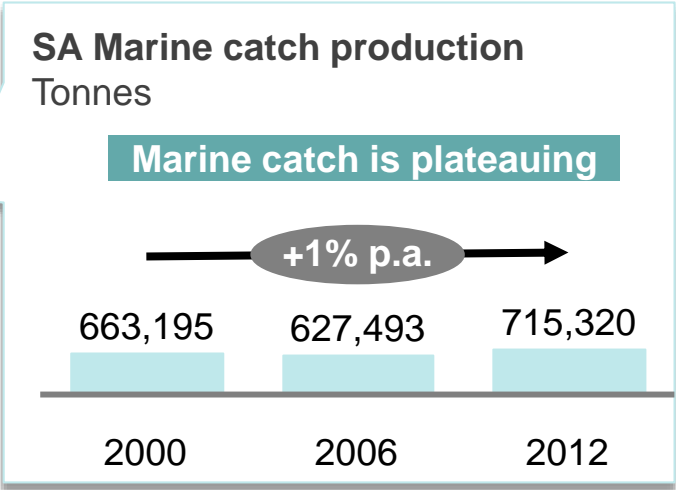
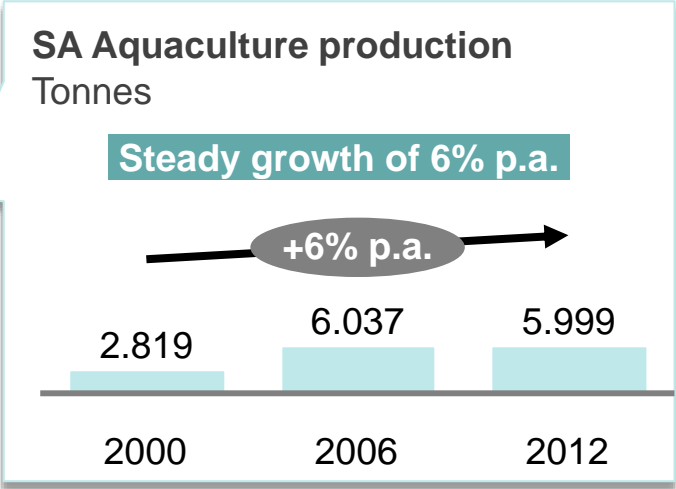
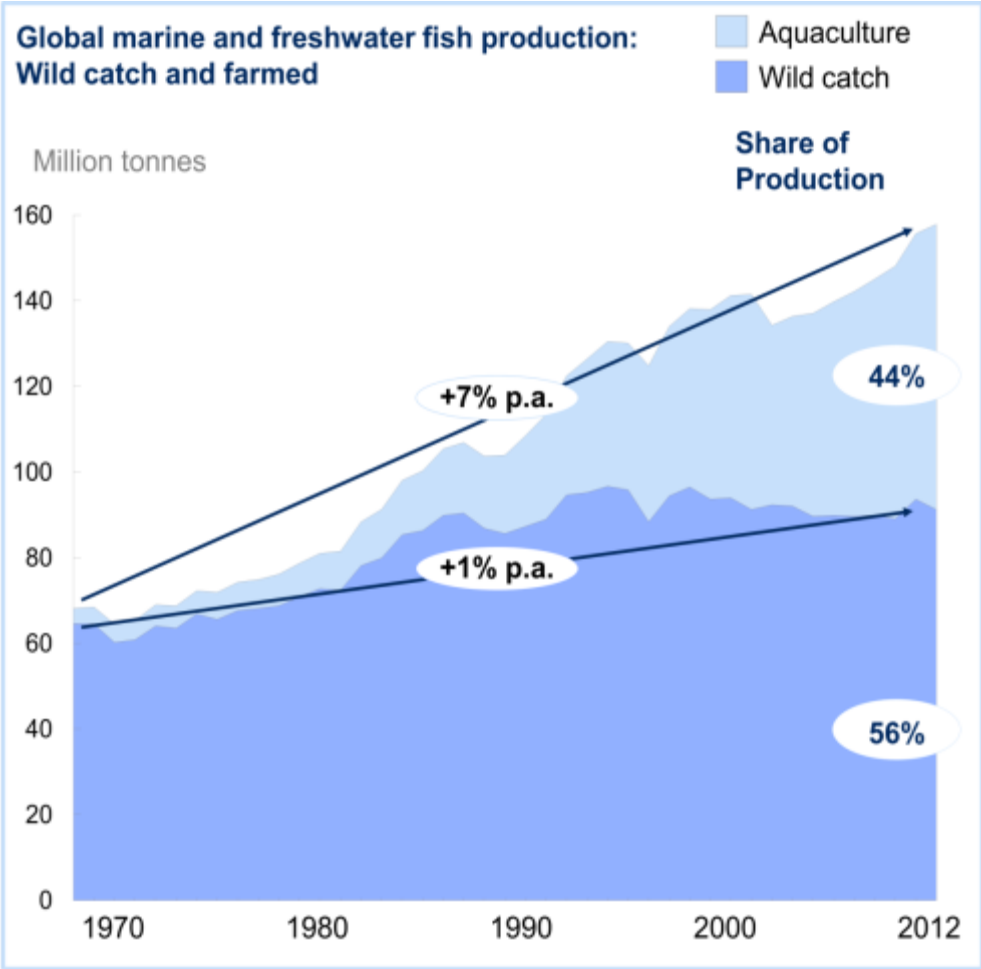


AQUACULTURE



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

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



South Africa has the coastline to support aquaculture

Nations with similar coastline are producing ~1,000 times of SA's production

Nations with similar size of length of coastline as South Africa

Country	Share of aquaculture production	Coastline length
	%	km
China	61.7	14,500
India	6.3	7,000
Vietnam	4.6	3,444
Indonesia	4.6	54,716
Bangladesh	2.6	580
Norway	2	25,148
Thailand	1.9	3,219
Chile	1.6	6,439
Egypt	1.5	2,450
Myanmar	1.38	1,930
South Africa	0.00003424	2,798



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

Headlines 2019: SA economy reaps the rewards of Operation Phakisa

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

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

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

“...experts estimate the **revenue contributed by Aquaculture to South Africa’s economy to be as much as R3 bn...**”



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



Deep dive: 24 projects have been selected and sequenced for implementation across 3 phases

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



Project/enterprise		
★	Hatchery expansion- Paternoster- Oyster	
★	Expansion- East London IDZ- Kob	
★	Expansion- Hamburg cluster- Oyster	
★	Expansion-Ventersdorp- Catfish	
★	Expansion - Jacobsbaai Sea Products	
★	Expansion - Abagold	
★	Expansion - HIK Abalone	
★	New - Amatikulu - Kob	
●	Expansion - Amatikulu - Ornamentals	
●	Expansion - DST Abalone Hatchery	
●	New- Hamburg cluster- Kob	
●	New- Saldanha Viking Cages- Trout	
●	ADZ-Ventersdorp- Catfish	
●	Doring Bay Abalone	
●	New - Saldanha Viking Cages - Salmon	
●	Expansion- Saldanha Blue Ocean Mussels- Mussel	
●	Expansion- Saldanha Bay Oyster Company- Oyster	
●	New- Saldanha Southern Atlantic Sea Cages- Salmon	
●	New- Algoa Bay Sea Cage Farming- Yellowtail	
●	New- Richards Bay Sea Cage Farming- Dusky Kob	
●	New- Diamond Coast Abalone Ranching- Abalone	
●	New - Van der Kloof - Trout	
●	New - Matzikama Brenner Dietrichs - Abalone	
●	New - Buffeljachts - Abalone	



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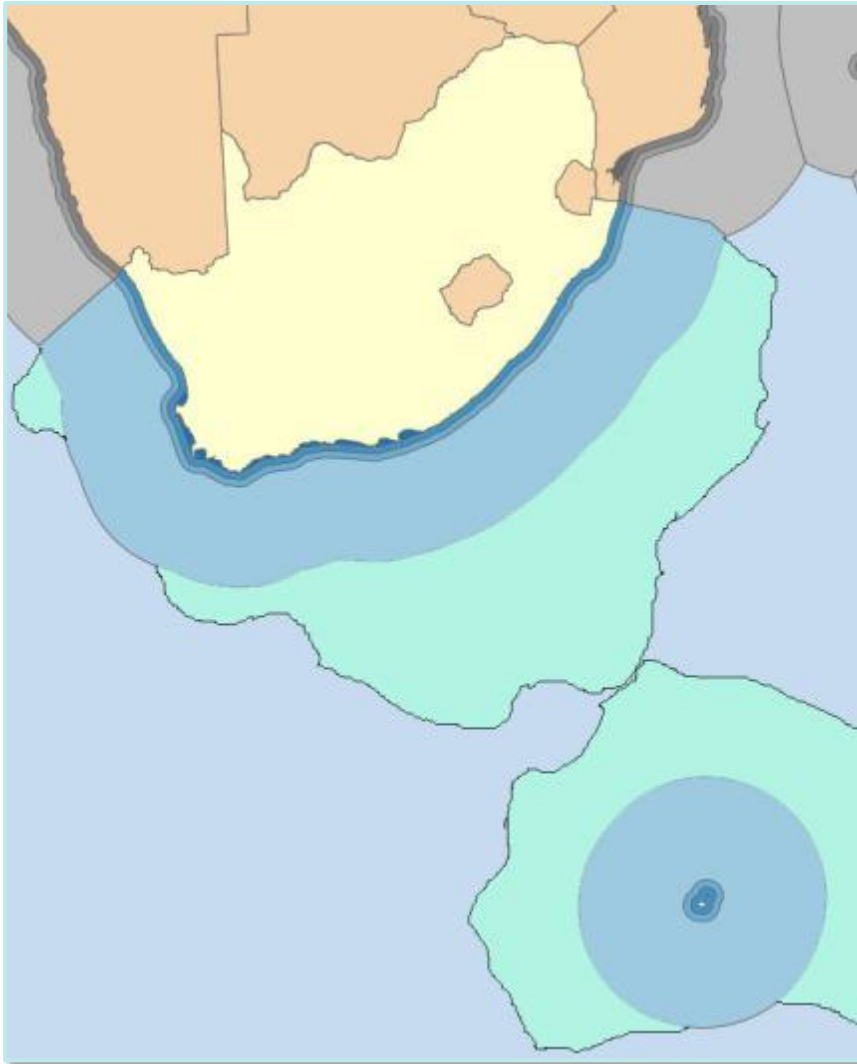


MARINE PROTECTION SERVICES AND OCEAN GOVERNANCE



South Africa has more ocean space than land, and our ocean jurisdiction will increase should the extended continental shelf claim be successful

Legend Land Mass EEZ Extended Continental Shelf Claim



Land Size:

1.2 mil km²

Exclusive Economic Zone (EEZ)
Size:

1.5 mil km²

- South Africa is responsible for managing an **oceans space** that is **greater** than the **land territory**
- Extended continental shelf claim will **double** the size of the **ocean geographic extent**

With such a large ocean jurisdiction, effective governance is critical but will be challenging given the size and complexity of our oceans

~3,900

kilometres of coastline
(including the Prince Edward Islands)



~20

Key departments and institutions in the marine environment with distinct roles and maritime policies

Topic	Date	Responsible
Development of a Service Plan for Public Service Institutions	June 2012	CG: SA
Approval of a Service Plan for Public Service Institutions and Coordination of Public Service Institutions	March 2013	CG: SA
Call for Applications	March and April 2013	CG: SA, Service Provider, Mining Industry and Public
Advertisement of a Service Plan	May 2013	CG: SA
Formulation of a Service Plan	June 2013	CG: SA
Processing of Application Forms and Data Capturing	July 2013	Service Provider
Allocation by Designated Authority	September 2013	Designated Authorities
Call for Applications	September 2013	CG: SA
Processing of Application Forms and Data Processing	October 2013	Service Provider
Amendment of Approach	November 2013	CG: SA
Amendment of Rights Register	December 2013	CG: SA

~50

National Acts regulating marine governance



4

Coastal provinces with their own socio-economic context and development goals



The Lab proposed the implementation of 10 key initiatives to achieve these targets

Integrated Ocean Governance and Protection

Integrated Framework and Governance



1 Secretariat to Govern Activities

2 Enhancement of Legislation into the Integrated Coastal and Oceans Management Act or Oceans Act

3 Review of ocean-related legislation and international instruments

4 Accelerated Capacity Building Intervention in Ocean Governance

Ocean Protection



5 Enhanced and Coordinated Enforcement Programme

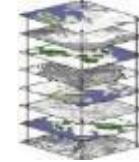
6 National Ocean and Coastal Information System and Extending Earth Observation Capacity

7 National Ocean and Coastal Water Quality Monitoring Programme

8 Creation of a Marine Protected Area Representative Network

9 Marine Protected Area / Marine Spatial Planning Discovery, Research & Monitoring Programme

Marine Spatial Planning



10 Marine Spatial Planning Process

Initial short-term targets: First Results by March 2016



Thank You