



# SOUTH AFRICA

INFORMATION SHARING AND LESSON LEARNED  
LAND SEA INTERACTIONS WITHIN A FRAMEWORK OF  
MARINE SPATIAL PLANNING / INTEGRATED COASTAL MANAGEMENT

Tanzania

29 November 2022



forestry, fisheries  
& the environment

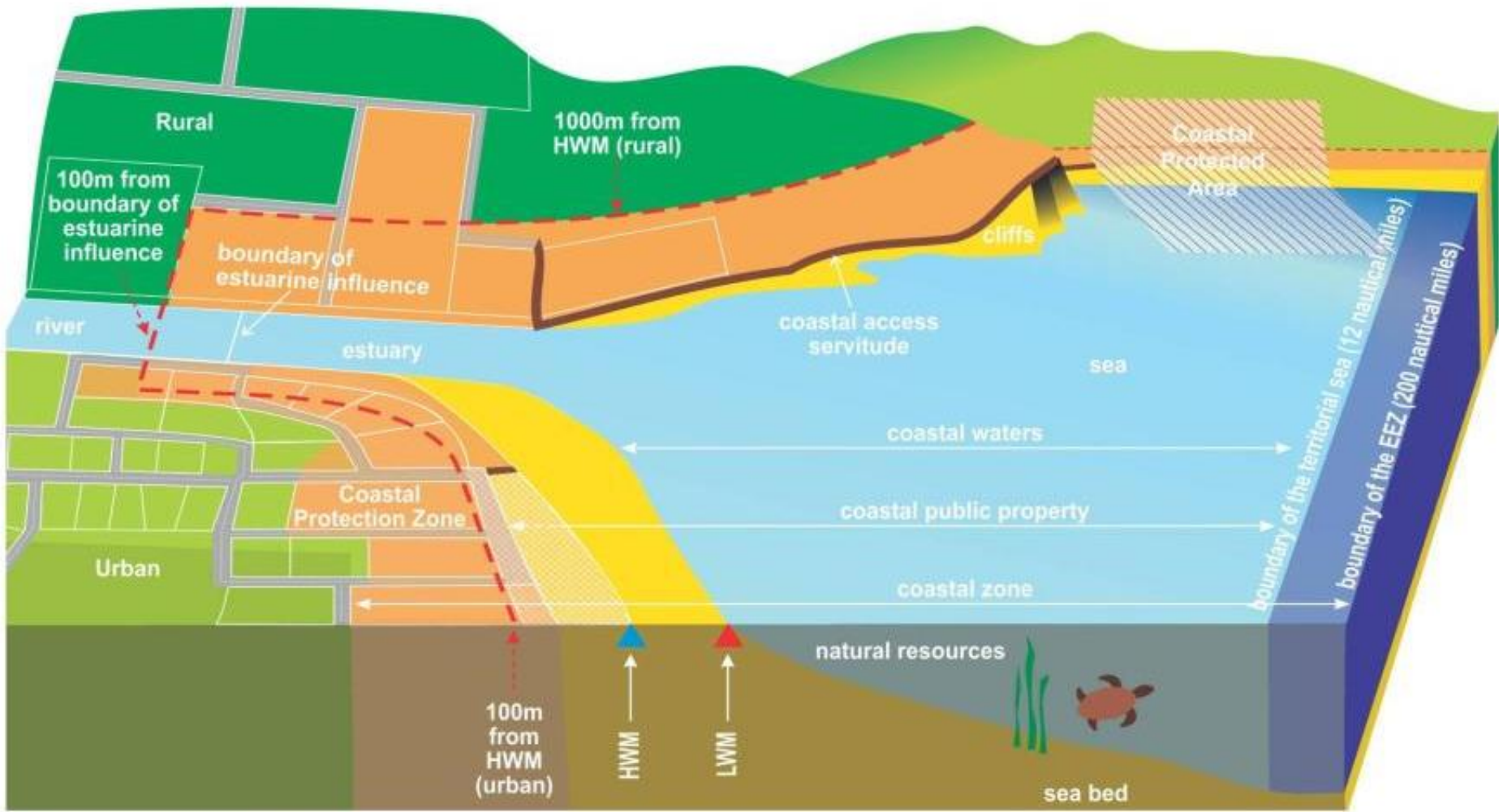
Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA



# TABLE OF CONTENT

1. Background.
2. Istitahi (Technologies).
3. Aspirations.
4. Uwekezaji (Investment).
5. Sustainable Oceans Development.
6. Focus Areas.
7. Four Marine Planning Areas.
8. Current Initiatives.
9. High Level achievements.
10. Process and Guidance
11. Data and Information
12. Different View Points
13. Lesson Learned
14. Way Forward
15. Recommendations





- Seashore
- Coastal Protection Zone
- Cadastral Boundary
- Admiralty Reserve



forestry, fisheries  
& the environment

Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA



# BACKGROUND

1. Marine spatial planning (MSP) 1<sup>st</sup> introduced in the early 1980s as a **conservation tool** for marine sustainability. (e.g., *Great Barrier Reef Marine Protected Area* (Douvere & Ehler 2006; Kidd & Shaw 2014; Zervaki 2015).
2. Over time MSP was identified with the need to **manage the resource use and space** of marine systems. (e.g., *increasing human pressure and degradation of marine ecosystems* (Zervaki 2015).
3. Differences understanding and viewpoints “e.g., others refer to MSP as a **Process**! Others as a **Tool**! and others as a **Framework**” – *similar to a definition of MSP*



# ISTILAH

- The **Ocean Economy** is defined as any **economic activity** that **directly or indirectly uses** the sea as an input (sea specific activity), as well as any **economic activity** that **produces an input or uses an output** from a sea-specific activity in their production process (Vega et al. 2012).
- The **coastal economy** is all economic activity that takes place within the coastal region (i.e., sum of employment, wages, and output in the region)



# ISTILAH

- The European Commission “**Blue Growth**” is defined as “**smart, sustainable and inclusive economic and employment growth** from the oceans, seas and coasts” (ECORYS et al. 2012).
- According to UNECA (2016) the African “**Blue Economy**” recognises that the **productivity of healthy freshwater and ocean ecosystems** as the basis for aquatic and maritime-based economies.

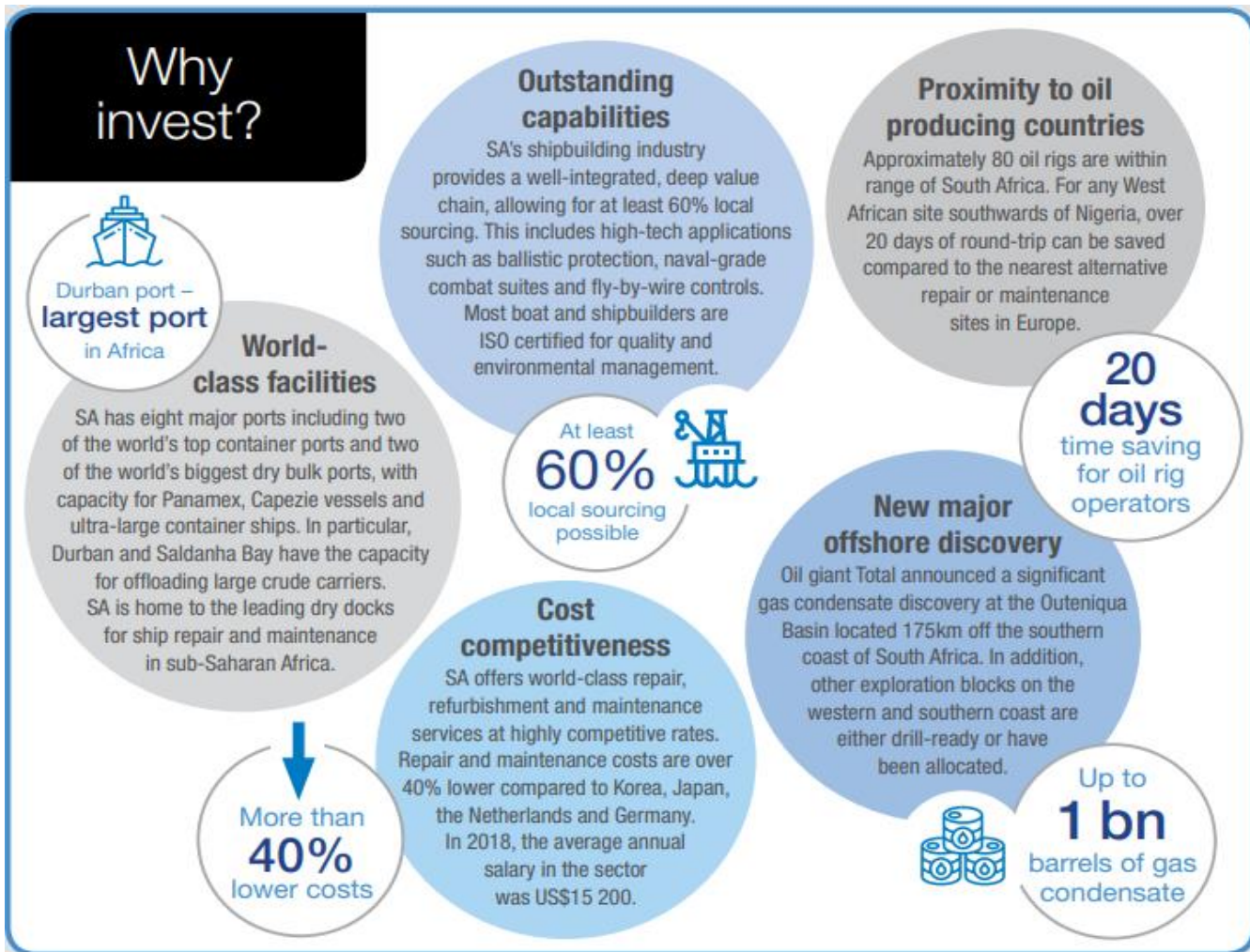


# ASPIRATIONS

- Operation Phakisa is a **fast results delivery programme** that SA launched in **July 2014** to help us implement the **National Development Plan (NDP)** with the ultimate goal of boosting economic growth and create jobs.
- Operation Phakisa is a **CROSS-SECTOR PROGRAMME** where various stakeholders engage to implement initiatives and concrete actions to address constraints to delivery in a prioritised focused area for public accountability and transparency.
- The Operation Phakisa: **Oceans Economy** seek to target initiative has a target to create **1 million jobs by 2030**.
- Achieving this target required the identification of New Growth Paths as areas within different ocean sectors.



# UWEKEZAJI



Investing in South Africa's Ocean Economy:

- Opportunities in the Oil and Gas, Ship-Building and Ship-Repair Sectors

South Africa Fact Sheet: 2020 (DTI)



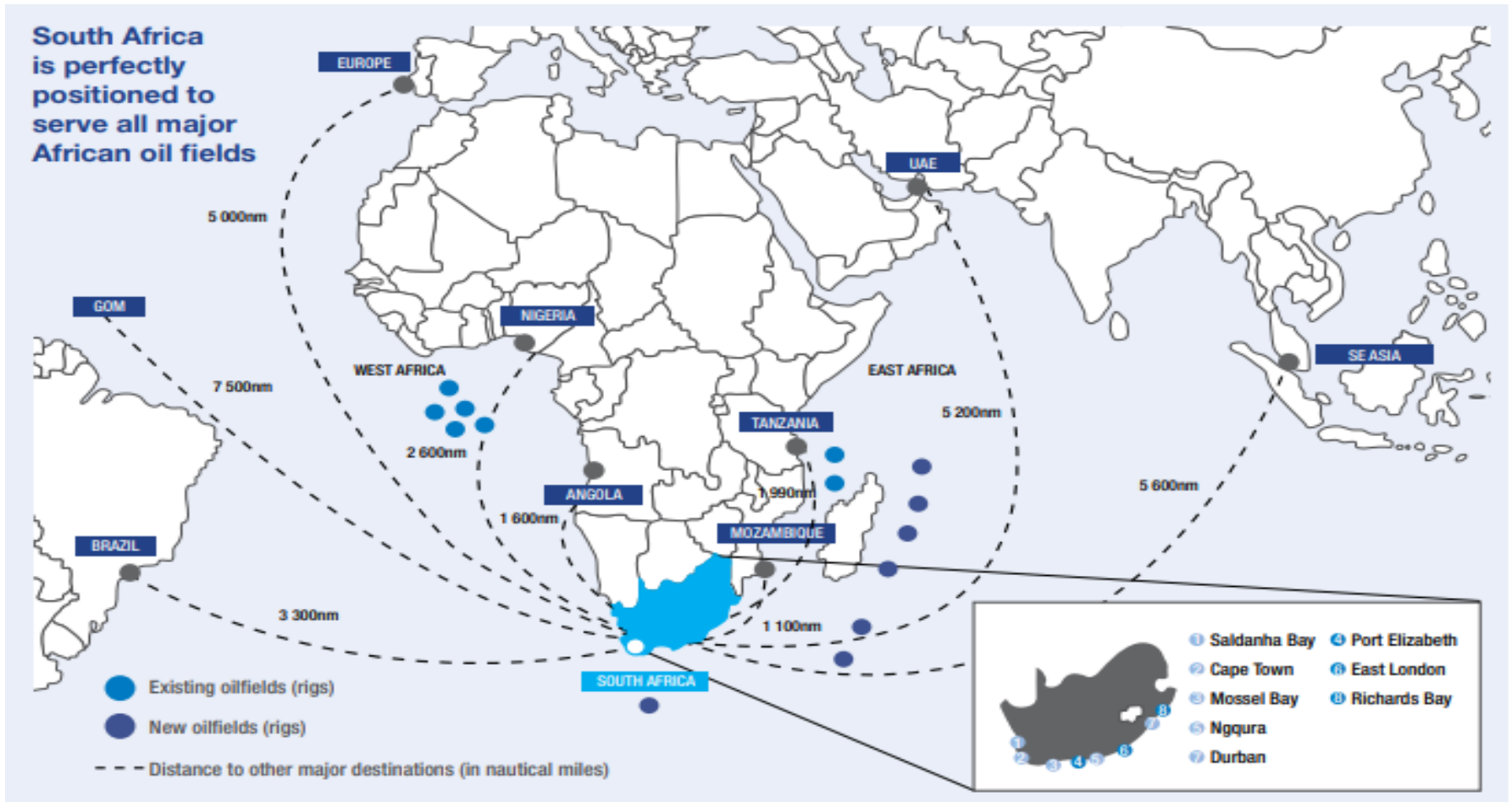
forestry, fisheries  
& the environment

Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA





# UWEKEZAJI



South Africa Fact Sheet: 2020 (DTI)



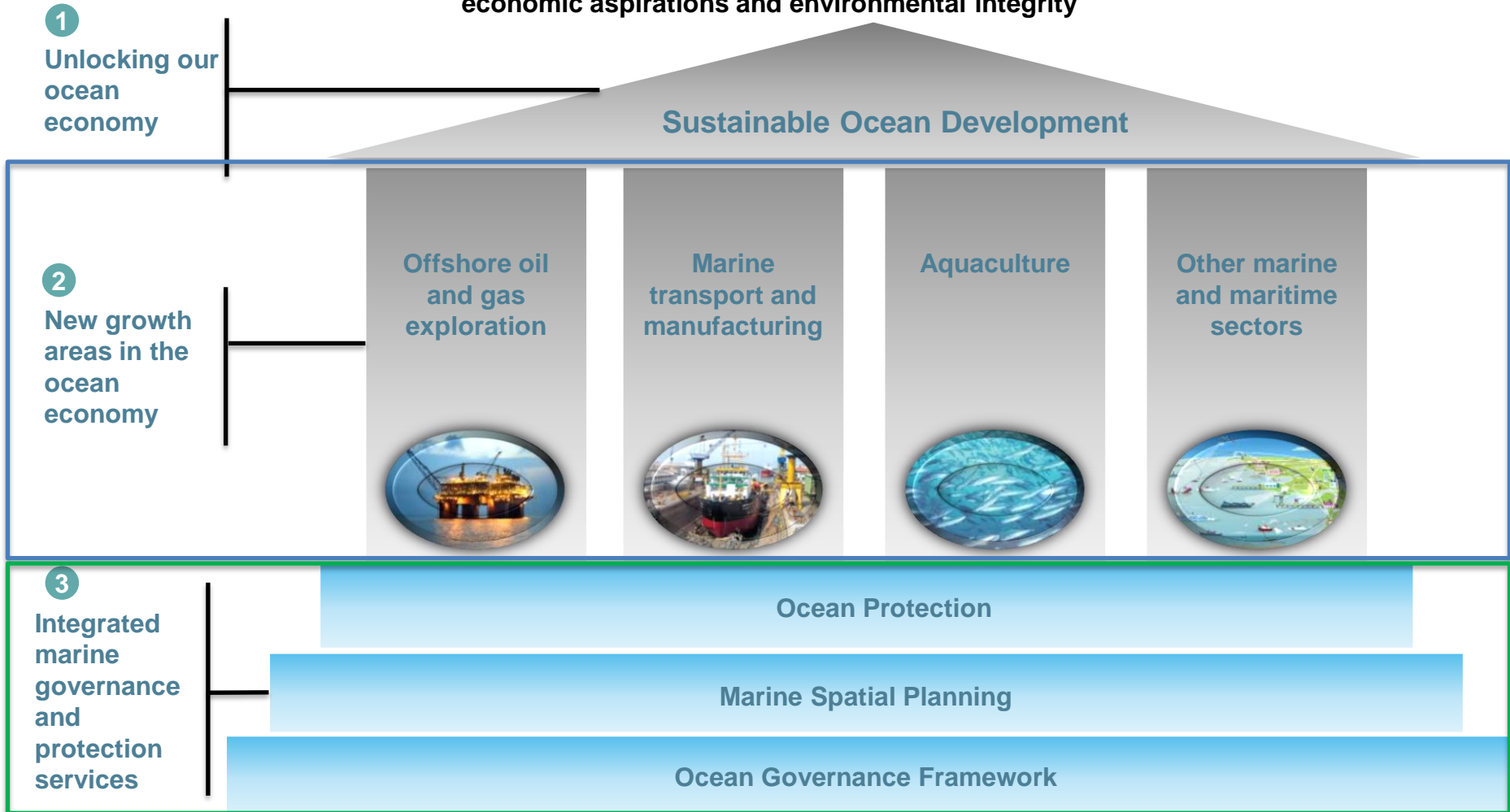
forestry, fisheries  
& the environment

Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA



# SUSTAINABLE OCEANS DEVELOPMENT

Coordinated ocean governance in South Africa will identify and manage interdependencies of socio-economic aspirations and environmental integrity



forestry, fisheries  
& the environment

Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA



# FOCUS AREA

Three focus areas were identified, each with their unique challenges to overcome

## Integrated Ocean Governance and Protection

### Integrated Framework & Governance



- **Uncertainty** on roles and responsibilities
- **No institutional framework** to manage the multiple users of the same ocean space
- **Coordination** of departments that are active in the oceans
- Lack of **adequate skills** for ocean governance

### Ocean Protection



- **Coordination** required for **enforcement and policing** of coasts and oceans
- Need to **improve** monitoring of **compliance**
- Identification and protection of **sensitive and unique marine habitats and species**
- Limited **human and financial resources** to manage ocean resources and environment

### Marine Spatial Planning



- **No system** to manage the multiple users in the same ocean space
- Many departments and **multiple information sources**
- A large part of the ocean space has **not been studied or surveyed**
- Need to **consolidate** survey, research and monitoring programmes

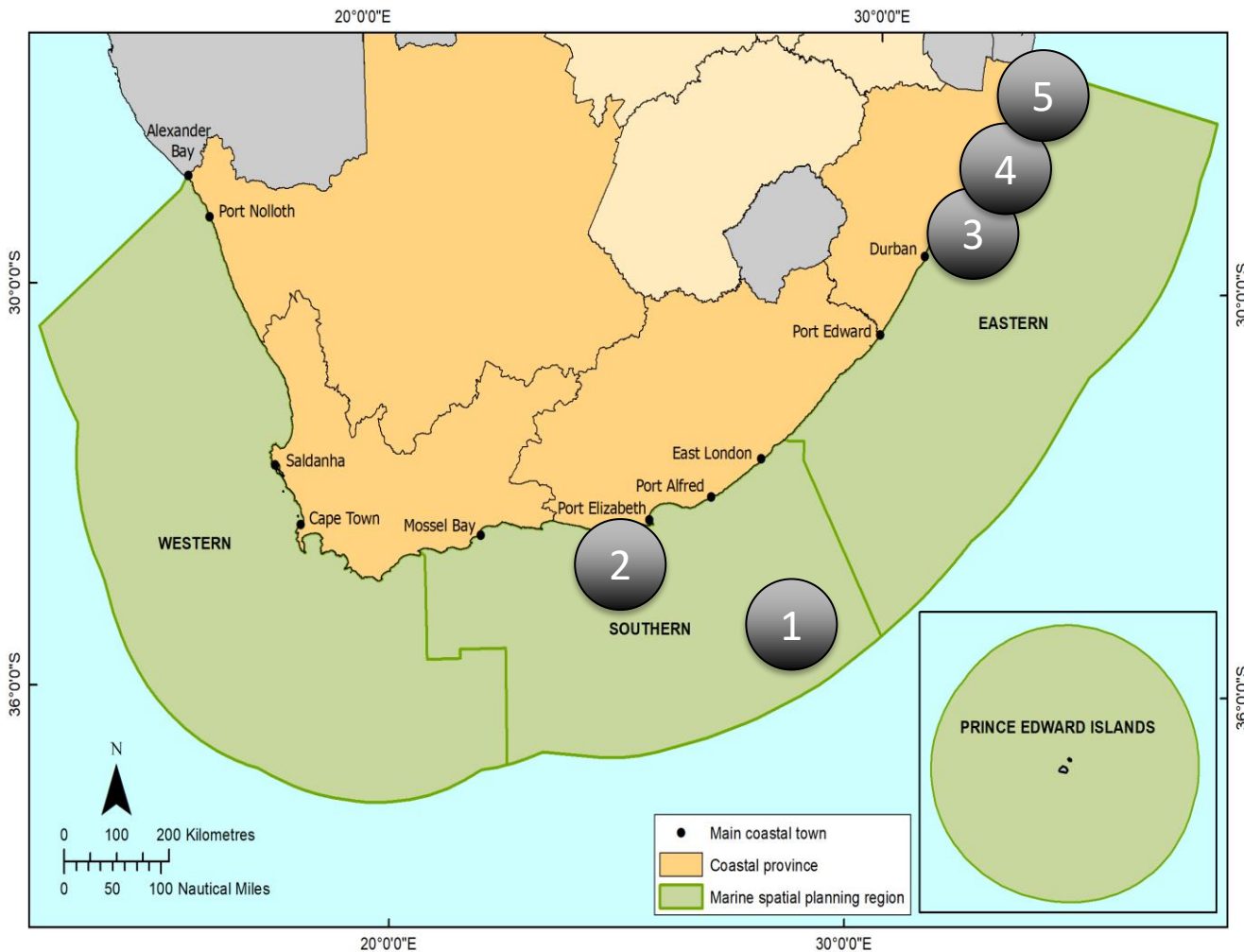


forestry, fisheries  
& the environment

Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA



# THE FOUR MARINE PLANNING AREAS



- Over 3000 km of coastline
- 4 Provinces
- 4 Metropolitan Municipalities
- 12 District Municipalities
- 48 Local government Municipalities

Land Size:

1.2 mn km<sup>2</sup>

Exclusive Economic Zone (EEZ) Size:

1.5 mn km<sup>2</sup>

- 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



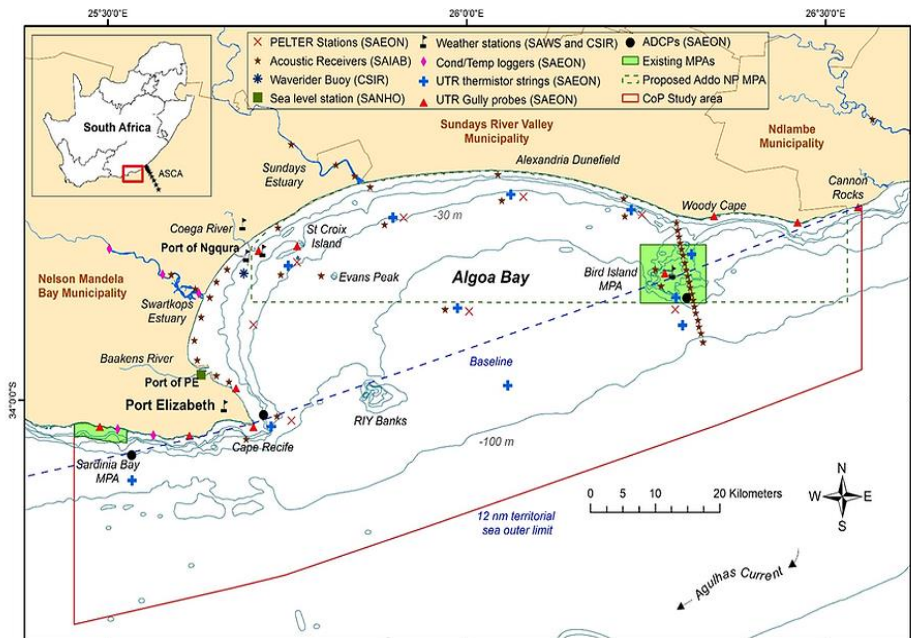
forestry, fisheries  
& the environment

Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA



# CURRENT INITIATIVES

1. **Southern Marine Area Plan:** initiative currently underway through the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH (GIZ) **MARISMA** Project under the **Benguela Current Convention (BCC)**
  - 1st Region identified for a large scale Marine Spatial Planning initiative in South Africa



2. **Algoa Bay Small Scale Marine Spatial Planning:** initiative currently underway via **Nelson Mandela Bay University**.
  - The project consists of two phases.
    - **Phase 1** aims to collect data on and model the biophysical and governance systems in Algoa Bay.
    - **Phase 2** aims to address the socio-economic system, and tie all three systems together in an overall model that can inform MSP decisions in the Bay.



forestry, fisheries  
& the environment

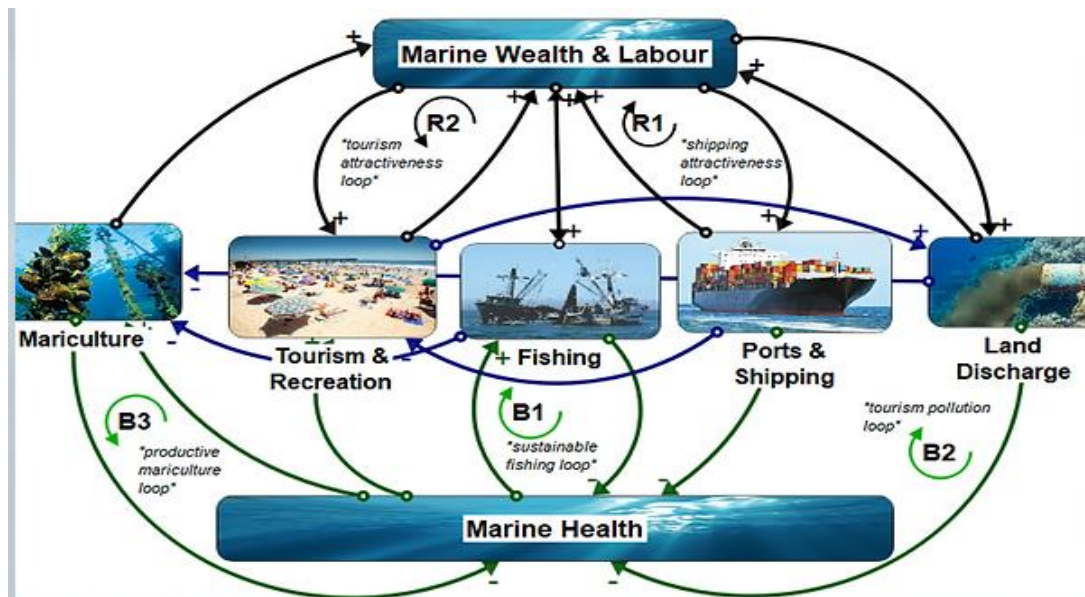
Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA



# CURRENT INITIATIVES

## The Algoa Marine Systems Analysis Tool (AlgoaMSAT) – Land and Sea Interactions

AlgoaMSAT is an exploratory framework and simulation model that uses system dynamics modelling (SDM) to facilitate and support MSP



Algoa MSP web info:

<https://www.algoabayproject.com/community-of-practice>

The model boundary of AlgoaMSAT consists of six sub-models. Five of these represent selected marine uses in Algoa Bay, whereas the sixth sub-model integrates the outputs from each marine use in terms of sustainable management outputs.

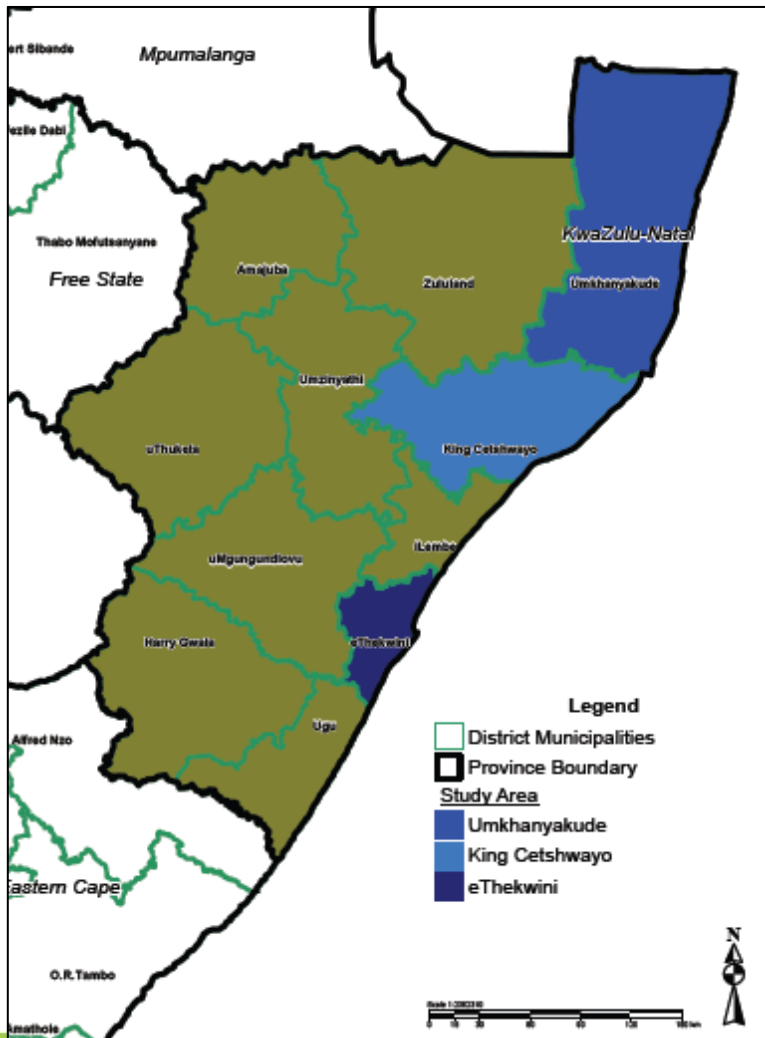


forestry, fisheries  
& the environment

Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA



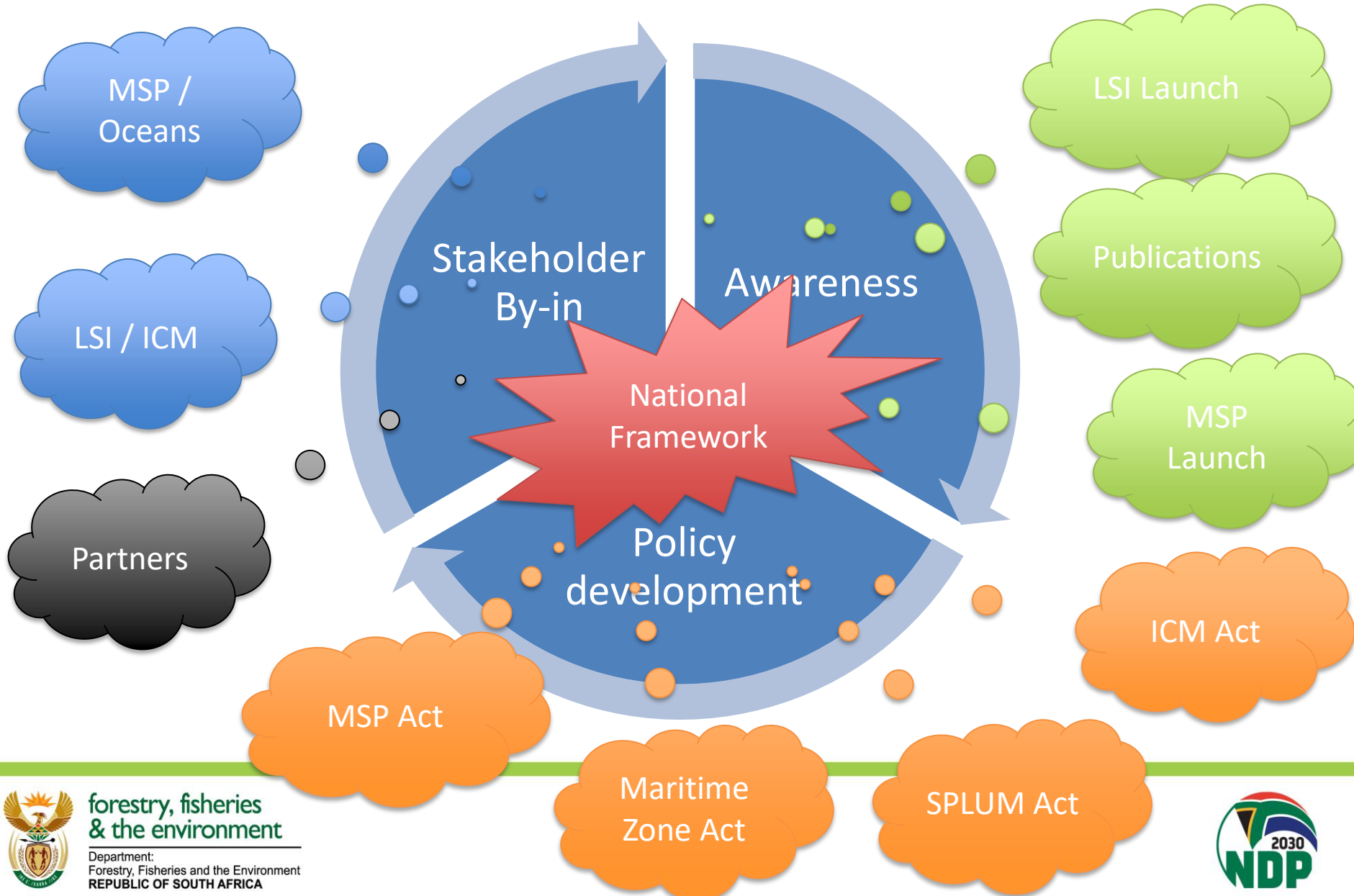
# CURRENT INITIATIVES



3. **Land-Sea Interactions Planning** : initiative currently underway through the ***Strategic Action Programme Policy Harmonisation and Institutional Reforms (SAPPHIRE)*** Project under the **Nairobi Convention**. The project consists of three (3) municipal sites in KwaZulu Natal.

- **Phase 1** aims to Launch Land Sea Interactions Planning in South Africa.
- **Phase 2** aims to undertake municipal profiles, marine activities and ports strategies
- **Phase 3** aims to deal with consultations and stakeholder buyin towards the development of three small scale site plans to inform Marine and Coastal Spatial Planning.

# HIGH LEVEL ACHIEVEMENTS



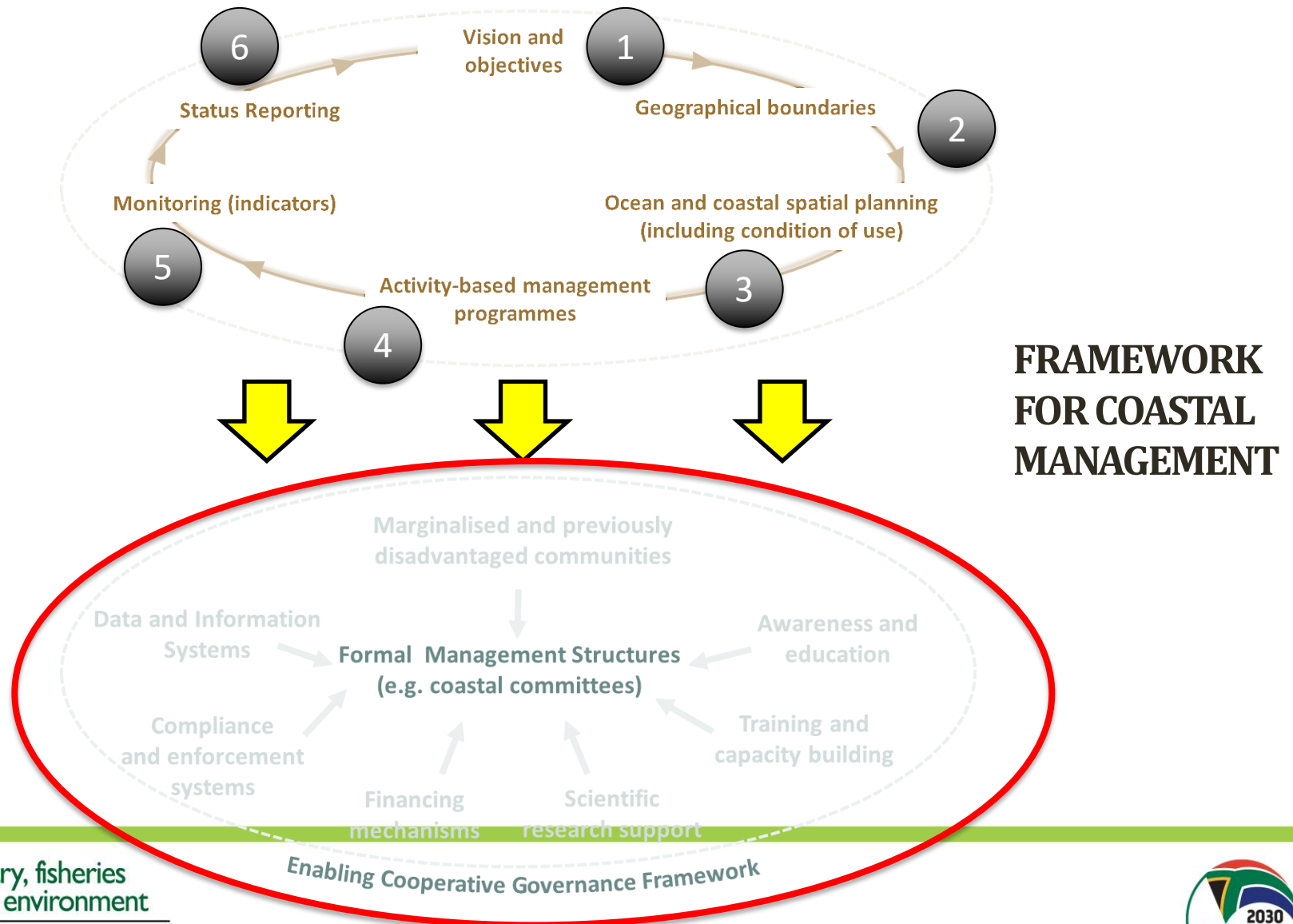
forestry, fisheries  
& the environment

Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA

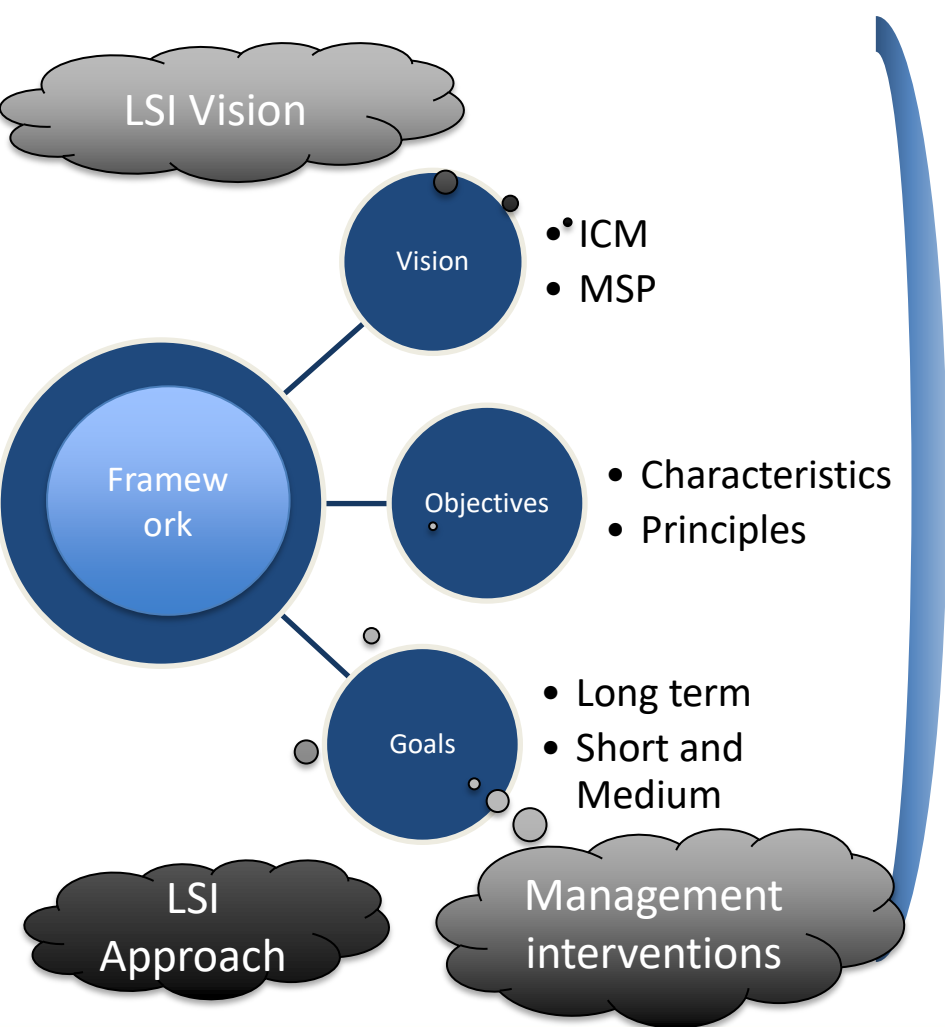




# HIGH LEVEL ACHIEVEMENTS



# PROCESS & GUIDANCE



A productive, healthy and safe ocean that is accessible, understood, equitably governed and sustainably developed and managed for the benefit of all

- Area-based;
- Integrated;
- Multi-objective;
- Participatory and coordinated;
- Ecosystem-based; and
- Strategic and future-oriented.

- Sustainable development;
- Spatial efficiency;
- Collaboration and responsible ocean governance;
- Justice, equity and transformation
- Ecosystem and earth system approach;
- Precautionary approach;
- Adaptive management; and
- Coherent Planning and Management



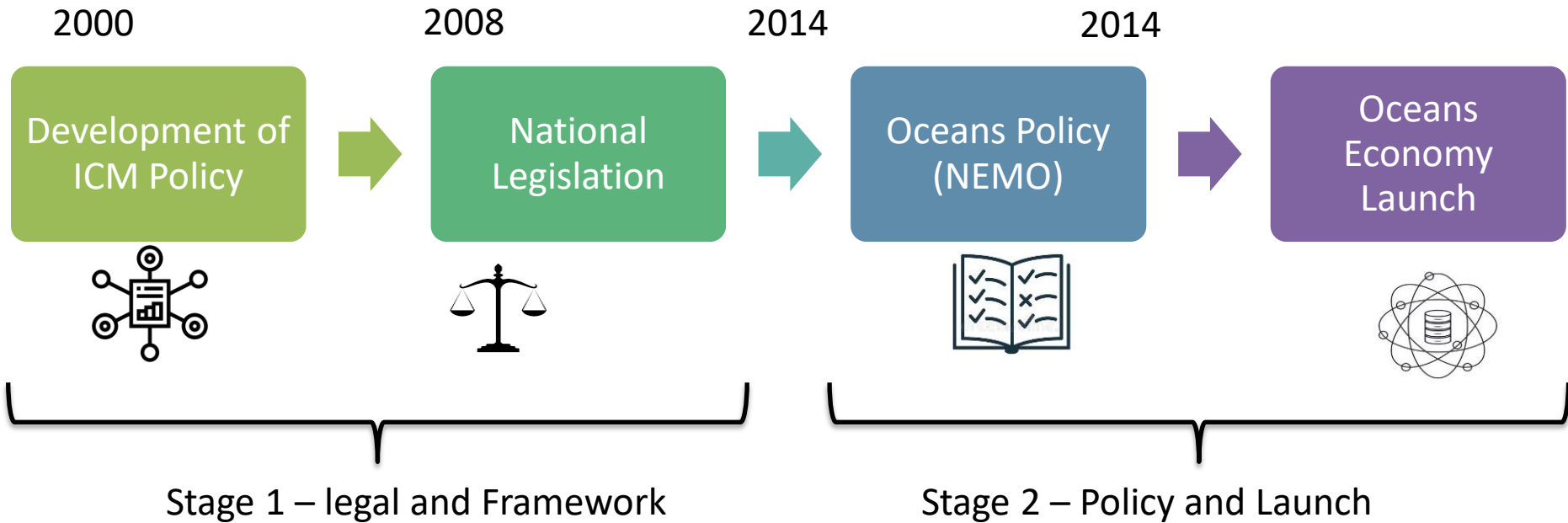
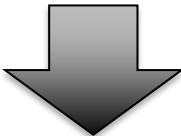
forestry, fisheries  
& the environment

Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA



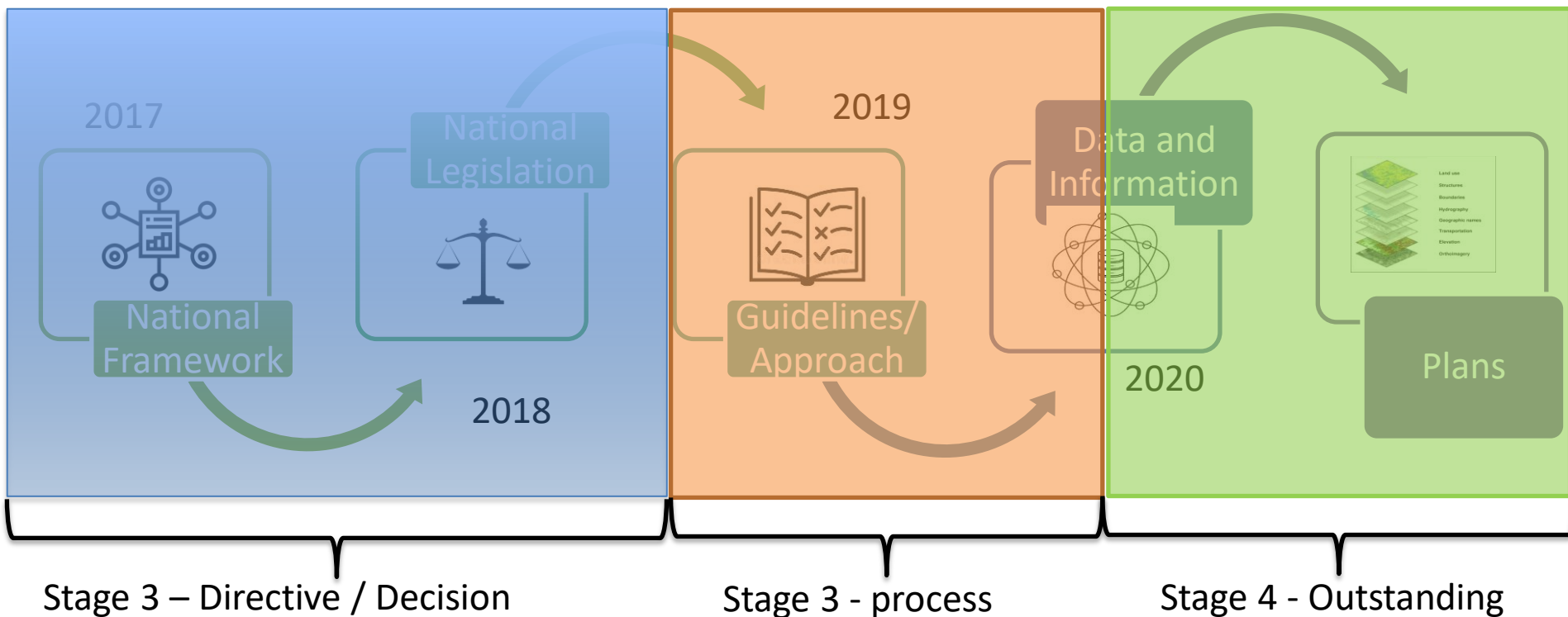
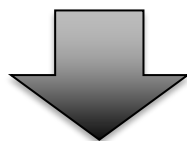
# PROCESS & GUIDANCE

Process aims to take into consideration all the competing users in the ocean space and be used as the key trade-off tool



# PROCESS & GUIDANCE

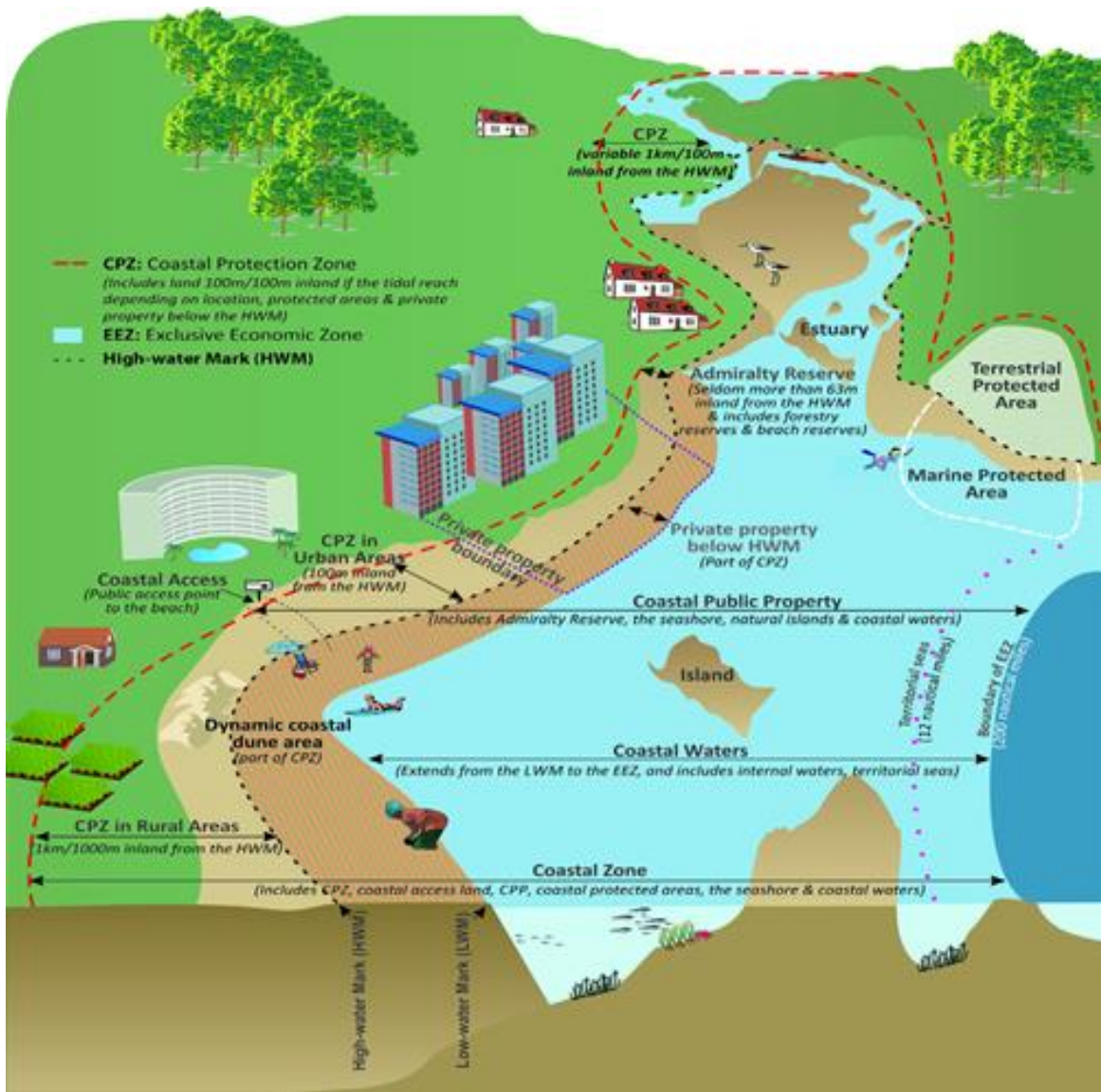
Process aims to take into consideration all the competing users in the ocean space and be used as the key trade-off tool



forestry, fisheries  
& the environment

Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA





Coastal Protection Zone

High Water-Mark

Low Water-Mark

Coastal Access

State Land and Admiralty Reserves

Estuaries

Internal Waters

Territorial Seas (12 nm)

Management and Protected Areas

Coastal Zone / Coastal Public Property (200nm)



forestry, fisheries  
& the environment

Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA



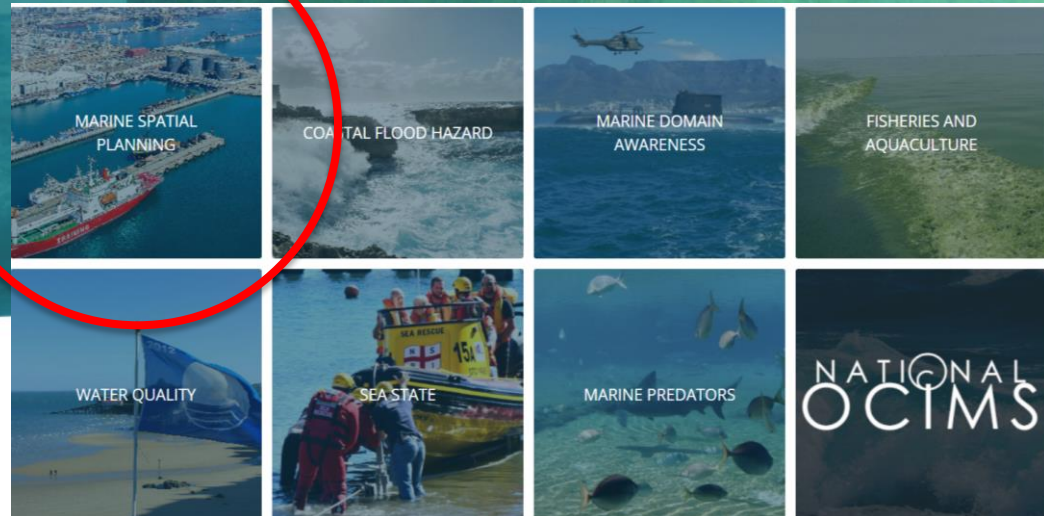
# DATA AND INFORMATION - OCIMS

NATIONAL  
OCIMS

HOME ABOUT DOCUMENTS DATA TOOLS THEMES

National Oceans and  
Coastal Information  
Management System

Marine Spatial Planning Support Viewer



forestry, fisheries  
& the environment

Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA

For further information you can now visit: <https://www.environment.gov.za/MSP>  
<https://ocims-dev.dhcp.meraka.csir.co.za/>

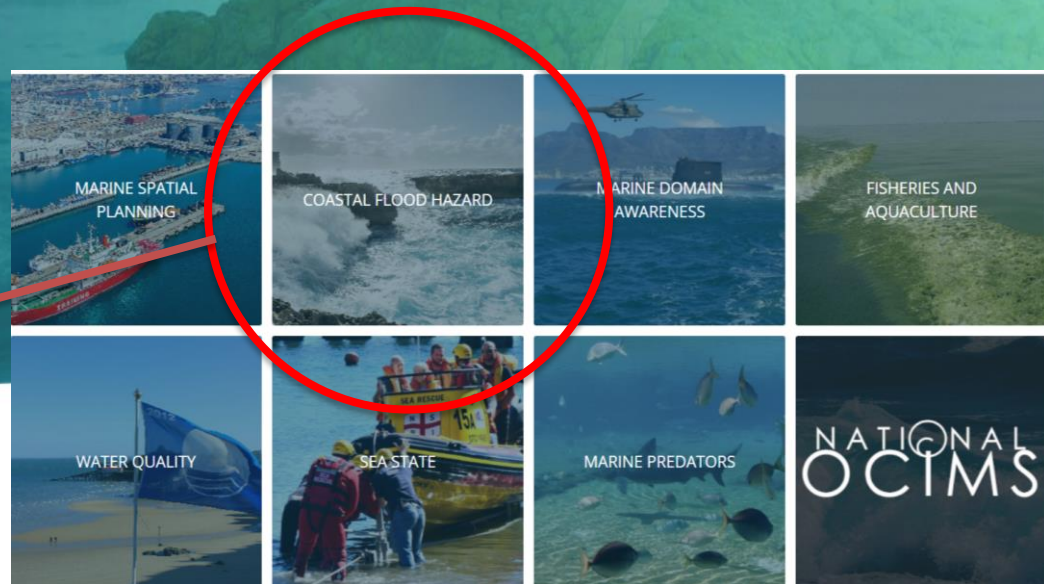
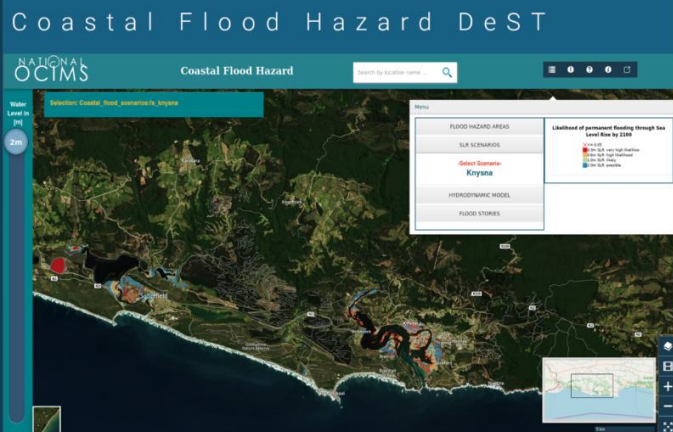


# DATA AND INFORMATION - OCIMS

NATIONAL  
OCIMS

HOME ABOUT DOCUMENTS DATA TOOLS THEMES

National Oceans and  
Coastal Information  
Management System



forestry, fisheries  
& the environment

Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA

For further information you can now visit: <https://www.environment.gov.za/MSP>  
<https://ocims-dev.dhcp.meraka.csir.co.za/>



# DATA AND INFORMATION - OCIMS



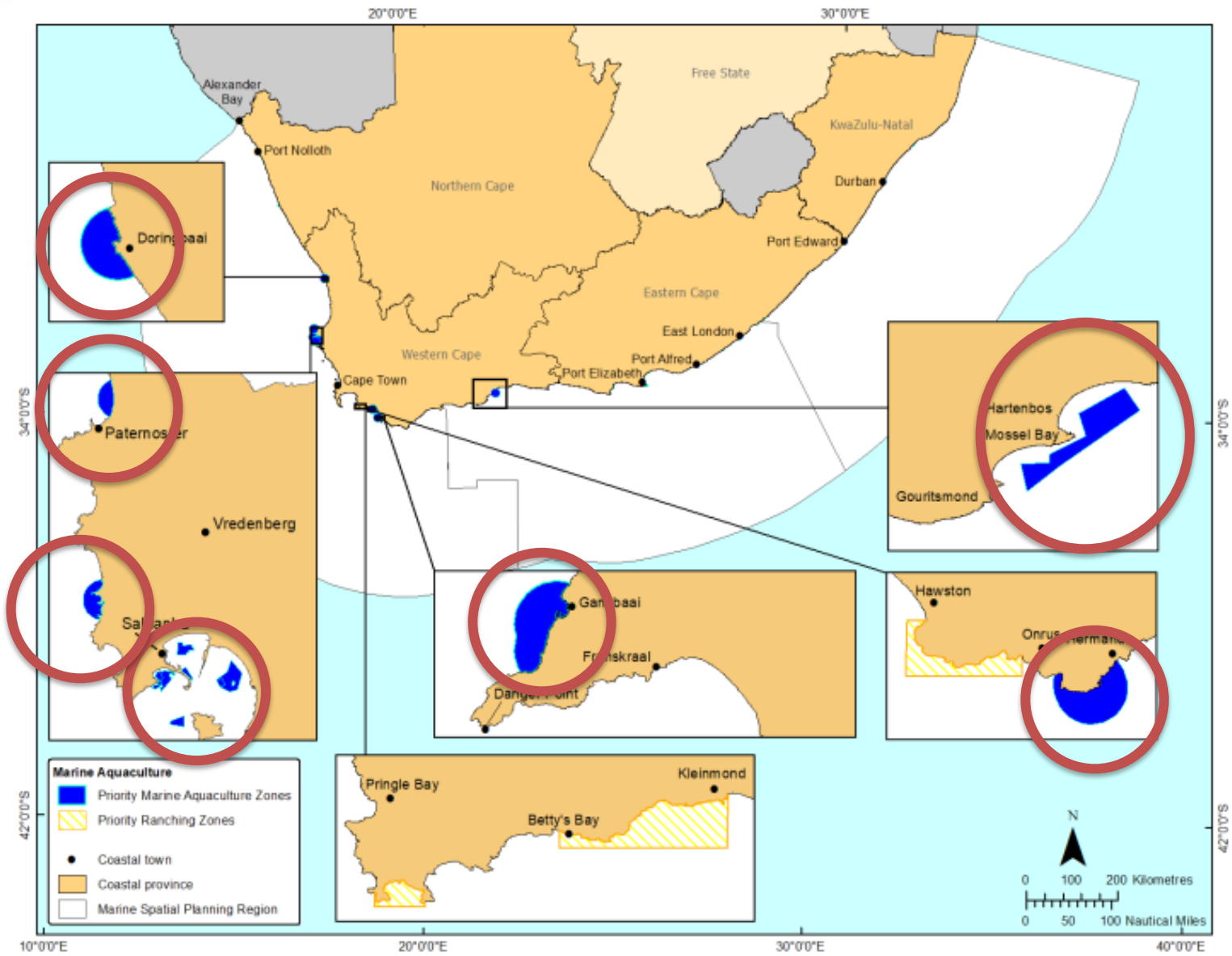
forestry, fisheries  
& the environment

Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA

For further information you can now visit: <https://www.environment.gov.za/MSP>  
<https://ocims-dev.dhcp.meraka.csir.co.za/>



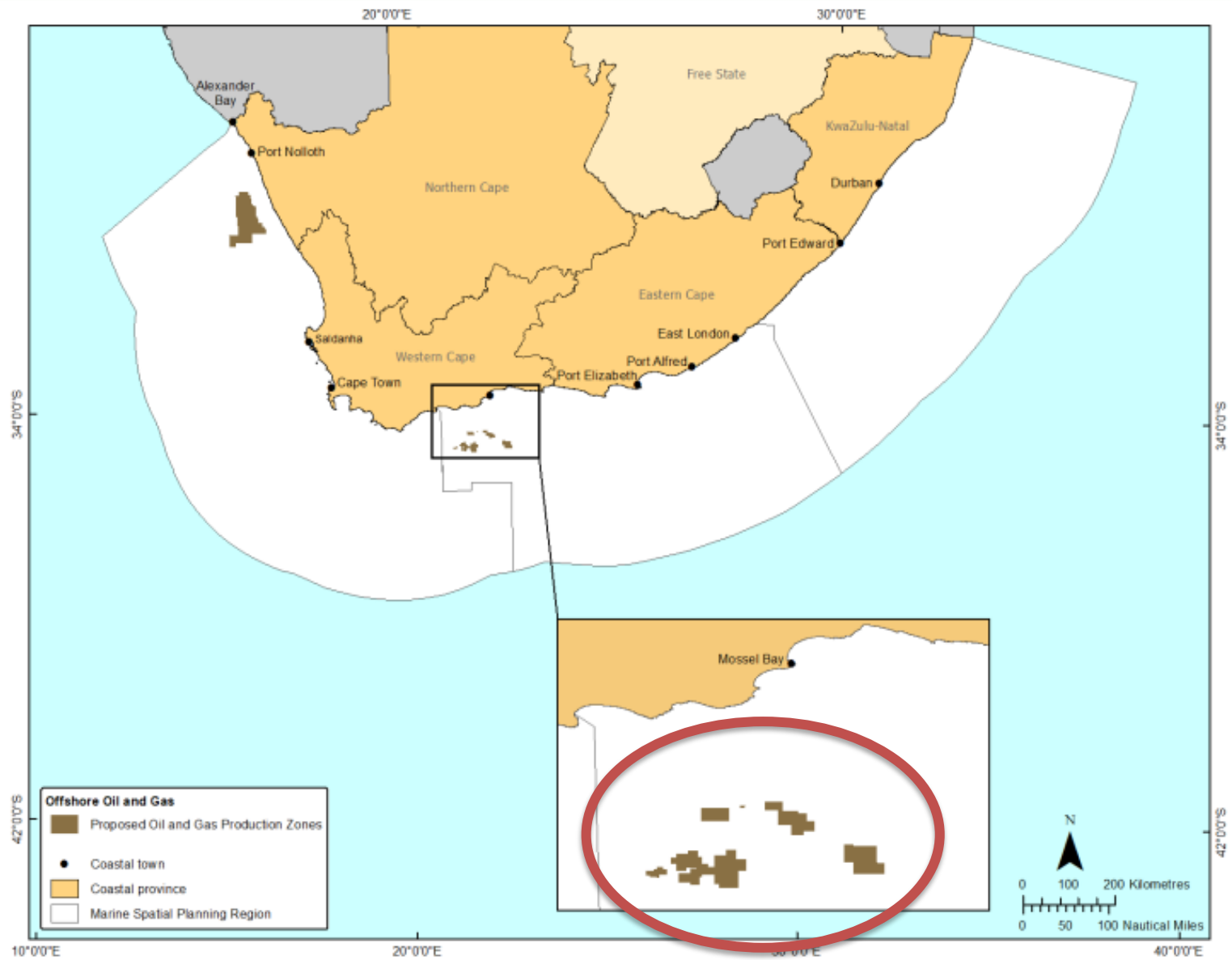




## forestry, fisheries & the environment

Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA

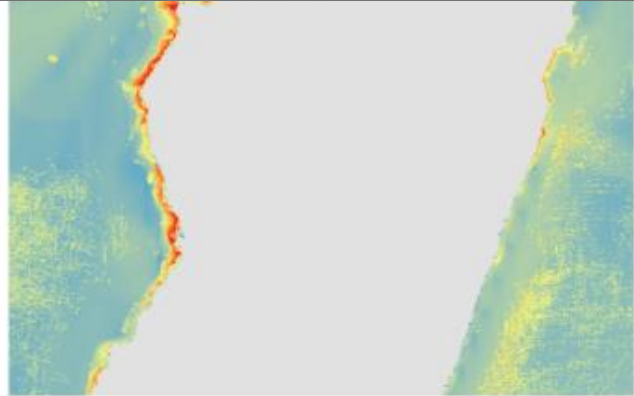
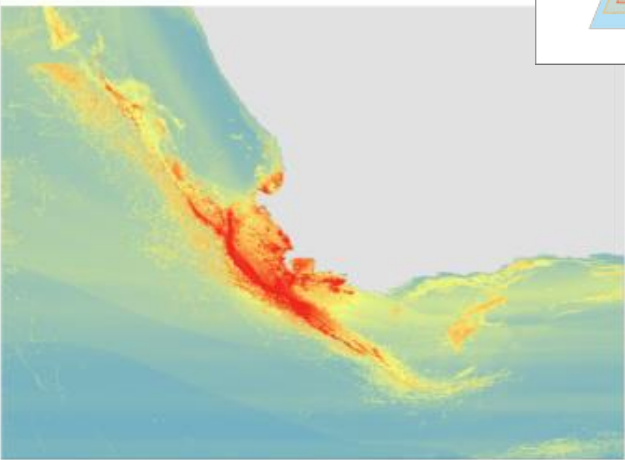
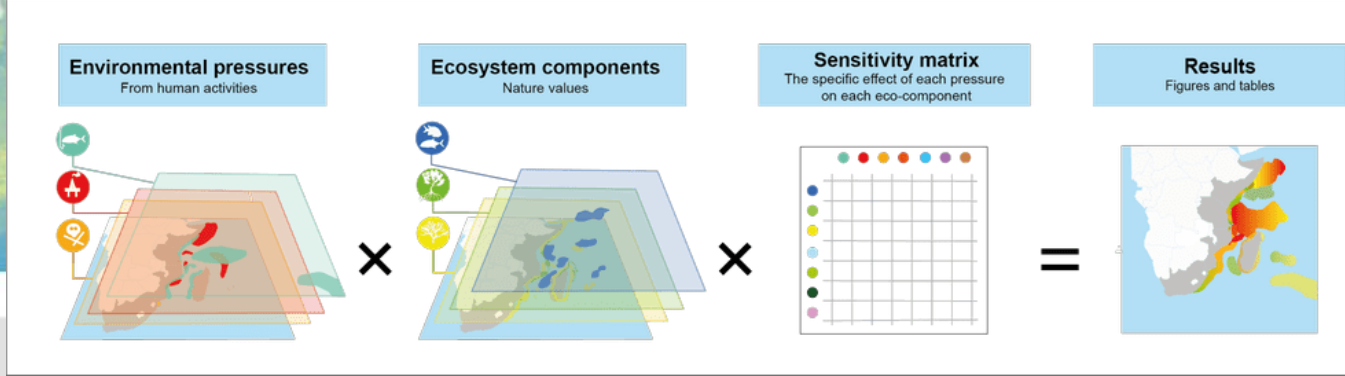
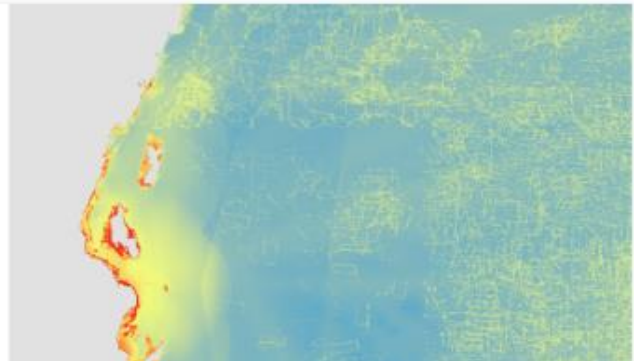




## forestry, fisheries & the environment

Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA





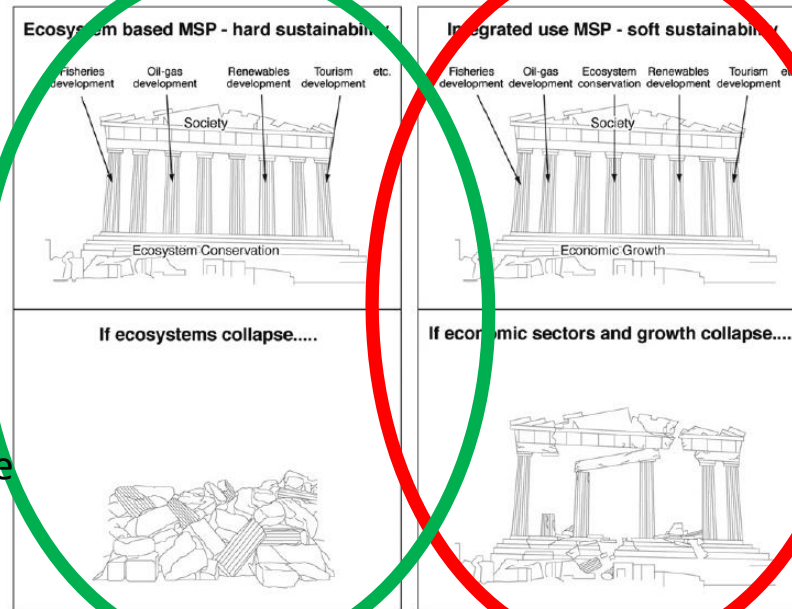
Demonstration of test drive results showing the cumulative environmental impact of human activity in East Africa using the WIO Symphony tool.

# DIFFERENT VIEW POINTS

Different views on sustainability in MSP.

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

- 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.



Wanfei Qiu and Peter Jones (2016)

- 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.

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



# LESSON LEARNED ON MSP / LSI AND ICM

European Nation



forestry, fisheries  
& the environment

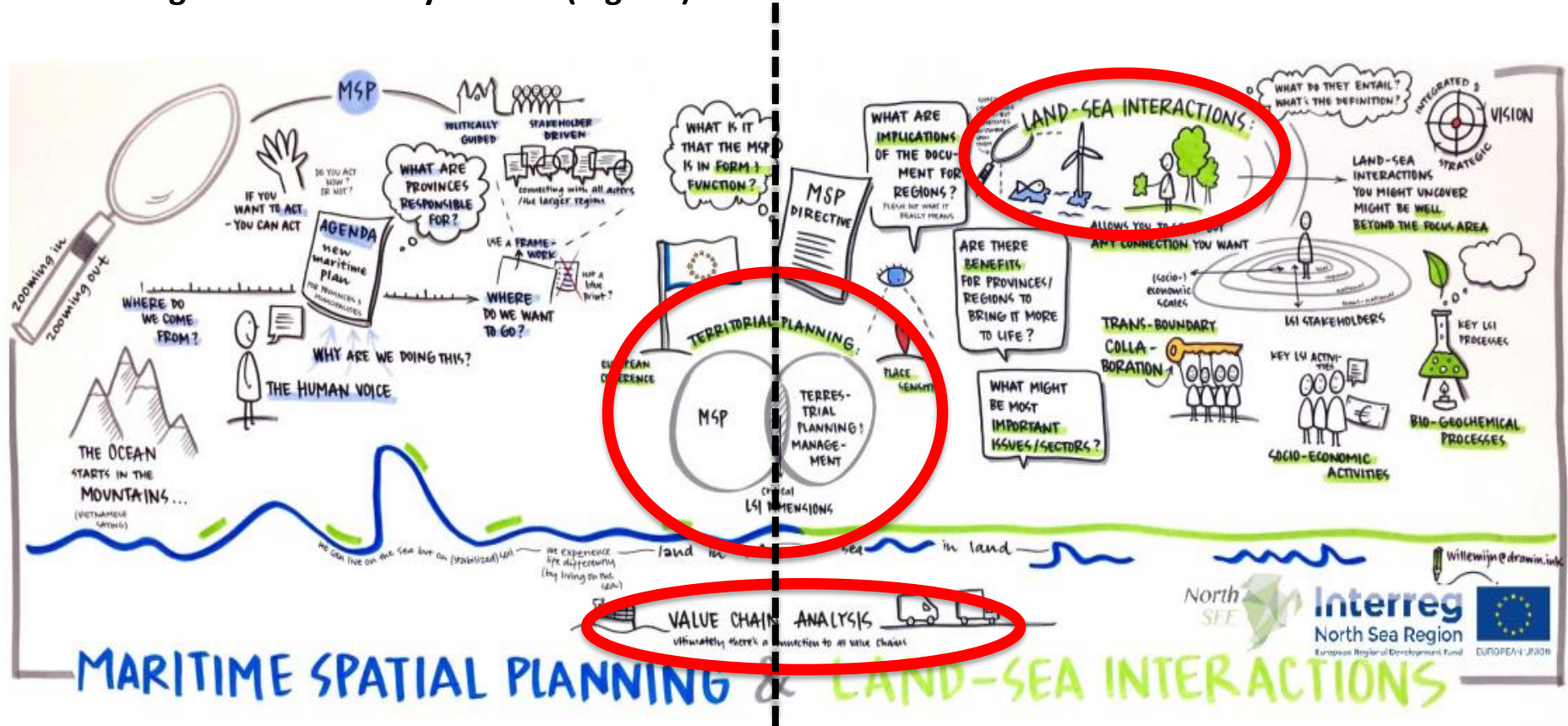
Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA



# CHALLENGES

Marine Spatial Planning and Land-Sea Interactions (Source: Willemjin Lambert)

- Nightmare for many nations (e.g. EU)



The inclusion of land-sea interactions (LSI) in the Maritime Spatial Planning (MSP) Directive recognises that effective maritime spatial planning cannot take place unless consideration is given to the interface between terrestrial and marine environments

# RELATIONSHIPS

## The relationship between the MSP Directive and LSI

- Understanding and accommodating LSI is critical to the successful delivery of MSP and cohesive management at the coast.
- The MSP Directive (2014/89/EU) specifically requires Member States to take account of LSI.
- The Directive notes that should LSI not form part of the MSP process directly, Member States may use other formal or informal processes, such as integrated coastal management (ICM).
- Member States shall reflect the outcomes in their maritime spatial plans.
- Member States should aim through MSP to promote coherence of maritime spatial plans with other relevant processes.
- Addressing LSI is one key to achieving this coherence.

## Role of Integrated Coastal Management in delivering LSI

- Management of the land-sea interface has been promoted at a European level through the process of ICM or Integrated Coastal Zone Management (ICZM).
- ICM is a process for the management of the coast using an integrated approach, regarding all aspects of the coastal zone, including geographical and political boundaries, in an attempt to achieve sustainability.
- The tools developed by ICM are important in the identification, assessment and management of LSI to ensure the economic, social and environmental sustainability of Europe's coastal regions.

# LSI & CLIMATE CHANGE

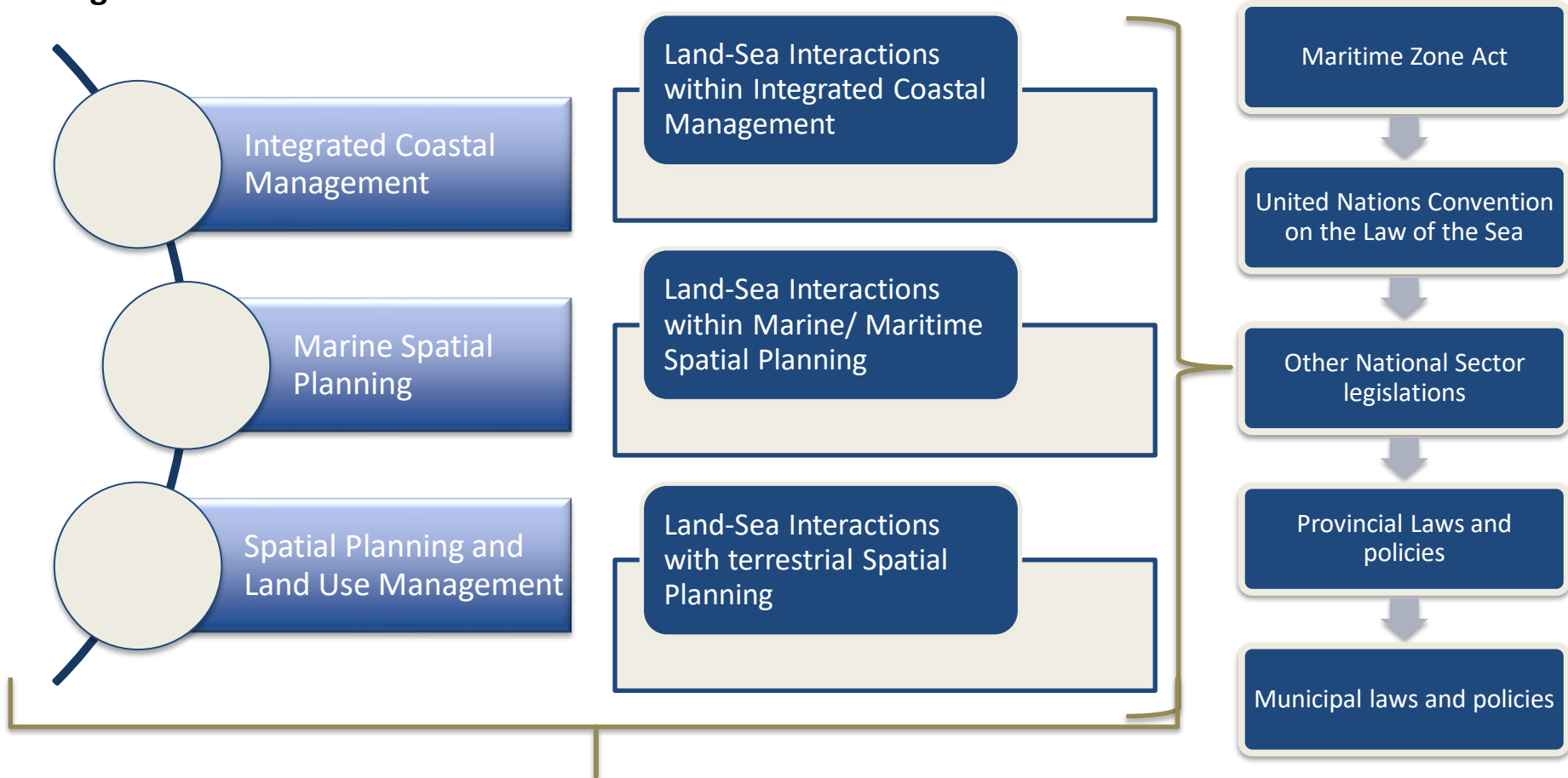
When addressing LSI planners need to consider:

- Vertical, geographical and sectoral separation of decision making
- Role and engagement of private/commercial sectors
- Consultations with communities / NGO's / Civil society is key
- Using the Ecosystem Based Approach / integrated developmental planning
- Scale and availability of data
- Political context
- Expected climate change impacts.
- Adaptive management strategies
- Innovation and systems understanding



# LEGAL INSTRUMENTS

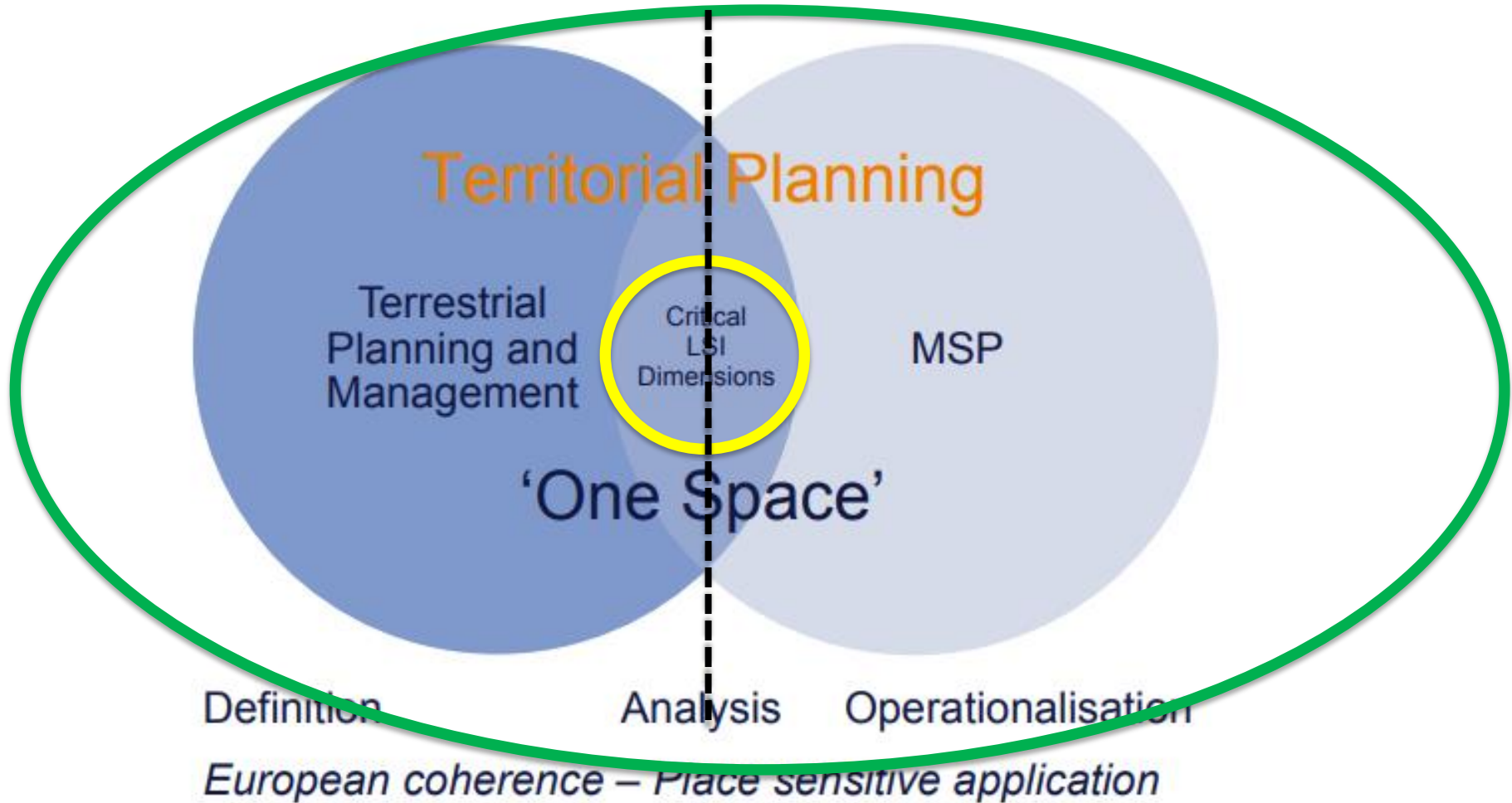
South Africa needs to undertake a Policy Harmonisation process on the following policies and legislations to cater for effective land sea interactions



The Constitution of the Republic of South Africa

# INTEGRATED APPROACH

Addressing LSI and a 'One Space' territorial planning perspective



forestry, fisheries  
& the environment

Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA



# WAY FORWARD

- South Africa will continue to facilitate the all initiatives contributing the development if area plans. (different scale and approaches).
- Share lesson learned on the development of the plans with the Region
- Deal with different approaches to understand the perfect fit for South African environment (integrated approach vs ecosystems approach)
- Continue to collaborate with partners and support services offered through bilateral agreements.
- Undertake project that demonstrates the harmonization required at policy level
- Undertake LSI as part of both MSP and ICM within a good system of planning

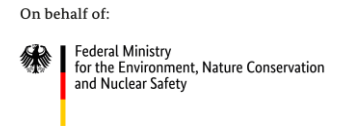
# RECOMMENDATIONS

- Recommended that the Region takes note of the initiatives undertaken in South Africa contributing to the broader Oceans and Coastal Governance.
- The SAPPHIRE demonstration project to be support to its completion to show case the harmonization of policy and legal instruments.
- For the Region to consider a comprehensive / broader context of MSP / ICM with the integration of LSI
- Consider the acknowledgement from the EU that MSP is incomplete without LSI integrated.
- To further Countries to explore based on needs and aspirations to what works for them (integrated MSP vs Ecosystem approach MSP)





Council for Geoscience



of the Federal Republic of Germany



# THANK YOU!

**MR POTLAKO KHATI**

Directorate: Coastal Special Planning

Department of Forestry, Fisheries and the Environment

Email: [pkhati@dfre.gov.za](mailto:pkhati@dfre.gov.za)

Website: <http://www.environment.gov.za>

Address: 1 East pier road, East pier Building, Waterfront, Cape Town, 8001

Thank You



forestry, fisheries  
& the environment

Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA

