

MSP Implementation in South Africa

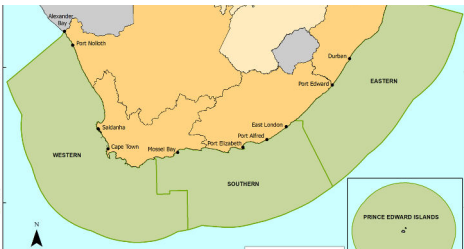
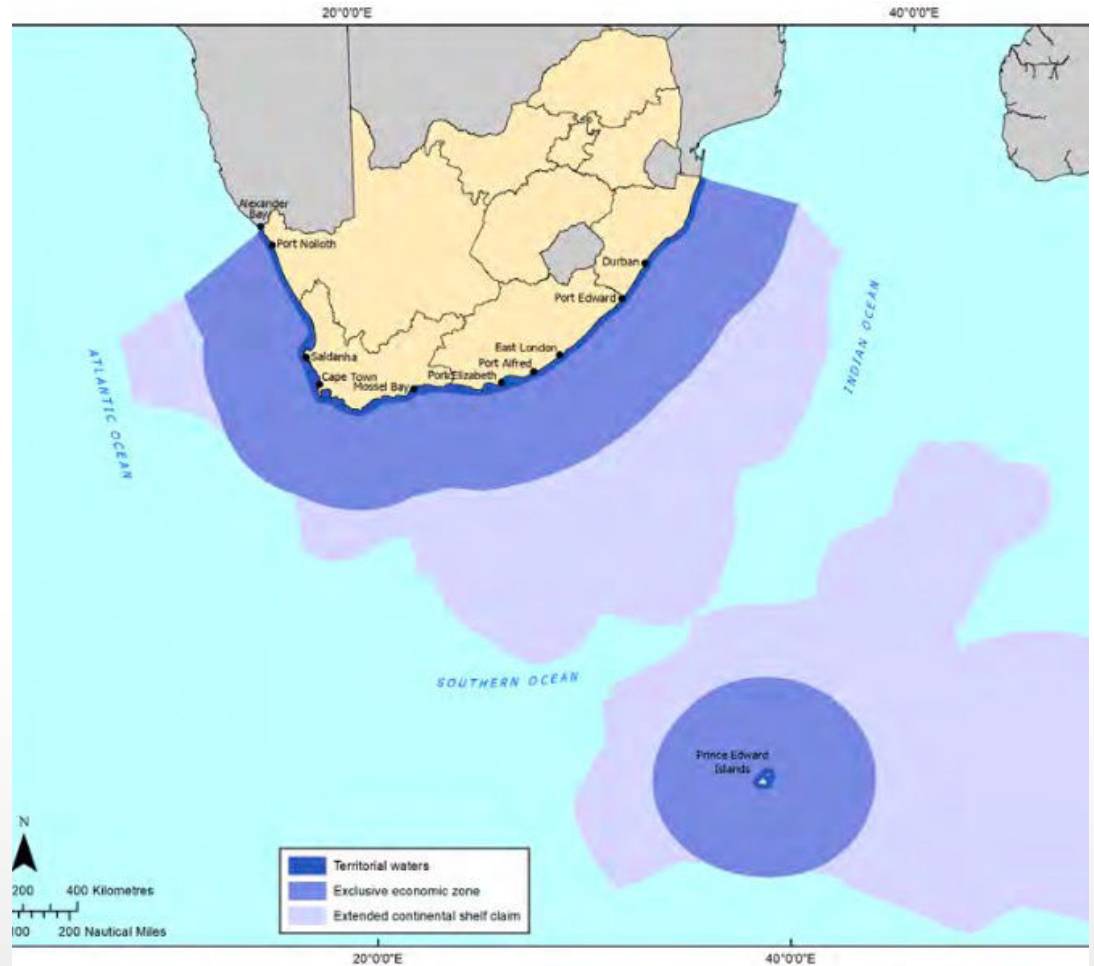
Lead Ministry

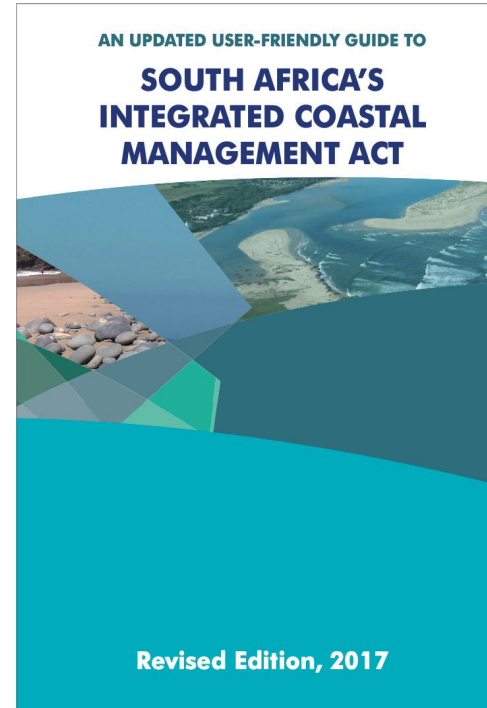
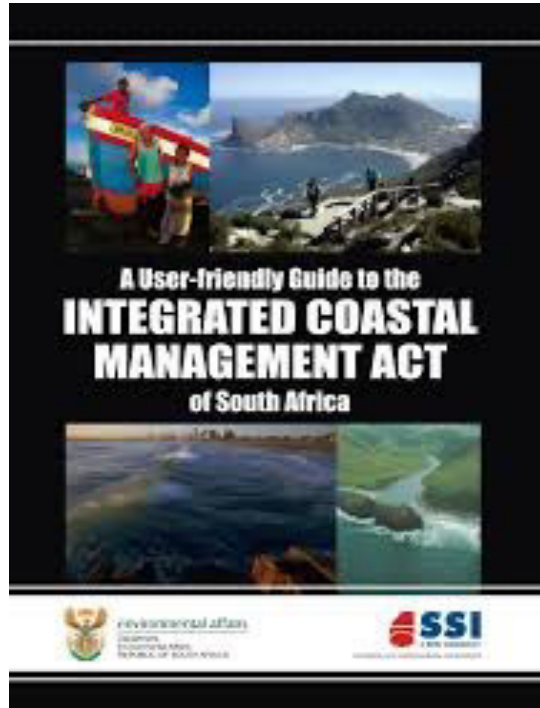
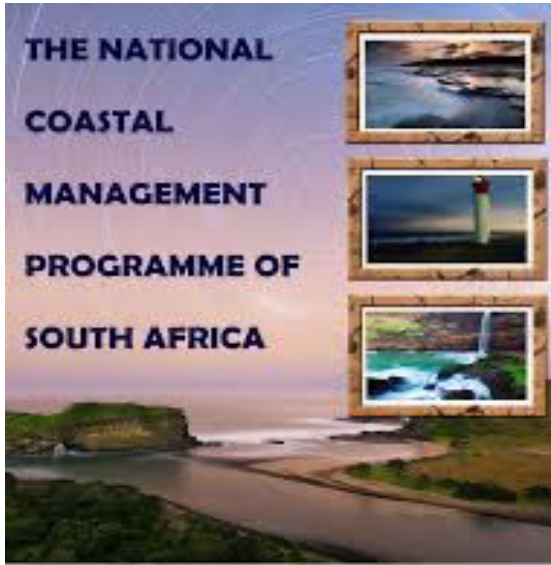
Ministry of Forestry Fisheries and the Environment



South Africa at a glance

Population	:	56m
GDP	:	US\$ 313bn
Oceans Economy GDP contribution	:	US\$ 6.3bn
Currency	:	Rand (ZAR). Conversion rate of 15.88 to the US\$ used throughout this material
Coastline	:	3900km
Major ports	:	8
Exclusive Economic Zone	:	1.5 million Km ²
Languages	:	English, Afrikaans, isiNdelbele, isiXhosa, isiZulu, Sesotho sa Leboa, Sesotho, Setswana, siSwati, Tshivenda, Xitsonga





Government Gazette

REPUBLIC OF SOUTH AFRICA

Vol. 524 Cape Town 11 February 2009 No. 138

THE PRESIDENCY

No. 138 11 February 2009
It is hereby notified that the President has assented to the following Act,
hereby published for general information:—

**No. 24 of 2008: National Environmental Management: Integrated Coastal
Management Act, 2008.**

Policy and Legislations

Objects of Act

The objects of this Act are—

- a) to determine the coastal zone of the Republic;
- b) to provide, within the framework of the National Environmental Management Act, for the co-ordinated and integrated management of the coastal zone by all spheres of government in accordance with the principles of co-operative governance;
- c) to preserve, protect, extend and enhance the status of coastal public property as being held in trust by the State on behalf of all South Africans, including future generations;

Policy and Legislations



The Republic of South Africa

National Framework for Marine Spatial Planning in South Africa



Government Gazette

REPUBLIC OF SOUTH AFRICA
Vol. 578 Cape Town 5 August 2013 No. 36730

THE PRESIDENCY
No. 559 5 August 2013
It is hereby notified that the President has assented to the following Act, which is hereby published for general information:—
Act No. 16 of 2013: Spatial Planning and Land Use Management Act, 2013



Objects of Act

The objects of the Act are to—

- develop and implement a shared marine spatial planning system to manage a changing environment that can be accessed by all sectors and users of the ocean;
- promote sustainable economic opportunities which contribute to the development of the South African ocean economy through coordinated and integrated planning;
- conserve the ocean for present and future generations;
- facilitate responsible use of the ocean;
- provide for the documentation, mapping and understanding of the physical, chemical and biological ocean processes and opportunities in, and threats to, the ocean; and
- give effect to South Africa's international obligations in South African waters.



REPUBLIEK VAN SUID-AFRIKA

STAATSKOERANT

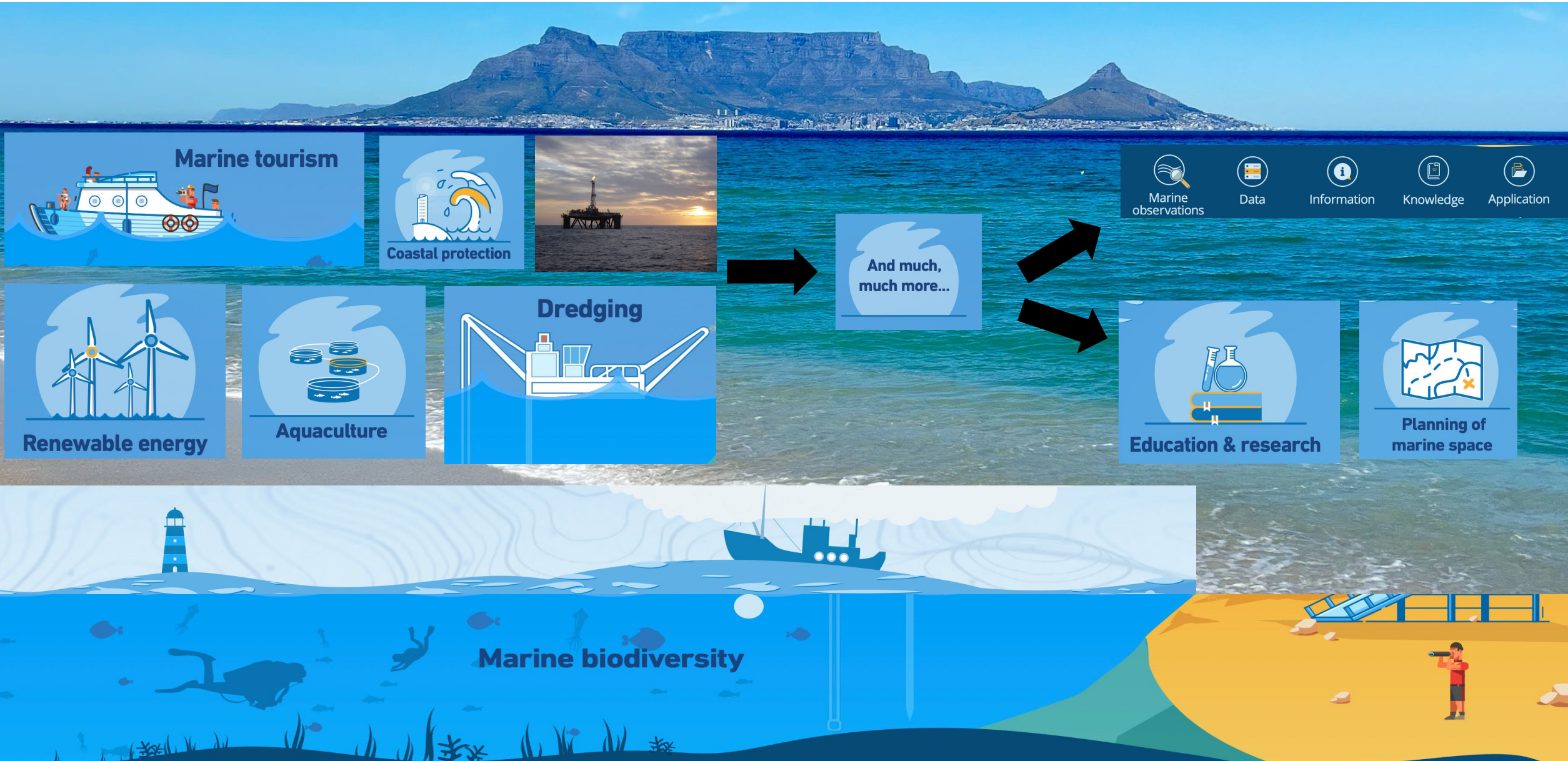
GOVERNMENT GAZETTE

OF THE REPUBLIC OF SOUTH AFRICA

As 'n Nuusblad by die Postkantoor Geregistreer Registered at the Post Office as a Newspaper

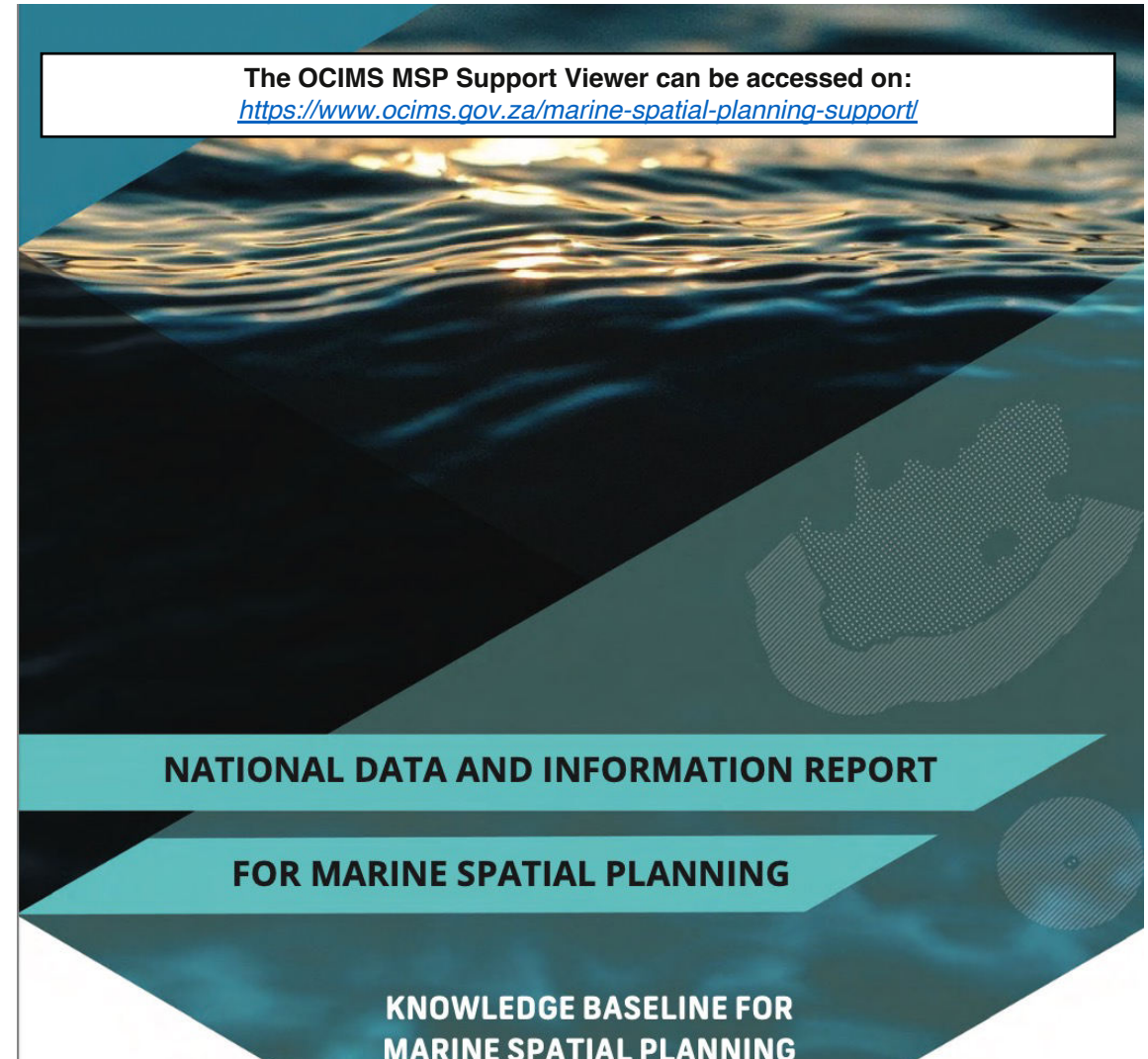
Vol. 353 KAAPSTAD, 11 NOVEMBER 1994 No. 16083
CAPE TOWN, 11 NOVEMBER 1994

KANTOOR VAN DIE PRESIDENT	OFFICE OF THE PRESIDENT
No. 1952. 11 November 1994	No. 1952. 11 November 1994
Hiërby word bekend gemaak dat die President sy goedkeuring gegee het aan die onderstaande Wet, wat hiërby ter algemene inligting gepubliseer word:	It is hereby notified that the President has assented to the following Act, which is hereby published for general information:
No. 15 van 1994: Wet op Maritieme Sonnes, 1994.	No. 15 of 1994: Maritime Zones Act, 1994.

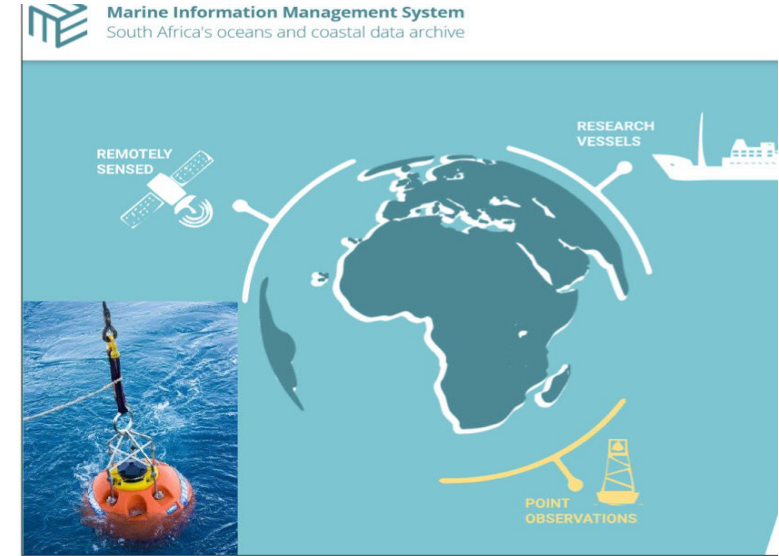


Current Status

- The **Oceans and Coastal Information Management System (OCIMS)** system designed as a 'one-stop-shop' where the **public** can expect to find **data, decision support tools and information** relating to South Africa's marine and coastal domains.
- The **data portal** is Initiated through **Operation Phakisa**, to support a range of **stakeholders in accessing the oceans economy**.
- The search will return the relevant **metadata including the details of the custodian** where one will be able to access the **data**, as not all datasets are immediately available for download (***due to licence agreements, embargoes etc.***).
- The decision support tools (DeSTs) are designed to communicate complex information in a user-friendly manner through interactive mapping applications, including a **Marine Spatial Planning (MSP)** DeST.



- Coastal Viewer
- Fisheries & Aquaculture Support
- Marine Spatial Planning
- Coastal Flood Hazard
- Water Quality
- Marine Predators
- Coastal Operations at Sea
- Integrated Vessel Tracking
- Marine Information Management System (MIMS)



Fisheries-related Information dissemination services

- Government advisories
- Email HAB bulletins
- Regional WhatsApp groups
- Data cubes
- OCIMS Fisheries and Aquaculture Decision support tool
- OCIMS Integrated Vessel Tracking

environmental affairs
Department: Environmental Affairs
REPUBLIC OF SOUTH AFRICA

OPERATION PHAKISA
planning | implementation | growth

science & technology
Department: Science and Technology
REPUBLIC OF SOUTH AFRICA

NATIONAL OCIMS

HOME ABOUT DOCUMENTS DATA TOOLS

NATIONAL OCEANS AND COASTAL INFORMATION MANAGEMENT SYSTEM

Process of achieving MSP targets/ limitations

- 

1994
South African Constitution
- 

1994
Maritime Zone Act
- 

1998
Green Paper on Integrated Coastal Management
- 

2000
Sustainable coastal management
- 

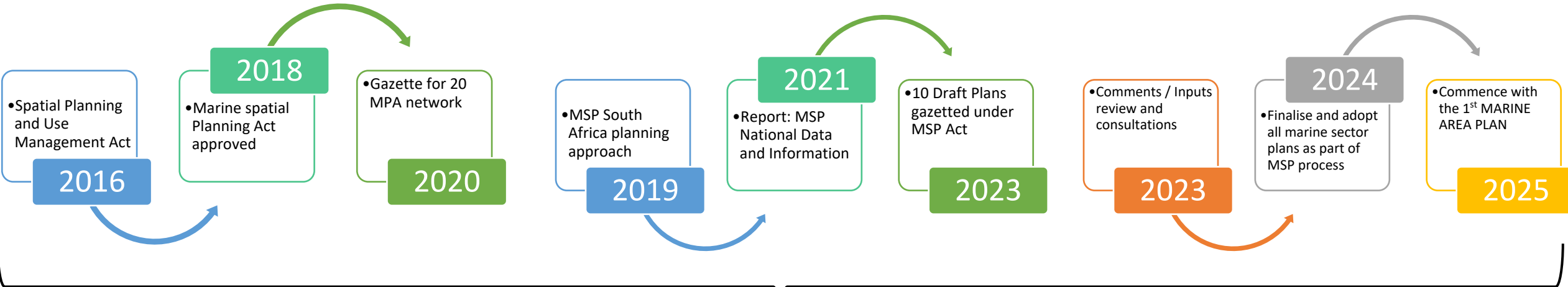
2008
Integrated Coastal Management (ICM Act)
- 

2013
Amendments of the ICM Act
- 

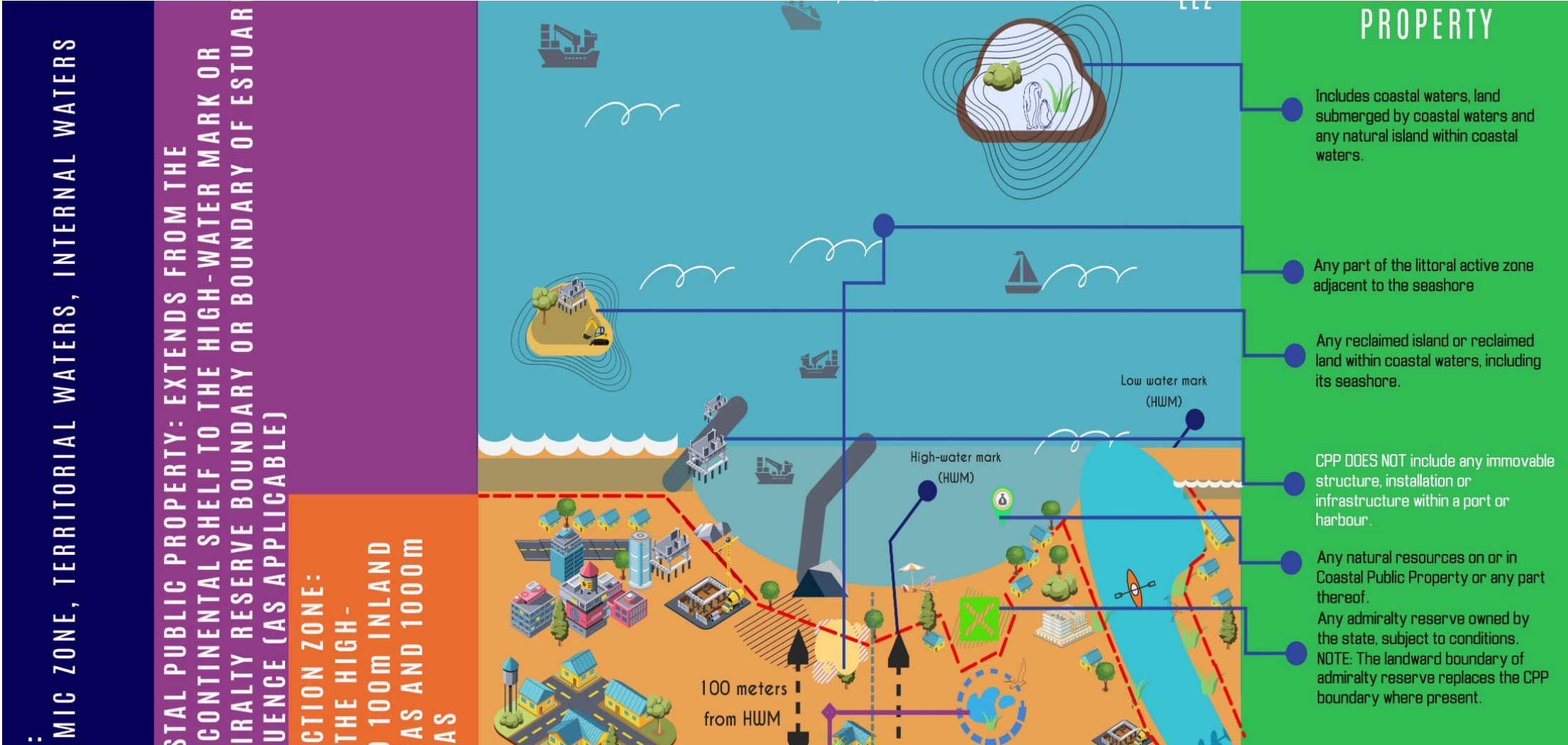
2013
Cabinet approval for NEMO
- 

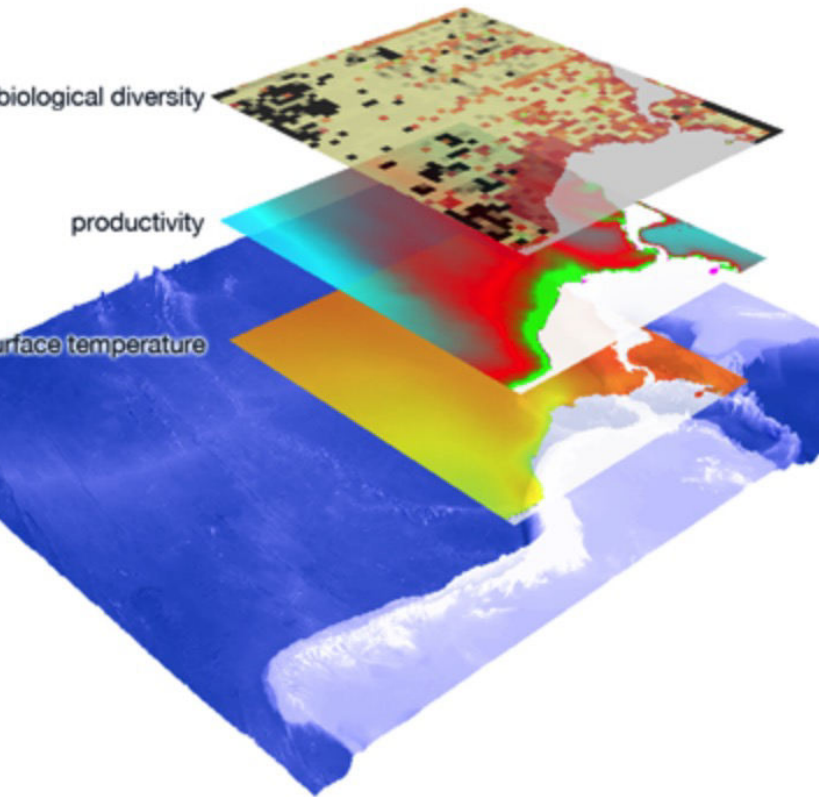
2014
Oceans Economy: Operation Phakisa
- 

2014
Spatial Planning and Land Use Management Act



National Development Plan (2030) Targets





DEPARTMENT OF FORESTRY, FISHERIES AND THE ENVIRONMENT

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MARINE SPATIAL PLANNING ACT, 2018 (ACT NO. 16 OF 2018)

THE PUBLICATION OF DRAFT MARINE SECTOR PLANS FOR PUBLIC COMMENT

I, Barbara Dallas Crecy, Minister of Forestry, Fisheries and the Environment, hereby give notice in terms of sections 7(1)(c) and 8 of the Marine Spatial Planning Act, 2018 (Act No. 16 of 2018) that the public is invited to comment on ten (10) draft Marine Sector Plans.

The draft Marine Sector Plans have been prepared by sector national governments to support the development of Marine Area Plans as part of the Marine Spatial Planning process. The Department of Forestry, Fisheries and the Environment, supported by the National Working Group on Marine Spatial Planning, will lead and guide the public comment process for Marine Sector Plans development as envisaged in the Marine Spatial Planning Act.

Marine Sector Plans specify the overall developmental objectives and priorities of each sector from a national point of view and the extent of its spatial presence and interests in the marine environment and outline the spatial claims and interests of each sector in the South African marine environment.

The published draft Marine Sector Plans are therefore not the integrated Marine Area Plans. They are critical inputs for the next step of developing integrated cross-sectoral Marine Area Plans and as such, they serve as the sectors' proposals that will need to be considered in the development of Marine Area Plans.

The following draft Marine Sector Plans are being released for public comment:

- 1) Marine Biodiversity Sector Plan
- 2) Coastal and Marine Tourism Sector Plan
- 3) Marine Transport and Ports Sector Plan
- 4) Maritime and Underwater Cultural Heritage Sector Plan
- 5) Marine Defence (Navy) Sector Plan
- 6) Marine Science and Innovation Sector Plan
- 7) Marine Aquaculture Sector Plan
- 8) Marine offshore Oil and Gas Sector Plan

IMPLEMENTATION

- **Marine spatial planning system**

- 6. The MSP system is an iterative, phased process consisting of the following steps:
 - (a) The development of a marine spatial planning framework;
 - (b) the development of a knowledge and information system referred to in section 7;
 - (c) the development of marine area plans;
 - (d) the effective implementation, monitoring and evaluation of marine area plans; and
 - (e) the review of the marine area plans in terms of section 14.

Oceans Economy Aspirations



By 2033: The Oceans Economy will create 1 million jobs



By 2033: the oceans economy will contribute R177 billion to GDP



The oceans economy has the capacity to provide much-needed skills and new job opportunities



Operation Phakisa:
Working together to move
South Africa's Oceans Economy forward

MSP Growth Path

	MARINE TRANSPORT AND MANUFACTURING	OFFSHORE OIL AND GAS EXPLORATION	AQUACULTURE	SMALL HARBOURS	COASTAL AND MARINE TOURISM
Jobs	Jobs from 6 000 to 40 000 - 50 000 created		Jobs from 2 227 to 15 000 created (incl. value chain)	Potential jobs of 12 100.	116 000 jobs by 2026
Economic growth	GDP contribution from R7bn1 to R14-23 bn	Promotes exploration in order to drill 30 exploration wells in 10 years	GDP contribution from R0.7 bn1 to R3 bn	GDP contribution of R6 bn.	GDP contribution of R21,4 billion by 2026
Transformation indicator	•Market share of SA companies to 30%		•Inclusive growth	•Inclusive growth	

	SHORT TERM 2016	MEDIUM TERM 2019	LONG TERM 2033
Jobs	26 000 jobs cumulative	77 100 jobs	1 million jobs
Economic growth	GDP contribution of R7.5 bn ₁	GDP contribution of R32 bn ₁	GDP contribution of R129-R177bn ₁
Transformation indicator	<ul style="list-style-type: none"> •Monitoring of Maritime BEE Charter and application of BEE Codes in National Ports Act. (min level 4 BEE and focus on Ownership and Operation). •15% transformation (Aquaculture). •Opportunities for SMME's. 	<ul style="list-style-type: none"> •Monitoring of Maritime BEE Charter and application of BEE Codes in National Ports Act. (min level 4 BEE and focus on Ownership and Operation). •26% transformation (Aquaculture). •Opportunities for SMME's. 	<ul style="list-style-type: none"> •Monitoring of Maritime BEE Charter and application of BEE Codes in National Ports Act. (min level 4 BEE and focus on Ownership and Operation). •50% transformation (Aquaculture). •Opportunities for SMME's.

MSP targets and limitations



Targets

- The Marine Spatial Vision is linked to the National Development Plan (NDP 2030) and New Growth Path (NGP) 2010;
- By 2030 a socially equitable, environmentally sustainable and functionally efficient integrated ocean governance mechanism that bolsters its status as advancing economic development.
- Meeting the Operation Phakisa Oceans Economy aspirations of 1 million jobs and GDP contributions of R129 – R177 billion rands



limitations

- Data availability and disseminations due to protocols and mandates;
- MSP spatial plan scale (Bioregions / local municipal interface);
- Sector Investment gap in long term planning and required research (Biodiversity vs Mining);

Lessons learnt – different views on sustainability in MSP

navigation

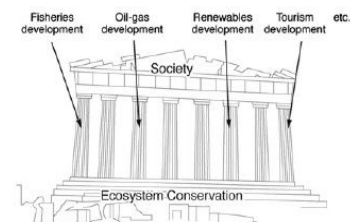
consensus

By-in

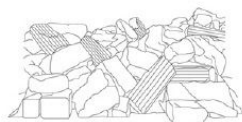
The two figures on the left describe ecosystem-based MSP, and the anticipated consequences of ecosystem collapse, based on 'hard sustainability'.

- This view sees ecosystem conservation as the foundation for MSP, and that irreversible collapses in marine ecosystems would eventually lead to collapses in the economic sectors that depend on such marine ecosystems.

Ecosystem based MSP - hard sustainability

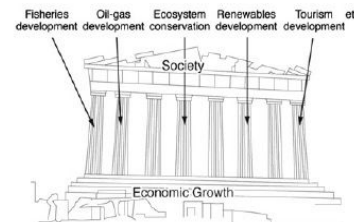


If ecosystems collapse.....



The two figures on the right describe integrated-use MSP, based on 'soft sustainability',

Integrated use MSP - soft sustainability

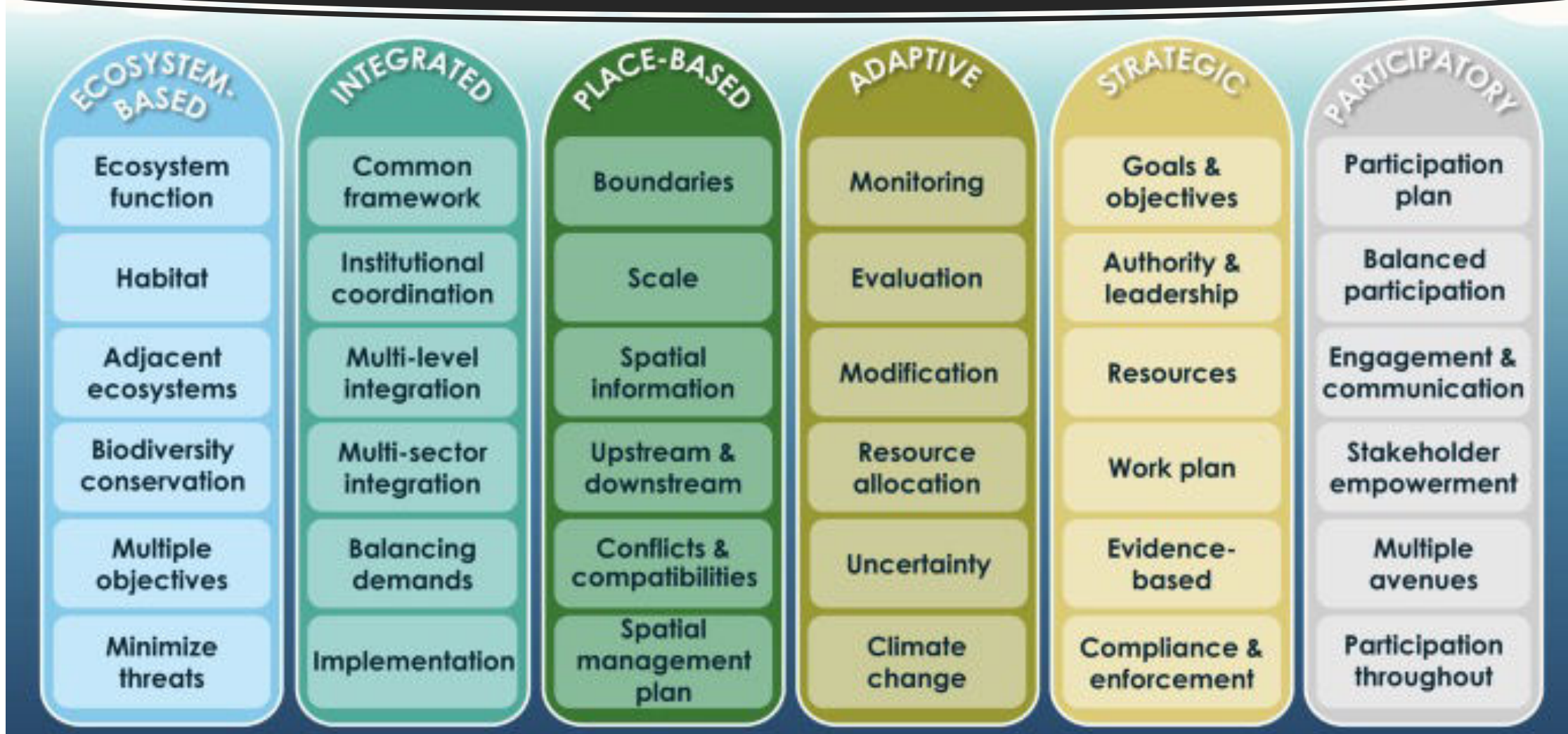


If economic sectors and growth collapse.....

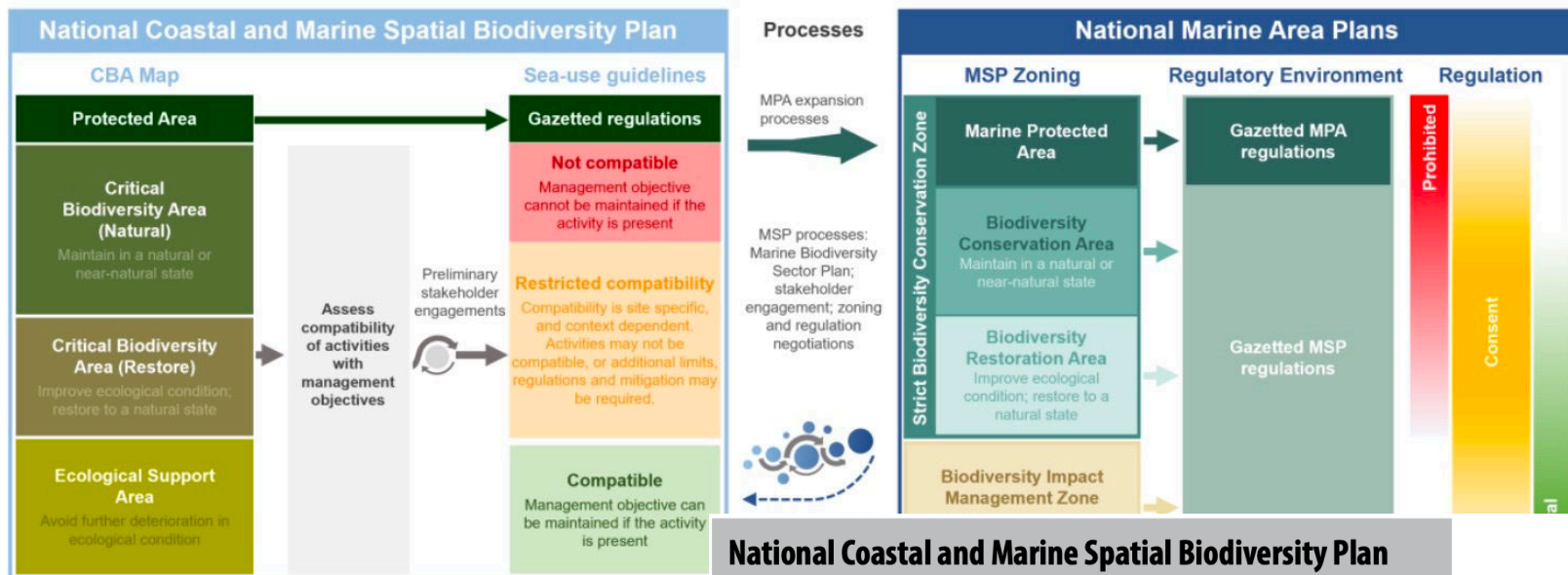


in which economic growth is seen as the foundation of MSP, and the collapse of the 'environmental pillar' does not necessarily lead to the collapse of related socio-economic structures.

Index / Principles / approaches

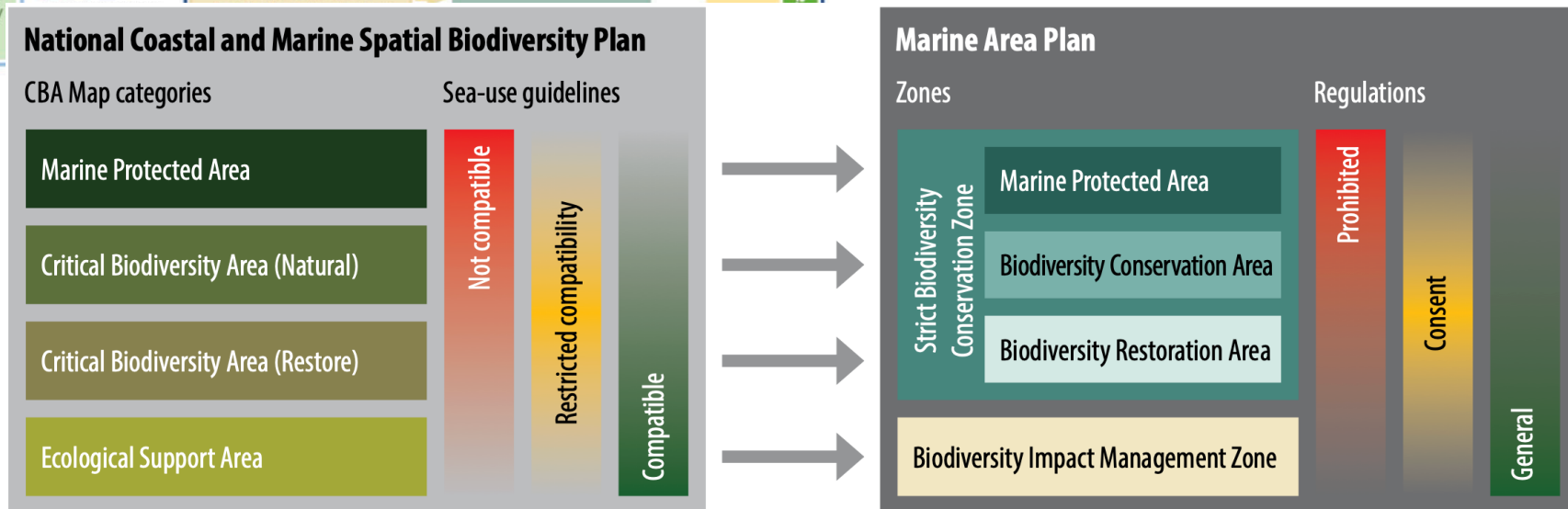


What is Ecosystem based Marine Spatial Planning



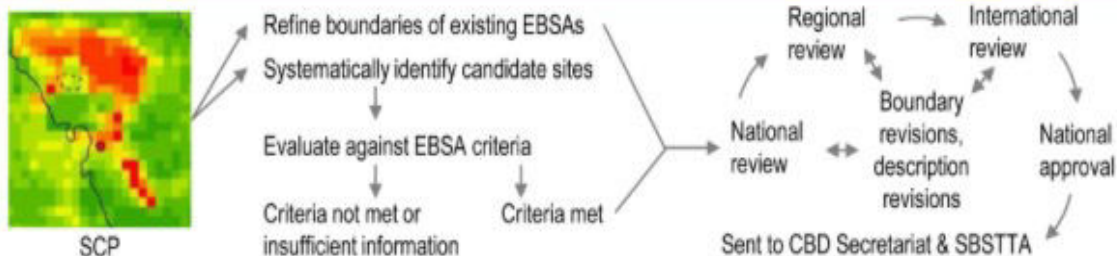
- The **National Coastal and Marine Spatial Biodiversity Plan** comprises a map of *Critical Biodiversity Areas (CBA Map)* and accompanying sea-use guidelines.

- The *CBA Map* presents a spatial plan for the marine environment, designed to inform planning and decision-making in support of sustainable development.



What is Ecosystem based Marine Spatial Planning

1. EBSA Refinement



2. EBSA Status Assessment

Evaluate the ecological condition, ecosystem threat status and ecosystem protection level of all ecosystem types in EBSAs

Ecological Condition

Compile ecosystem-pressure matrix (W_{ij})

Map ecosystems & pressures

$$I_{cj} = \sum_{i=1}^n B_i \times W_{ij}$$

Convert to condition classes using natural breaks in the data

Good	Fair	Poor
------	------	------

where B_i is the intensity of the pressure at a site, and W_{ij} is the impact weight for pressure i on the specific ecosystem type j . After Halpern et al. (2007) and Teck et al. (2010).

Ecosystem Threat Status

Angola/Namibia: Ecological condition

<20% good	<35% good	<80% good/fair	>80% good/fair
CR	EN	VU	LC

South Africa: IUCN RLE Criterion C3

IUCN RLE Criterion C3	Severity of degradation		
	≥90	≥70	≥50
≥90	CR	EN	VU
≥70	EN	VU	
≥50	VU		

Ecosystem Protection Level

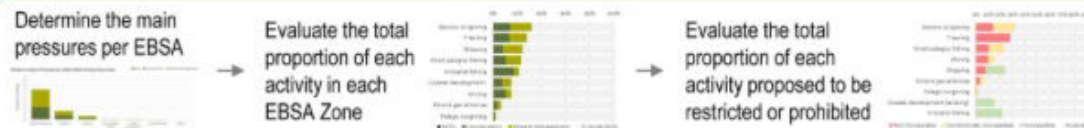
Proportion of target met in MPAs or partial protection	
WP	≥100% and A/N: ≥25% in MPAs; SA: 100% of target in good ecological condition
MP	50-<90% and A/N: ≥10% in MPAs
PP	5-<50%
NP	0-<5%

WP = Well Protected; MP = Moderately Protected; PP = Poorly Protected; NP = Not Protected. A/N = Angola / Namibia; SA = South Africa; MPAs = Marine Protected Areas.

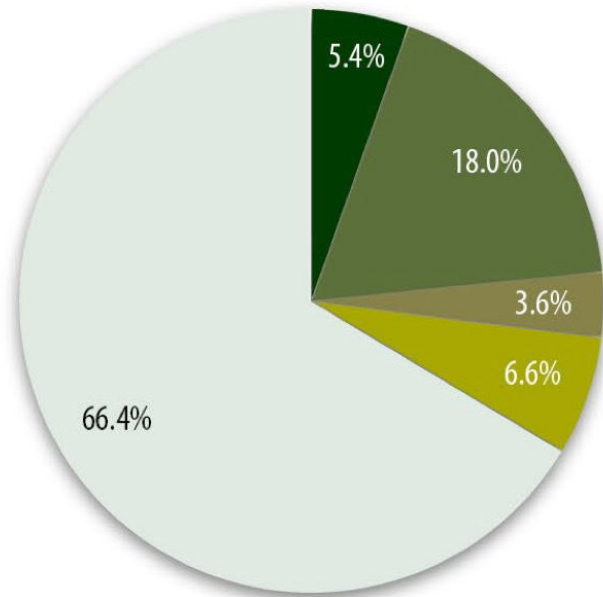
3. EBSA Zonation and Management Recommendations



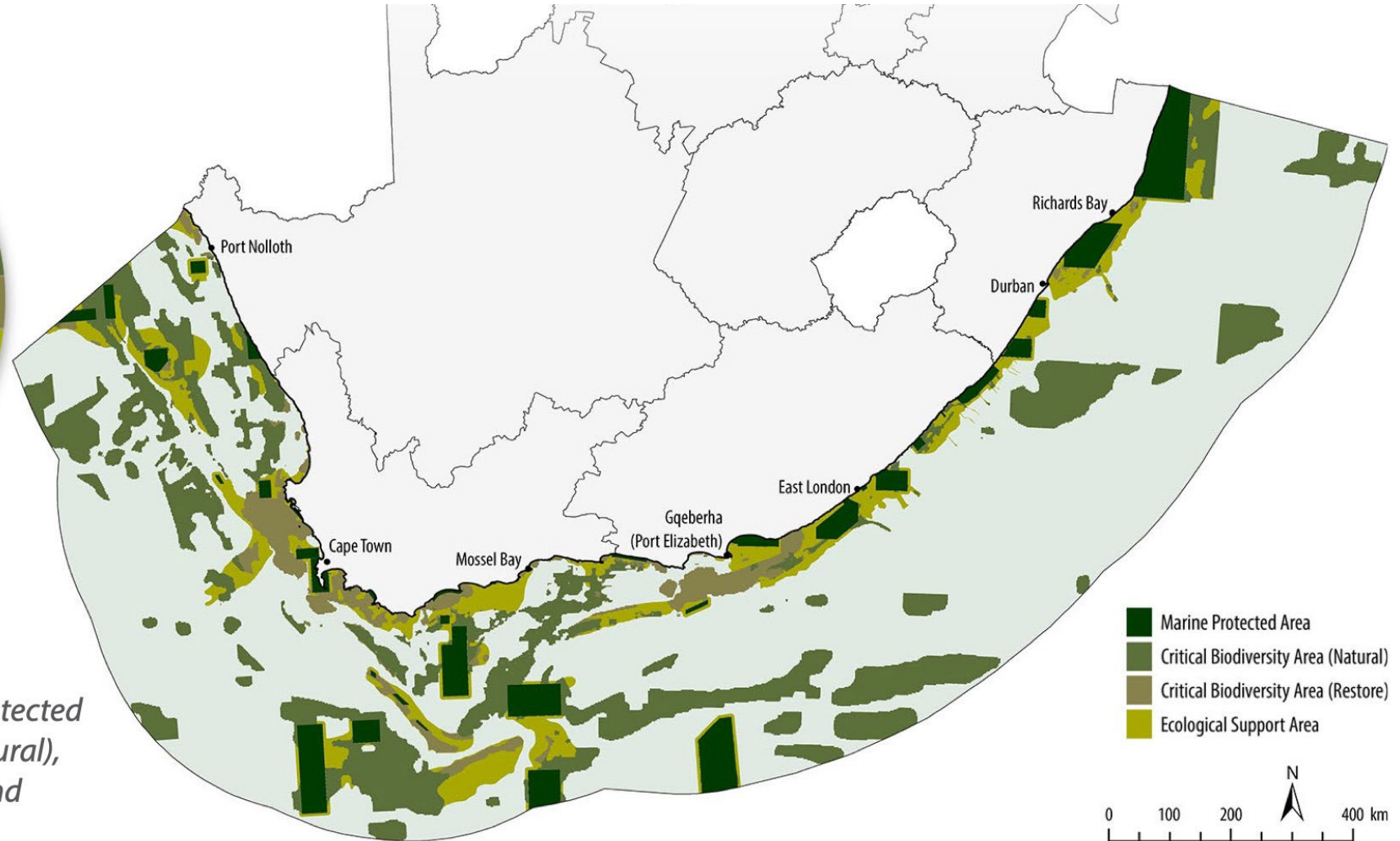
4. Feasibility Assessment



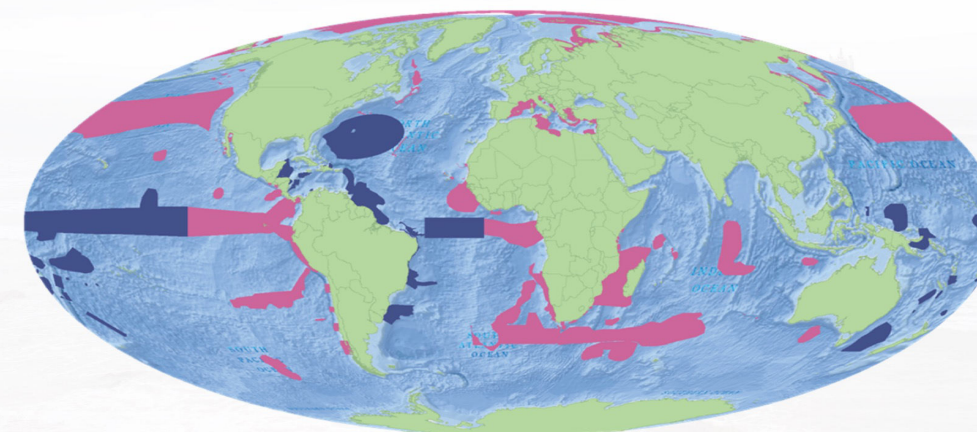
What is Ecosystem based Marine Spatial Planning



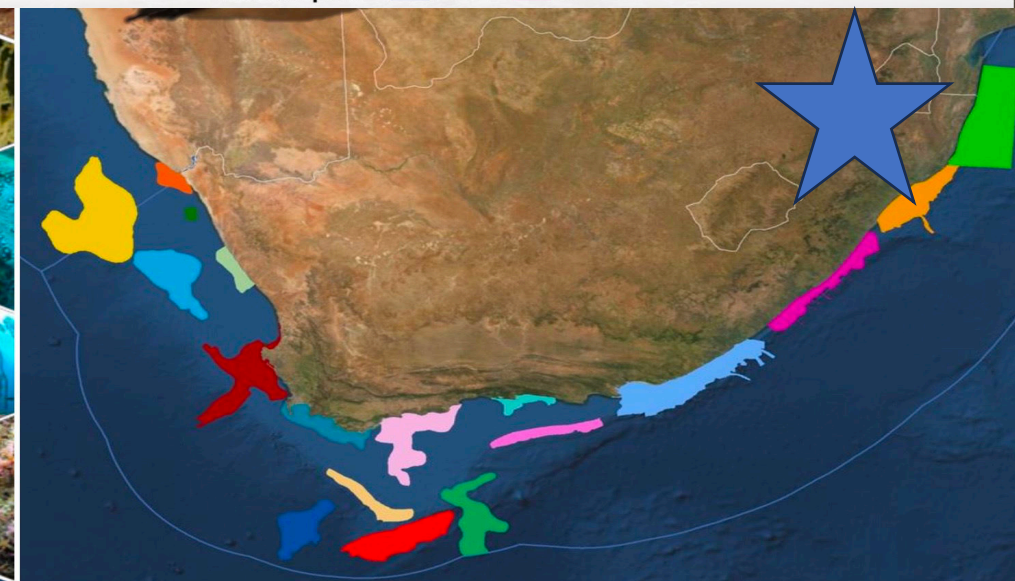
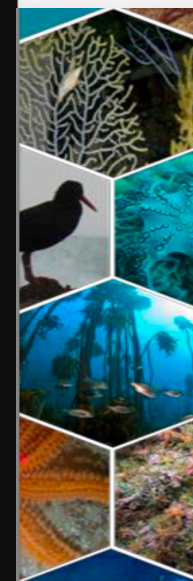
The CBA Map has four categories of biodiversity priority areas: Marine Protected Areas, Critical Biodiversity Areas (Natural), Critical Biodiversity Areas (Restore) and Ecological Support Areas.



EBSA History



Year adopted 2012 2014



The 7 EBSA Criteria

A site is considered an EBSA if it can meet at least one of the seven EBSA criteria.

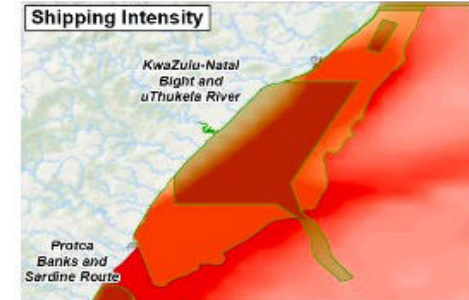
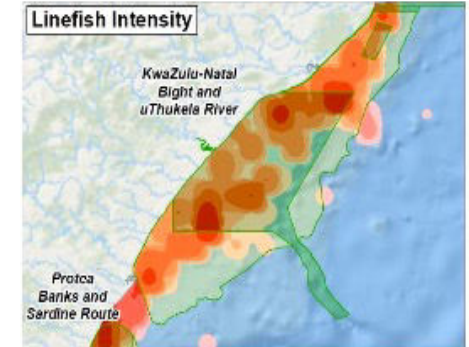
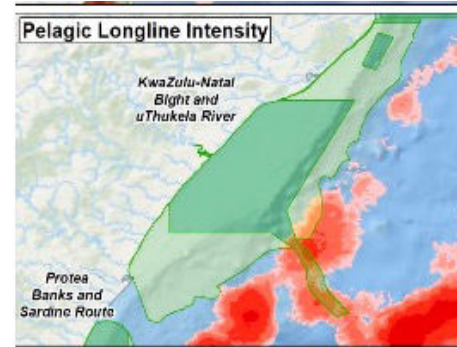
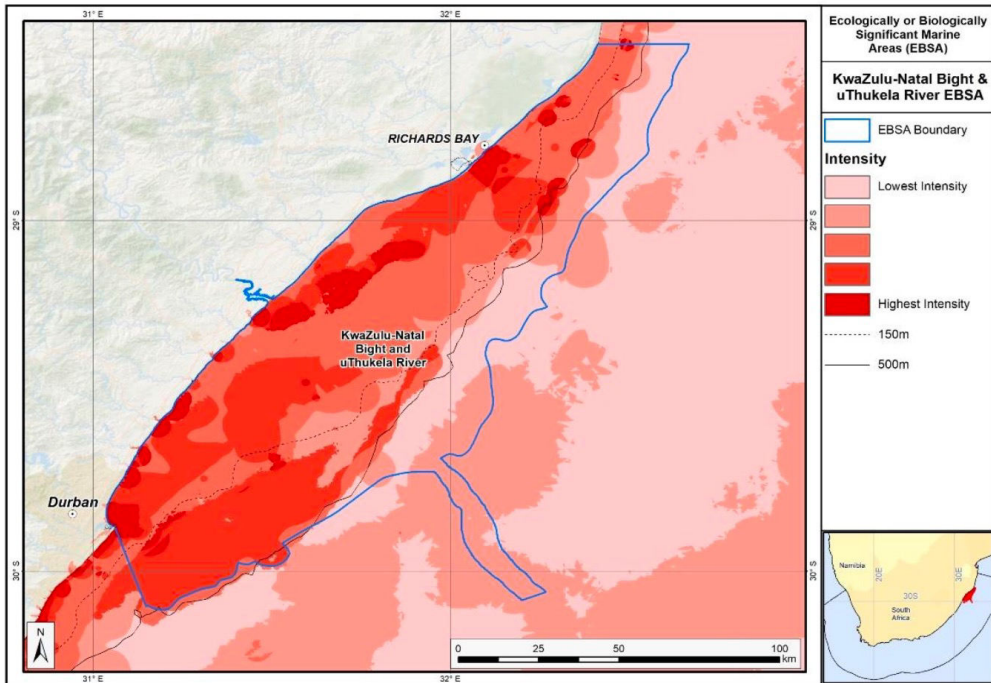
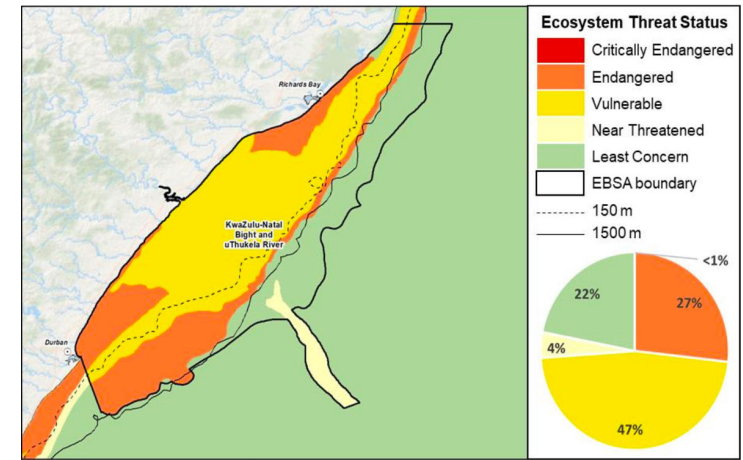
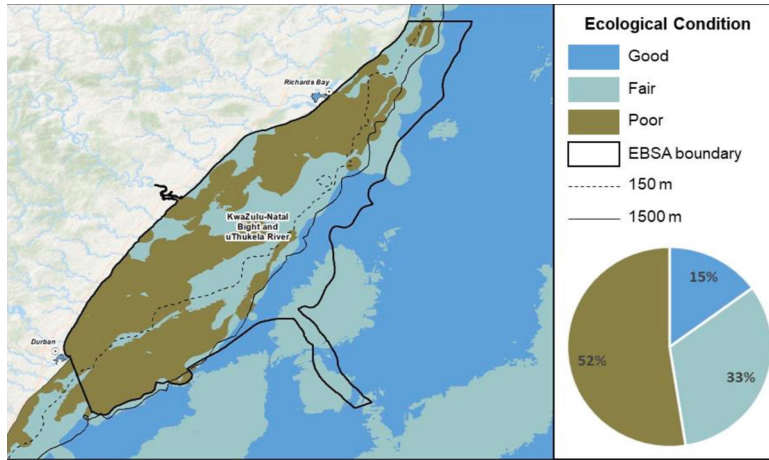
1. uniqueness or rarity;
2. importance for life-history stages;
3. importance for threatened species and/or habitats;
4. vulnerability, fragility and/or sensitivity;
5. biological diversity;
6. biological productivity;
7. naturalness

Orange Cone	Seas of Good Hope	Tsitsikamma-Robberg
Orange Seamount and Canyon Complex	Protea Seamount Cluster	Kingklip Corals
Namaqua Fossil Forest	Browns Bank	Algoa to Amathole
Namaqua Coastal Area	Mallory Escarpment and Trough	Protea Banks and Sardine Route
Childs Bank and Shelf Edge	Shackleton Seamount Complex	KwaZulu-Natal Bight and uThukela River
Cape Canyon and Associated Islands, Bays and Lagoon	Agulhas Bank Nursery Area	Delagoa Shelf Edge, Canyons and Slope

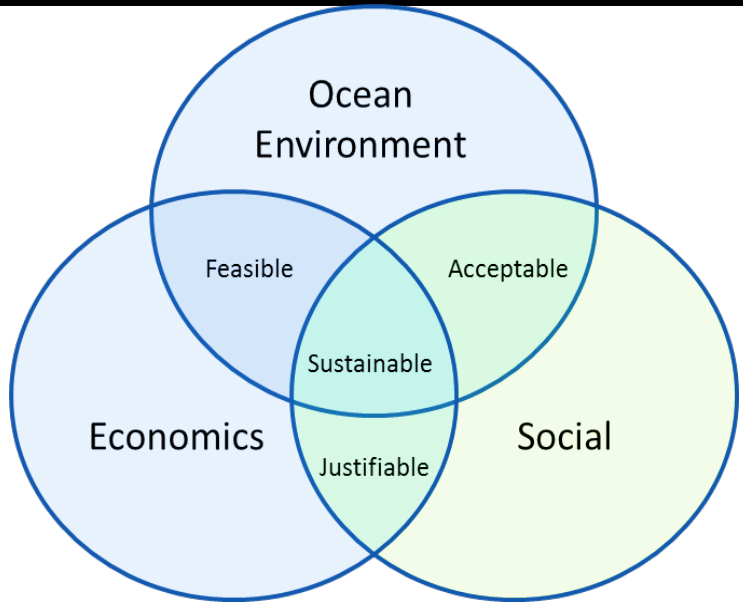
Example

Ecologically or biologically significant marine areas (EBSAs) are geographically or oceanographically discrete areas.

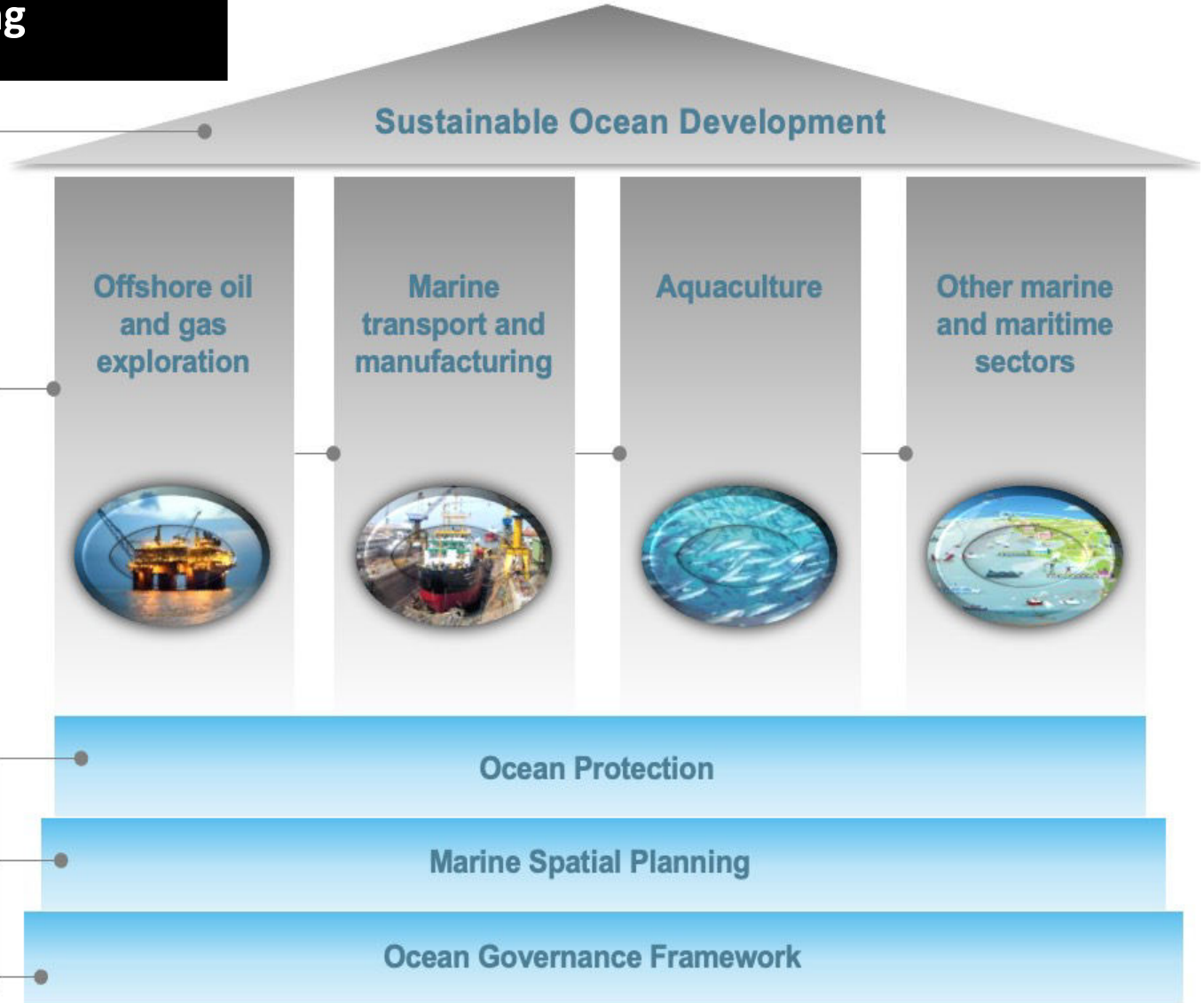
- provides important services to one or more species/populations of an ecosystem or to the ecosystem as a whole,



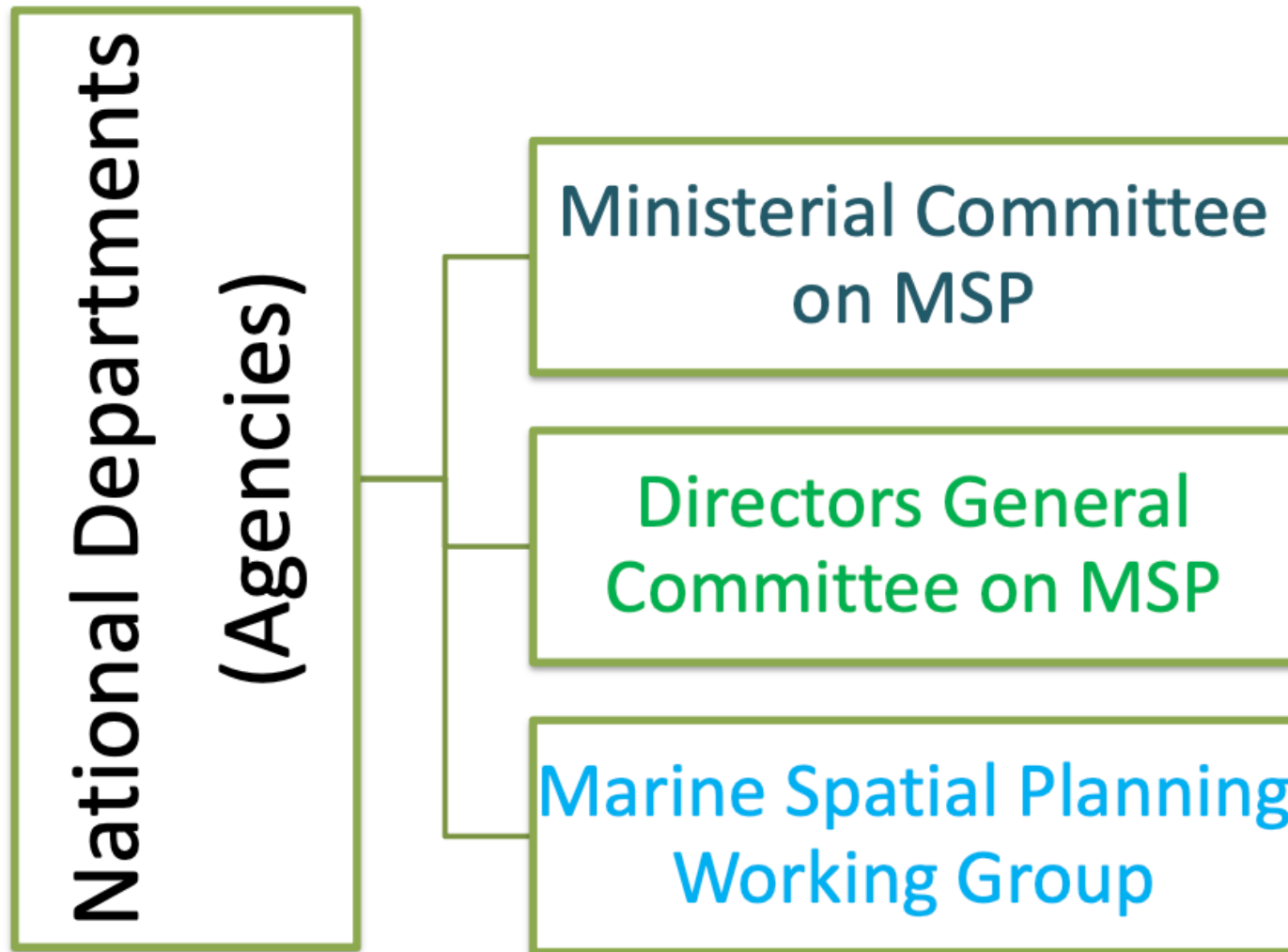
What is Integrated Approach Marine Spatial Planning



- 1 Unlocking our ocean economy
- 2 New growth areas in the ocean economy



- mechanism for the resolution of conflicts over ocean resources - strike a satisfactory balance between competing interests in the marine environment.
- The socio-economic test seeks to reconcile competing interests and conflicts at all levels be it institutional, social, economic and all spatial scales.



What is Integrated Approach Marine Spatial Planning

Mineral and Petroleum Resources Development Act, No.28 of 2002, SA
 The Petroleum Agency SA has been appointed the designated Agency, with the mandate to regulate the petroleum industry and to ensure that the exploration and production on and offshore is conducted in a manner that is consistent with the national petroleum exploration and production database.
 The Agency is required to issue permits and rights for the exploration and production of petroleum resources, and to recommend the award of permits and rights to the relevant authority. The Agency is also required to ensure that the exploration and production of petroleum resources is conducted in a manner that is consistent with the national petroleum exploration and production database.

U GAS FIELD
 Operated by a Chevron / Regent JV. The reservoir comprises a massive sandstone reservoir with up to 22% oil at 4400m.

TOSACO / PETROSA
 Prospects/leads mapped in the drift sequence.

OK ENERGY (90%)
 2 acquired prospects (ER)

OK ENERGY (76%)
 4% (PR)

RKOK (65%)
 SA (35%) (ER)

FIELD
 Fluvial type channels by Cretaceous age. Right is under a Gas with an Integrated ongoing.

OK ENERGY (100%)
 OK Energy (ER)

OK ENERGY (100%)
 OK Energy (ER)

OK ENERGY (100%)
 OK Energy (ER)

OK ENERGY (100%)
 OK Energy (ER)

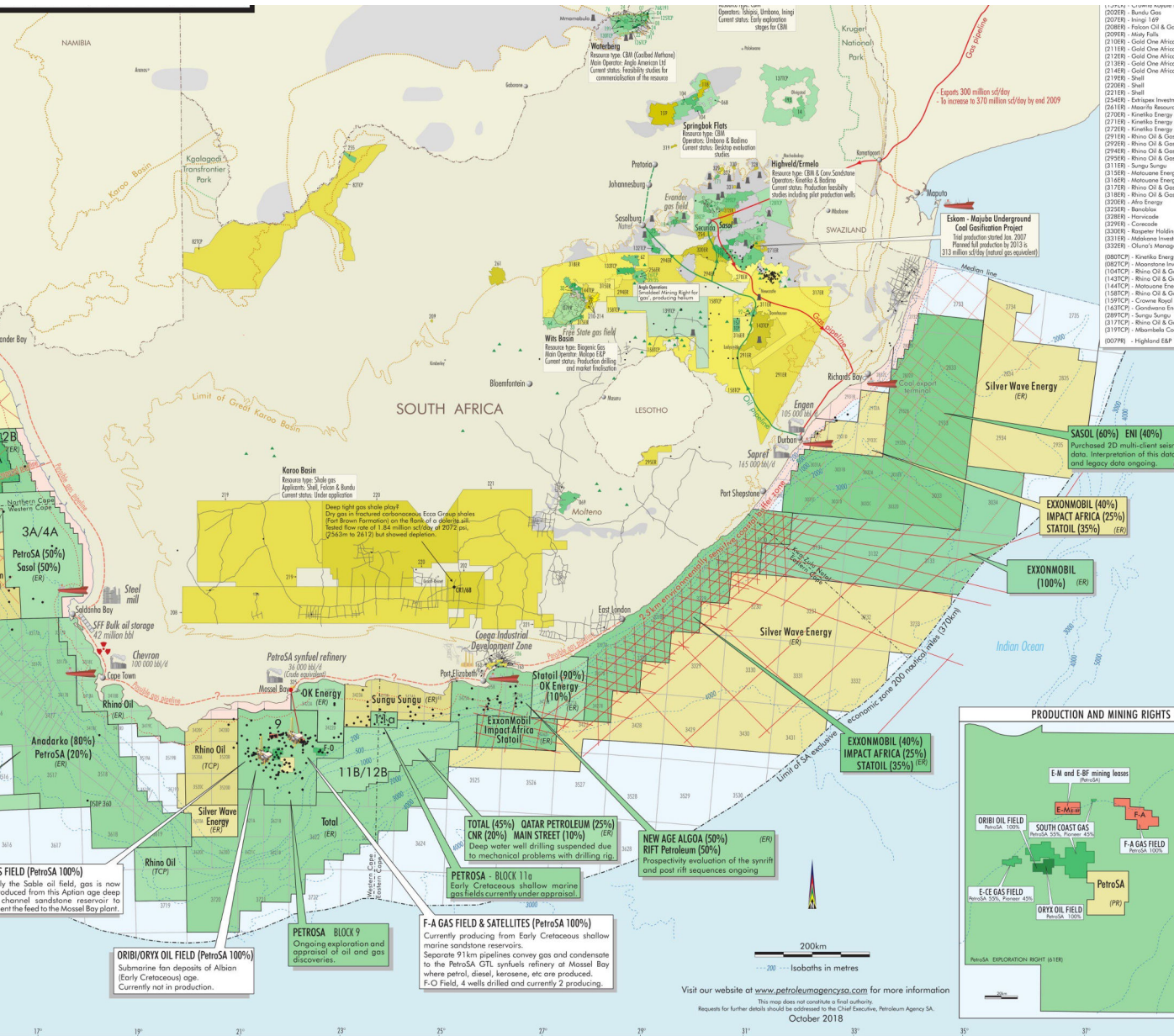
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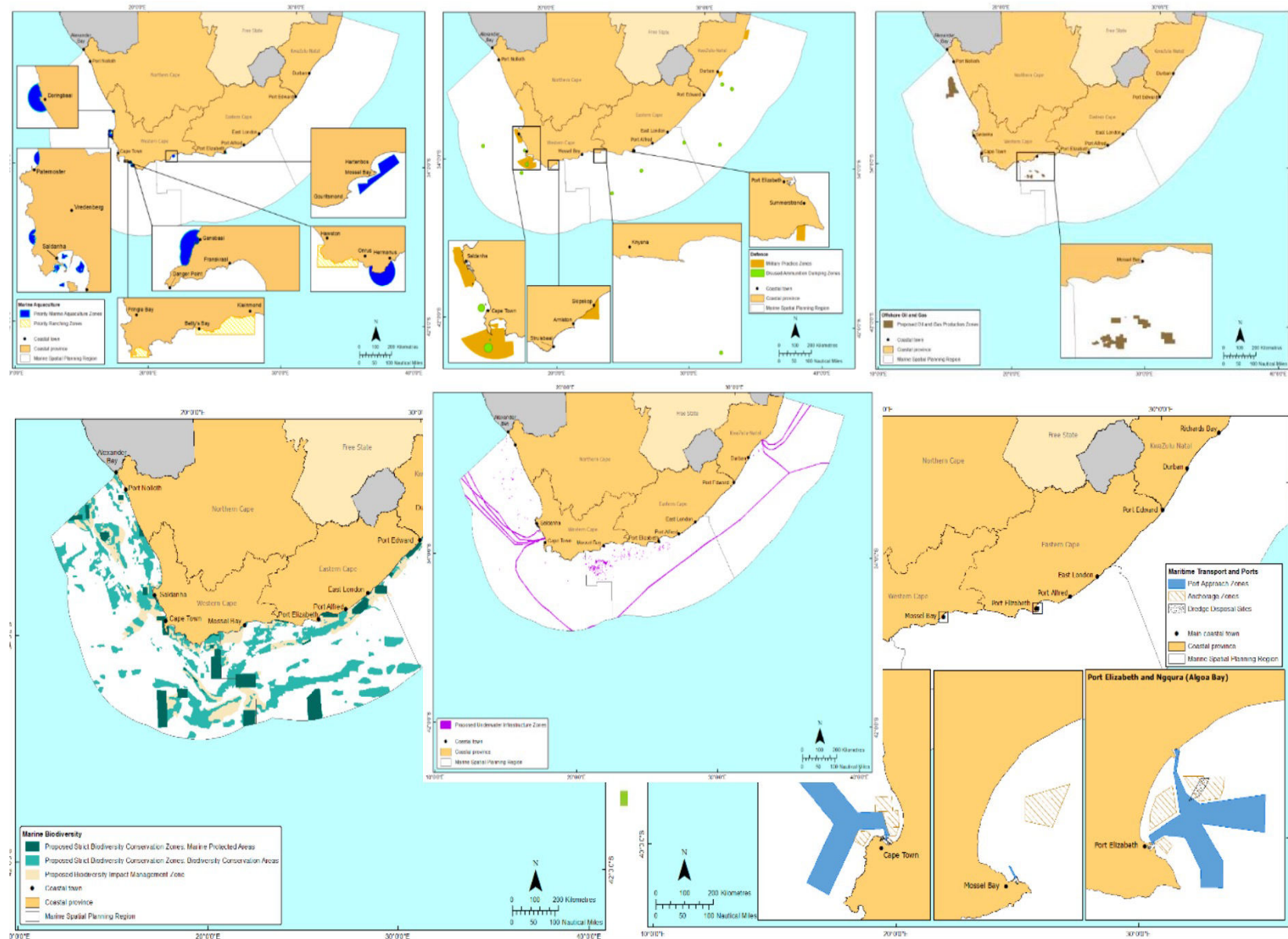
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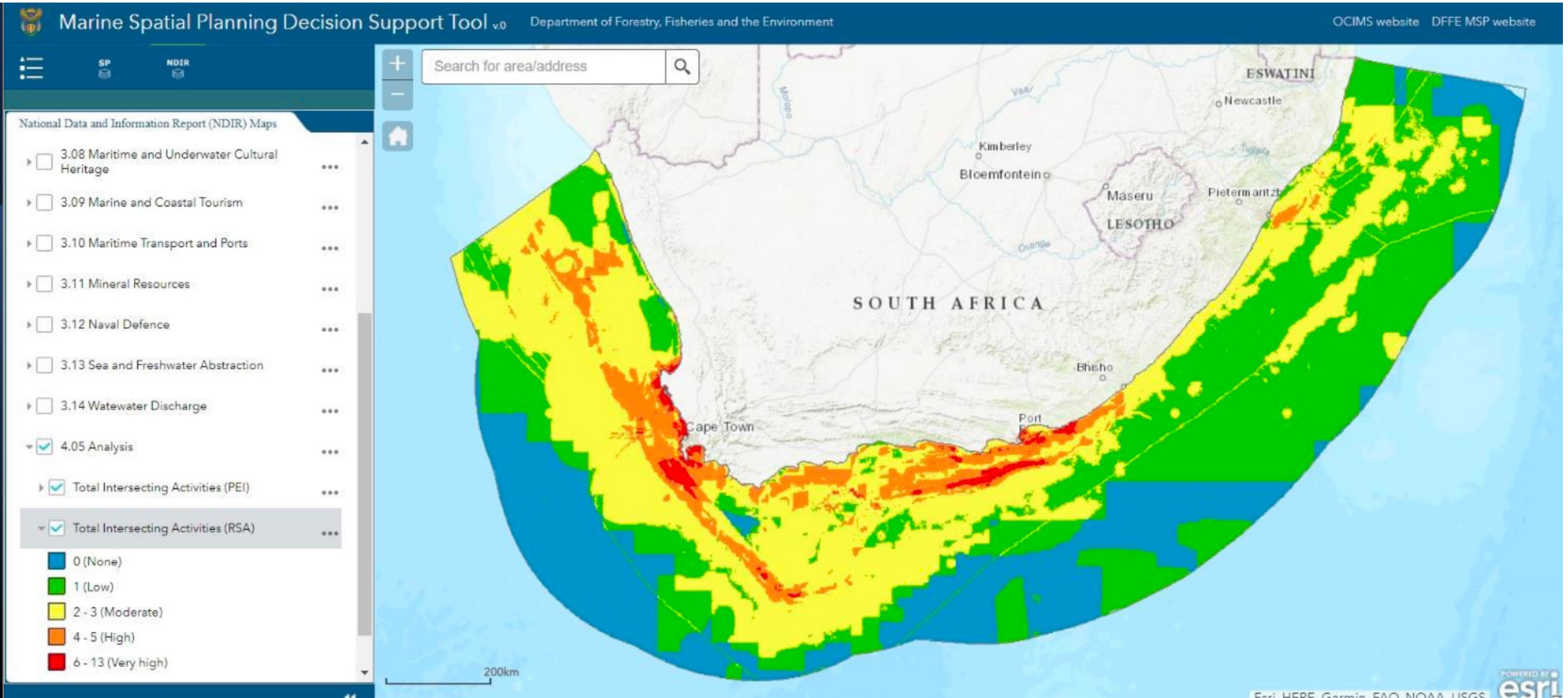
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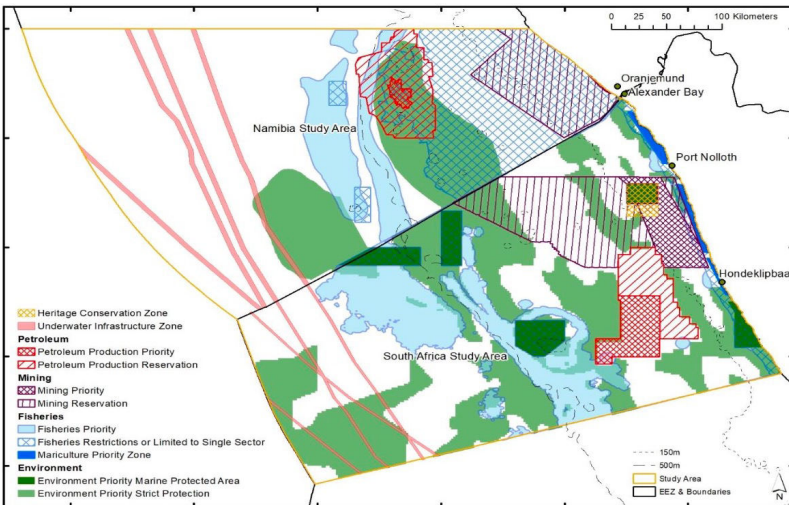
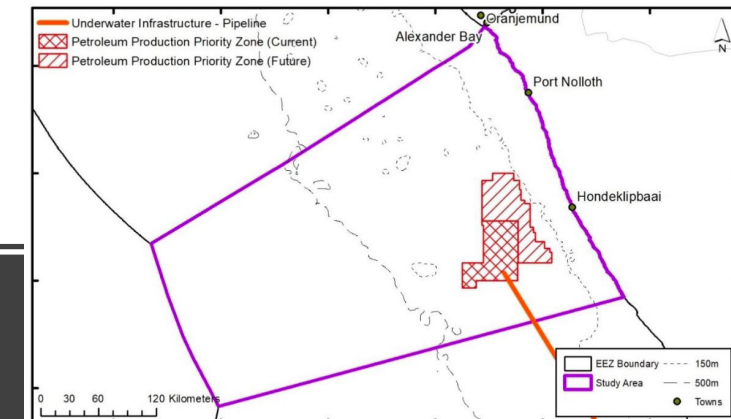
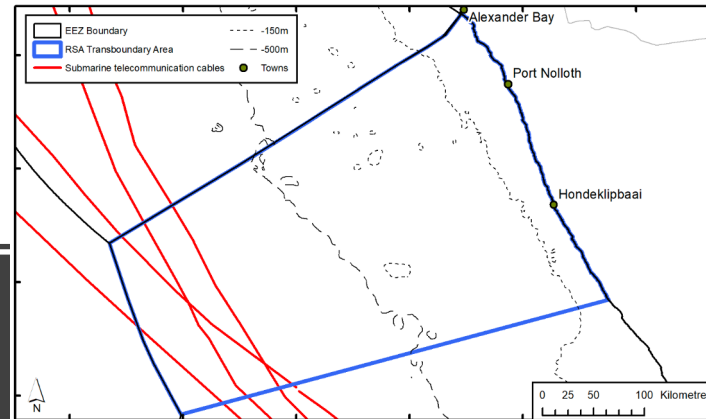
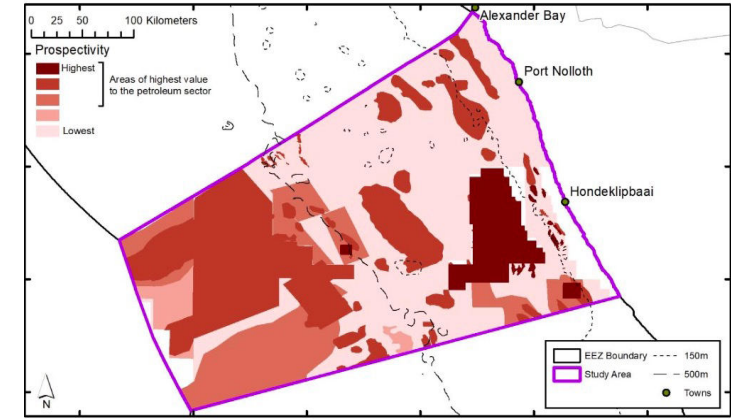
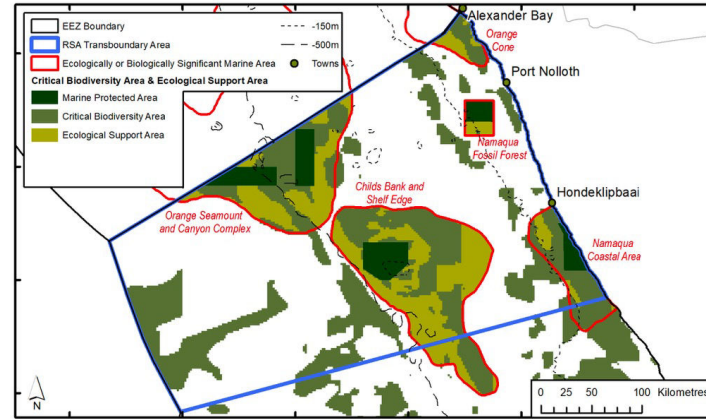
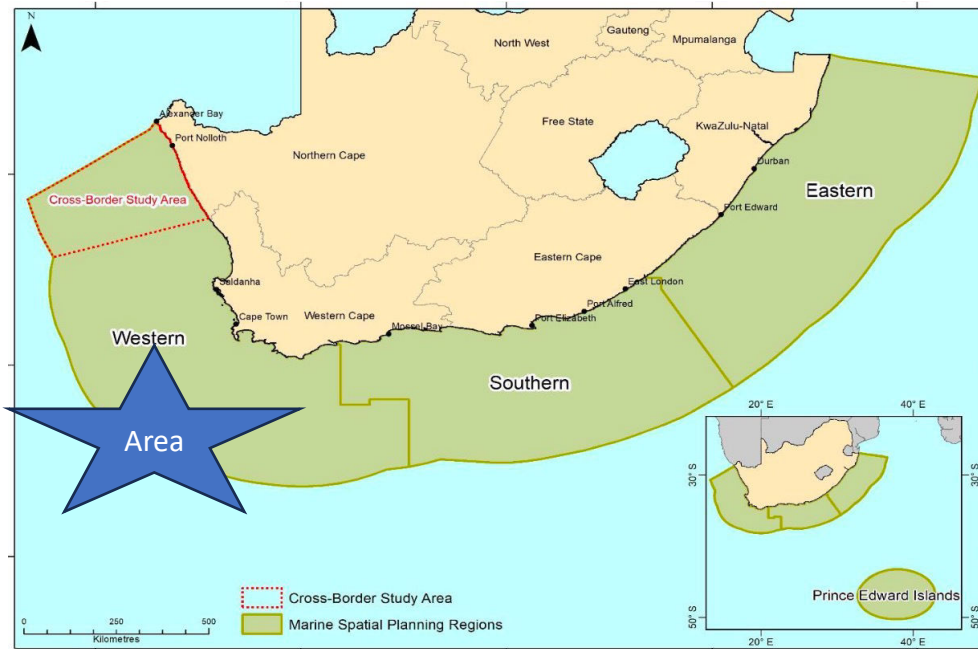


What is Integrated Approach Marine Spatial Planning





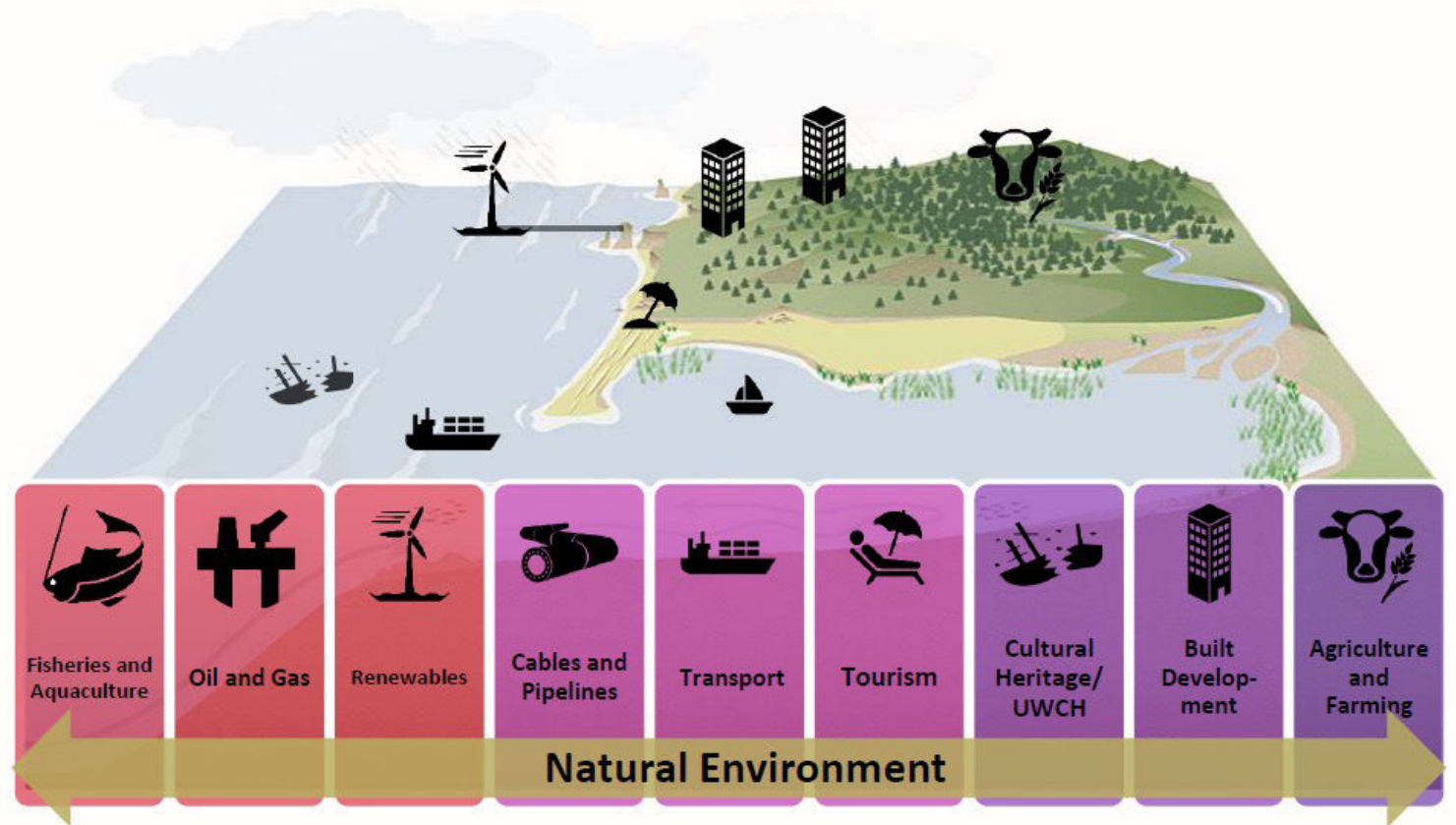
What is Integrated Approach Marine Spatial Planning



Transboundary – Case study

LAND-SEA INTERACTIONS

Best practices that can be adopted and reproduced



- Spatial Planning is not complete with connecting both systems (coastal and oceans)
- Beside allocating space, planning looks at unemployment, opportunities and growth

Best practices that can be adopted and reproduced: SAPPHIRE Demonstration Project

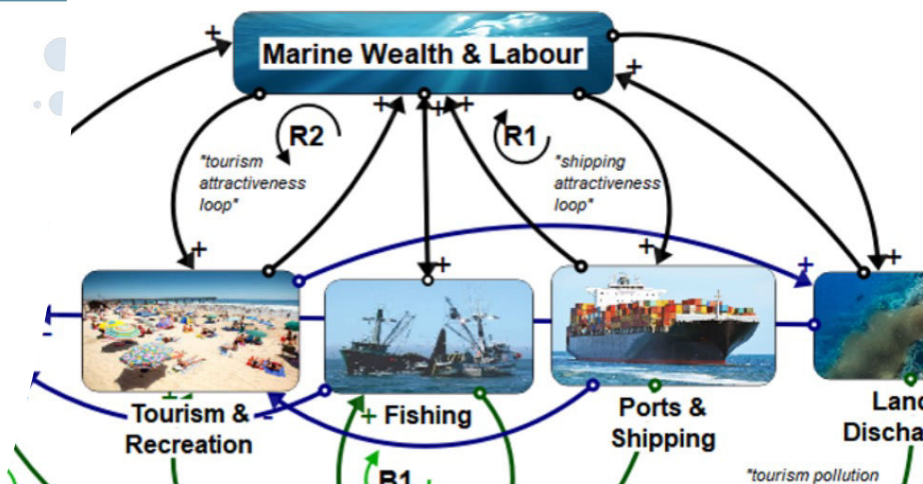
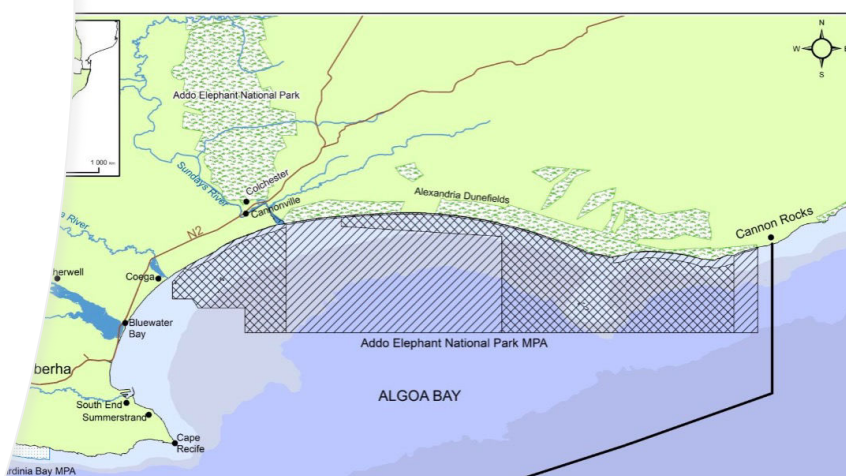
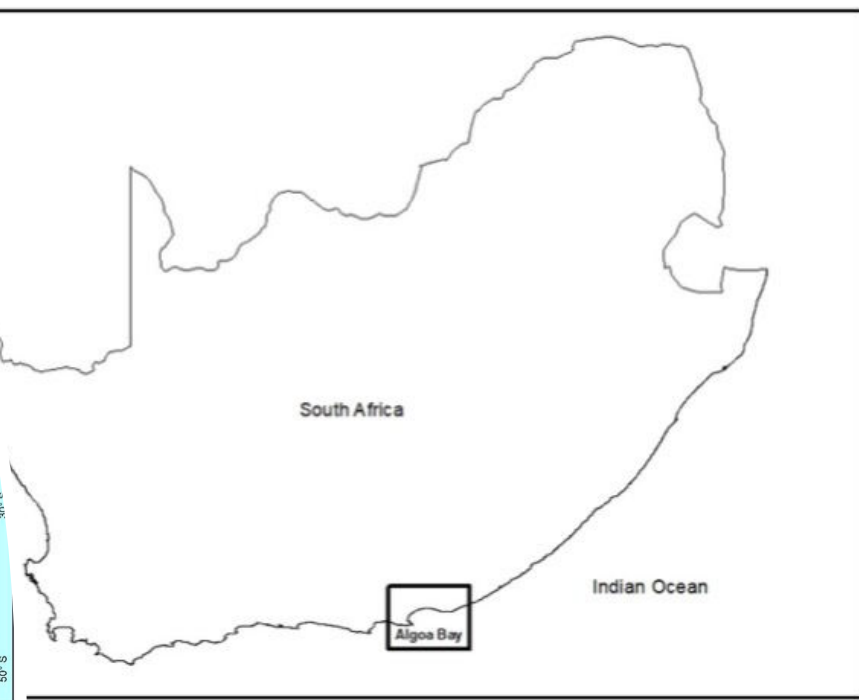
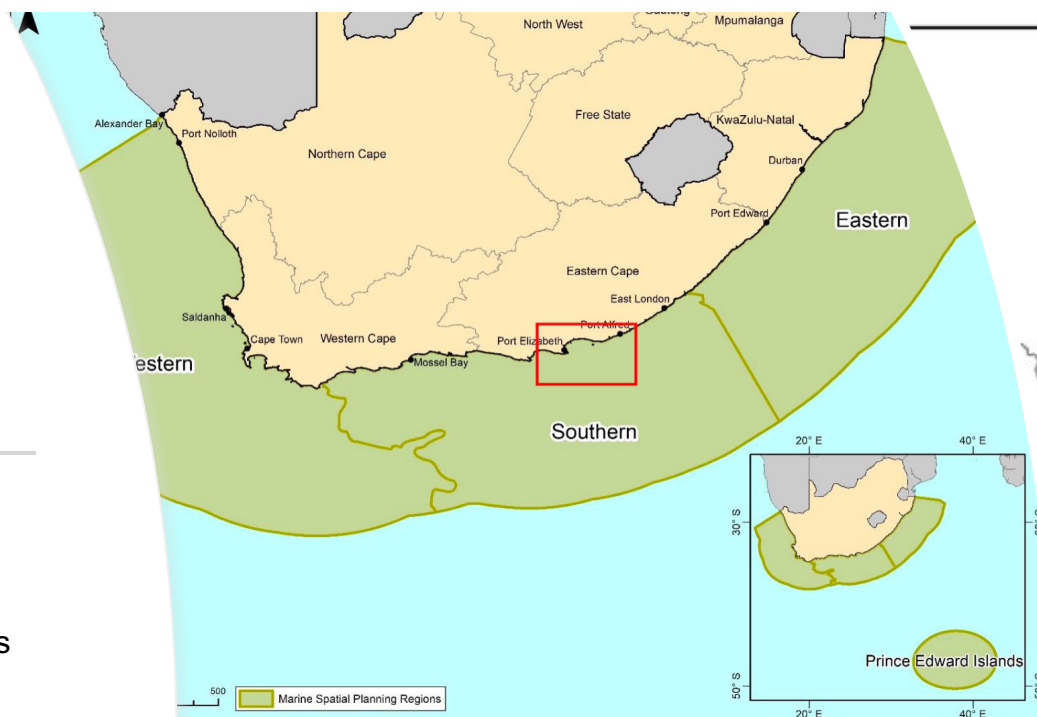
Spatial planning for a land-sea interface would involve the county governments in which the interface lies.

Development of three (3) integrated Oceans and Coasts Site Plans as pilots to contribute to the broader implementation of the South Africa's Marine Spatial Planning Framework.



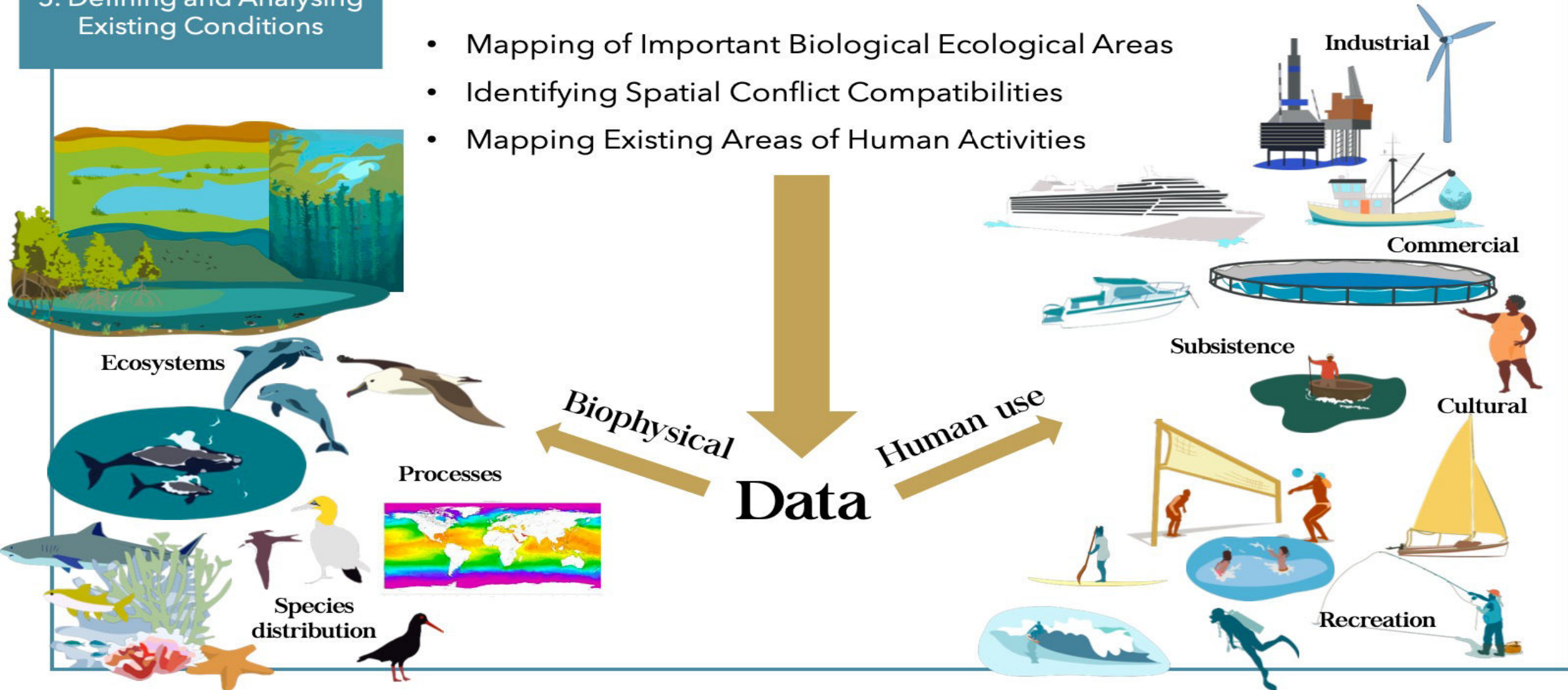
Best practices that can be adopted and reproduced: Oceans Account “Algoa Bay”

- Diversity of habitats & oceanographic processes
- Extraordinary diversity of invertebrates, seaweeds and corals
- Well studied fauna like top predators, fish, squid, penguins and more
- Threatened species and marine protected areas
- Extensive biophysical data available
- Socio-economic reliance on the ocean in diverse sectors including ports, blue-flag beaches, coastal communities and industries
- Complex scales of governance



5. Defining and Analysing Existing Conditions

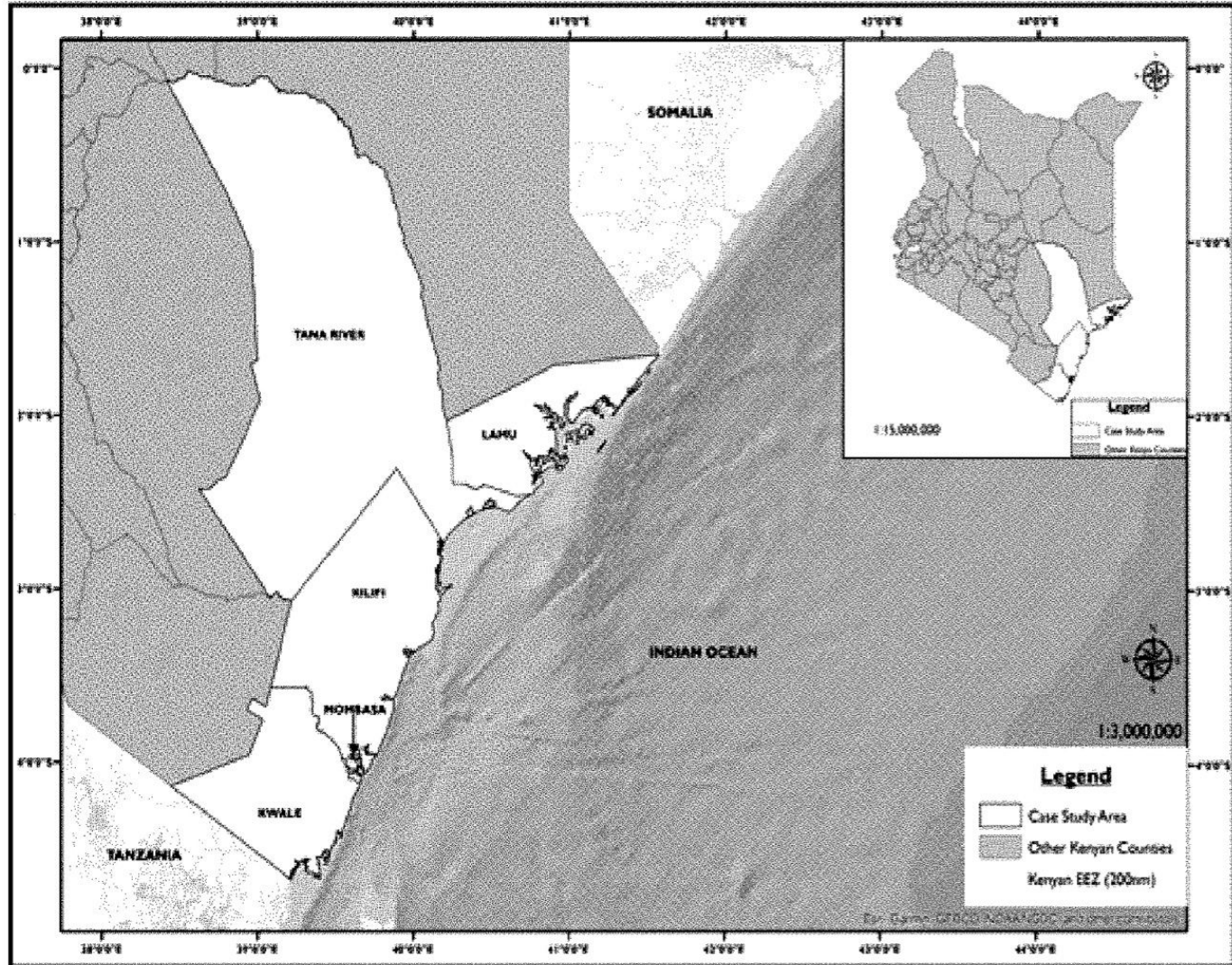
- Mapping of Important Biological Ecological Areas
- Identifying Spatial Conflict Compatibilities
- Mapping Existing Areas of Human Activities



Best practices that can be adopted and reproduced

Spatial planning for a land-sea interface would involve the county governments in which the interface lies.

In the Kenyan case, these are the counties of Mombasa, Kilifi, Tana River, Lamu, and Taita Taveta.



Map above shows the land-sea interface in Kenya

Challenges and innovations

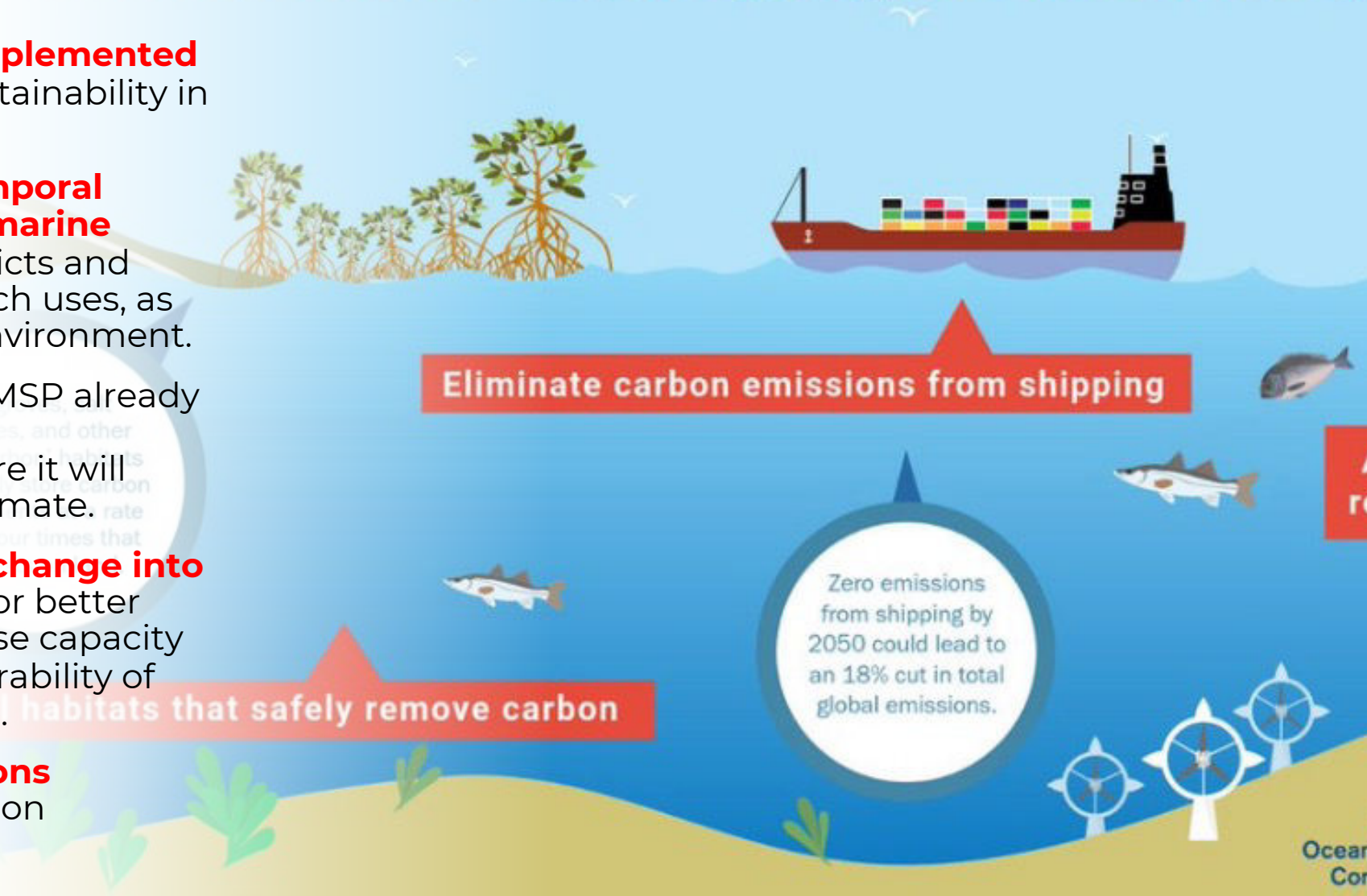
1. Slow pace in the integration of Terrestrial spatial planning and marine/ oceans spatial planning;
2. Stakeholder engagements and buy-in “often problematic and time consuming”;
3. Data availability and information sharing;
4. Inconsistencies with participation and attendance of meetings / workshops from government stakeholders.
5. Translating scientific and technical information to level of understanding to community members.
6. Take up the concept of Land-Sea Interactions within ICZM &/OR MSP
7. Lack of co-operations within the WIO Region on bilateral support to each other outside the conventions.
8. Initiate Transboundary demonstration projects on small scale MSP for lesson learning and exchange knowledge.
9. A need for inclusive stakeholder workshop (government sectors, NGO’s, civil society, academia, research institutions, private sector).

THE OCEAN IS A CLIMATE SOLUTION

How can the ocean help mitigate global climate change?

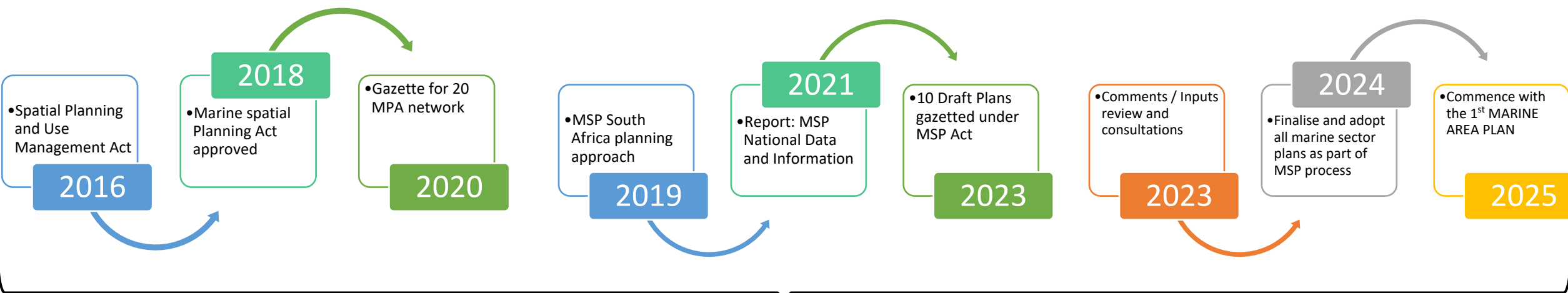
Next steps

- MSP is being **developed and implemented** worldwide as a way to foster sustainability in ocean management and use.
- It deals with the **spatial and temporal distribution of human uses in marine areas**, striving to minimize conflicts and foster compatibilities among such uses, as well as between uses and the environment.
- On top of the many challenges MSP already faces (**political, socioeconomic, environmental**), in the near future it will need to deal with a changing climate.
- Properly incorporating **climate change into the MSP framework** will allow for better preparedness, improved response capacity and, ultimately, a reduced vulnerability of marine socio-ecological systems.
- Make use of **Land Sea Interactions** approach for analysing conflicts on nearshores

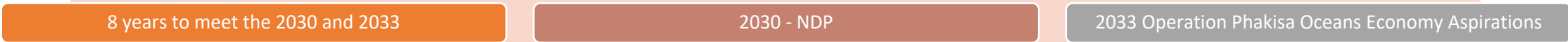


RECAPPING

- 1994
South African Constitution
- 1994
Maritime Zone Act
- 1998
Green Paper on Integrated Coastal Management
- 2000
Sustainable coastal management
- 2008
Integrated Coastal Management (ICM Act)
- 2013
Amendments of the ICM Act
- 2013
Cabinet approval for NEMO
- 2014
Oceans Economy: Operation Phakisa
- 2014
Spatial Planning and Land Use Management Act



National Development Plan (2030) Targets



Exercise

Fisheries and aquaculture, renewable energy, marine tourism, governance and protection, dredging and pollution.

What is the "could be" of the activities and practices of the blue economy? Let's be optimistic and imagine a sustainable future.

Where are we currently? What are the established practices and activities of the blue economy? What benefits flow from them, and who are the beneficiaries?

MSP National Framework developed, MSP Act developed and the MSP approach strategy developed including the national MSP Data inventory.

Marine Sector plans developed and published for comments (MSP Act).

Business as usual still exists with sectors doing their own plans based on mandates.

The benefit flow on business as usual approach is that sectors understand only their focus and their beneficiaries, but do not take into account accumulative impacts/ spill over to other sectors

Regulation and legislative implementation.

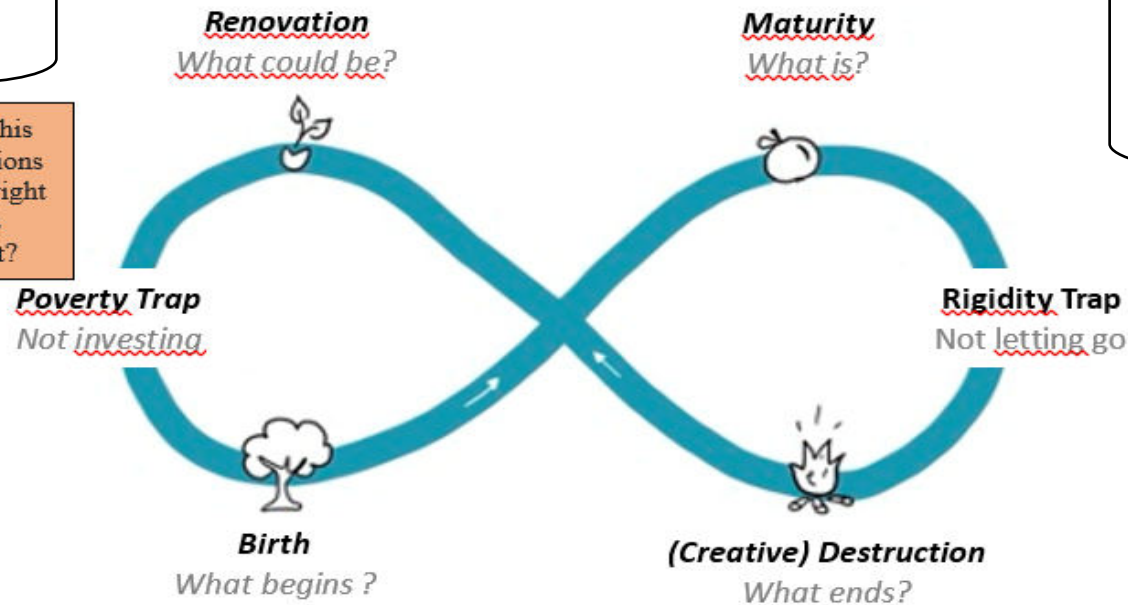
Laws are hindrances in some parts of implementation (consultations and by-in).

It must be people driven than government drives

Lack of compliance, enforcement and monitoring

Where are we falling into this trap? What are the innovations we should be investing in right now? What are the barriers preventing us from doing it?

What things should be beginning, but are not?



What new ideas, new practices and new initiatives are being developed that need investment and support so they can grow and help build the social foundation and regenerate / safeguard the ecological ceiling?

What unsustainable practices and activities are already disappearing to give space to renewal?

Where are we falling into this trap? What are the unsustainable activities and practices we should be letting go of? What are the barriers preventing us from letting go?

What things should be ending, but aren't?

(Are there changes, developments or innovations that are taking us down a bad path? How can we end these before they progress?)

Legislative mandate and single sector approach make us fall into the trap.

Having Legislation for sake of a law becomes a hindrance to implementation and its difficult to let go.

Protection based on international commitments and requirement should ends (MSPAs) including unsustainable deep and coastal mining.

The challenge is the pathway of the MSP through to which lens is each Country using (ecosystems based or integrated approach)

Nothing at the moment is disappearing, however, new emerging activities have been identified which will add more stress and pressure to the environment

3. What has changed during the transition from the present to the future? Have any practices, sectors or activities changed, and if so, in what ways?

present situation → A sustainable future

Building climate change indicators for marine spatial planning to support the adaptive management approach.

Mapping the seafloor via geological survey.

Building capacity and empowerment programme, including training

Thank you!!

Asante!!

Any questions or comments?

