The National Coastal Management Programme of South Africa



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PO Box 52126

Victoria and Alfred (V&A) Waterfront

CAPE TOWN,

SOUTH AFRICA

8002

2 East Pier Shed

East Pier Road,

Victoria and Alfred (V&A) Waterfront

CAPE TOWN,

SOUTH AFRICA

8001

Tel: +27 21 819 2498

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

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"The overall goal of Integrated Coastal Management is to improve the quality of life of human communities who depend on coastal resources while maintaining the biological diversity and productivity of coastal ecosystems. . . . It is a process that unites government and the community, science and management, sectoral and public interests in preparing and implementing an integrated plan for the protection and development of coastal ecosystems and resources."

Report on fundamental goals of coastal management via deliberations of the Group of Experts of Marine Protection (1996)



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Project Team

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DEA (Oceans and Coasts):

Andre Share: Chief Director Integrated Coastal Management

Lindelani Mudau: Director Coastal Conservation Strategies

Ryan Peter: Project Manager

Makwarela Matshili and Qaphela Mpotulo: Project Assistance

Council for Scientific and Industrial Research (CSIR)

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Executive Summary

Executive Summary

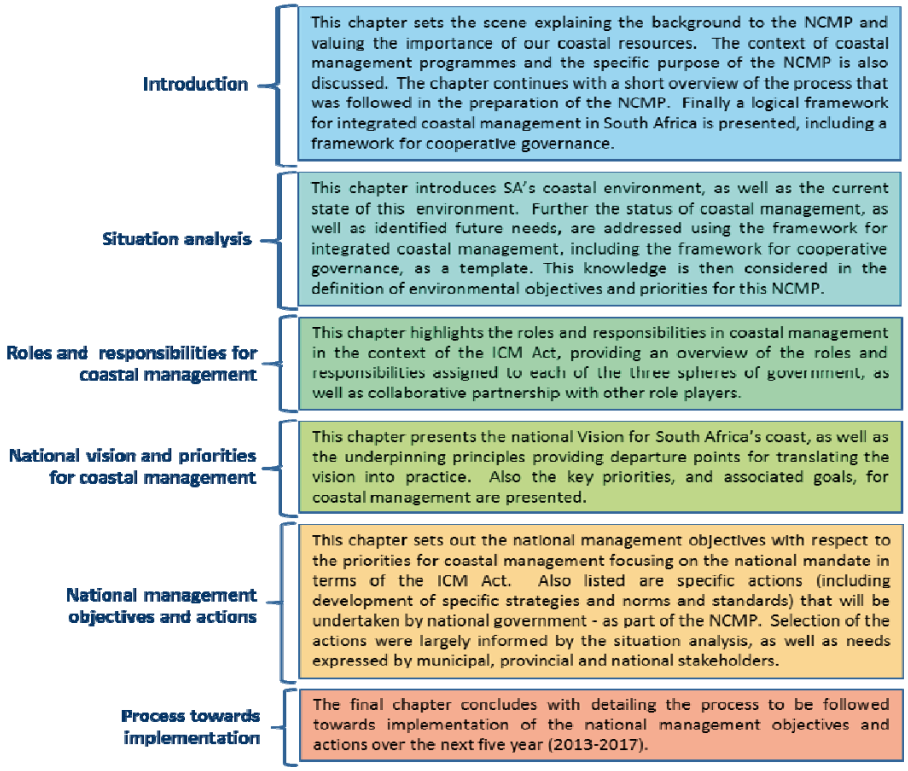
This document presents South Africa's National Coastal Management Programme (NCMP) under the National Environmental Management: Integrated Coastal Management Act (Act No. 24 of 2008)(ICM Act) for the period 2015 to 2019.

Coastal zones throughout the world have historically been among the most heavily exploited areas because of their rich resources. In coastal countries today, an estimated half of the total population live in coastal zones, and migration from inland areas to the coast is increasing. Not surprisingly, there is also a rising conflict between the need for immediate consumption or use of coastal resources and the need to ensure the long-term supply of those resources. The enjoyment of the coastal zone by a wide variety of users and the view of the coast as a national asset and legacy for future generations is of the utmost importance for the promotion of its current and future sustainable use.

South Africa's coastal environment is a rich and diverse national asset, providing important economic and social opportunities for the human population.The estimated total contribution of coastal resources (without regulatory services) to the South African economy is in the order of some R 57 billion (US$5.7 billion). The direct economic benefits from coastal resources in South Africa are estimated to be approximately 35% of the country's annual gross domestic product (GDP) (referring to the "White Paper"). Direct economic benefits include the marine fishing industry, port and harbour development and attractive lifestyles, and recreational and tourism opportunities offered by a coastal location. Furthermore, the coast provides indirect economic benefits such as the erosion control provided by coastal features such as dunes and high cliffs which protect built and natural features along the coast (including roads, buildings and farmlands) from the damaging effects of waves and wind, and it allows waste

assimilation, detoxification and recycling through coastal wetlands, forests and grasslands. These indirect benefits account for an additional 28% of the country's GDP.

The overall structure of the NCMP comprises the following:



The ICM Act has been promulgated to establish the statutory requirements for integrated coastal and estuarine management in South Africa. The Act also prescribes the inclusion of norms, standards and policies for further elaboration and guidance on coastal management provisions within legislation and specific scenarios and/or issues. One of the many reasons for the adoption of this form of management is to promote the conservation of the coastal environment, and to maintain the natural character of coastal landscapes.

Among the myriad of implementation tools that are available within the ICM Act, Coastal Management Programmes (CMPs) are arguably the most powerful integrating instruments in an ICM toolbox.

A CMP is a policy directive for the management of the coastal zone, inclusive of strategies and plans for the effective implementation of the ICM Act that will enable organs of state to plan accordingly, to set a course for the environmental future of a nation by addressing the resolution of current management problems and user-conflicts (due to the wide variety of activities and

uses of the coast), as well as the long-term development and management of the coastline. CMPs also play the vital role of bringing together the various spheres and sectors of government, private sector activities and community activities on the coast for the effective implementation of ICM over a projected period of time. This is achieved by ensuring that the development and use of natural resources in the coastal zone is done with the best interests of the public and economy, while being ecologically sustainable.

The framework for coastal management for South Africa identified key components or elements of an integrated coastal management programme presenting the structure – the integrated, coordinated and uniform approach to coastal management. The framework is presented in a cyclic context where environmental management – including ICM – has an iterative, adaptive approach where the system in incrementally improved as new information and knowledge is made available:

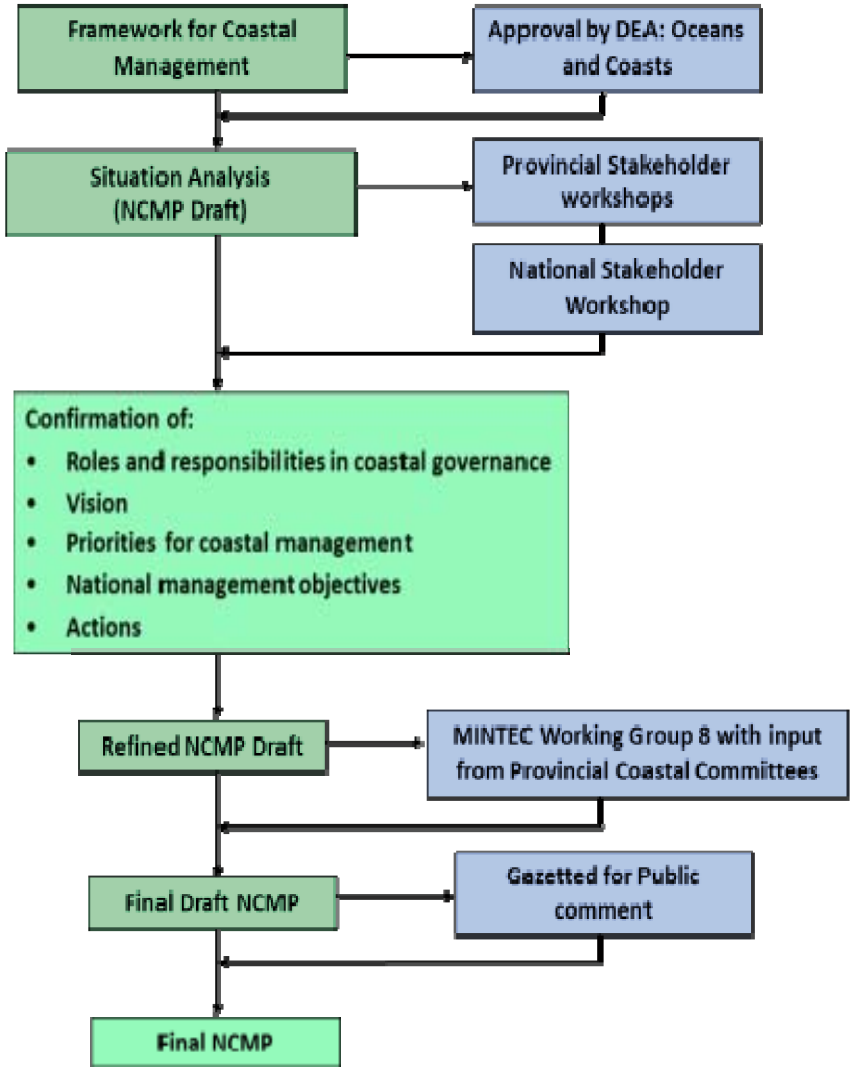
- A **Vision** which reflects ecosystem protection (i.e. ecological aspects) and key opportunities for sustainable coastal development (i.e. social, cultural and economic aspects), as well as **objectives** direct the focus of coastal management effort in order to achieve the vision;
- **Coastal area management units**, which boundaries can be delineated at the regional, national, provincial and municipal (local) level;
- **Ocean and coastal spatial planning** (i.e. strategic planning and mapping of coastal and ocean use), as an integral component within the larger integrated coastal management framework, including a spatial data infrastructure;
- **Activity-based management programmes**, involving the management specific activities, often show a stronger sectoral focus (i.e. activities are managed by different governing authorities through activity-specific statutory systems);
- **Monitoring and evaluation using appropriate performance indicators** to measure progress in achieving the vision and strategic objectives; and

- **Status reporting** (e.g. State of Coast reporting) evaluates the findings of monitoring programmes to inform subsequent reviews and to inform future strategic planning processes.

Overarching and intrinsic to all of the above is an enabling **Cooperative governance framework**. While formal coastal management institutions (e.g. coastal management committees) remain central to a cooperative governance framework, a governance framework extends wider requiring additional partnerships with government, business, civil society, and the scientific and professional communities. Seven such "support elements" for effective cooperative governance are considered relevant to the South Africa:

- Marginalised and previously disadvantaged communities;
- Awareness and Education;
- Training and capacity building;
- Scientific research support;
- Financing mechanisms;
- Compliance and enforcement systems; and
- Data and information systems.

The process followed in the development of this NCMP included the development of a framework for coastal management, a detailed situation analysis, as well as national and provincial stakeholder consultation, are illustrated here:


Framework for Coastal Management
Approval by DEA: Oceans and Coasts
Situation Analysis (NCMP Draft)
Provincial Stakeholder workshops
National Stakeholder Workshop
Confirmation of:
• Roles and responsibilities in coastal governance
• Vision
• Priorities for coastal management
• National management objectives
• Actions
Refined NCMP Draft
MINTEC Working Group 8 with input from Provincial Coastal Committees
Final Draft NCMP
Gazetted for Public comment
Final NCMP

The **national vision** sets out the desired future for South Africa's coast and the people using this valuable resource as follows:

> ***We, the people of South Africa, celebrate the diversity, beauty and richness of our coast and seek an equitable balance of opportunities and benefits throughout it***
>
> ***We strive for sustainable coastal development – involving a balance between material prosperity, social development, cultural values, spiritual fulfilment and ecological integrity, in the interests of all South Africans***
>
> ***We strive for a time when all South Africans recognise that the coast is ours to enjoy in a spirit of community***
>
> ***We look forward to a time when all South Africans assume shared responsibility for maintaining the health, diversity and productivity of coastal ecosystems in a spirit of stewardship and caring***
>
> ***We seek to guide the management of our coast in a way that benefits current and future generations, and honours our obligations and undertakings from local to global levels.***

The NCMP framework, including the framework for cooperative governance, provided the template for the detailed Situation Analysis related to coastal management in South Africa, as well as providing a structured approach to engage with the stakeholders. Following a detailed situational analysis and a key stakeholder consultation process, nine key **priorities** for coastal management was identified, that is key issues that are currently preventing South Africa from achieving the Vision for our coast.

For each of the key priorities the NCMP then set out a series of national **goals and associated management objectives** specifically aimed at areas which coastal management efforts at national government level must address.

Priority 1: Effective planning for coastal vulnerability to global change (including climate change)

Goal: Ensuring that all planning and decision-making tools applied by all organs of state within the coast zone address coastal vulnerability by taking into account the dynamic nature of our coast, sensitive coastal environments, health and safety of people, illegal structures within coastal public property, and appropriate placement of infra-structure not to compromise investment by the state, as well as the rehabilitation of coastal ecosystems
Management Objective 1.1: Develop regulatory mechanisms (including norms and standards) to facilitate a uniform approach to assess coastal vulnerability and to establish conditions of use in the coastal zone
Management Objective 1.2: Develop appropriate data and decision-support for the identification of vulnerable coast areas to dynamic coastal processes and the effects of global change
Management Objective 1.3: Rehabilitation of areas along the coast that have been adversely effected

Priority 2: Ensuring equitable public access in the coastal zone

Goal: Ensuring that the public has safe and equitable access to coastal public property through the establishment of sufficient coastal access land that is cognisant of the sensitivity of coastal ecosystems, the needs and livelihoods of coastal communities or other socio-economic considerations, as well as the removal of inappropriate and unsafe coastal access points
Management Objective 2.1: Provide a national commitment for the facilitation of safe and equitable access to coastal public property along South Africa's coast
Management Objective 2.2: Develop norms and standards to assist municipalities in carrying out their responsibilities with respect to coastal access
Management Objective 2.3: Provide capacity strengthening mechanisms for municipalities to effectively implement, maintain and monitor coastal access

Priority 3: Integrating the management of estuaries

Goal: Ensure that all estuaries along the South Africa coast are managed in an integrated, holistic manner in accordance with the National Estuarine Management Protocol and the extent to which activities within estuaries are consistent with the other key priorities for coastal management
Management Objective 3.1: Develop and implement a national estuarine management protocol for a uniform approach to estuarine management, including individual estuary management plans that are tailored to suit the current and future requirements including social, economic and ecological considerations
Management Objective 3.2: Establish appropriate institutional mechanisms for estuarine management to facilitate dialogue, collaboration and implementation of Estuarine Management Plans

Priority 4: Managing pollution in the coastal zone

Goal: Ensure the effective management of waste and effluent into the coastal zone and minimizing adverse effects on the health of coastal communities, and on coastal ecosystems and their ability to support the sustainable uses of coastal resources in a manner that is socially, economically and ecologically justifiable
Management Objective 4.1: Establish regulatory mechanisms for waste and effluent disposal in the coastal zone
Management Objective 4.2: Establish a national Water quality Monitoring programme to assist in an improvement management plan/campaign for coastal water quality and its various uses (aquaculture, desalination, recreational use)
Management Objective 4.3: Develop and implement specific programmes that deal with marine litter, nutrient enrichment and storm water management

Priority 5: Establishing coastal monitoring and reporting systems to inform decision-making

Goal: Ensure the development and implementation of a dedicated, cooperative, co-ordinated and integrated coastal monitoring and reporting system that includes compliance monitoring and reporting in accordance with laws and policies, performance monitoring and reporting to measure progress in coastal management, and descriptive monitoring and reporting to measure variability and trends in biophysical, social and economic characteristics and

Priority 5: Establishing coastal monitoring and reporting systems to inform decision-making

Goal: Ensure the development and implementation of a dedicated, cooperative, co-ordinated and integrated coastal monitoring and reporting system that includes compliance monitoring and reporting in accordance with laws and policies, performance monitoring and reporting to measure progress in coastal management, and descriptive monitoring and reporting to measure variability and trends in biophysical, social and economic characteristics and processes in the coastal zone
Management Objective 5.1: Establish a national commitment for an effective coastal monitoring system in accordance with the ICM Act and other legislation that has a bearing on the coastal zone
Management Objective 5.2: Ensure that performance and status reporting on coastal management is conducted in accordance with the ICM Act and other legislation that has a bearing on coastal zone

Priority 6: Establishing mechanisms for effective compliance and enforcement

Goal: Establish a committed compliance and enforcement system for coastal management in alignment with related laws and policies, and inclusive of cooperation and coordination between organs of state with enforcement responsibilities and NGOs with appropriate capacity
Management Objective 6.1: Ensure a coordinated, uniform approach to implementation of compliance and enforcement in the coastal zone across all spheres of government
Management Objective 6.2: Ensure that the necessary capacity within all spheres of government is available to conduct compliance and enforcement under the ICM Act

Priority 7: Provision of coastal information and research

Goal: To have an effective national information system and research framework to support integrated coastal management, that is able to promote a dedicated, cooperative, coordinated and integrated planning management approach accessible to all stakeholders
Management Objective 7.1: Ensure that information in support of integrated coastal management is collated, maintained and managed in a responsible manner, and made accessible to all stakeholders
Management Objective 7.2: Conduct relevant research in support of coastal management in collaboration with various role players, nationally and

Priority 8: Strengthening awareness, education and training to build capacity

Goal: Ensuring that the general public and decision-makers are appropriately aware, educated and trained, where applicable, so as to be able to take collective responsibility for managing and protecting the coastal environment in a manner that is socially, economically and ecologically justifiable
Management Objective 8.1: Develop enabling mechanisms for the effective implementation of coastal awareness and education for South Africa, including empowerment of coastal communities
Management Objective 8.2: Develop enabling mechanisms for effective training to build capacity in coastal management in South Africa

Priority 9: Strengthening partnerships for ICM

Goal: To ensure that institutional partnerships and mechanisms for ICM are established amongst all sectors and spheres of government, the private sector and civil society in a collaborative, problem-solving and consensus-building manner that promotes dialogue, cooperation, coordination and integration
Management Objective 9.1: Develop enabling formal, institutional mechanisms for promotion and coordination of ICM
Management Objective 9.2: Establish and strengthen collaborative partnerships with coastal local structures for empowerment, knowledge sharing and implementation of coastal management
Management Objective 9.4: Facilitating partnerships towards the long-term integration of the principles of integrated coastal management in all sectors of South African economy

The priorities, together with the national management objectives, as well as the various actions and performance indicators presented in this NCMP constitute national governments' (DEA's) commitment to implementing ICM in South Africa over the next five years (2015-2019).


Acronyms

Acronyms

ASCLME	Agulhas Somali Current Large Marine Ecosystem
A&E	Awareness and Education
AET	Awareness, Education and Training
Air Quality Act	National Environmental Management: Air Quality Act (Act No. 39 of 2004)
AsgiSA	Accelerated and Shared Growth Initiative of South Africa
BCLME	Benguela Current Large Marine Ecosystem
Biodiversity Act	National Environmental Management: Biodiversity Act (Act No. 10 of 2004)
BLSMS	Boat Launch Site Monitoring System
CAPE	Cape Action for People and the Environment
CARA	Conservation of Agricultural Resources Act (Act No. 43 of 1983)
CERM	Consortium for Estuarine Research and Management
CMP	Coastal Management Programme
CSIR	Council for Scientific and Industrial Research

DAFF	Department of Agriculture, Forestry and Fisheries
DEA	Department of Environmental Affairs
DEAT	Department of Environmental Affairs and Tourism
Defence Act	Defence Act (Act No. 42 of 2002, amended 2010)
DMR	Department of Mineral Resources
DoT	Department of Transport
DST	Department of Science and Technology
DPLG	Department of Provincial and Local government and municipalities
DPW	Department of Public Works
DWA	Department of Water Affairs
DWS	Department of Water and Sanitation (referred to as DWA at time of publication)
DWAF	Department of Water Affairs and Forestry
EAF	Ecosystems Approach to Fisheries Management
EEZ	Exclusive Economic Zone

EIA	Environmental impact assessment
EIF	Environmental Integrity Framework
EMPlans	Environmental management plan
EMProgrammes	Environmental management programmes
Energy Act	National Energy Act (Act No. 34 of 2008)
ERR	Environmental Risk Report
EFZ	Estuarine Functional Zone
FAO	Food and Agriculture Organisation of the United Nations
GIAMA	Government Immovable Asset Management Act (Act No. 19 of 2007)
GIS	Geographic Information System
GPA	Global Programme of Action for the Protection of the Marine Environment from Land-based Activities
ha	Hectare
HCDS	Human Capital Development Strategy
HWM	High-water mark

ICM	Integrated Coastal Management
ICM Act	National Environmental Management: Integrated Coastal Management Act (Act No. 24 of 2008)
IDP	Integrated development plan
IMMS	International Marine Mining Society
IP	Implementation Plan
IUCN	The World Conservation Union
KZN	KwaZulu-Natal
LME	Large marine ecosystem
Marine Traffic Act	Marine Traffic Act (Act No. 2 of 1981)
Maritimes Zones Act	Maritimes Zones Act (Act No. 15 of 1994)
MARPOL Act	International Convention for Prevention of Pollution from Ships Act (Act No. 2 of 1986)
MEC	Member of the Executive Council of a coastal province responsible for designated provincial lead agency in terms of the ICM Act
Merchant Shipping Act	Merchant Shipping Act (Act No. 57 of 1951)
MINMEC	Standing intergovernmental body consisting of the Minister of Environmental Affairs, members of the provincial Executive Councils (MECs) responsible for environmental management functions and South African Local Government Association (SALGA)

MINTEC	Standing intergovernmental body that provides technical input into the MINMEC. The MINTEC consists of the Director-General of the DEA, the heads of the provincial departments responsible for environmental management functions, and SALGA
MLRA	Marine Living Resources Act (Act No. 18 of 1998, amended 2000)
MPRD Act	Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)
MSL	Mean sea level
MSP	Marine Spatial Planning
Municipal Systems Act	Municipal Systems Act (Act No. 32 of 2000)
NBSAP	National Biodiversity Strategy and Action Plan
National Building Regulations and Standard Act	National Building Regulations and Building Standards Act (Act No. 103 of 1977 amended 1982, 1984, 1989, 1995, 1996)
National Health Act	National Health Act (Act No.61 of 2003)
NBA 2011	National Biodiversity Assessment 2011 (South Africa)
NCMP	National Coastal Management Programme
NEMA	National Environmental Management Act (Act No. 107 of 1998)

NEMPAA	National Environmental Management: Protected Areas Amendment Act (Act No. 21 of 2014)
NMMU	Nelson Mandela Metropolitan University
NPAES	National Protected Area Expansion Strategy
NPC	National Planning Commission
NPoA	National Programme of Action to protect the marine environment from land-based activities (South Africa)
NQF	National Qualifications Framework
NRF	National Research Foundation
NSDI	National Spatial Data Infrastructure
NSDP	National Spatial Development Perspective
NSSD 1	National Strategy for Sustainable Development and Action Plan 2011–2014
NWA	National Water Act (Act No. 36 of 1998)
NWMS	National Waste Management Strategy
OCSDI	Ocean and Coastal Spatial Data Infrastructure
PAI Act	Promotion of Access to Information Act (Act No. 2 of 2000, amended Act No. 54 of 2002)

PAR	Performance Assessment Report
Protected Areas Act	National Environmental Management: Protected Areas Act (Act No. 57 of 2003)
SABS	South African Bureau of Standards
SADCO	Southern African Data Centre for Oceanography
SAEO	South Africa Environment Outlook
SAHRA	South African Heritage Resources Agency
SALGA	South African Local Government Association
SAMSA	South African Maritime Safety Authority
SAMSA Act	South Africa Maritime Safety Authority Act (Act No. 5 of 1998)
SAMSM&CP	South African Molluscan Shellfish Monitoring and Control Programme
SANBI	South African National biodiversity Institute
SANCOR	South African Network for Coastal and Oceanic Research
SANParks	South African National Parks
SASSI	South African Sustainable Seafood Initiative
SDF	Spatial development framework

SDI Act	Spatial Data Infrastructure Act (Act No. 54 of 2003)
Seashore Act	Seashore Act (Act No. 21 of 1935, as amended 1984, 1993)
Sea Fishery Act	Sea Fishery Act (Act No. 12 of 1988)
SIPS	Port Expansion Strategies
SOP	Standard Operating Procedures
SPLUMA	Spatial Planning and Land Use Management Act (Act No. 16 of 2013)
TAC	Total Allowable Catch (TAC)
TAE	Total Allowable Effort (TAE)
The Constitution	The Constitution of the Republic of South Africa Act (Act No. 108 of 1996)
Transnet NPA	Transnet National Ports Authority
Waste Act	National Environmental Management: Waste Act (Act No. 59 of 2008)
WESSA	Wildlife and Environment Society of South Africa
WG8	Working Group 8 (Oceans and Coasts) of MINTEC
WRC	Water Research Commission
WWF	World Wildlife Fund

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Chapter 1: Introduction

1. Introduction

1.1. Background

Almost half of the entire planet's population is concentrated along the coast, placing an ever-increasing burden on coastal habitats and resources to meet the social and economic demands of a growing human populace.

Coastal zones throughout the world have historically been among the most heavily exploited areas because of their rich resources. In coastal countries today, an estimated half of the total population live in coastal zones, and migration from inland areas to the coast is increasing. Not surprisingly, there is also a rising conflict between the need for immediate consumption or use of coastal resources and the need to ensure the long-term supply of those resources. In many countries this conflict has already reached a critical stage, with large parts of the coastal zone polluted from local or inland sources, wetlands drained, estuarine ecosystem health compromised and beaches long since ruined for human enjoyment. Notwithstanding these impacts, the enjoyment of the coastal zone by a wide variety of users and the view of the coast as a national asset and legacy for future generations is of the utmost importance for the promotion of its current and future sustainable use.

The right to an environment that is protected for the benefit of both present and future generations of South Africans – which ensures the perpetuation of their health and well-being – is enshrined in the Constitution of the Republic of South Africa (1996). Section 24 of the Constitution requires the promulgation of legislation and appropriate instruments that promotes conservation, prevents pollution and ecological degradation, and ensures that the social and economic growth of our nation progresses with due consideration of the need to secure ecologically sustainable development and natural resources.

In answer to this need, the National Environmental Management Act (No. 107 of 1998) (NEMA) was promulgated in 1998. Acting as a broad "umbrella" legislative instrument, NEMA's primary objectives include the promotion of a co-ordinated approach to matters affecting the environment by ensuring that co-operative governance as well as co-ordinating mechanisms and institutions are implemented as key principles for the effective management of the environment of South Africa.

These principles, translated within the context of coastal management, were captured in the White Paper for Sustainable Coastal Development in South Africa (DEAT, 2000) (White Paper), which signified the first fundamental shift in thinking, ushering in a new era for adopting an integrated approach to matters pertaining to the coast.

According to the White Paper, past coastal management efforts did not recognise the value of coastal ecosystems as a cornerstone for development. Coastal management was also resource-centred rather than people-centred, and attempted to control, rather than promote the sustainable use of coastal resources, with a lack of recognition of the

diversity of our coast. Furthermore, management of the coastal area was fragmented and uncoordinated, and was undertaken largely on a sector-specific basis, with an emphasis on maximising coastal resource use on a single sector basis and the exclusive use of areas and resources. In recognition of these shortcomings the government of South Africa elected to embrace a holistic approach, known as Integrated Coastal Management (ICM). The purpose of ICM is to maximize the benefits provided by the coastal zone and to minimize the conflicts and harmful effects of activities upon each other, on resources and on the environment.

It starts with an analytical process to set objectives for the development and management of the coastal zone. All of the historical challenges mentioned above are contradictory to the objectives of ICM and therefore the Integrated Coastal Management Act (No. 24 of 2008) (hereafter referred to as the "ICM Act") has been promulgated, to establish the statutory requirements for integrated coastal and estuarine management in South Africa. ICM also prescribes the inclusion of norms, standards and policies for further elaboration and guidance on coastal management provisions within legislation and specific scenarios and/or issues. One of the many reasons for the adoption of this form of management is to promote the conservation of the coastal environment, and to maintain the natural character of coastal landscapes and seascapes. The purpose of ICM is to ensure that the development and use of natural resources in the coastal zone is socially and economically justifiable, as well as being ecologically sustainable.

The ICM Act contains a variety of tools that can be used as important tools to ensure that:

- The coastal zone is conserved;

- Development is conducted in an environmentally sustainable manner; and
- Transgressions by individuals or groups are dealt with through appropriate measures and/or fines.

Amongst these tools, Coastal Management Programmes (CMPs) are arguably the most powerful integrating instruments. A CMP is a policy directive for the management of the coastal zone, inclusive of strategies and plans for the effective implementation of the ICM Act that will enable organs of state to plan accordingly, to set a course for the environmental future of a nation by addressing the resolution of current management problems and user-conflicts (due to the wide variety of activities and uses of the coast), as well as the long-term development and management of the coastline. CMPs also play the vital role of bringing together the various spheres and sectors of government, private sector activities and community activities on the coast for the effective implementation of ICM over a projected period of time. This is achieved by ensuring that the development and use of natural resources in the coastal zone is done with the best interests of the public and economy, while being ecologically sustainable.

1.2. The value of our coast

South Africa's coastal environment is a rich and diverse national asset, providing important economic and social opportunities for the human population. As a result, coastal populations have developed a strong reliance on these

resources for commercial opportunity and gain, food, recreation, and transport. Also, coastal resources have facilitated job creation and general economic upliftment in coastal regions.

Historically, the industrial centre in South Africa was in the interior of the country near the gold mines along the Witwatersrand. However, over the years the country's economy evolved from a strong dependence on primary extraction activities (e.g. mining) to increased manufacturing and service industries to lately becoming increasingly dependent on port facilities for the export of such processed products. Consequently, the coastal cities have developed and expanded rapidly.

Since the 1980s the major coastal cities of Cape Town, Port Elizabeth, East London, Durban, and Richards Bay (Figure 1) have experienced the fastest economic growth of all cities in the country (DEAT, 2006).

The coastal environment of South Africa is therefore:

- An *economic place* where commercial, recreational and subsistence activities take place;
- A *social place* where people enjoy themselves and come to relax and find spiritual peace; and
- A *biophysical place* where land, sea and air meet and interact, and where beaches, sand dunes, rocky headlands and estuaries support a wide range of coastal biodiversity.

Importantly, these three components are interrelated with the social and economic value of coastal systems, largely depending on the health and productivity of the biophysical component.

The estimated contribution of coastal resources (without regulatory services) to the South African economy is in the order of some R 57 billion (US$5.7 billion) (UNOPS, 2011). The direct economic benefits from coastal resources in South Africa are estimated to be approximately 35% of the country's annual gross domestic product (GDP). Direct economic benefits include the marine fishing industry, port and harbour development and attractive lifestyles, and recreational and tourism opportunities offered by a coastal location. Furthermore, the coast provides indirect economic benefits such as the erosion control provided by coastal features such as dunes and high cliffs which protect built and natural features along the coast (including roads, buildings and farmlands) from the damaging effects of waves and wind, and it allows waste assimilation, detoxification and recycling through coastal wetlands, forests and grasslands.

These indirect benefits account for an additional 28% of the country's GDP. In addition to the economic benefits, the coastal environment provides enormous social benefits that many people enjoy. For some people, the coast is a place of cultural or spiritual significance and many South Africans also see the coast as a place of recreation. It supports coastal population livelihoods, by providing building materials, food and other benefits that are difficult to measure in monetary terms. The coast also provides many educational and scientific opportunities which are not easily

quantifiable in monetary value. Tourism, recreation and leisure activities have developed into a global growth industry and South Africa's coast has particular value in this regard.

1.3. The context of Coastal Management Programmes

While the promulgation of the ICM Act, for the first time mandated the development of Coastal Management Programmes (CMPs) and institutions for cooperative coastal governance, South Africa already has several statutes governing aspects of coastal management. These include at least 19 international obligations and agreements, 11 national policies (other White Papers) and approximately 46 national acts (Taljaard, 2011). The most recent overviews on international and national legislation pertaining to South Africa's coastal and marine environment are provided by Glavovic and Cullinan (2009) and McLean and Glazewski (2009). A summary of the key international obligations and agreements is provided in Appendix B.

The ICM Act views CMPs as the most important tool for integrating coastal management in South Africa. All spheres of government – national, provincial and municipal - must establish and implement CMPs. Provincial CMP's must be consistent with the National Coastal Management Programme (NCMP), as well as the National Estuarine Management Protocol. Municipal CMP's, applying to a particular coastal municipality, must be consistent with the NCMP and that of the province in which they are located. Therefore, nested within the NCMP is the various provincial coastal management programmes (CMPs), and within these, the various municipal CMPs (developed at the district municipal level). These CMPs specifically apply to the coastal zone within the various jurisdictions (Figure 1).

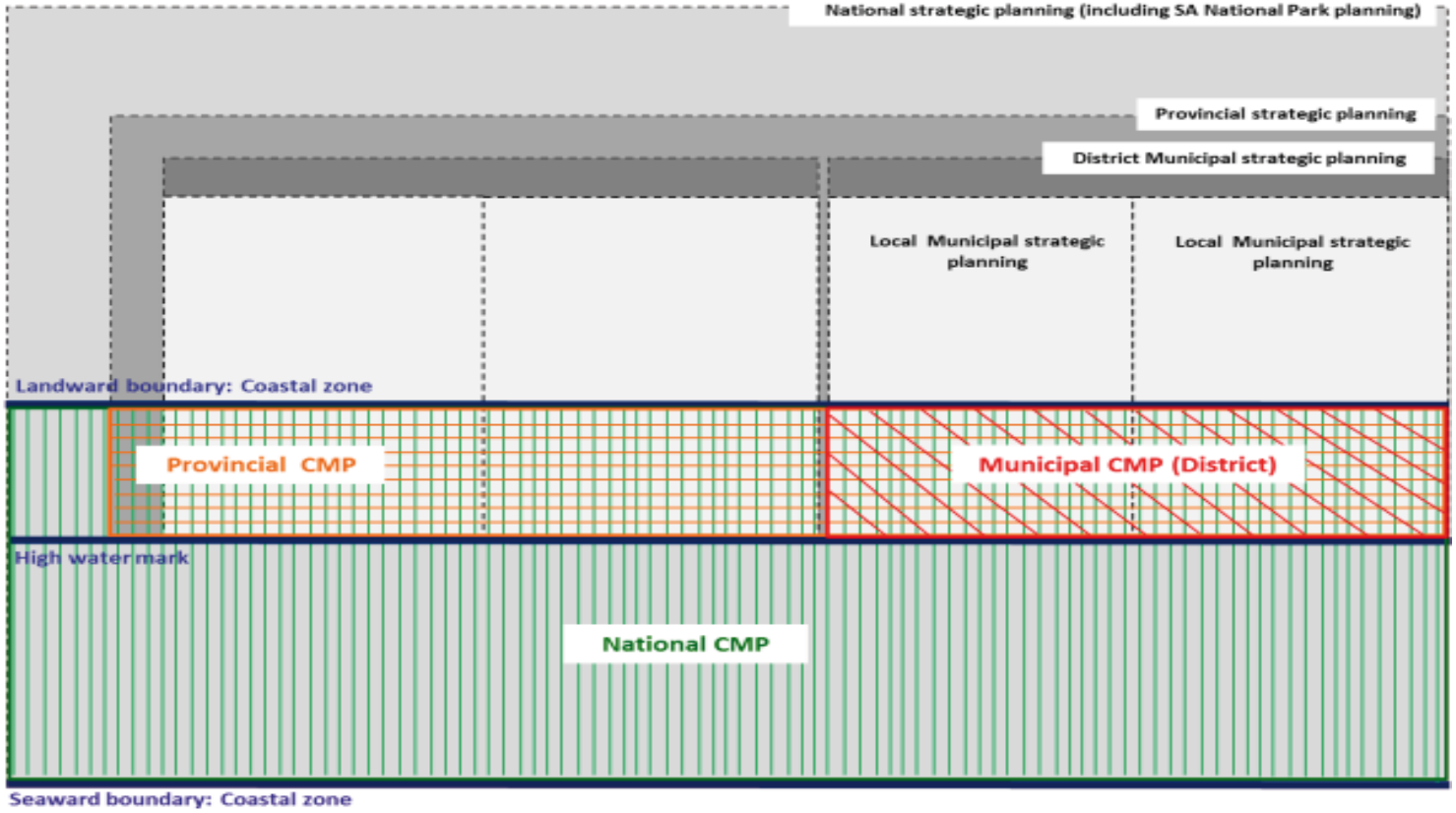


Figure 1: Conceptual illustration depicting the context of coastal management programmes in relation to other national, provincial and municipal strategic planning

For example, provincial CMPs address strategic planning and implementation in the coastal zone in the provinces, stretching from the HWM up to the landward boundary of the coastal zone. Municipal CMPs similarly address planning and implementation in the coastal zone within the district municipal boundaries, again stretching from the HWM up to the landward boundary of the coastal zone.

Further, larger strategic planning processes at national, provincial and municipal levels, must embed CMPs for the coastal zone in order to address the legal requirements of the ICM Act (Figure 1). For example, the municipal integrated development plan, spatial planning framework and zoning schemes must take into account and incorporate the provisions of the municipal CMP. Similarly, provincial spatial and development planning must take into account and incorporate the provisions of the provincial CMP, which in turn must be aligned with the NCMP (including coastal planning schemes).

1.4. The Purpose of the National Coastal Management Programme

With specific reference to the NCMP the ICM Act (Section 45) stipulates that the programme must –

(a) "Be a policy directive on Integrated Coastal Management;

(b) Provide for an integrated, coordinated and uniform approach to coastal management by organs of state, in all spheres of government, non-governmental organisations, the private sector and local communities".

More specifically the Act (Section 45) states that the NCMP must include the following components:

- A national vision for coastal management, including sustainable use of coastal resources;
- National coastal management objectives;
- Priorities and strategies to achieve the objectives;
- Performance indicators to measure progress with achieving objectives;
- Norms and standards for the management of the coastal zone or specific components thereof; and
- A framework for cooperative governance in which the responsibilities of organs of state and other stakeholders (including previously disadvantages communities that rely on coastal resources for their livelihood) are identified. The framework should include mechanisms for coordination between these groups to enable integrated coastal management.

In other words, the NCMP provides the direction and guidance towards a structured and standardised approach to coastal management in South Africa, including an appropriate cooperative governance framework– a critical element for effective implementation of integrated coastal management. However, the NCMP is an iterative, dynamic processwhere priorities for coastal management must be periodically evaluated to improve performance and revise strategies. As a result South Africa's NCMP is not a once-off programme that is "cast in iron" Indeed, this NCMP identifies national strategies, and norms and standards still to be developed towards achieving the vision and management objectives. For this reason the ICM Act (Section 44) requires that the Minister of Environmental Affairs review the programme at least once every five years or, and, when necessary, amend the programme.

1.5. The National Coastal Management Programme Development Process

The development of this NCMP did not happen within a coastal management void. Indeed, South Africa had several statutes, management programmes (e.g. DEAT, 2008) and initiatives in place that already addressed aspects of coastal management (these are dealt with in greater detail in the Situation Analysis chapter). In this light, the intention here was not to start completely afresh, but rather to consider existing management programmes and initiatives and to use those as basis for the development of the NCMP within the realm of the ICM Act. The process followed in the development of this NCMP is schematically illustrated in Figure 2.

First a framework for coastal management in South Africa was proposed. This framework identifies key components or elements of an integrated coastal management programme presenting the structure – the integrated, coordinated and uniform approach to coastal management. The preparation of a draft situation analysis on coastal management in South Africa followed, including the identification of future needs. The proposed framework and draft situation analysis were then presented at stakeholder workshops in each of the four coastal provinces, as well as at a national stakeholder workshop. The aim of these workshops was to consult on the proposed framework for coastal management, as well as the finding of the draft situation analysis.

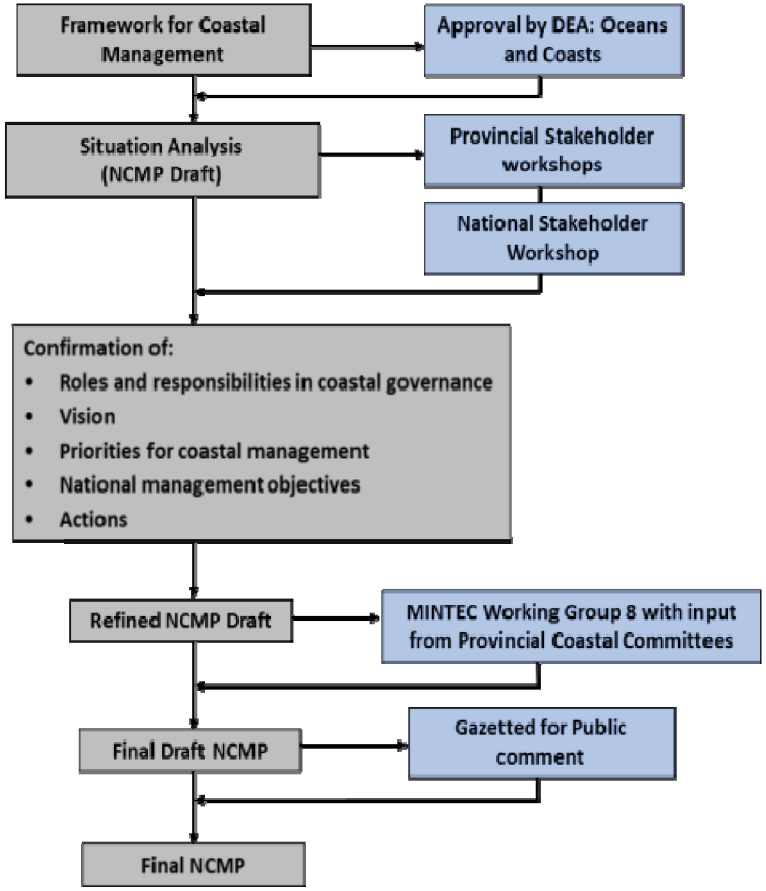


Figure 2: The NCMP development process

Further, the aim was to gauge stakeholders' priorities for coastal management. The detailed findings of the stakeholder consultation process are documented in a supporting document to this NCMP (DEA, 2013a). Following the stakeholder consultation process, the framework for coastal management was refined; a national vision for coastal management in South Africa was derived, as well as the management objectives to achieve the

vision. A list of priorities - linked to each of the management objectives – was then identified guided by results from the situation analysis and priorities emerging from the stakeholder workshops. A preliminary list of indicators for coastal management - in order to monitor progress in terms of achieving the management objectives, and ultimately, the vision for coastal management in South Africa - was also derived. This national vision, management objectives and the priorities, serve as the broad directive for coastal management in South Africa, giving guidance to provinces and municipalities in the development of their coastal management programmes - supporting a synchronised approach to coastal management. However, the specific foci of provincial and municipal management programmes may vary, as defined by the site-specific coastal management issues in various provinces and municipalities. Finally, specific actions for the NCMP 2013 were distilled for which DEA: Oceans and coasts will develop detailed implementation plans, in collaboration with others where appropriate.

The above was compiled into a draft NCMP document and presented to MINTEC Working Group 8 (WG8) for review. WG8 deals with oceans and coasts and is attended by key national agencies, representatives from provincial lead agents for ICM, science councils, and conservations bodies amongst others. Pending the establishment of an official national institutional structure for coastal management, under the ICM Act, WG8 fulfilled the role. Comments from WG8 were incorporated into a final draft NCMP document that was gazetted for public comments. Finally, public comments were considered and, where appropriate, incorporated into the final NCMP for South Africa.

1.6. The Framework for Integrated Coastal Management

The framework for integrated coastal management represents the overarching components or elements to be addressed within an integrated coastal management programme - the integrated, coordinated and uniform approach to coastal management (Figure 3). It provides for a holistic and structure manner in which to conduct a situation analysis, and to identify issues and future needs. Management objectives and priorities within a coastal management programme are then typically directed at specific components or elements in the framework that is either lacking or needing improvement – working towards a comprehensive integrated coastal management programme. The framework is presented in a cyclic context as environmental management – including ICM – has an iterative, adaptive approach where the system in incrementally improved as new information and knowledge becomes available. The framework for ICM proposed here are informed by requirements stipulated in the ICM Act, (referring to Section 45), as well as international best practice. While it is widely recognised that ICM is contextual and place-based, commonalities have been distilled from the implementation of ICM worldwide (e.g. Stojanovic et al., 2004; Taljaard et al., 2011).

In ecosystem-based management not only the ecological, but also the economic, social and cultural aspects of the resource become important (UNEP/GPA, 2006). All these aspects should be reflected in the **vision** for the coast.Thus, the vision should not only reflect ecosystem protection (i.e. ecological aspects) but also the key opportunities for sustainable coastal development (i.e. social, cultural and economic aspects). **Objectives** direct the focus of coastal management effort in order to achieve the vision. Elucidation of jurisdictional space (i.e. the applicable space within which the jurisdiction of coastal management and coastal management programmes must be applied) for management comprises another key component – specifically the delineation of coastal management units (Halpern et al. 2008).

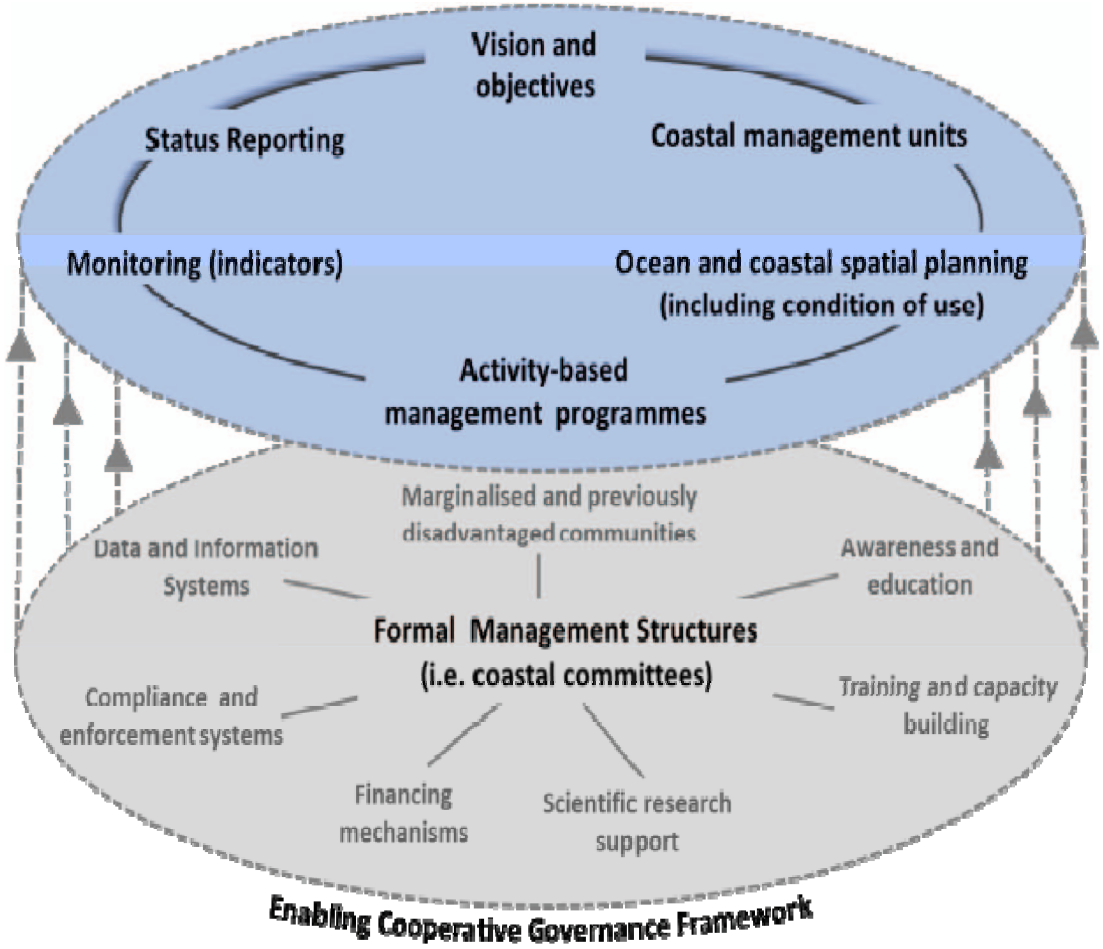


Figure 3: A framework for integrated coastal management in South Africa

Coastal Management units can be delineated at regional and national scales, as well as at the provincial and municipal (local) level (see Figure 4). Demarcation of

the coastal management units of the local/municipal area is challenging because most of the threats posed by intensifying human activities and ecosystem change cannot necessarily be dealt with by managing river basins, coastal zones and larger marine ecosystems in isolation (UNEP/GPA, 2006).However, it does make practical sense to limit the size of the local coastal management unit. The boundaries of a coastal management unit stipulate the geographical space at the core of the management programme. However, this does not imply that activities outsides these boundaries - which may impact on the geographical space – are excluded. These are typically addressed through the activity-based management programmes in the framework (e.g. stormwater runoff into the coastal zone but originating outside the geographical boundaries of the coastal zone). Due to a burgeoning demand for ocean and coastal space, **ocean and coastal spatial planning**(i.e. strategic planning and mapping of coastal and ocean use), is increasingly becoming a necessity (e.g. Ehler and Douvere, 2009). Spatial planning in the coastal zone, therefore, is not a separate process rather it is an integral component within the larger integrated coastal management framework.

In coastal environment **activity-based management programmes**, involving the management specific activities,often show a stronger sectoral focus (i.e. activities are managed by different governing authorities through activity-specific statutory systems) where the

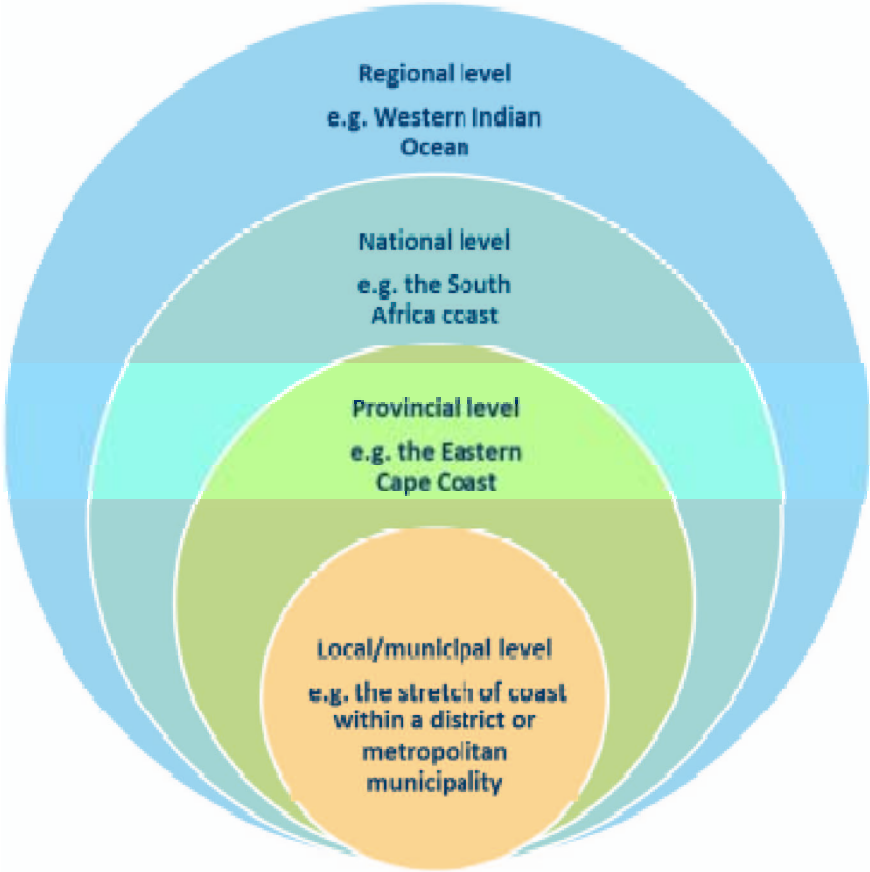
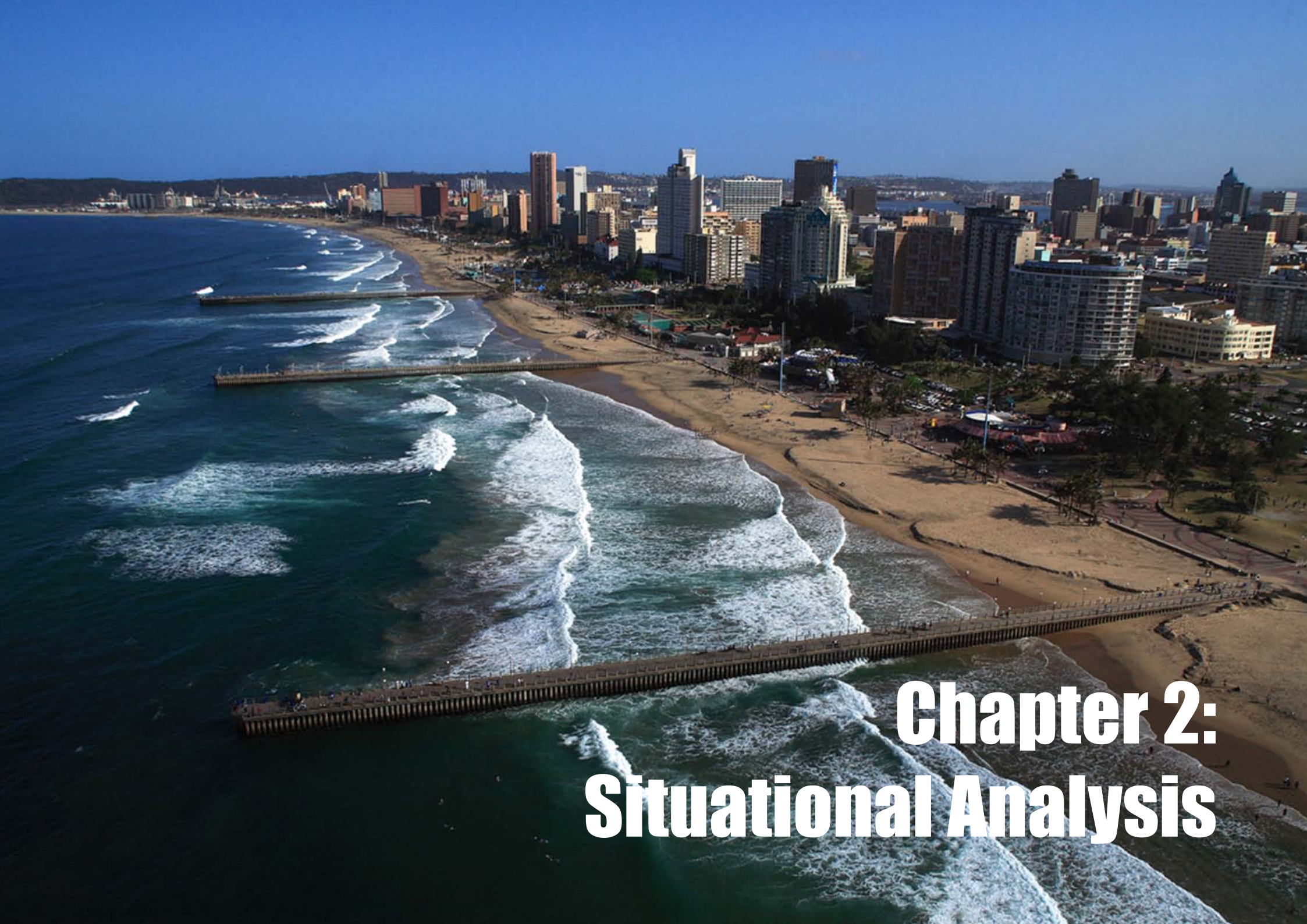


Figure 4: Generic Illustration of coastal management units at various tiers within which respective coastal management programmes may apply

expertise to develop and manage these programmes typically resides. The framework, therefore, embeds activity-based management programmes but subservient to the vision, management objectives, and ocean and coastal spatial planning outcomes. The selection of indicators and implementation of **monitoring**programmes are fundamental to coastal management providing the means of continuously assessing progress toward achieving the vision and management objectives.Monitoring comprises "a continuous function that uses the systematic collection of data on specified indicators to provide management and the main stakeholders of an ongoing development intervention with indications of the extent of progress and achievement of objectives and progress in the use of allocated funds" (Kusek and Rist, 2004). **Status reporting** (e.g. State of Coast reporting) evaluates the findings of monitoring programmes to inform subsequent reviews and to inform future strategic planning processes (coastal management is an incremental, adaptive management process – "learning-by-doing").

Implementation of coastal management requires and enabling **cooperative governance framework**. While formal coastal management institutions (e.g. coastal management committees) remain central to a cooperative governance framework, a governance framework extends wider requiring additional partnerships with government, business, civil society, and the scientific and professional communities. Seven such "support elements" for effective cooperative governance are considered relevant to the South Africa situation as illustrated in Figure 3. Cicin-Sain and Knecht (1998) argue that integrated coastal management cannot survive over the long-term without the support of the public (i.e. society outside government) Further human capital development and empowerment are critical to enhance the capacity of institutions and individuals to undertake effective coastal management programmes.



Chapter 2: Situational Analysis



1. Situational Analysis

This chapter presents a situation analysis related to coastal management in South Africa. A brief overview of the coastal environment and the status of coastal ecosystems are provided. Thereafter, the status of coastal management is assessed using the framework for coastal management (Chapter 1.6) as template. Specifically future needs are identified taking into account the status of coastal ecosystems, feed-back from the stakeholder consultation process, as well as outstanding statutory requirements. This knowledge is then considered in the definition of environmental objectives and priorities for this NCMP.

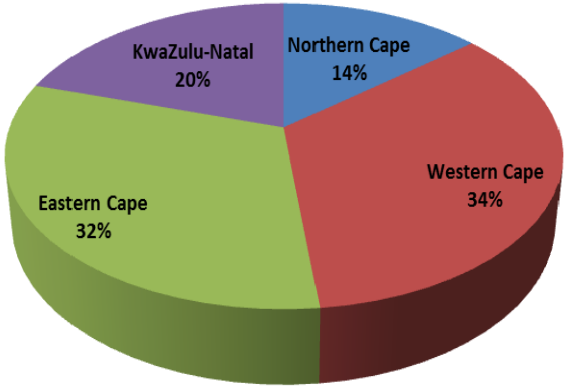
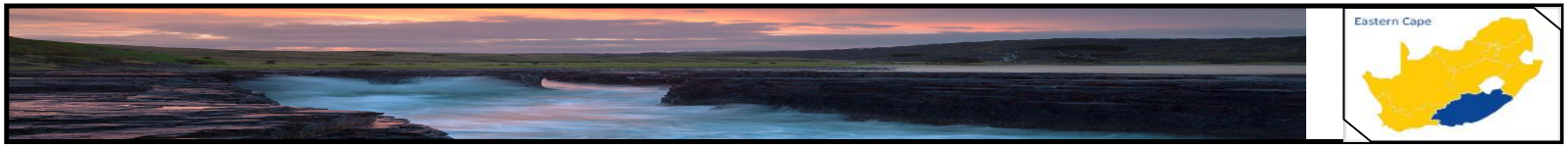


Figure 5: Percentage of each coastal province to the total coastline length of SA

2.1. Geography

South Africa is a coastal nation, with oceans on its shores from the northwest down south and up again to the northeast. Four of its nine provinces lie on the coast: the Northern Cape to the northwest, which abuts the Atlantic Ocean, then the Western Cape, which shares both the Atlantic and Indian Ocean, and, towards the east, the Eastern Cape and KwaZulu-Natal, which both enjoy the warm waters of the Indian Ocean (SA Tourism, 2012).

2.1.1. The Eastern Cape



The Eastern Cape lies in the southeast of South Africa.

- Roughly the size of Uruguay
- Land area: 168 966 square kilometres
- Capital city: Bhisho
- Provincial borders: Western Cape to the west, Northern Cape to the northwest, Free State to the north and KwaZulu-Natal to the east
- National borders: Kingdom of Lesotho to the north
- Ocean borders: Indian Ocean, to the southeast

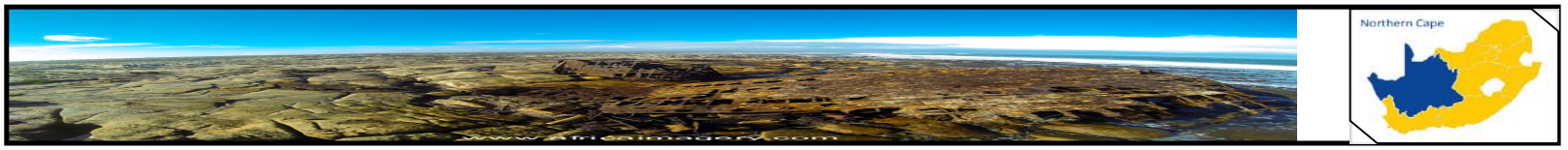
2.1.2. Kwa-Zulu Natal



KwaZulu-Natal lies on the eastern coastline of South Africa.

- Roughly the size of Portugal
- Land area: 94 931 square kilometres
- Capital city: Pietermaritzburg
- Provincial borders: Eastern Cape to the southwest, the Free State to the west and Mpumalanga to the north
- National borders: Kingdom of Lesotho to the west, and Swaziland and Mozambique to the north
- Ocean borders: Indian Ocean to the south

2.1.3. The Northern Cape



The Northern Cape is in the northwest is South Africa's largest and driest province.

- Slightly smaller than Japan

- Land area: 372 889 square kilometres
- Capital city: Kimberley
- Provincial borders: the Western Cape to the south, the Eastern Cape to the southeast, the Free State to the east, and North West to the northeast
- National borders: Namibia and Botswana, to the north
- Ocean borders: Western Atlantic Ocean

2.1.4. The Western Cape



The Western Cape is at the southernmost point of the African continent.

- Roughly the size of Greece
- Land area: 129 462 square kilometres
- Capital city: Cape Town
- Provincial borders: the Northern Cape to the north and Eastern Cape to the east
- National borders: None
- Ocean borders: Western Atlantic Ocean on its western shoreline and Indian Ocean in the south



2.2. The Natural Coastal Environment

2.2.1. Brief Description

South Africa's coastline stretches from the Orange River on the west coast to Ponta do Ouro on the east coast, a distance of approximately 3 100 km (Figure 5). Further there are nearly 300 river catchments draining into the coastal zone through functional estuaries. These estuaries constitute much of the sheltered marine habitat along South Africa's coastline and consequently they are important for biodiversity as well as socio-economic development (Van Niekerk and Turpie, 2012). The coast spans three biogeographical regions (or coastal climatic zones), namely the cool temperate west coast, warm temperate south coast and subtropical east coast



Figure 6: Biogeographical regions and currents along the South African coast



(Brown and Jarman, 1978).

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The coastal environment of South Africa spans two of the 64 large marine ecosystems (LMEs) of the world, namely the Benguela Current large marine ecosystem (BCLME) and the Agulhas Somali Current (ASCLME) (NOAA, 2013). LMEs are relatively large areas of ocean space, approximately 200 000 km² or greater, adjacent to the continents where primary productivity in coastal waters is generally higher than in open ocean areas. The Benguela Current on the west coast comprises a general equator-ward flow of cold water in the South Atlantic gyre and dynamic wind-driven upwelling close inshore at certain active upwelling sites (Shannon, 1985). The temperature regime in the Benguela Current region is strongly seasonal, with average surface temperatures ranging between 21°C and 15°C in summer and between 17°C and 13°C in winter (Boyd and Agenbag, 1984), broadly reflecting changes in insolation, upwelling, vertical mixing and horizontal advection (Shannon, 1985). As a result of upwelling the west coast is characterised by high nutrient supplies to the upper layers resulting in high primary production (i.e. dense plankton blooms). Decay of large deposits of organic-rich matter along the west coast reduces the dissolved oxygen content of the bottom waters to



extremely low levels in the mid and inner continental shelf (Lombard et al., 2004).The Agulhas Current flows strongly southward along the east coast. Sea surface temperatures in the region show a decline of about 2°C moving from north the south, with maximum average temperatures ranging from 28°C (summer) and 23°C (winter) in the north and from 25°C (summer) and 21°C (winter) in the south (Lutjeharms, 2006). Compared to the west coast, primary production is much lower owing to the warm, nutrient-poor tropical waters introduced from the equatorial region of the western Indian Ocean. Coastal waters, therefore, are typically blue and clear (Lombard et al., 2004), except in areas adjacent to larger, turbid river systems such as the larger systems located along South Africa's east coast in the sub-tropical biogeographical region (Figure 1).Along the south coast, upwelling of nutrient-rich sub-photic water occurs along the shelf break and at promontories along the southern coastline, creating an intensive, dynamic mixing region, intermediate in terms of temperature and productivity between the BCLME and ASLME (Lombard et al., 2004).

The coastal zone of South Africa comprises various types of benthic substate including several sandy, rocky and mixed substrata (Sink et al., 2012). The distribution of habitat types can be partly explained by geography, likely reflecting large-scale patterns in coastal geology. The west coast is characterised by very heterogeneous substrates with marked contrasts between rocky cliffs, long sandy beaches, extremely sheltered deep bays and highly exposed open coasts. The majority of South Africa's long dissipative beaches are found in along this stretch of coast. The south coast comprises largely a series of log spiral bays (e.g. Mossel Bay, Plettenberg Bay and Algoa Bay) interspersed with cliffs or long stretches of rocky coastline (e.g. the Tsitsikamma coast). Along the south coast the Alexandria dune field is a unique feature and represents one of the largest active coastal dune fields in the world. Cliffs, rocky shores and intermediate estuarine pocket beaches dominate the transition zone into the east coast. Along the east coast rocky

shores and sandy beaches dominate the south whereas beaches become more intermediate and dissipative-intermediate in the north.The strong oceanographic variability is reflected in the division of the marine biodiversity zones (Branch et al., 1994; Heemstra and Heemstra, 2004; Lombard et al., 2004) in the South African coastal environment depicted in Figures6 and 7.Together with the complex interactions between the oceans and the atmosphere, combined with high variability in rainfall patterns and variety of biodiversity zones, it is not surprising that South Africa displays such high levels of marine biodiversity within such a small area.

Some 10 000 species of plants and animals have been recorded, representing 15% of the global marine species diversity (DEAT,2006).



Figure 7: Bioregions within South Africa's coastal environment

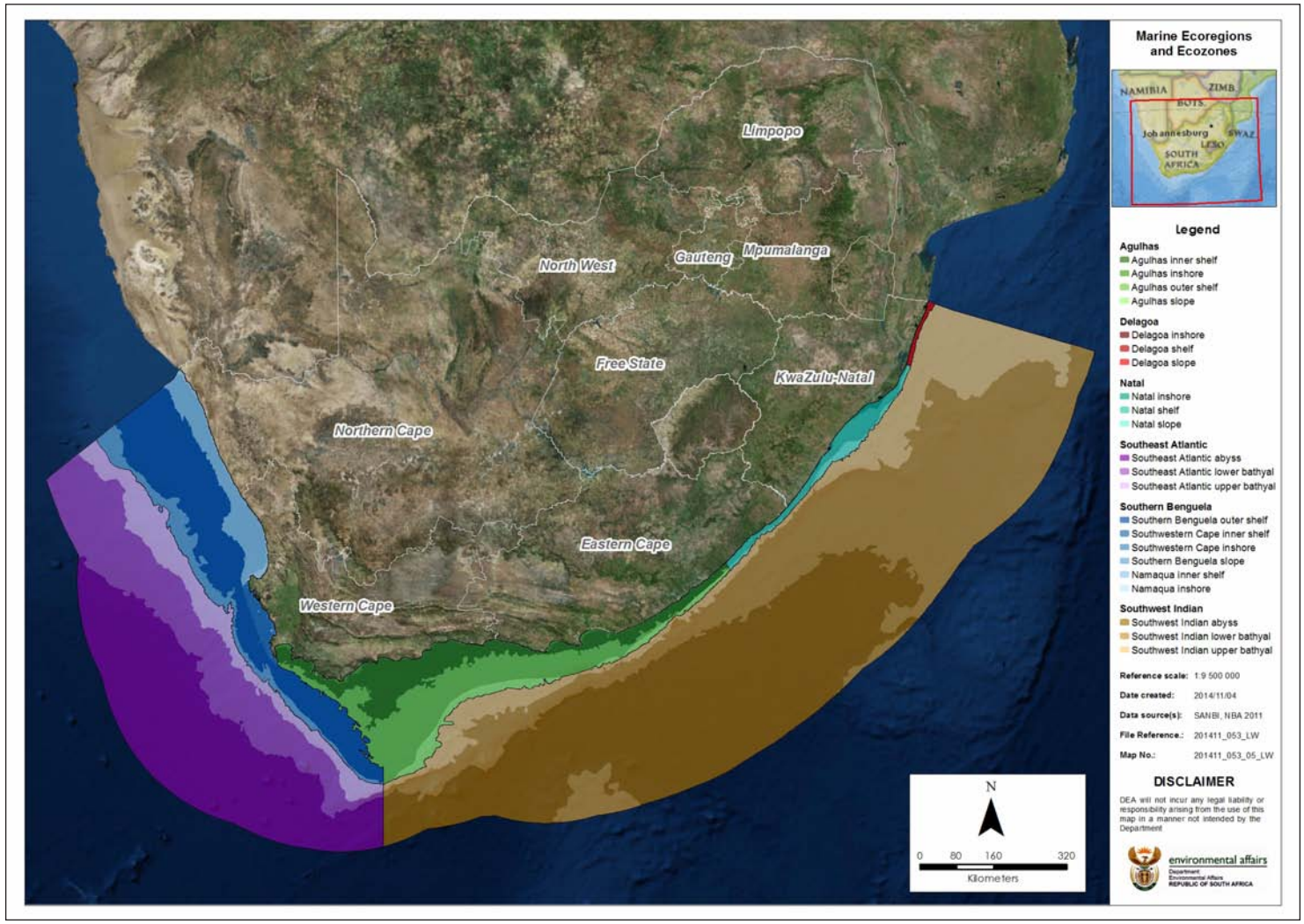

Figure 8: Ecoregions and Eco-zones



In broad terms, plants and animals are distributed according to the distinctive physical characteristics of the different regions. Along the west coast is characterised by high primary productivity and low species diversity, but it supports large populations of some species. The south coast is a transition zone between the east and west coasts, showing characteristics of both areas. Its coastal environment has a high biological diversity and moderate productivity. Along the east coast becomes increasingly warm and tropical northward and is characterised by increasing species diversity but smaller populations (DEAT, 1998).

2.2.2. Health Status of Coastal Ecosystems

The health status of South Africa's coastal ecosystems - summarized here - was extracted from the National Biodiversity Assessment 2011 (NBA 2011) (Driver el al., 2012) and the yet unpublished 2012 Environmental Outlook and the reader is referred to the original documents for details.

The NBA 2011 assessed the ecosystem threat status of status of South Africa's marine and coastal ecosystems (Sink et al., 2012). The ecosystem threat status of 136 marine and coastal habitat types was assessed (Figure 8) included 58 coastal, 62 offshore benthic and 16 offshore pelagic habitat types grouped into a total of 14 broad ecosystem groups.



A total of 64 habitat types (47% of total amount of habitat types) are considered threatened. Seventeen percentage (17%) of these habitat types are critically endangered, 7% endangered, 23% vulnerable and 52% least threatened. Although 47% of habitat types are considered threatened(i.e. critically endangered, endangered and/or vulnerable), the overall area of threatened habitat is less than 30% of the marine and coastal environment considered (i.e. shaded areas in Figures 8 and 9).



Figure 9: Ecosystem threat status of marine and coastal benthic species in South Africa



Figure 10: Ecosystem threat status of marine and coastal pelagic species in South Africa

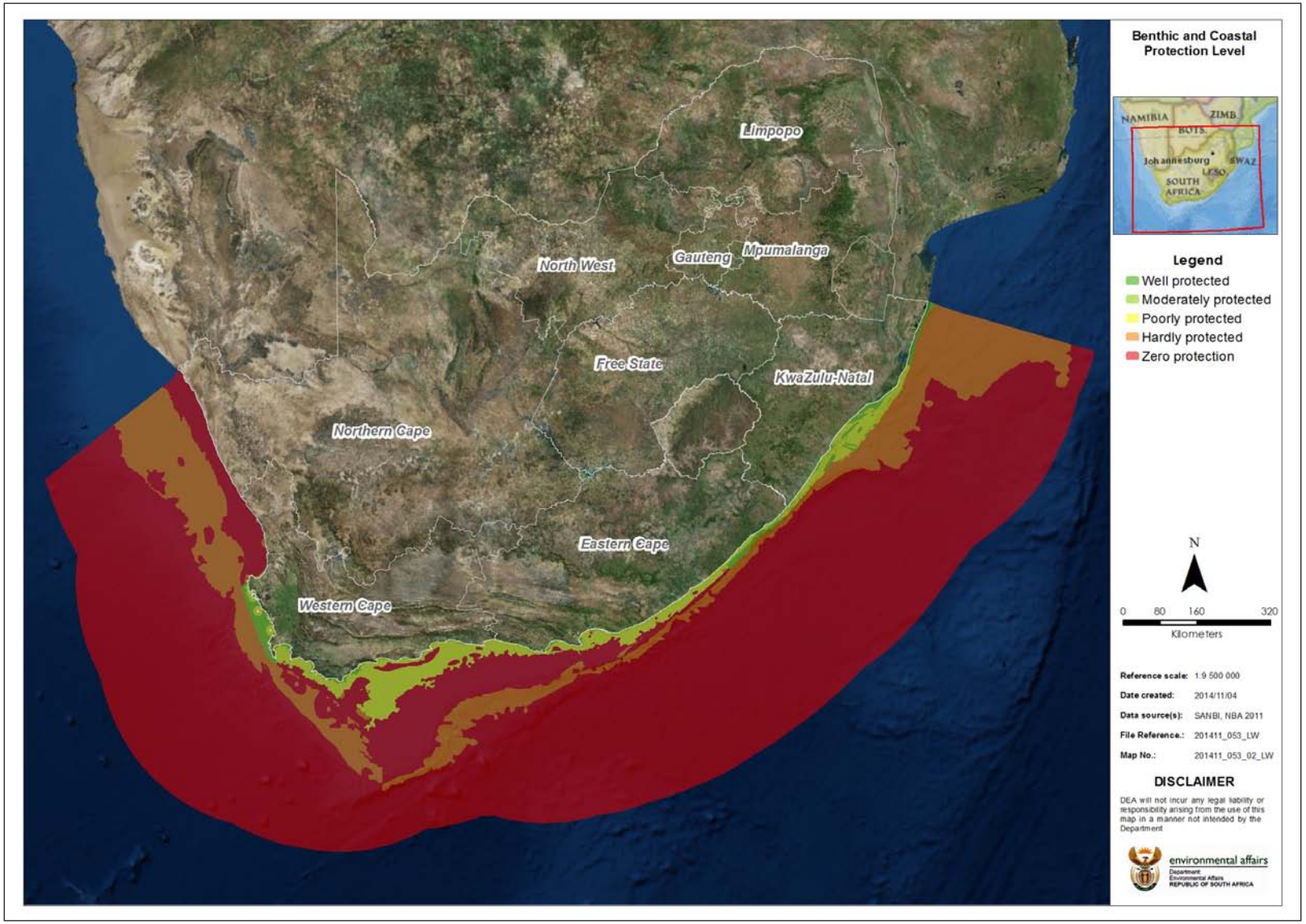

Figure 11: Benthic and coastal protection levels

This reflects the small spatial extent of many threatened habitat types whereas many of the deeper habitat types that have far greater extent are least threatened (Sink et al., 2012). A summary of the threat status of coastal and marine habitat types in South Africa is provided in Figure 11 (Source: Sink et al., 2012).

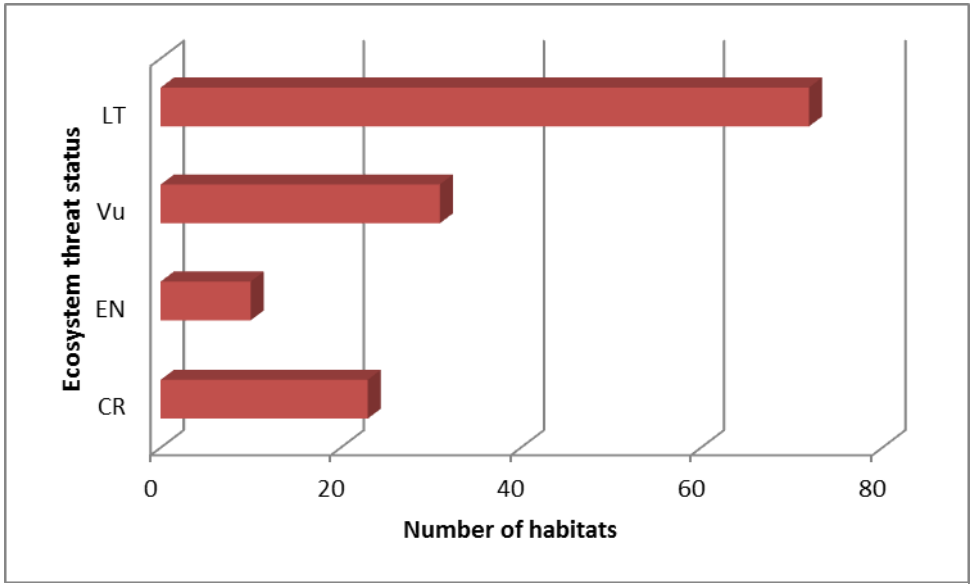

Figure 12: Number of coastal and marine habitat types in each ecosystem threat status category in South Africa (Cr - critically endangered; En – endangered; Vu – vulnerable; LT - least threatened)

The health status of South Africa's estuaries was also determined as part of the NBA 2011 (Van Niekerk and Turpie, 2012). This assessment found that a total of 17% of estuaries were considered to be in excellent state and another 41% were in a good state. About 35% were in a fair state and 7% were in a poor state (Figure 8, Source: Van Niekerk and Turpie, 2012).

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A: Unmodified, Natural				
Langebaan	kwanyana	mzamba	Storms	Keurbooms
Swartlintjies	Lottering	Ngadla	Elandsbos	Ngoma/Kobule
Blue Krans	Lupatana	Ngqwara	Gxwaleni	Krom
Bloukrans	Lwandilana	Nyara	Timba	Ku-Amanzimuzama
butsha	Lwandile	Quko	Unamed2	Ku-Bhula/Mbhanyan
Cunge	Mendu	Schuster	Mendwana	Mkweni
Freshwater poort	Mgwegwe	Sikombe	Nqakanqa	Mnyameni
Gqunqe	Mgwetyana	Sout (Oos	Ku-nocekedwa	
Klipdrifsfontein	Mtentu	sundwana	Nebelele	
Hluleka/Majusini	Kwa-goqo	Msikaba	Beechamwood	
Sitasha	Zalu	Myekane	mpahlane	
B: Largely natural with few modifications				
Bilanhlolo	Kobonqaba	mtentwana	Zinkwasi	Kaaimans
Bira	Ku-Mpenzu	mtolane	Zolwane	kandandhlovu
Blinde	Kwa-Nyambalala	Mtonga	Gqutywa	Kasuka
Ngculura	kwa-suka	Mvutshini	Mpahlanyana	Kiwane
Breede	Kwelera	Umzimpunzi	Mpande	Kleinmond Wes
Bulungula	Kwenxura	Mzumbe	Xora	Kleinemond Oos
Bulura	Lovu	Ncizele	Lilyvale	Knysna
Bushmans	Maalgate	Ngogwane	Ross' Creek	Mpekweni
Cebe	Mapuzi	Ngqinisa	Ncera	Mpenjati
Cefane	Matjies	Nxaxo/Ngqusi	Mlele	Msimbazi
Cwili	Mbizana	Nkanya	Gxulu	Mtakatye
Duiwenhoks	Mbotyi	Noetsie	Goda	Mtana
Elands	Mdumbi	Nonoti	Hlozi	Mtati
Sihlontlweni/Gcini	Mgwalana	Nqabara	Mvubukazi	Mtendwe
Goukamma	Mhlangeni	Ntlonyane	Hickmans	Wilderness
Gqunube	Mhlathuze	Qinira	Tshani	Swartvlei

Groot (Oos)	Mhlungwa	Qolora	Tongazi	Tsitsikamma
Groot (Wes)	Mkomazi	Qora	Spoeg	Tyolomnqa
Gwaing	Mkozi	Riet	Mzintlava	Umgababa
Gxara	Mnamfu	Sandlundlu	Mntafufu	Umhlangankulu
Haga-haga	Mncwasa	Shixini	Nkodusweni	Van Stadens
Imtwendwe	Mnenu	Siyaya	Ntlupeni	Mtambane
Jujura	Mpako	Swartvlei	Mngazana	Bulolo
Steenbras	Rooiels	Buffels (Oos)	Sinangwana	
C: Moderately modified				
Boboyi	Kongweni	Mtwalume	Zotsha	Kariega
Boknes	Koshwana	Mvoti	Little Manzimtoti	Keiskamma
Bokramspruit	Kowie	Mzimayi	Olifants	Klein Brak
Cintsa	Ku-Boboyi	Mzinto	Tugela/Thukela	Mpambanyoni
Damba	Kwa-Makosi	Nahoon	Palmiet	mtamvuna
Fafa	Lourens	Nenga	Ratel	Mtentweni
Gamtoos	Mahlongwa	Ngane	Shelbertsstroom	Swartkops
Goukou (Kaffirkui)	Mahlongwana	Nhlabane	Mcantsi	Uvuzana
Gourits	Maitland	Nkomba	Blind	Vungu
Great Fish	matigulunyoni	Old Womans	Klein	Buffels
Great Kei	mbango	Piesang	Richards Bay	Nhlabane
Hlaze	Mbashe	Rufane	Bot/Kleinmond	Ngqenga
Intshambili	Mfazazana	Seteni	Bobs Stream	
Kaba	Mhlangamkulu	Sezela	Mzimvubu	
Kabeljous	Morgan	Sundays	Mngazi	
D: Largely modified				
Hartenbos	Mdloti	Sand	Wildevoelvlei	Mdesingane
Heuningnes	Mfolozi	Seekoei	Wildevoelvlei	Orange(gariep)
Jakkalsvlei	Mhlabatshane	Silvermine	Manzimtoti	Verlorenvlei
Klipdrif	Mhlanga	Slang	Mdlotane	Klein Palmiet

Kosi	Mkumbane	Mgobezeleni	Mtata	
Kromme	Berg (Groot)	Tongati	Buffalo	
Mbokodweni	Mvuzi	Uilkraals	Sout	
E: Seriously modified				
Rietvlei/Diep	Mhlali	Wadrift\langdrift	Mgeni	Sipingo
Eerste	Baakens	Zeekoe	Elsies	Hout Bay
Groot Brak	Onrus	Sir Lowry's Pass	Mzimkulu	
F: Critically / extremely modified				
Coega	Sout (Wes)	Buffels Wes	Papkuils	Umlazi
Mlalazi				
Other				
Durban Bay	Langebaan	Bloukrans	Shwele-Shwele	Swartlintjies
St Lucia/Mfolozi				

Figure 13: The present ecological state of South African estuaries (NBA, 2011)

This relative optimistic picture changes dramatically if "total estuarine area" (expressed as hectares habitat) is used as the measure. Figure 13 provides a summary of the state of South Africa's estuaries expressed as a percentage of estuaries, as well as percentage of the total habitat (ha) area.

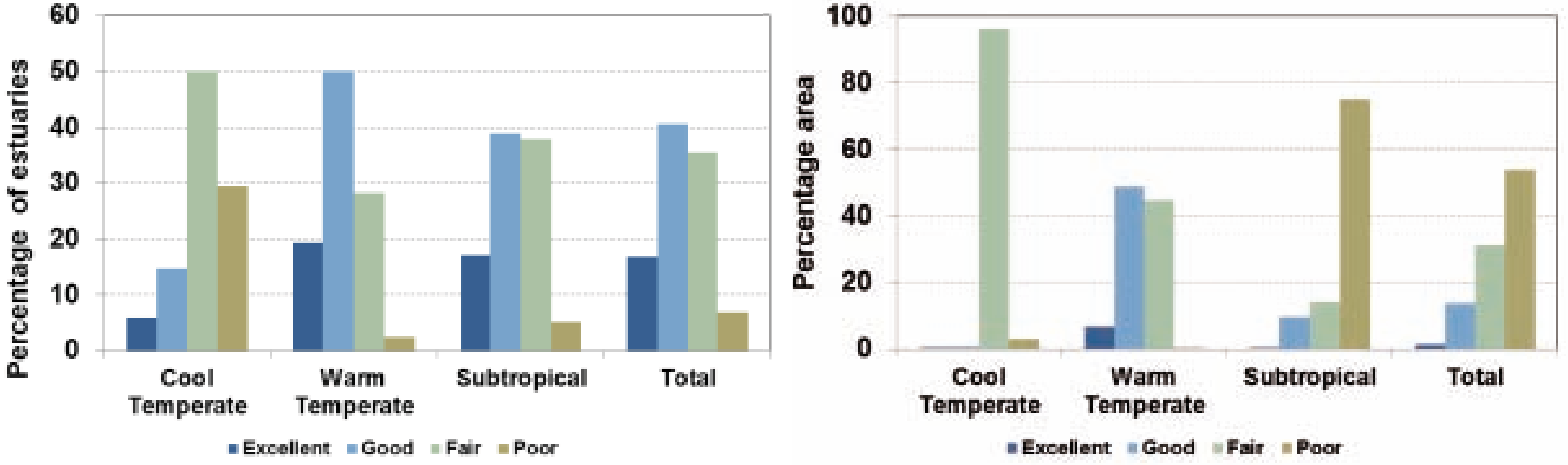


Figure 14: Different perspectives arising when the National Health Assessment is presented as "Percentage of estuaries" or "Percentage Area"

From this analysis it is very clear that only a very small percentage of estuarine habitats are in an excellent condition, with most of these areas located in the Warm Temperate region (i.e. the numerous small, near-natural estuaries along the Wild Coast). Only about 1% of total estuarine habitat is in an excellent state and only 14% of the total estuarine habitat is in a good state, mostly represented by systems in the Warm Temperate bio geographical region.



The 2006 SAEO concluded that the ocean and coastal environment of South Africa was in a moderately healthy state in relation to international trends at the time.Five years later, there has been considerable focus and investment in creating appropriate policy and legislative conditions, which has positively influenced several aspects of marine and coastal environments. These aspects over last five years have included, amongst others, the expansion of marine protected areas, the creation of operational estuarine management plans, the implementation of the Working for Coasts programmes, improved implementation of the ecosystem approach to fisheries, the establishment of water quality guidelines, the creation and implementation of species management plans and a significant increase in the spend of ocean and coasts research and monitoring. Real gains from these initiatives have been a decrease in seabird mortalities, increases in some island bird populations, improved management of sensitive estuarine habitats and species, and an increase in the understanding of marine ecosystem functioning and biodiversity distribution. Some aspects of the health of our oceans and coasts continue to experience apparent deterioration. Pressures on the oceans and coasts ecosystems are mostly as a result of increased anthropogenic pressures such as pollution from land-based sources and resultant decreases in water quality. Estuaries are examples of habitats that may be susceptible to such pressures. This includes the continuing trend of increased numbers of peoples residing in coastal areas.

The growing importance of mitigation and adaptation to **climate change** in the coastal zone specifically aimed at reducing risks and impact needs to be addressed. The Climate Change Response White Paper (DEA, 2012d) recognises that climate change is one of the greatest threats to sustainable development and, if left unmitigated, will undo many positive advances in meeting development goals. It further highlights the important role of healthy intact ecosystems (including coastal ecosystems) in adapting to climate change. The White Paper acknowledges that the mandate for



various spheres of government to take on various specific climate change-related issues is not always clear, and that it may be useful to assign specific powers for mitigation and adaptation actions.

Climate change results in environmental changes in the coastal zone such as:

- Changes in ocean circulation patterns;
- Sea level rise and increase storminess;
- Changes in temperatures from both the land and sea;
- Changes in precipitation and runoff; and
- Changes in pH (referred to as ocean acidification).

Response to climate change in coastal management, therefore, requires understanding of the influence of these environmental changes on other pressures and activities in the coastal zone. Climate change is not a separate pressure rather it is an anthropogenically-induced alteration acting as an accelerator of ecosystem change. It is necessary to understand the potential amplification of variability that climate change may have on the existing coastal system (and its use), together with the potential impact on production, as well as the harvesting of resources in the marine environments. Climate change should also be seen as a catalyst to fast track freshwater resource management, e.g. ecological water allocations. It is also essential that climate change, and the projected effects thereof, be integrated into ocean and coastal spatially planning, e.g. the demarcation of coastal set-back lines. In addition, adaptation includes adjusting to situations, developing coping strategies and impact responses. Adaptation may be behavioural or involve mitigation such as engineering solutions. Response to climate change in coastal management requires an adaptive management approach supported by monitoring and frequent review.



2.3. The National Vision and Objectives

During the development of the "White Paper" (DEAT, 2000) the first shared vision for coastal management in South Africa was put forward through an extensive, consultative and participatory process. Subsequently, the National Development Plan 2030 (NPC, 2012), one of the most important strategic documents visioning South Africa's development over the next 18 years also came to force that also applies to the coastal zone. The National Strategy for Sustainable Development and Action Plan 2011–2014 (NSSD 1) (DEA, 2011a) is another policy that visions South Africa's future specifically related to sustainable development and also applies to the coastal zone. The "White Paper's" vision (as a result of the progressive and democratic process adopted at the time) largely reflect the spirit of the National Development Plan 2030 and Sustainable Development and Action Plan 2011–2014 visions by acknowledging the three pillar of sustainable development, that is economic growth, social well-being and equity, and ecological integrity.

The "White Paper" (DEAT, 2000) also put forward goals and objectives for coastal management. Also, the "White Paper" presented a list of priority issues that came to the fore over the period of development of the policy. At them time these included:

- Diversifying coastal economies and optimising benefits for local coastal communities;



- Promoting coastal tourism, leisure and recreational development;
- Establishing “one-stop-shops” for development approvals;
- Identifying supplementing and managing State coastal assets;
- Identifying opportunities for improving public access to the coast and coastal resources;
- Introducing effective planning and development mechanisms and incentives for effective coastal management;
- Exploring opportunities for development of ports and harbours;
- Identifying opportunities for mariculture and aquaculture development;
- Developing and implementing a representative system of coastal protected areas;
- Introducing mechanisms and incentives to avoid physical development in high risk coastal areas;
- Creating incentives to promote better estuary and river mouth management practices;
- Improving co-ordination and integration of coastal and marine resource management;
- Improved co-ordination of monitoring and management of coastal pollution; and
- Rehabilitating degraded coastal areas and resources.

While many of the goals, management objectives and priorities for coastal management may still be relevant, these need to be updated and refined as part of this NCMP informed by this Situation Analysis, as well as priority issues identified by stakeholders during the provincial and national stakeholder workshops (DEA, 2013a).



2.4. The Status of Coastal Management Units and Boundaries

The ICM Act defines the coastal zone as the area comprising coastal public property, the coastal protection zone, coastal access land and coastal protected areas, the seashore, coastal waters and the exclusive economic zone and includes any aspect of the environment on, in, under and above such area. Important coastal management boundaries relevant to the NCMP is summarised in Table 3. The relevant boundaries are defined under the Maritime Zones Act, ICM Act and National Environmental Management Act (Act No. 107 of 1998) (NEMA). Various coastal boundaries are also schematically illustrated in Figure 12.

Table 1: Important coastal management boundaries relevant to the NCMP

	Geographical boundary	DESCRIPTION
Maritime Zones Act	**Coastal baseline**	(1) Subject to subsections (2) and (3) the low-water line shall be the baseline. (2) Notwithstanding subsection (1) straight lines joining the grouped coordinates mentioned in Schedule 2 shall be the baselines of the relevant part of the coast. (3) Notwithstanding subsections (1) and (2) the outer limits prescribed or determined in accordance with subsection (4) or (5) shall be the baselines. (4) Outer limits of internal waters referred to in section 3(1) (b) shall be established in the prescribed manner. (5) In the absence of any outer limits of internal waters prescribed in accordance with subsection (4), the outer limits shall be the outermost harbour works which form an integral part of the harbour system (Section 2).
	Continental shelf	The continental shelf as defined in Article 76 of the United Nations Convention on the Law of the Sea, 1982, adopted at Montego Bay on 10 December 1982 (Section 8)
	Exclusive Economic Zone	The sea beyond the territorial waters referred to in section 4, but within a distance of two hundred nautical miles from the baselines (Section 7)
	Contiguous zone	The sea beyond the territorial waters referred to in section 4, but within a distance of twenty four nautical miles from the baselines (Section 5)
	Territorial waters	The sea within a distance of twelve nautical miles from the baselines (Section 4)



ICM Act	**High water mark**	The highest line reached by coastal waters, but excluding any line reached as a result of exceptional or abnormal floods or storms that occur no more than once in ten years or an estuary being closed to the sea (Section 1)
	Seashore	Subject to section 26, means the area between the low water mark and the high-water mark
	Admiralty reserve	Any strip of land adjoining the inland side of the HWM which, when this Act look effect, was state land reserved or designated on an official plan, deed of grant, title deed or other document evidencing title or land-use rights as "admiralty reserve", "government reserve", "beach reserve", "coastal forest reserve" or other similar reserve (Section 1: Definitions)
	Coastal access land	Land designated as coastal access land in terms of section 18(1), read with section 26
	Coastal protected areas	A protected area that is situated wholly or partially within the coastal zone and that is managed by, or on behalf of an organ of state, but excludes any part of such a protected area that has been excised from the coastal zone in terms of section 22.
	Coastal waters	Marine waters that form part of the internal waters or territorial waters of the Republic referred to in sections 3 and 4 of the Maritime Zones Act (Act No. 15 of 1994) (Maritime Zones Act), respectively, and, subject to section 26, any estuary
	Estuaries	Estuarine functional zone (EFZ)[1] as defined in the National Estuaries Layer (http://bgis.sanbi.org/estuaries/project.asp), available from the South African National Biodiversity Institute's BGIS website (http://bgis.sanbi.org) (Government Gazette No. 33306, Notice No. R 546, 10 June 2010) (National Estuary Management Protocol)
	Special management areas	An area declared as such in terms of section 23
	Coastal public property	Coastal public property consists of - (a) coastal waters; (b) land submerged by coastal waters, including - (i) land flooded by coastal waters which subsequently becomes part of the bed of coastal waters; and (ii) the substrata beneath such land; (c) any island, whether natural or artificial, within coastal waters, but excluding - (i) any part of an island that was lawfully alienated before this Act commenced; or (ii) any part of an artificially created island (other than the seashore of that island) that is proclaimed by the Minister to be excluded from coastal public property; (d) the seashore, but excluding - (i) any portion of the seashore below the high-water mark which was lawfully alienated before the Sea-Shore Act (No. 21 of 1935), took effect or which was lawfully alienated in terms of that Act and which has not subsequently been re-incorporated into the seashore; and (ii) any portion of a coastal cliff that was lawfully alienated before this Act took effect and is not owned by the State; (e) the seashore of a privately owned island within coastal waters; (f) any admiralty reserve owned by the State; (g) any State-owned land declared under section 8 to be coastal public property; or (h) any natural resources on or in (i) any coastal public property of a category mentioned in paragraph (a) to (g); (ii) the exclusive economic zone, or in or on the

[1] This layer maps the estuarine functional zone for South Africa's estuaries. The estuarine functional zone is defined by the 5 m topographical contour (as indicative of 5 m above mean sea level). The estuarine functional zone includes: Open water area; Estuarine habitat (sand and mudflats, rock and plant communities); and Floodplain area http://bgis.sanbi.org/estuaries/project.asp.



ICM Act		continental shelf as contemplated in sections 7 and 8 of the Maritime Zones Act, 1994 (Act No. 15 of 1994), respectively; or (iii) any harbour, work or other installation on or in any coastal public property of a category mentioned in paragraphs (a) to (h) that is owned by an organ of State (Section 7). Section 8 allows the Minister to extend the boundaries of coastal public property under certain conditions.
	Coastal protection zone	The coastal protection zone consists of - (a) land falling within an area declared in terms of the Environment Conservation Act, 1999 (Act No. 73 of 1989), as a sensitive coastal area within which activities identified in terms of section 21(1) of that Act may not be undertaken without an authorisation; (b) any part of the littoral active zone that is not coastal public property; (c) any coastal protection area, or part of such area, which is not coastal public property; (d) any land unit situated wholly or partially within one kilometre of the high-water mark which, when this Act came into force - (i) was zoned for agricultural or undetermined use; or (ii) was not zoned and was not part of a lawfully established township, urban area or other human settlement; (e) any land unit not referred to in paragraph (d) that is situated wholly or partially within 100 metres of the high-water mark; (f) any coastal wetland, lake, lagoon or dam which is situated wholly or partially within a land unit referred to in paragraph (d)(i) or (e); (g) any part of the seashore which is not coastal public property, including all privately owned land below the high-water mark; (h) any admiralty reserve which is not coastal public property; or (i) any land that would be inundated by a 1:50 year flood or storm event. An area forming part of the coastal protection zone, except an area referred to in subsection (1)(g) or (h), may be excised from the coastal protection zone in terms of section 26.
	Estuaries	A body of surface water: (a) that is permanently or periodicallyopen to the sea; (b) in which a rise and fall of the water level as a result of the tides is measurable at spring tides when the body of surfacewater is open to the sea; or (c) in respect of which the salinity is higher than freshwater as a result of the influence of the sea, and where there is asalinity gradient between the tidal reach and the mouth of the body of surface water.



The ICM Act specifies the relevant spheres of government responsible for the determination or adjustment of various coastal boundaries, as well as the demarcation of as follows:

Coastal public property	Minister of Environmental Affairs in accordance with section 27 of the ICM Act by notice in the Gazette (the power of the Minister to determine or adjust the inland coastal boundary of coastal public property in terms of section 27, includes the power to make any consequential change to an adjoining coastal boundary of the coastal protection zone or coastal access land)
Coastal protection zone	MEC (Executive Council of a coastal province who is responsible for the designated provincial lead agency) in accordance with section 28 of the ICM Act by notice in the Gazette
Special management area	Minister of Environmental Affairs in accordance with section 23 of the ICM Act by notice in the Gazette
Coastal access land	Municipality in accordance with section 29 of the ICM Act by notice in the Gazette

In addition to the coastal management boundaries listed in Table 1, the ICM Act also stipulates the geographical boundaries of coastal management units for the provincial and municipal CMPs as follows:

Provincial CMP	Managing the coastal zone in the province (Section 46), which may extend into coastal public property for the purposes of fulfilling operational functions that are mandated to the province.
Municipal CMP	Managing the coastal zone or specific parts of the coastal zone in the municipality (Section 48), which may extend into coastal public property for the purposes of fulfilling operational functions that are mandated to local government.

The jurisdiction of various other Acts and international conventions is depicted in Figure 15 (Source: DEAT, 2000).

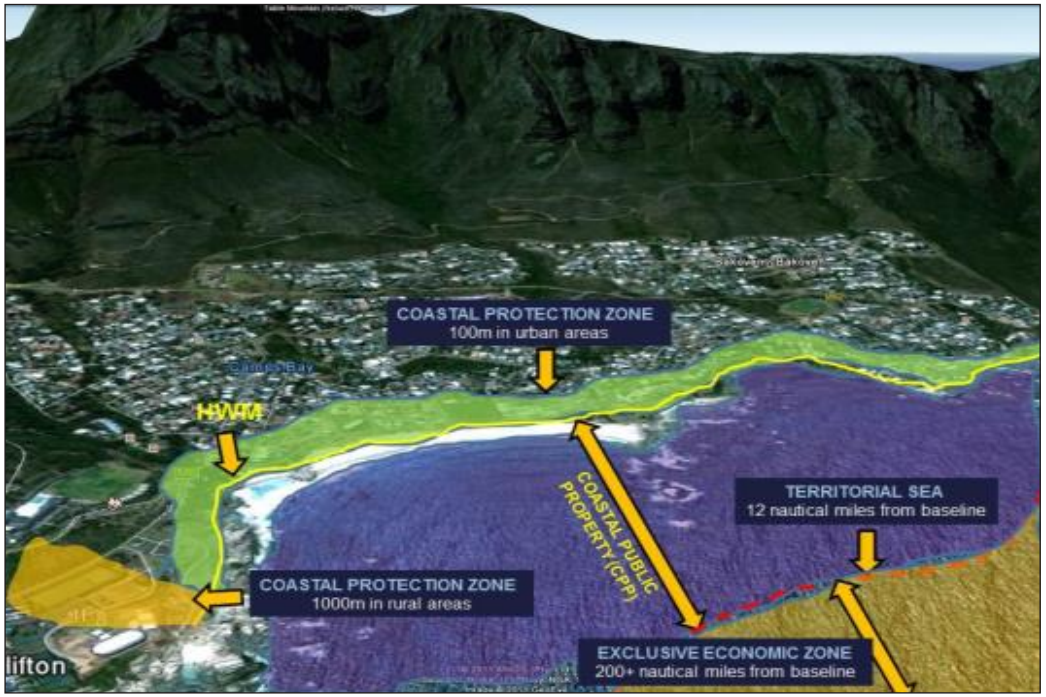


Figure 15: Important geographical boundaries in the coastal zone

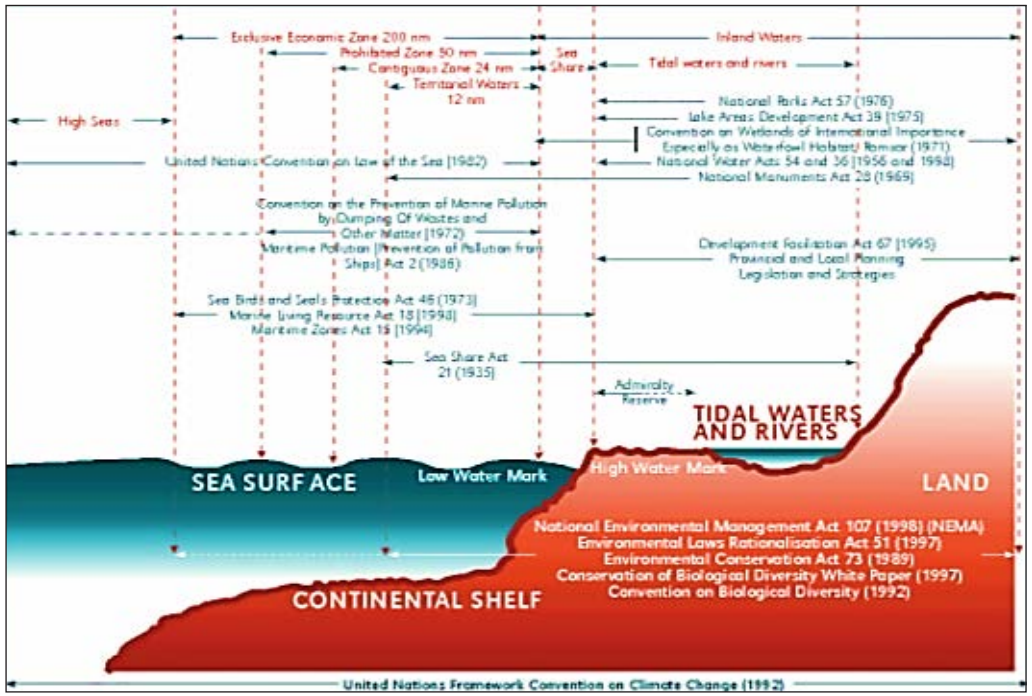


Figure 16: Important jurisdiction of other Act and international conventions



An imperative to ICM is the confirmation of the location of the HWM (or the use of an agreeable line for operational purposes), as other coastal boundaries such as coastal public property and coastal protection zone are defined in terms of the HWM. National guidelines/norms and standards for the demarcation of coastal set-backlines is also required to ensure a standardised approach in the development of these lines across coastal provinces. This will be developed in collaboration with coastal provinces. A number of coastal provinces together with metropolitan and district municipalities within the provinces (e.g. in the Western Cape and KwaZulu-Natal) have already invested in the development of coastal set-back lines in their area of jurisdiction in accordance with the ICM Act (Section 25).

During stakeholder consultation the need was expressed for practical measures for the interpretation, application and mapping of the geographical boundaries, specifically at the provincial and municipal (both local and district/metropolitan municipalities) levels:

Reflecting on the situation analysis on boundaries for coastal management the following future needs emerged in terms of giving directives and guidance on coastal management in South Africa:

- A standardised approach and method for the determination of the HWM, a critical geographical boundary in coastal management
- National guidelines/norms and standards to determine coastal set-backlines/management lines
- Guidelines to standardize the approach and methods for the demarcation of the coastal protection zone (CPZ), and a nationally consistent spatial layer indicating the position and extent of the CPZ
- Practical guidance on the interpretation, application and mapping of geographical boundaries for coastal management directed at all three spheres of government. Specifically the guidelines should focus on the provincial and municipal levels differentiating local, district and metropolitan municipalities, where appropriate.



2.5. Coastal Spatial Planning and Condition of Use

Legislation governing spatial planning either within the coastal zone, or overlapping with the coastal zone, is extensive. Spatial planning is already occurring in the coastal zone through an array of spatial planning processes as illustrated in Table 2:

Table 2: Important spatial planning (or demarcation of use area) processes occurring/overlapping in the coastal zone

PLANNING PROCESS	KEY LEGISLATION/PLAN	LEAD AUTHORITY
National Spatial Development Perspective	National Development Plan 2030	**The Presidency: NPC**
	National Spatial Development Perspective (NSDP) 2006	**The Presidency**
	Spatial Planning and Land Use Management Bill (Notice 280 of 2011)	**Department of Rural Development and Land Reform**
Biodiversity protection area as informed by biodiversity planning processes	National Environmental Management: Biodiversity Act (No. 10 of 2004) Protected Areas Act (Act No. 57 of 2003) (Protected Areas Act) National Protected Area Strategy	**DEA** **South African National biodiversity Institute (SANBI)** **SANParks** **DEA**
Sensitive Coastal Areas	Environmental Conservation Act (No. 73 of 1989) (areas specifically gazetted, namely areas in the Garden Route and south coast of KZN).	**DEA**
Marine Protected Areas (MPAs) and Protected Areas (PAs)	National Environmental ManagementProtected Areas Act [formerly under the Marine Living Resources Act (Act No. 18 of 1998) (MLRA)]	**DEA/SANParks/Provincial agencies**



	National Environmental Management Protected Areas Act	**DEA/SANParks**
National parks	National Environmental Management Protected Areas Act	**DEA/SANParks**
Fishing zones	MLRA	**DAFF**
Mining and exploration concessions	Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)	**DMR**
Shipping and navigation routes	Marine Traffic Act (Act No. 2 of 1981)	**DoT**
	National Ports Act (Act No. 12 of 2005)	**Transnet NPA**
	Port Expansion Strategies, e.g. Strategic Infrastructure Projects (SIPS)	**Transnet NPA**
National Water Resource Strategy	National Water Act (Act No. 36 of 1998)	**DWA**
Agricultural spatial plans	Conservation of Agricultural Resources Act) (Act No. 43 of 1983)	**DAFF**
Heritage areas	National Heritage Resources Act (Act No. 25 of 1999)	**DEA through South African Heritage Resources Agency (SAHRA)**
Estuary zoning plans (as part of estuary management plans)	National Estuary Management Protocol (ICM Act)	**Responsible Management Authority for the Estuary Management Plan**
Coastal set-back lines/ Management lines	ICM Act	**MEC**
Coastal planning schemes	ICM Act	**DEA, Responsible provincial authority and municipalities**
Special management areas	ICM Act	**DEA**
Provincial and municipal SDFs, land use plans and zoning schemes	Municipal Systems Act (Act No. 32 of 2000), Spatial Planning and Land Use Management Act (Act. No. 16 of 2013) (SPLUMA)	**Relevant provincial authority Municipalities**
	Provincial Planning and Development Acts	

Spatial planning in the coastal zone landward of the HWM – the part of the coastal zone that fall within areas under the jurisdiction of provinces and municipalities - is assigned to the designated provincial and municipal authorities under legislation such as the Municipal Systems Act, Spatial Planning and Land Use Management Act (Act. No. 16 of 2013) (SPLUMA), and provincial planning and development act (Table 2). Provincial and municipal spatial planning



processes are consolidated in provincial and local spatial development frameworks, land-use plans and zoning schemes.

Currently spatial planning in the coastal zone seaward of the HWM remains largely sector-based. In other words, the various spatial planning processes listed in Table 2 still largely occur independently from one another. Increasing demand for ocean and coastal space, however, necessitates greater coordination in ocean and coastal spatial planning, especially seaward of the HWM. One of the key aims of the Green Paper: National Environmental Management of the Ocean (DEA 2012b) is to address spatial planning in this area of the coastal zone. Ultimately, strategic alignment between the landward (role of provinces and municipalities) and seaward (role of various national government departments) spatial planning processes is necessary to prevent conflict of use across the interface.

With specific reference to the ICM Act, spatial planning is explicitly addresses in term of special management area, estuaries and coastal planning schemes. Spatial planning in estuaries forms part of estuary management plans, as specified in the National Estuary Management Protocol (DEA, 2013c). The responsibility for the development of estuary management plans is set out in the National Estuary Management Protocol. Also, the Act provides for estuary management plans (including spatial zoning plans) to be to be prepared or adopted as part of an integrated development plan and spatial development framework (Section 48[4]). Section 23 makes provision for the declaration of special management areas where an area that is wholly or partly within the coastal zone may be declared a special



management area by the Minister (after consultation with the MEC) if environmental, cultural or socio-economic conditions require the introduction of measures to:

- Attain the objective of any CMPs;
- Facilitate management of coastal resources for a local community;
- Promote sustainable livelihood for a local community; or
- Conserve, protect or enhance coastal ecosystems and biodiversity in the area.

Finally, Section 56 of the Act allows for the demarcation of coastal planning schemes for specific purposes and activities, or prohibition of certain purposes and activities in the coastal zone or coastal management area, under certain conditions. These schemes may be established by the Minister, a MEC or a municipality under specific conditions, the person in which the authority to manage a coastal protected area is vested if the planning scheme only applies within that protected area or the management authority of a special management area, in consultation with the MEC and after consultation with the municipality, if the planning scheme only applies within that management area.



A powerful, pro-active manner in which to promote sustainable coastal use is to set norms and standards that specify the **conditions of use**, in general, and not aimed at a specific activity or use[2]. These may, for example be stipulated in acts, regulations or protocols. Furthermore, plans and guidelines can also be put forward to encourage best practice that recommends best practice conditions of use. Several norms and standards, as well as guidelines, have been issued by government either stipulating condition of use in the coastal zone. Important national norms and standards, as well as guidelines, expressing condition of use in the coastal zone is summarised in Table 3. Provinces and municipalities may also specify condition of use of areas within the coastal zone under their jurisdiction, provided that those specifications are aligned with these national specifications on conditions of use.

During the stakeholder consultation additional needs in terms of the condition of use of the coastal zone were identified (as reflected below). For example, guidelines were required on conditions of use in the Admiralty Reserve. Also, the caveat in guidance or specification on rehabilitation and stabilisation of dunes areas within the coastal zone was highlighted.

[2] Regulations, norms, standards and/or guidelines can also be stipulated for specific activities taking place in the coastal zone e.g. use of off-road vehiclesor discharging of effluent. These are dealt with under "Activity-based management programmes"



Table 3: National acts, regulations, protocols and gazetted notices (norms and standards), as well as national plans and guidelines expressing conditions of use in the coastal zone in South Africa

AREA	NORM AND STANDARD/PLAN/GUIDELINE/NOTICE
Coastal zone	The building, erection, alteration or extension of structures that are wholly or partially seaward of that coastal set-back line must be prohibited or restricted (ICM Act, Section 25)
	South Africa Risk and Vulnerability Atlas (www.sarva.org.za/)
Coastal public property	Any natural person in the Republic - (a) has a right of reasonable access to coastal public property; and (b) is entitled to use and enjoy coastal public property, provided such use-(i) does not adversely affect the rights of members of the public to use and enjoy the coastal public property; (ii) does not hinder the State in the performance of its duty to protect the environment; and (iii) does not cause an adverse effect. (2) This section does not prevent prohibitions or restrictions on access to, or the use of, any part of coastal public property - (a) which is or forms part of a protected area; (b) to protect the environment, including biodiversity; (c) in the interests of the whole community; (d) in the interests of national security; or (e) in the national interest. The above do not apply to apply to coastal public property- (a) that has been leased; or (b) that is, or forms part of a protected area or the sea that forms part of a harbour or a proclaimed fishing harbour (Section 13 of ICM Act).
	Regulations for use of coastal public property (currently being developed by DEA)
Coastal protection zone	Established for enabling the use of land that is adjacent to coastal public property or that plays a significant role in a coastal ecosystem to be managed, regulated or restricted in order to- (a) protect the ecological integrity, natural character and the economic, social and aesthetic value of coastal public property; (b) avoid increasing the effect or severity of natural hazards in the coastal zone; (c) protect people, property and economic activities from risks arising from dynamic coastal processes, including the risk of sea-level rise; (d) maintain the natural functioning of the littoral active zone; (e) maintain the productive capacity of the coastal zone by protecting the ecological integrity of the coastal environment; and (f) make land near the seashore available to organs of state and other authorized persons for - (i) performing rescue operations; or (ii) temporarily depositing objects and materials washed up by the sea or tidal waters (Section 17 of ICM Act).
Estuaries	National Estuarine Management Protocol
	Guidelines to determine the Present Ecological Status, as well as Recommended Ecological Status for estuaries (contained in Methods to determine the Ecological Flow requirements for Estuaries – DWAF 2008) a requirement under the NWA
	Generic framework for estuary management plans developed as part of the CAPE estuaries programmes (currently being reviewed to meet the requirements of and be officially adopted as a guideline under the



	National Estuarine Management Protocol.
Coastal waters	**Water quality guidelines for the coastal environment: Recreational use (DEA, 2012a)**
	Water quality guidelines for the coastal environment: Natural Environment (DWAF 1995)
	National Guideline for the Discharge of Effluent from Land-based Sources into the Coastal Environment (DEA, 2014)
	Draft Coastal Waters Discharge regulations
	Water quality guidelines for desalination and aquaculture use
	Draft abalone and finfish norms and standards (currently provincial draft)
Sensitive coastal area	**Regulations on Sensitive Coastal Areas (zone promulgated under Environmental Conservation Act (No. 73 of 1989) (these apply only to areas that have specifically been gazetted, namely areas in the Garden Route and south coast of KwaZulu-Natal**
Marine protected areas	**The MLRA and the MLRA Regulations sets out rules, prohibitions and limitations for MPAs (still active under the transitional provisions in terms of the National Environmental Management: Protected Areas Amendment Act (Act No. 21 of 2014)**
Protected areas	**National Protected Area Expansion Strategy (SA Government 2008)**
	Offshore Marine Protected Area Plan (Sink et al. 2011)
	Norms and standards, plans, guidelines and policies issued for South African National Parks

Future needs for ocean and coastal spatial planning in terms of giving directives and guidance on coastal management - including specification on condition of use of coastal zone - include:

- Schedule of prohibited and restricted activities on coastal public property (DEA: Oceans and coasts, in progress)
- A national ocean and coastal spatial planning strategy
- Guidelines for the development of coastal planning schemes (e.g. SAWIC website)
- National resource strategy plan for estuaries (based on recommendations in the NBA 2012)
- Guidance/specifications on the conditions of use of the Admiralty Reserve
- A national coastal risk and vulnerability assessment that will provide guidance mitigation and adaptation to climate change in the coastal zone (DEA: Oceans and coasts, in progress)

- A national coastal risk and vulnerability assessment that will provide guidance on beach safety along in the coastal zone
- Adopt/adapt the Generic framework for estuary management plans (CAPE Estuaries Programme) as an official guidelines under the National Estuary Management Protocol
- Norms and standards/guidelines on dredging/mouth breaching for estuaries
- National guidelines on conditions of use of the coastal zone to inform EIA process
- Guidelines/norms and standards for dune rehabilitation and stabilisation
- Review the South African water quality guidelines for coastal waters, especially for protection coastal ecosystems (natural environment)
- Guidelines addressing limits imposed by ecosystem goods and services (?)
- Guidelines/norms and standards for condition of use of the coastal zone in terms of small harbours and marinas
- Consider national guidelines/norms and standards for protected areas as proposed in the NBA 2011.



2.6. Status of Activity-based Management Programmes

The management and control of activities taking place in the coastal zone are governed under numerous Acts. The legislation is largely sectoral, i.e. different activities are governed by different acts and often by different departments or governing authorities. Activity-based regulations, norms and standards, and guidelines have been promulgated under these acts - all of which need to be acknowledged and put in context of coastal management under the ICM Act. To illustrate this, as well as to guide the situation analysis on activity-based management programmes, the **key activities** taking place in the coastal zone, as well as the primary act/s governing such activities, are presented in Table 4. This list may expand as other activities are introduced.

For the purposes of this assessment activities were categorised further into the following types, namely:

- Activities governed under the ICM Act;
- Activities governed under other Act by the Department responsible for the environment; and
- Activities governed under other Acts by other departments or governing authorities.



Table 4: Key activities in the coastal zone including the key Act/s governing such activities

CATEGORY	KEY ACTIVITY	KEY ACT/S
Governed under ICM Act	Managing of coastal access land	ICM Act
	Land reclamation	
	Coastal leases and concessions	
	Unlawful structures	
	Off-road vehicles (being transferred to ICM Act)	
	Boat launching sites	
	Effluent discharges into coastal waters	
	Dumping at sea	
	Incineration at sea	Prohibited under the ICM Act (Section 70), except under specific conditions as specified in the Act
Governed under other Acts by DEA	Environmental Impact Assessment	NEMA
	Biodiversity and protected areas management	National Environmental Management: Biodiversity Act (No. 10 of 2004) (Biodiversity Act)
		National Environmental Management: Protected Areas Act (Act No. 57 of 2003) (Protected Areas Act)
	Marine protected areas	National Environmental Management: Protected Areas Amendment Act (Act No. 21 of 2014)
	Sensitive Coastal Areas	Environmental Conservation Act (Act No. 73 of 1989) (Environmental Conservation Act)
	Heritage area management	World Heritage Convention Act (Act No. 49 of 1999)
		National Heritage Resources Act (Act No. 25 of 1999)



CATEGORY	KEY ACTIVITY	KEY ACT/S
	Prevention and combating pollution from ships, including solid waste (garbage) and ballast water)	International Convention for Prevention of Pollution from Ships Act (Act No. 2 of 1986) (MARPOL Act)
		South Africa Maritime Safety Authority Act (Act No. 5 of 1998) (SAMSA Act)
		Marine Pollution (Control and Civil Liability) Act (Act No. 6 of 1981) (Control and Liability Act)
		Merchant Shipping Act (Act No. 57 of 1951
	Solid waste management (land-based)	National Environmental Management: Waste Act (Act No. 59 of 2008) (Waste Act)
	Atmospheric pollution	National Environmental Management: Air Quality Act (No. 39 of 2004) (Air Quality Act)
	Control of scuba diving, whale watching and shark cage diving and other protected or threatened species	Marine Living Resources Act (Act No. 18 of 1998, amended 2000) (MLRA)
		Transkei Environmental Decree and legislation controlling whales, sharks sea birds
Governed under other Acts by other departments or governing authorities	State assets in coastal zone, including 12 fishing harbours	Government Immovable Asset Management Act (Act No. 19 of 2007) (GIAMA)
		State Land Disposal Act (Act No. 48 of 1961)
		MLRA
	Fisheries management	MLRA
		Sea Fishery Act (Act No. 12 of 1988)
	Marine aquaculture or harvesting of marine living resources (sea-based)	MLRA
	Harvesting of coastal resources (land-based)	Conservation of Agricultural Resources Act (Act No. 43 of 1983) (CARA)

CATEGORY	KEY ACTIVITY	KEY ACT/S
Governed under other Acts by other departments or governing authorities		National Forest Act (Act No. 84 of 1998)
	Port management	National Ports Act (Act No. 12 of 2005)
		International Health Regulations Act (Act No. 28 of 1974)
	Shipping	Marine Traffic Act
		SAMSA Act
	Freshwater flows (quantity and water quality) into coastal zone	National Water Act (Act No. 36 of 1998) (NWA)
	Mining	Mineral and Petroleum Resources Development Act (Act No. 28 of 2002) (MPRD Act)
	Oil and gas exploration	MPRD Act
	Coastal infrastructure (and-based)	Local Government: Municipal Systems Act (Act No. 32 of 2000) (Municipal Systems Act)
		National Building Regulations and Building Standards Act (Act No. 103 of 1977 amended 1982, 1984, 1989, 1995, 1996) (National Building Regulations and Standards Act)
		Spatial planning and land use management Act (Act No. 16 of 2013) (SPLUMA)
		Provincial Planning Acts
	Recreational water quality (e.g. beaches)	National Health Act (Act No. 61 of 2003)
	Renewable energy activities	National Energy Act (No. 34 of 2008)



2.6.1. Activities Governed Primarily under the ICM Act

i. Managing coastal access land

Part 3 of the ICM Act deals with coastal access land. Specifically Section 18 assigns the designation coastal access land to district and metropolitan municipalities (including local municipalities were those municipalities have provided written consent to their appropriate district municipality stating that there is sufficient funding and capacity to carry out such functions), while Section 20 stipulates municipalities' responsibilities in terms of managing coastal access land - including compliance and enforcement. Municipalities may also issue by-law related to their responsibilities in terms of the management of coastal access land.

Section 59 of the ICM Act grants the Minister (Environment) – under certain conditions - the right to issue coastal access notices to prohibit activities in order to allow natural persons access to coastal public property. Section 83 also permits the Minister to make regulations related to public access to coastal public property.



Future needs in terms of giving directives and guidance on management of coastal access land include:

- Regulations pertaining to the establishment and maintenance of coastal access (DEA: Oceans and coasts, in progress)
- Guidelines to municipalities for the designation of coastal access land and public access servitudes (DEA: Oceans and coasts, in progress)

ii. Land reclamation

Approval of land reclamation in the coastal zone is assigned to the Minister (environment) as per Section 21(6) of the ICM Act.

Future needs in terms of giving directives and guidance on land reclamation include:

- Regulations pertaining to the reclamation of land from the sea (DEA: Oceans and coasts, in progress)

iii. Coastal leases and concessions

The ICM Act (Section 65 and 66, once proclaimed) gives the Minister (Environment) the powers to grant coastal leases or coastal concessions in coastal public property, as well as to set the terms and conditions of leases. However, this section has not yet been proclaimed for leases below the HWM. Management of such leases still remains under the Seashore Act (Act No. 21 of 1935, as amended 1984, 1993) (in the case of leases in the Admiralty Reserve, the Department of Public Works is still responsible under the Government Immovable Asset Management Act (Act No. 19



of 2007) [GIAMA]).Sections 7 and 8 allow municipalities to extend coastal public property for the purpose of improving coastal access.Section 95 of the ICM addresses transitional provisions in the case of coastal leases from the act under which it was previously governed.

Future needs in terms of giving directives and guidance on management of coastal leases and concessions include:

- Procedures for the transitional transfer period for management and control of coastal leases from Seashore Act (and other legislation) to the ICM Act.

iv. Unlawful structures

Section 96 of the ICM Act grants the Minister (Environment) or the MEC the authority to issue a notice for the removal of unlawful structures in accordance with Section 60 (dealing with the repair or removal of structures within coastal zone). Municipalities, however, have a responsibility to pro-actively ensure that their building inspectors do not allow the erection of unlawful structures, in terms of conditions of use specified for various areas within the coastal zone falling within their areas of jurisdiction. Illegal occupation of state land (e.g. the Admiralty Reserve) also involves the Department of Public Works, and, in the case of the Eastern Cape Province, the Provincial Department responsible for Land Affairs (relating to land previously falling under the Department of Defence in the Transkei/Ciskei).

Future needs in terms of giving directives and guidance on management of unlawful structures include:

- National guidelines on the procedures to prevent/remove unlawful structures in the coastal zone, specifically aimed at assisting provinces and municipalities.

v. Off-road vehicles

Currently off-road vehicles are regulated by Regulations in terms of NEMA (Section 24) pending the promulgation of replacement regulations under Section 83 of the ICM Act. Regulations under the ICM Act assign the responsibility for issuing of off-road vehicle permits to the responsible department within DEA: Oceans and coasts. The national department is also the competent authority for implementing and conducting of compliance and enforcement for the Regulations.

Existing regulations, norms and standards, or guidelines for off-road vehicles include:

Off-road Vehicle Regulation Guidelines to assist with the implementation of the Off-road Vehicle (under NEMA) (2004)

Future needs in terms of giving directives and guidance on management of off-road vehicles include:

- Control of Use of Vehicles in the Coastal Area Regulations (DEA: Oceans and coasts, draft regulation published - http://discover.sabinet.co.za/document/GGD126075)



- Ensure implementation of reporting of status of management and control of off-road vehicles in the coastal zone by national government (DEA: Oceans and coasts)

vi. Boat launching sites

The Minister (Environment) may issue regulation on activities in the coastal public property (Section 83). Pending the approval of such regulations, boat launching sites are governed by provincial legislations (under NEMA) and administered by either provincial lead agents or protected areas management authorities. These departments and authorities are also responsible from compliance and monitoring of boat launching sites. The regulations under the ICM Act, give the MEC powers to list launching sites by notice in the Gazette under specific conditions. THE MEC may also appoint a management body - an organ of state identified by the MEC – to manage a public launch site.

Existing regulations, norms and standards, or guidelines for boat launching sites include:

Provincial regulations dealing with boat launching sites (under NEMA)
Future needs in terms of giving directives and guidance on management of boat launching sites include:
• Management of Public Launch Sites in the Coastal Zone Regulations (DEA: Oceans and coasts, draft regulation published - http://discover.sabinet.co.za/document/GGD126076).

vii. Effluent discharges

Section 69 of the ICM Act governs effluent discharges to coastal waters, including estuaries. Any discharge of effluent that originates from a source on land into coastal waters must be authorized by the Minster (Environment), either in terms of a general discharge authorisation or a coastal waters discharge permit (Note: in accordance with the NEMPAA, no discharge of effluent is permitted within Marine Protected Areas). Where effluent is disposed of into estuaries, the Minister must consult with the Minister responsible for Water Affairs. Effluent discharges are also listed activities under the NEMA EIA Regulations. Therefore any new development (or upgrading of existing development) is subject to an Environmental Impact Assessment (EIA). However, on approval of the EIA, operations may commence only after general discharge authorization or a coastal waters discharge permit has been granted by the Minister (Environment). The characteristics of industrial or urban stormwater discharges – typically containing waste – fit the definition of effluent in the ICM Act (Section 1), defined as any liquid discharged into the coastal environment as waste, and includes any substance dissolved or suspended in the liquid; or (b) liquid which is a different temperature from the body of water into which it is being discharged. However, management and control of urban stormwater resides with local authorities (Constitution [Act No.108 of 1996]). Municipalities typically control stormwater quality in term of by-laws.

Previously, effluent discharges to the coastal zone was governed under general authorization or licenses issued under the NWA. All such effluent discharges must be reviewed and, where appropriate, transferred either to a general discharge authorisation or coastal waters discharge permit under the ICM Act (Section 69). DEA: Oceans and coasts (the organ of state issuing permits) must report every three years National Coastal Committee on the status of each pipeline that discharges effluent into coastal waters and its impact on the coastal environment (i.e. the competent authority for compliance and enforcement).



Existing regulations, norms and standards, or guidelines for effluent discharges include:

NEMA EIA Regulations (2010) Effluent discharges are scheduled activities under the NEMA EIA Regulations (contained in Government Notices R544, R545 & R546, Government Gazette 33306, 18 June 2010)
NWA (1998). Most effluent discharges to the coastal zone still operate under Section 21 licenses issued under this act pending review and transfer to general discharge authoristation or coastal waters discharge permit under the ICM Act (not applicable to the surf zone or estuaries)
General Authorisations Regulations under the NWA (2004). Most effluent discharges to estuaries and the surf zone still operate under these regulations pending review and transfer to general authoristation or coastal waters discharge permit under the ICM Act
Municipal by-laws related to stormwater
A framework for implementing non-point source management under the NWA (Pegram et al., 1999)
National Guideline for the Discharge of Effluent from Land-based Sources into the Coastal Environment (DEA, 2014)
Recreational water quality guidelines (DEA, 2014)
A guide to non-point source assessment (Pegram and Görgens, 2001)
Guidelines for human settlement planning and design - The Red Book (CSIR, 2001)
Managing the Water Quality Effects of Settlements (DWAF, 1999)
Strategic guidance towards prioritising stormwater management research in human settlements (Burke and Mayer, 2007)
National Estuarine Management Protocol (DEA, 2013), Section 4- Standards for Estuarine Management.



Future needs in terms of giving directives and guidance on management of effluent discharges include:

- Develop Assessment Criteria for Coastal Waters Discharge Permits for sector specific discharges (DEA: Oceans and Coasts. Currently an Assessment Framework is being developed - in progress)
- Conduct review of all effluent discharge issued under the NWA, and in the case of estuaries a joint review with the department responsible for water affairs in order to determine compliance to the ICM Act, and where appropriate re-issue coastal water discharge permits (in progress)
- Regulations on general discharge authorisations (where appropriate)
- Technology-based standards (or effluent limit values) for effluent linked to specific industry types or specific points of discharges, sensitivity of receiving environment or users of the receiving environment.
- Application fees for coastal waters discharge permits.
- Regulations/norms and standards pertaining to an Effluent DischargeFee System for South Africa
- National guidelines on urban stormwater management in order to improve effluent quality prior to discharging to the coastal zone.

viii. Dumping at sea

The ICM Act prohibits the dumping of waste at sea (Section 70, unless a dumping permit has been issued by the Minister (Environment) (Section 71). Furthermore the Act stipulates that dumping permits may only be granted for the



disposal of dredged material, sewage sludge, fish waste, or material resulting from industrial fish processing operations, vessels and platforms or other man-made structures at sea, inert, inorganic geological material, organic material of natural origin, or bulky items primarily comprising iron, steel, concrete and similarly non-harmful materials for which the concern is physical impact, and limited to those circumstances where such wastes are generated at locations, such as small islands with isolated communities, having no practicable access to disposal options other than dumping at sea. DEA: Oceans and Coasts in responsible for implementation of the provisions for dumping at sea in terms of the ICM Act.

Existing regulations, norms and standards, or guidelines for dumping at sea include:

NEMA EIA Regulations (2010) Dumping of certain wastes at sea is a scheduled activity under the NEMA EIA Regulations (contained in Government Notices R544, R545 & R546, Government Gazette 33306, 18 June 2010)
The Waste Assessment Guidelines (as per ICM Act, Schedule 2) stipulating guidelines for the assessment of wastes or other material that may be considered for dumping at sea
South Africa's National Action List for the screening of dredged material proposed for marine disposal (DEA, 2012c)

Future needs in terms of giving directives and guidance on dumping at sea include:

- Regulations and best practice guidelines to facilitate effective management and control of dredging operations in South Africa, taking into account the specific requirements of the London Convention and the 1996 Protocol.

- Resolve conflict between ICM Act and EIA Regulations

2.6.2. Activities Governed by DEA under other Acts

i. Environmental impact assessments

In South Africa, environmental impact assessment studies (EIAs) are required for numerous activities – including activities in the coastal zone – prior to development and implementation. All the activities, for which EIA (or Basic Environmental Assessments) are required, are listed in the EIA regulations promulgated under NEMA.

Existing regulations, norms and standards, or guidelines for EIAs include:

Overview of Integrated Environmental Management (DEAT, 2004)
NEMA EIA Regulations (Government Notices R544, R545 & R546, Government Gazette 33306, 18 June 2010)
Development of a National Environmental Impact Assessment Management Strategy for South Africa (DEA, 2013d)
Standard operating procedure for EIAs in the coastal zone (DEA, 2010b)



Future needs in terms of giving directives and guidance on EIAs include:

- National norms and standards/guidelines applying to the EIAs (or Basic Assessments) to be conducted for scheduled activities in the coastal zone.

ii. Biodiversity and protected areas management

The Biodiversity Act (Chapter 3) deals with biodiversity planning and monitoring in South Africa. The Minister (Environment) is responsible for the development and monitoring of a national biodiversity framework (Section 38). The Minister may also determine a bioregion and prepare a bioregional plan after consultation with an MEC. An MEC, in turn, may also determine bioregions within province and prepare provincial bioregional plans, but with concurrence of the Minister (Section 40). Any person, organization or organ of state that want to contribute to biodiversity management may request approval from the Minister to prepare a biodiversity management plan (Section 43). The South African National Biodiversity Institute (SANBI) may assist the Minister or others involved in the preparation of the national biodiversity framework, a bioregional plan or a biodiversity management plan (Section 48). Monitoring and reporting on the status of South Africa's biodiversity is one of the key responsibilities assigned to SANBI through this Act (Section 11), as is done through the NBA 2011 (Driver et al., 2012). Compliance primarily resides with the Minister who can make regulation (Section 97) and norms and standards (Section 9) in this regard. Compliance with bioregional plans may also reside with the MEC, where appropriate (Section 42).



The management of protected areas is dealt with in Chapter 4 of the Protected Areas Act. According to the Act (Section 38), either the Minister (Environment) or MEC has the power to assign a management authority for a designated protected area (e.g. SANParks in the case of National Parks). The Protected Areas Act (Section 8) does not affect the implementation of provincial legislation regulating matters with regard to provincial or local protected areas to the extent that such legislation regulates matters not covered by this Act, is consistent with this Act, or prevails over this Act in terms of section 146 of the Constitution.

Existing regulations, norms and standards, or guidelines on biodiversity and protected areas management include:

Provincial conservation plans
Guidelines regarding the determination of bioregions and the preparation of and publication of bioregion plans (Government Gazette No. 32006. Government Notice No. 291, 16 March 2009)
South Africa's National Biodiversity Strategy and Action Plan (NBSAP) (DEAT, 2005)
Existing national biodiversity frameworks, Bioregion plans and biodiversity management plans
National Protected Area Expansion Strategy proposing to achieve cost-effective protected area expansion for ecological sustainability and increased resilience to climate change (DEA, 2008)
Offshore Marine Protected Area Project proposing systematic planning to identify focus areas for offshore biodiversity protection in South Africa in alignment with the NPAES (SANBI, 2011) (summary presented in Appendix C)
National Estuary Biodiversity Plan proposed as part of NBA 2011 (Turpie et al., 2012) (summary presented in Appendix D)



Guidelines for Offshore Marine Protected Areas in South Africa (SANBI, 2008a)
User profiles for the South African offshore environment (SANBI,2008b)
Alien and invasive species Regulations (Gazette Notice No. 36683, Notice No. R 506, 19 July 2013)
Publication of national list of invasive species (Gazette Notice No. 36683, Notice No. R 507, 19 July 2013)
Publication of prohibited alien species (Gazette Notice No. 36683, Notice No. R 508, 19 July 2013)
Publication of exempted alien species (Gazette Notice No. 36683, Notice No. R 509, 19 July 2013)

Future needs in terms of giving directives and guidance on biodiversity and protected areas include:

- Expand the national biodiversity assessment to include terrestrial areas in the coastal zone
- Refine/expand the coastal sections (especially the area immediately seaward of the high-water mark up to roughly the territorial water boundary) in the coastal and marine component in the national biodiversity assessment
- National Coastal Biodiversity Plan that integrates marine, estuarine, freshwater and terrestrial aspects. Such a plan should be conducted at a fine enough scale to support integrated coastal development at the municipal level (linked to spatial planning)
- Consider recommendation on biodiversity planning in SANBI's NBA 2011 for inclusion in the National biodiversity framework, Bioregion plans and biodiversity management
- Best practice guide specifically focusing on the control and management of alien flora and fauna in the coastal zone, e.g. removal of aliens and using aliens for stabilization, invasive introduced through ballast waters and dry dock operations.

iii. Marine protected areas

Marine protected areas (MPAs) - in terms of theNational Environmental Management: Protected Areas Amendment Act (NEMPAA) (Section 22) - remained designated to the Minister (Environment). Specifically MPAs, in terms of the NEMPAA is declared:

(a) to conserve and protect marine and coastal ecosystems;

(b) to conserve and protect marine and coastal biodiversity;

(c) to conserve and protect a particular marine or coastal species, or specific population and its habitat;

(d) if the area contains scenic areas or to protect cultural heritage;

(e) to facilitate marine and coastal species management by protecting migratory routes and breeding, nursery or feeding areas, thus allowing species recovery and to enhance species abundance in adjacent areas;

(f) to protect and provide an appropriate environment for research and monitoring in order to achieve the objectives of this Act; or

(g) to restrict or prohibit activities which is likely to have an adverse effect on the environment.



Existing regulations, norms and standards, or guidelines on MPAs include:

National Environmental Management: Protected Areas Amendment Act 21 of 2014 (with effect from 2 June 2014).

iv. Sensitive coastal areas

Sensitive coastal areas along the South African coast have been promulgated under the Environmental Conservation Act namely along the Garden Route and south coast of KZN. These are governed by DEA.

Existing regulations, norms and standards, or guidelines on management of sensitive coastal areas include:

Sensitive coastal Areas Regulations in terms of the Environmental conservation Act

v. Heritage area management

The management of heritage areas is not specific to the coastal zone, but such areas are located in the coastal zone, and where applicable related regulations, norms and standards, and guidelines apply. The DEA manage and control national heritage sites through South African Heritage Resources Agency (SAHRA). The World Heritage Convention Act provides for the recognition and establishment of World Heritage Sites, the establishment of authorities and the granting of additional powers to existing organs of state tasked with the management of World Heritage Sites. The National Heritage Resources Act introduces an integrated and interactive system for the managements of national heritage resources (which include landscapes and natural features of cultural significance). One of the important

elements of the Act is that it provides the opportunity for communities to participate in the identification, conservation and management of cultural resources. The Act requires that in areas where there has not yet been a systematic survey to identify conservation-worthy places, a permit is required to alter or demolish any structure older than 60 years. This will apply until a survey has been done and identified heritage resources are formally protected. Anyone who intends to undertake a development must notify the heritage resources authority and if there is reason to believe that heritage resources will be affected, an impact assessment report must be compiled at the developer's cost. Thus developers will be able to proceed without uncertainty about whether work will have to be stopped if a heritage resource is discovered.

Existing regulations, norms and standards, or guidelines on management of heritage areas related to the coastal zone include:

Regulations in connection with the Greater St. Lucia Wetland Park (renamed to the iSimangiliso Wetland Park) (No. R.1193, 24 November 2000)

vi. Preventing and combating of pollution from ships

Prevention of pollution from ships is primarily the responsibility of the Department responsible for transport and the South African Maritime Safety Authority (SAMSA) under the MARPOL Act, SAMSA Act, and Control and Civil Liability Act. However, in the case of oil pollution from ships the responsibility is shared with the DEA (MARPOL Act and SAMSA Act). Specifically the DEA takes responsibility once oil has been released to sea, including shoreline protection and clean-up, and at-sea response. Their responsibility includes the use of dedicated oil response vessels and aircraft



and dispersant spraying operations. In terms of compliance and enforcement the DEA carries out regular oil spill surveillance through its Kuswag programme. Through this service, ships are also monitored for potential illegal oil discharges.

Existing regulations, norms and standards, or guidelines on preventing and combating pollution from ships include:

National Plan for the prevention and combating of pollution from ships and offshore installations. The National Oil Spill Contingency Plan was implemented in August 2006, and an amendment was made in 2007
Local oil spill contingency plans for coastal regions. There are 25 coastal regions for which oil spill contingency plans are prepared. These plans are in the process of being upgraded (Plan within ports have been delegated to Transnet NPA)
Proposed South African Management Framework for the implementation of the International convention for the control and management of ballast water and sediment (2011) (Nolting, 2011)

Future needs in terms of giving directives and guidance on preventing and combating pollution from ships include:

- Upgrade and revision of local oil spill contingency plans for coastal regions, including disaster management planning, and handling and disposal of waste originating from clean-up
- National contingency plan, not only for oil spill contingency, but also other pollution sources, e.g. toxic chemical spills

vii. Solid waste and litter management (land-based)

Solid waste disposal is not specific to the coast, but activities contributing to solid waste – e.g. littering – are having serious impact on the coastal zone (e.g. entanglement of marine animals and deteriorated aesthetics). The solid waste management is governed by DEA under the Waste Act. Formally, solid waste is typically disposed of in landfill sites. Landfill construction is listed as a scheduled activity in regulations under NEMA, and, therefore requires and EIA prior to commencement of operations. Littering constitutes a diffuse source of solid waste and to address this, the Department implements activities under the Working for the Coast Programme. This includes the annual participation in the International Coastal Clean-up campaign. Municipalities have day-to-day operational responsibilities for collection and disposal (at landfill sites) of solid waste (Waste Management Act).

Existing regulations, norms and standards, or guidelines on the management of solid waste and litter (land-based) include:

NEMA EIA Regulations (2010), landfill construction is a listed as scheduled activities under the NEMA EIA Regulations (contained in Government Notices R544, R545 & R546, Government Gazette 33306, 18 June 2010)
Guidelines for the development of integrated waste management plans (DEA, 2009a)



National Waste Management Strategy (NWMS) (DEA, 2011b)
National waste information regulations (Government Notices No. 35583. No R 625 of 13 August 2013)
Waste classification and management regulations (Government Notices No. 36784. No R 634 of 23 August 2013)
National norms and standards for the assessment of waste for landfill disposal (Government Notices No. 36784. No R 635 of 23 August 2013)
National Norms and standards for disposal of waste to land fill (Government Notices No. 36784. No R 636 of 23 August 2013)

Future needs in terms of giving directives and guidance on management of solid waste and litter include:

- Adopt and update best practice guidelines - that were previously developed by DWA- under new waste management legislation
- Strengthen links with international marine litter programmes such as the International Coastal Clean-up campaign
- Develop a marine litter management strategy

viii. Atmospheric pollution

Although not specific to the coastal zone, activities causing air pollution can potentially impact on the coastal zone (through atmospheric deposition), although this has not been listed as a serious impact as yet. The Air Quality Act – administered by the DEA – governs air pollution in South Africa. The Act aims to provide reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development while

promoting justifiable economic and social development. It provides for the establishment of national norms and standards regulating air quality monitoring, as well as management and control by all spheres of government. This Act also allow the MEC and municipalities to issue notices in the Gazette (provincial) or by-laws (municipal) issue standards for air quality in their areas of jurisdiction provided that these are not contradicting national norms and standards. Section 8 of the Air Quality Act assigned [compliance] monitoring of air quality to provinces and municipalities.

Existing regulations, norms and standards, or guidelines on the management of air quality include:

Draft regulations describing the format of the atmospheric impact report (Government Gazette No. 35883, Notice 945 of 2012, 23 November 2012)
Draft declaration of small boilers as controlled emitters (Government Gazette No. 35883, Notice 946 of 2012, 23 November 2012)
Draft dust control regulations (Government Gazette No. 35931, Notice 1007 of 2012, 7 December 2012)
Municipal by-laws on air quality

ix. Control of scuba diving, whale watching and shark cage diving

Section 77 of the MLRA allows for the promulgation of Regulations for the protection of marine living resources under the Act, including regulations. The regulation and norms and standards for off-road vehicles also apply (these activities also require permits for the use of off-road vehicles on the beach).



Existing regulations, norms and standards, or guidelines on the management and control of scuba diving, whale watching, shark cage diving, and other related activities, include:

Regulations for the management of boat based whale watching and protection of turtles (Government Gazette No. 31212, Notice No. R725, 4 July 2008)
Policy on White Shark Cage Diving (Government Gazette No. 33458, Notice No. R804, 31 July 2009)
Policy on boat based whale watching and dolphin watching (Government Gazette No. 32458, Notice No. 805, 31 July 2009)

2.6.3. Activities Governed by other Departments/Authorities under other Acts

i. State assets in coastal zone, including 12 fishing harbours

Immovable state assets are controlled and managed by the Department responsible for public works under GIAMA. Fishing harbours are jointly managed by the Departments' responsible for public works and fisheries in terms of the State Land Disposal Act 48 of 1961 and the MLRA with public works managing the landward areas, and fisheries the seaward areas of the fishing harbours.



Existing regulations, norms and standards, or guidelines on the management of state assets in the coastal zone (including fishing harbours) include:

MLRA Regulations (1998) (Government Notice R1111 in Government Gazette 19205 of 2 September 1998 - as amended) regulates certain activities in fishing harbours

Future needs in terms of giving directives and guidance on management of state assets in the coastal zone:

- Align regulations, norms and standards, or guidelines for management of coastal assets in the coastal zone with requirements under the ICM Act (and NEMA)
- Norms and standards/guidelines applying to management of state assets in the coastal zone, including roles and responsibilities of various departments and authorities.

ii. Fisheries management

Fisheries management is governed under the MRLA by the Department responsible for fisheries. South Africa has committed itself to the Ecosystems Approach to Fisheries Management (EAF) as defined by the Food and Agriculture Organisation of the United Nations (FAO). The EAF approach integrates the biotic, abiotic and human components of ecosystems with a view to managing fisheries within ecologically meaningful boundaries. Within this context, scientific advice informs the setting of Total Allowable Catch (TAC) or Total Allowable Effort (TAE) levels albeit for commercial, recreational, subsistence and small-scale fisheries. Scientific advice is coordinated and routed through the fishing-sector specific Scientific Working Groups convened by DAFF.



Fisheries that operate off the beach close to urban area e.g. False Bay beach-seine (treknet) fishery also often have to adhere to the municipal bylaws when launching or fishing e.g. there is an MoU between the City of Cape Town, treknetters and DAFF with respect to netting in Muizenberg corner. Gillnetters are also subject to the authority of SANParks and municipalities.

Existing regulations, norms and standards, or guidelines on the fisheries management include:

MLRA Regulations (1998) (Government Notice R1111 in Government Gazette 19205 of 2 September 1998 - as amended).
Policy for the small scale fisheries sector in South Africa (Government Gazette 35455, Notice No. 474, 20 June 2012).
Various policies for the allocation and management of commercial fishing rights (http://www.nda.agric.za/)

Future needs in terms of giving directives and guidance on marine fisheries management:

- Align regulations, norms and standards, or guidelines for fisheries management with requirements under the ICM Act (and NEMA)
- Transparent norms and standards for the allocation of fishing rights

iii. Marine aquaculture or harvesting of marine living resources (sea-based)



Marine aquaculture and harvesting of marine living resources are governed under the MRLA by the Department responsible for fisheries. The collection of marine vegetation (e.g. kelp) also requires a permit in terms of the MLRA.

Under the MLRA, each marine aquaculture enterprise has to apply for a right to engage in marine aquaculture. Each application is assessed for viability, economic, social and environmental aspects by the Marine Aquaculture Working Group. Further to this, applicants need to apply for permits to collect brood stock, import and export animals, engage in marine aquaculture activities (production, hatchery), transport animals, seed and harvest abalone for ranching. Farms are visited at least annually to assess adherence to permit conditions and rights. Disease surveillance of each of the marine farms is undertaken by qualified veterinarian service provider appointed by the DAFF. In terms of the permit conditions, production facilities are required to comply with the requirements of the relevant food safety programmes such as the South African Molluscan Shellfish Monitoring and Control Programme (SAMSM&CP).

Existing regulations, norms and standards, or guidelines on the marine aquaculture and harvesting of living marine resource management include:

MLRA Regulations (1998) (Government Notice R1111 in Government Gazette 19205 of 2 September 1998 - as amended)
Policy for the development of a sustainable marine aquaculture sector in South Africa (Notice 1109 of 2007) aimed at create an enabling environment that will promote the growth of marine aquaculture in South Africa and enhance the



industry's contribution to economic growth and to support and develop regulatory and management mechanisms aimed at avoiding or minimizing adverse environmental impacts
National Aquaculture Strategic Framework sets out to provide a harmonised national direction and scope for achievable government and private sector interventions, towards achieving goals that facilitate and lead to the removal of constraints and create a pragmatic, enabling environment for developing an equitable, diverse, viable, competitive and sustainable aquaculture sector (prepared by DAFF)
The Biodiversity Risk and Benefit Assessment of seven alien species aquaculture species (including marine oyster and mussel) to assist the DAFF and other relevant decision-makers to promote the consideration of the effective management of specific alien species used in aquaculture in South Africa (prepared byDAFF in collaboration with provincial and national competent environmental authorities) (DAFF, 2012e)
Strategic environmental assessment to define Marine Aquaculture Development zones in South Africa (prepared by DAFF in collaboration with DEA: Oceans and Coasts) (DAFF, 2011)
Guidelines for Marine Finfish Farming in South Africa This document provides guidelines for fin-fish farming, including land-based farming (DAFF, 2012a)
Guidelines for Aquaculture Better Management Practices in South Africa (DAFF, 2012b)
Guidelines and Potential Areas for Marine Ranching and Stock Enhancement of Abalone (*Haliotis midae*) in South Africa (DAFF, 2010)
The Environmental Integrity Framework (EIF) for Marine Aquaculture is based on principles of "sustainable development", requiring the optimisation of human beneficiation and equity from the use of natural resources, while maintaining biological diversity and protecting ecosystem function. To achieve this, the EIF provides a framework for

setting objectives, indicators, mitigation measures, monitoring and performance standards, as the starting point for responsible and sustainable sector development. The EIF provides a decision support tool from project level to sector level, for the planning of marine aquaculture and for EIA's, while serving as an information platform for new entrants, government officials and consumers (prepared by DAFF in collaboration with provincial and national competent environmental authorities) (DAFF, 2012c)
South African Molluscan Shellfish Monitoring and Control Programme (SAMSM&CP). This manual was prepared by DAFF and the Department of Food and Associated Industries of the Regulator for Compulsory Specifications with the purpose of developing an official manual for South African operators (DAFF, 2008; DAFF, 2012d)
EIA and Environmental Management Guideline for Aquaculture in South Africa (DEA, 2012e)

Future needs in terms of giving directives and guidance on marine aquaculture and collection of living marine resource management include:

- Align regulations, norms and standards, or guidelines for marine aquaculture and collection of living marine resource management with requirements under the ICM Act (and NEMA)
- Norms and standards/guidelines on the harvesting of marine algae (e.g. kelp)
- Transparent norms and standards for the allocation of permits for marine aquaculture

iv. Harvesting of coastal living resources (land-based)

Land-based coastal resources (e.g. coastal forests and mangroves) are governed under the National Forest Act governed by the Department responsible for forestry.



Future needs in terms of giving directives and guidance on harvesting of coastal living resource (land-based) management include:

- Align regulations, norms and standards, or guidelines for harvesting of coastal living resource (land-based) in the coastal zone with requirements under the ICM Act (and NEMA)

v. Port management

Commercial ports in South Africa are managed and control by the Department responsible for transport through the Transnet National Ports Authorities (Transnet NPA) under the National Ports Act. Further the International health regulations Act requires that every seaport must be provided with a system for the removal and disposal of excrement, refuse, waste water, condemned food and other matter dangerous to health. This act falls under the jurisdiction of the Department responsible for health. Activities within ports that are governed by other Acts, e.g. effluent discharges dredging requiring dumping at sea, are governed under the related legislation. Transnet NPA also has an obligation to ensure pollution is managed at the port according to the National Ports Act.

Existing regulations, norms and standards, or guidelines applying to port management include:

Draft Port Rules and Harbour Master's Written Instructions to replace Harbour Regulations (www.info.gov.za/gazette/notices/2007/30253d.pdf)

Future needs in terms of giving directives and guidance on port management include:

- Align regulations, norms and standards, or guidelines related to port management with requirements under the ICM Act (and NEMA)
- Monitoring and reporting on environmental management in commercial ports.

vi. Shipping traffic

Shipping traffic in the coastal zone of South Africa is governed under the Marine Traffic Act by the Department responsible for Transportand provides for matters such as regulating ship traffic and the anchoring of ships outside harbours and the sinking and abandoning of ships.

Existing regulations, norms and standards, or guidelines applying to shipping traffic include:

Marine Traffic Regulations (1981) (under Marine Traffic Act)

Future needs in terms of giving directives and guidance on shipping traffic include:

- Align regulations, norms and standards, or guidelines for shipping traffic with requirements under the ICM Act (and NEMA)



vii. Freshwater flows (quantity and water quality) to coastal zone

The freshwater flow (both related to quantity and quality are governed by the Department responsible for water affairs under the NWA. Chapter 3 of the NWA deals with the protection of water resources, including classification and determination of Reserve (estuaries remains classified as water resources under this Act). Further, Section 21 lists a number of activities that are classified as water uses requiring authorisation from the Minister (Water Affairs), some of which still apply to uses in estuaries. Specific operational management procedures are detailed in individual license Agreements. The DEA Environmental Protection and Infrastructure programmes (Working for Water and Coasts Programme) fulfill a key role in removal of alien vegetation to reduce water demand on the country's water resources and improve water quality.

Existing regulations, norms and standards, or guidelines applying to freshwater flows to the coastal zone include:

General Authorisations (2004) under NWA (Section 39) pertaining to the exception of applying for a licences for use of freshwater, as well as disposal of wastewater into a water resources under specified conditions
Methods for the determination of ecological water requirements for estuaries (DWAF 2008 and future updates thereof)
Determination of freshwater requirements of the marine environment of South Africa: A proposed framework and initial assessment (Van Ballegooyen et al., 2007)



Future needs in terms of giving directives and guidance on freshwater flows to the coastal zone include:

- Align regulations, norms and standards or guidelines applying to estuaries under the NWA with requirements under the ICM Act (and NEMA)
- Methods to determine the freshwater requirements of the sea, including requirements in terms of sediment supply
- Determine and implement ecological water requirements for all estuaries
- A national strategy for the use of desalination of coastal waters as an additional source of water supply for South Africa
- Discharges in estuaries require concurrence with the DWS when a coastal waters discharge permit is concerned. A consensual Inter-departmental approach is essential to deal with estuarine discharges in rivers close to estuaries and within estuaries.

viii. Mining

Mining, including mining in the coastal zone is governed by the MRDP Act by the Department responsible for mining. The authorisation process for mining is also governed under the MRDP Act, not NEMA Regulations. The Act did adopt certain sections of NEMA namely Section 2 on the principles of NEMA, Chapter 5 on the objectives of IEM, and section 24(7) on impact assessment. Holders of authorisations are required to include detailed monitoring plans in their EMProgrammes and EMPlans and to submit Performance Assessment Reports (PARs) to DMR. Although the larger mining companies generally have well-developed monitoring plans (as part of EMProgrammes and EMPlans) and,



importantly, implement them, this is generally not the case for the smaller mining operations (e.g. sand winning). The MPRD Act requires that a Closure Plan be submitted to the Minister (Mining) for approval. The Regulations stipulate that a final Performance Assessment Report (PAR), Environmental Risk Report (ERR) and closure plan are submitted for consultation and approval. This Closure Plan also requires that the closure objectives and strategies are implemented and monitored to ensure that it leads to closure. The issuing of a closure certificate is undertaken in consultation with other government departments to ensure that environmental; social, economic, water, health and safety issues are fully addressed. Environmental Monitoring Plans and Programmes are not closure plans, these only address the closure objectives to ensure that holders have a strategic framework in place when applying for closure, which is a process on its own addressing a wide range of issues including the natural environment. A coastal waters discharge permit is still required from DEA for any coastal effluent discharges.

Existing regulations, norms and standards, or guidelines applying to mining in the coastal zone include:

MPRD Act Regulations (2004) specifying the procedures to follow and the content in the preparation of EIA,'s, EMPlans and EMProgrammes, as well as PARs. Pollution control and waste management is also addressed ((www.info.gov.za/gazette/regulation/2004/26275.pdf).
Financial provision guidelines (2005) developed in terms of the MPRD Act and the MPRD Act Regulations (www.aspasa.co.za/PDFs/DMR-guidelines-quantam.pdf)
Mining and Biodiversity Guideline: Mainstreaming biodiversity into the mining sector (DEA, DMR, Chamber of Mines, South African Mining and Biodiversity Forum & SANBI, 2013)



Future needs in terms of giving directives and guidance on mining in the coastal zone include:

- Align regulations, norms and standards or guidelines applying to mining in the coastal zone under MRDP Act with requirements under the ICM Act (and NEMA)
- Norms and standards/guidelines specifically addressing mining in the coastal zone, including application and authorisation, implementation and monitoring as well as closure for coastal mining (both coastal and offshore)
- Investigate the International Marine Mining Society (IMMS) Environmental management code for marine mining for adoption in South Africa
- Investigate national strategy for smaller scale coastal mining operations (e.g. sand mining) including a more strategic approach to environmental assessment.



ix. Oil and gas exploration

Offshore oil and gas exploration in the coastal zone is governed by the MRDP Act by the Department responsible for mining.

Existing regulations, norms and standards, or guidelines applying to oil and gas exploration in the coastal zone include:

MPRD Act Regulations (2004) ((www.info.gov.za/gazette/regulation/2004/26275.pdf).
Financial provision guidelines (2005) (www.aspasa.co.za/PDFs/DMR-guidelines-quantam.pdf) developed in terms of the MPRD Act and the MPRD Act Regulations

Future needs in terms of giving directives and guidance on oil and gas exploration in the coastal zone include:

- Align regulations, norms and standards or guidelines applying to oil and gas exploration in the coastal zone under MRDP Act with requirements under the ICM Act (and NEMA)

x. Infrastructure development (land-based)

Municipalities are largely responsible for the implementation of legislation in terms of coastal infrastructure development. Municipalities usually have officials, such as building inspectors that check for compliance with building regulations and approve building plans.



Existing regulations, norms and standards, or guidelines applying to coastal infra-structure (land-based) in the coastal zone include:

Building Regulations and Standards prepared by the South African Bureau of Standards (SABS) setting standards for the technical performance for all buildings constructed in South Africa, mainly to ensure the health and safety of occupants (https://www.sabs.co.za/)
NEMA EIA Regulations (2010) - certain activities are listed as scheduled activities under the NEMA EIA Regulations (contained in Government Notices R544, R545 & R546, Government Gazette 33306, 18 June 2010)
Provincial planning legislation and SDFs
Municipal IDPs and SDF, as well as related by-laws

Future needs in terms of giving directives and guidance on infrastructure development (land-based) in the coastal zone include:

- Norms and standards/guidelines for infrastructure development in the coastal zone consolidating existing guidelines and by adapting Building Regulations to reflect aspects specific to the coastal zone. Allow for refinement at the Provincial and Local level to accommodate site specific aspects. Application and adaptation for climate change scenarios should also be addressed.



xi. Recreational water quality (e.g. beaches)

The National Health Act requires that every metropolitan and district municipality to ensure that appropriate municipal health services are effectively and equitably provided in their respective areas. This is understood to include water quality monitoring (in terms of health risks) in water resources (e.g. estuaries) used for recreational purposes.The DEA continuously encourages the local authorities to monitor recreational waters to ensure that water quality remains safe for public health.

Existing regulations, norms and standards, or guidelines applying to recreational water quality (beaches) include:

Water quality guidelines for the coastal environment: Recreational use (DEA, 2012a)

xii. Renewable energy activities

Renewable energy activities are governed under the National Energy Act by the Department responsible for energy. The Act defines "Renewable energy" is defined as energy generated from natural non-depleting resources including solar energy, wind energy, biomass energy, biological waste energy, hydro energy, geothermal energy and ocean and tidal energy. The Department may make regulations on such matters (Section 19).

Existing regulations, norms and standards, or guidelines applying to renewable energy activities that may be relevant to the coastal zone include:

Strategic Environmental Assessment (SEA) for the efficient and effective rollout of wind and solar photovoltaic (PV) energy (in progress, DEA: Integrated Environmental Management Support)

Future needs in terms of giving directives and guidance on renewable energy activities in the coastal zone include:

- Align regulations, norms and standards or guidelines applying to renewable energy activities in the coastal zone under the National Energy Act with requirements under the ICM Act (and NEMA)

xiii. Defence activities

Defence activities are governed under the Defence Act by the Department responsible for defence and Chapter 4 of this act stipulates the Integrated Environmental Management Support law enforcement powers of the defence force at sea executed by the South Africa Navy.

Existing regulations, norms and standards, or guidelines applying to defence activities in the coastal zone include:

Maritime Doctrine for the SA Navy that guides the actions of maritime forces in the pursuit of national and military objectives in support of national policy (SA Navy 2006)

Future needs in terms of giving directives and guidance on defence activities in the coastal zone include:

- Align regulations, norms and standards or guidelines applying to defence activities in the coastal zone under the Defence Act with requirements under the ICM Act (and NEMA)



2.7. Monitoring for Coastal Management

The ICM Act defines *monitoring* and enforcing compliance with laws and policies that regulate human activities within the coastal zone as a key component of coastal management (Section 1) and requires the NCMP to define *performance indicators* to measure progress with the achievement of its management objectives (Section 4[2]). Provincial lead agents are responsible for monitoring coastal management in their provinces to ensure that it is undertaken in an integrated, effective and efficient manner and in accordance with the objects of the ICM Act. A provincial lead agent must also monitor the state of the environment in the coastal zone and relevant trends affecting that environment (Section 38[2]). Further, the Biodiversity Act (Section 11) tasks SANBI to monitoring (and report) on the status of South Africa's biodiversity.

Monitoring for coastal management, therefor, comprise three main categories, namely:

- Compliance monitoring to ensure that human activities in the coastal zone comply with laws and policies
- Performance monitoring to measure progress with the achievement of its management objectives
- Descriptive monitoring to measure actual variability and trends in biophysical, social and economic characteristics and processes in the coastal zone.

Requirements and roles and responsibilities related to compliance monitoring and enforcement are mostly stipulated the laws and policies governing various human activities in the coastal zone (referring to Chapter 2, Section 2.5).



Performance monitoring addresses key performance assessments in terms of fulfilling environmental management objectives in the coastal zone. These are typically based on monitoring of selected performance indicators related to specific management objectives and strategies, as is put forward in Chapter 6.

Descriptive monitoring (i.e. monitoring of variability and trends in biophysical characteristics and processes) in the coastal zone largely occurs on an *ad hoc* basis. Examples of monitoring programmes - mainly comprising physical parameters – include seawater levels (including tides) which are monitored along South Africa's coast in some of the ports and harbours, Wave data are recorded near the commercial ports, and water level recorders in estuaries indicating change in the duration and frequency of mouth closure in the long term (about 10% of South Africa's estuaries are currently being monitored by DWA). The DWA – under the NWA - arerolling out National Estuaries Monitoring Programmes to measure selected physico-chemical parameters in estuaries. South African Environmental Observation Network (SAEON) was established in 2002 to develop an *in situ* environmental observation network that delivers long-term reliable data for scientific research and to inform decision-making. Their Elwandle and Egagasini nodes operate in the coastal and ocean environment, respectively. The Elwandle node has a well-established long-term observation programme ongoing in Algoa Bay. Environmental departments in some of the coastal provinces also commenced with monitoring programmes (e.g. monitoring of 10 priority estuaries in the Western Cape Province). Most of the coastal metropolitan municipalities (and some district municipalities) conduct long-term microbiological monitoring programmes at recreational beaches to fulfil their responsibility in terms of environmental quality under the National Health Act. Monitoring under the Biodiversity Act also addresses aspects of descriptive monitoring.

In terms coastal monitoring the following needs were identified:

- Selection of performance indicators in order to assess progress and status in terms of fulfilling environmental management objectives in the coastal zone
- Norms and standards on the roles and responsibilities of different spheres of government, as well as other role players, in long-term monitoring for coastal management
- Finalise development, and implement the National Estuary Monitoring Programme
- Develop and implement a national pollution monitoring programme, specifically targeted at pollution hotspots (DEA: Oceans and Coasts, in progress)
- Expand the national network of gauging station to monitor freshwater flows into the coastal environment
- Expand the national network of continuous water level recorders in estuaries
- Expand and re-establish the sediment monitoring programme in estuaries

2.8. State of the Coast Reporting

Section 93 of the ICM requires deals with Coast Reporting. First the MEC in coastal provinces must prepare a report on the state of the coastal environment (State of coast Report) and submit these to the Minister. Provincial State of Coast reports must be updated as applicable information becomes available (i.e. an adaptive management approach). At national level, the Minister (Environment) must prepare and regularly update a national report on the state of the



coastal environment based on provincial reports. Further, the Biodiversity Act (Section 11) tasks SANBI to report) on the status of South Africa's biodiversity as was done with the NBA 2011 (Driver et al., 2012).

Procedures on reporting mechanisms for compliance monitoring are mostly stipulated in the laws and policies govern the various human activities in the coastal zone. Performance reporting is (or should be) addressed in key performance assessments of various departments in terms of, for examples requirement under NEMA (requiring reporting on management of environmental matters).

To date state of coast reporting was largely accommodated in State of Environment Reports (e.g. South Africa Environment Outlook and Western Cape State of Environment Report) that is required in terms of NEMA, as well as the National Biodiversity Assessment (NBA 2011) as required in terms of the Biodiversity Act. Ideally, State of Coast Reporting that will have to be undertaken in terms of the ICM Act should provide greater detail on coastal matter which could then be incorporated into State of environment Reports. In 2002, DEA proposed a core set of environmental indicators (marine, coastal and estuarine) for State of the Coast Reporting (DEA, 2002), presented in the Pressure-State-Response (PSR) framework. However, few of these have been officially incorporated into performance monitoring programmes. More recently, the National Biodiversity Assessment 2011 (Driver et al., 2012) also proposed indicators and assessment approaches for future consideration. In the light of the above, an official suite of state of the coast indicators is required to evaluate and report on progress and effectiveness of coastal management in South Africa.



To strengthen mechanisms for State of Coast Reporting the following is required:

- Norms and standards for performance reporting – related to coastal management - in DEA's (and other departments') key performance assessments
- Norms and standards on the content and information to be included in State of Coast Reporting, including the selection of indicators and associated data sources (potential list of indicators presented in Appendix E)

2.9. Progress in Cooperative Governance

The framework for cooperative governance recognises the important of governance "support elements" - in addition to **formal institutional structures** - to achieve effective ICM. These support elements – in the South African context - include:

- Recognition and empowerment of marginalised or previously disadvantaged communities;
- Data and information systems;
- Awareness, education and training;
- Training and capacity building;
- Scientific (research) support programmes;

- Financial support programmes; and
- Coordinated coastal compliance and enforcement system.

2.9.1. Formal institutional structures

The ministerial political (MINMEC) and technical (MINTEC) structures under Intergovernmental Relations Framework Act (Act No. 13 of 2005), were set up to facilitate a high level of policy and strategy coherence between the three spheres of government. MINMEC: Environment is a standing intergovernmental body consisting of the Minister of Environmental Affairs, members of the provincial Executive Councils (MECs) responsible for environmental management functions and South African Local Government Association (SALGA). MINMEC meets quarterly. MINTEC: Environment is a standing intergovernmental body that provides technical input into the MINMEC. Several technical working groups meet regularly to discuss and advise on issues of biodiversity and heritage, impact management, pollution and waste management, and planning and reporting and a working group that deals with cross-cutting issues. Working Group 8 (WG8) deals with oceans and coasts and is chaired by the Chief Director: Integrated Coastal Management of DEA: Oceans and Coasts. WG8 is attended by key national agencies, representatives from provincial lead agents for ICM, science councils, and conservations bodies, amongst other.

Coastal committees form the core of the institutional framework for ICM under the ICM Act (Chapter 5) in a nested coastal governance system. The Minister (environment) must establish a National Coastal Committee (NCC), of which



the key function is to promote integrated coastal management in the Republic and effective co-operative governance by co-ordinating the effective implementation of the ICM Act and of the NCMP (Section 35). Representatives on the NCC (Section 36) must include (i) persons with expertise in fields relevant to coastal management and coastal ecosystems; (ii) a representative from each Provincial Coastal Committee; (iii) one or more members representing municipalities in the coastal zone; (iv) representatives of national government departments which play a significant role in undertaking or regulating activities that may have an adverse effect on the coastal environment, including representatives of the departments responsible for agriculture, minerals, energy, transport, public works, provincial and local government, land affairs, water affairs and forestry and trade and industry; and (v) one or more members representing the management authorities of coastal protected areas. Pending the establishment of an official national institutional structure for coastal management, under the ICM Act, WG8 fulfils the role. In this regard, a term of reference has been develop and adopted for this working group (DEA, 2011d).

The ICM Act (Section 39) also mandates the establishment of Provincial Coastal Committees (PCCs) in each of the coastal provinces of which the key function is promote integrated coastal management in the province and the co-ordinated and effective implementation of this Act and the provincial coastal management programme. Section 40 of the Act states PCCs must include (i) persons with expertise in fields relevant to coastal management; (ii) one or more members representing municipalities in the coastal zone; (iii) one or more members representing community based and non-government organisations; and (iv) one or more members representing scientific or coastal research institutes. The status of PCCs varies, where some provinces have already established their committees (e.g. Northern Cape and Western Cape) and others are in the process of doing so (Kwa-Zulu Natal and Eastern Cape).



In municipalities, coastal committees are not mandatory and are left to the discretion of the metropolitan, district or local municipalities (Section 42). The key function of municipal coastal committees (MCCs) may be to promote integrated coastal management in the municipality and the co-ordinated and effective implementation of this Act and the municipal coastal management programme. Representation on MCCs may include (i) persons with expertise in fields relevant to coastal management; (ii) representatives of the management authorities of coastal protected areas or special management areas within the municipality; and (iii) representatives of communities or organisations with a particular interest in contributing to effective coastal management, such as port authorities, organs of state, persons whose livelihoods or businesses rely on the use of coastal resources, environmental interest groups and research organisations (Section 42).

Institutional structure addressing trans-boundary aspects of coastal management includes the structures under the Nairobi and Abidjan Conventions (e.g. their Conference of Parties), as well as institutional structures set up for the Large Marine Ecosystems, such as the Benguela Current Commission (for the BCMLE). South Africa is a contracting party to the Nairobi Convention, which has, over the past three years, developed an Integrated Coastal Zone Management Protocol to the Convention, which has utilised the ICM Act as a foundational document to it content regional implementation plans (UNEP, 2012).



Reflecting on the above, as well as feed-back from stakeholders, the following needs related to formal coastal institutional structures are apparent in terms of giving directives and guidance on coastal management in South Africa:

- Agree on the institutions representative of the NCC under the ICM Act
- Complete the establishment of all PCCs (in progress)
- Strategy/norms and standards on the inclusion of civil society in coastal committees, especially the NCC
- Develop guidelines on the Develop guidelines for the establishment and consistent functioning of coastal committees, specifically addressing also collaboration and partnerships with traditional leadership should be included in the NCMP
- A strategy for collaboration and partnerships with traditional leadership should be included in the NCMP
- Strategies or guidelines for local co-management of projects in the coastal zone
- Strategy to coordinate disaster management in the coastal zone.

2.9.2. Marginalised or previously disadvantaged communities

The ICM Act is very specific on the empowerment of marginalised or previously disadvantaged communities. Section 45(2)(f)(i) stipulates that the framework for co-operative governance for coastal management (under the NCMP) must



identify the responsibilities of different organs of state, including their responsibilities in relation to marginalised or previously disadvantaged communities that are dependent on coastal resources for their livelihood. Further 49(2)(c)(iv) of the Act requires that municipal CMPs must equitably designate zones for the purposes of mixed cost housing and taking into account the needs of previously disadvantaged individuals (e.g. designated coastal planning schemes).

The empowerment and acknowledgement of empowerment of marginalised or previously disadvantaged communities is a cross-cutting element that must be address from setting the vision, through zoning of uses in the coastal zone, and in the cooperative governance framework for coastal management.

To facilitate the empowerment and recognition of marginalised or previously disadvantaged communities in the coastal zone, the following needs emerged in terms of giving directives and guidance on coastal management in South Africa:

- Strategy/norms and standards on the recognition, involvement and empowerment of marginalised or previously disadvantaged communities, across all spheres of government.
- Strategy to address sustainable and alternative livelihoods and job creation associated with coastal zone.



2.9.3. Data and information management systems

Section 93 of the ICM Act states that the Minister (Environment) must progressively, and within the available resources of the Department, make sufficient **information** available and accessible to the public concerning the protection and management of the coastal zone to enable the public to make an informed decision of the extent to which the State is fulfilling its duties in terms of coastal management. Section 83(1e) permits the Minister (environment) to make regulations stipulating the type and format of data to be submitted to the Department or other organs of state for the purposes of monitoring the coastal environment and the implementation of the ICM Act or maintaining a coastal information system. The accessibility to information is also supported in the Promotion of Access to Information Act (Act No. 2 of 2000, amended No. 54 of 2002). Further the Spatial Data Infrastructure Act (Act No. 54 of 2003) (SDI Act) was promulgated in recognition of the importance of a National Spatial Data Infrastructure.

The most comprehensive oceanographic data system for South Africa – that includes data on the coastal zone – is the Southern African Data Centre for Oceanography (SADCO). SADCO is hosted by the Council for Scientific and Industrial Research (CSIR) and is funded by a number of marine organisations in South Africa and Namibia, including the CSIR, South African Navy, Namibian Ministry for Fisheries and Marine Resources, National Research Foundation



(NRF) and DEA: Oceans and Coasts. SADCO is also recognised by the Intergovernmental Oceanographic Commission as the official South African mouthpiece in terms of international exchange of marine data.

The DEA maintains a Geographic Information System (GIS) for the storage and analysis of cartographic (mapped) and related environmental information for use by the Department. In this regard the department prepared a handbook, GIS Handbook: Policies, standards and guidelines (DEA, 2012) that outlines GIS policies, standards and guidelines applicable to the department. Policies that are included in this handbook are public access, pricing of products and services, custodianship. The policies on pricing of spatial data and data custodianship are adopted from those being developed by the Committee for Spatial Information. Some Departmental programmes require the submission of mapped data to a GIS standard. The submission of mapped data by all sectors based on the standard presented in this handbook will facilitate data input into the Department's GIS and the integration of data with other GIS systems.

With specific reference to estuaries a number of data bases and information systems exist, including:

- Estuary information system developed by the Elwandle node of SAEON
- KZN estuary data base
- Botanical data base of the Nelson Mandela Metropolitan University (NMMU), Botany Department
- DWA hydrological data base (data on river flows into, and water level recording in, some estuaries)

- DWA river water quality data base (including river inflows into some estuaries has developed and populated an information systems for estuaries.

Furthermore, in the absence of a national ocean and coastal information management system, several provinces and municipalities collated their own data and information systems, for example the Northern Cape Province uses the SPIsys system as its spatial planning data and information system (http://spisys.co.za/).

In the light of the data and information needs in terms of giving directives and guidance on coastal management in South Africa include:

- Develop a comprehensive Oceans and Coastal Information Management System (OCIMS) taking into account existing national, provincial and municipal developments (in progress)
- Requirements in terms of the SDI Act, probably only above HWM?
- Norms and standards on the type and format of data to be submitted to the OCIMS, as well as roles and responsibilities of various authorities and institutions
- Ensure that the OCIMS is easily accessible (e.g. web-based systems) with proper training on its use and application
- Establish a "Hotline" in support of coastal management.



2.9.4. Awareness and education

Section 83(1[m]) of the ICM Act permits the Minister (Environment) to make regulations on training, **education and public awareness programmes** on the protection, conservation and enhancement of the coastal environment and the sustainable use of coastal resources. The ICM Act (Section 38) tasks provincial lead agents to promote, in collaboration with other appropriate bodies and organisations, training, **education and public awareness programmes** relating to the protection, conservation and enhancement of the coastal environment and the sustainable use of coastal resources.

In practice, awareness, education and training (AE&T) is a shared responsibility between public, private and civil society sectors. There are a number of notable past efforts to promote coastal awareness in South Africa, such as the numerous initiatives undertaken as part of the CoastCARE programme (a DEA initiative). Current examples include the International Coastal Clean-up campaign (www.oceanconservancy.org/icc) in September each year involving large numbers of public participants through a series of regional initiatives. Environmental awareness and education in is also a key component (amongst others) of South Africa's Blue Flag campaign (www.blueflag.org.za/), an international initiative that encourages municipalities to provide clean and safe beaches for local populations and tourists (www.blueflag.org/). NGOs, such as World Wildlife Fund South Africa (www.wessa.org.za/), the Environment Society of South Africa (www.wessa.org.za/), Coastwatch (KZN), and Ushaka Sea World and its Education Centre (Durban) (www.seaworld.org.za), also play a critical role in A&E in the coastal zone.



To advance a coordinated approach in coastal AE&T in South Africa, specific needs in terms of giving directives and guidance on coastal management in South Africa include:

- Coordinated strategy for coastal awareness, education [and training] for South Africa to enable the effective planning, development, implementation monitoring and evaluation of various initiatives and programmes in the country (specifically recognising the roles on NGOs)
- Develop a national brand for coastal AE&T (similar to the previous CoastCARE programme)
- Expand awareness raising programmes to address specific activities in the coast, such as inappropriate coastal development (e.g. linking with the insurance industry) and the importance of stormwater management
- Strategy to incorporate coastal issues in the school curriculum.

2.9.5. Training and capacity building

Within cooperative governance framework for coastal management, it was decided to present training and capacity building as a separate support element to A&E to stress the importance of training directed at building professional capacity in coastal management.



Section 83(1[m]) of the ICM Act permits the Minister (Environment) to make regulations on **training**, education and public awareness programmes on the protection, conservation and enhancement of the coastal environment and the sustainable use of coastal resources. Section 38 of the Act tasks provincial lead agents to promote - in collaboration with other appropriate bodies and organisations - **training**, education and public awareness programmes relating to the protection, conservation and enhancement of the coastal environment and the sustainable use of coastal resources.

A major threat sustainable coastal management in South Africa, is diminishing (or lack of) capacity in government, from national to municipal level. This has a cascading effect on the effectiveness and efficiency of coastal management institutions. Effective training and capacity building mechanisms are, therefore, a critical support element in the long-term sustainability of ICM implementation. DEA, in response to the national challenges relating to skills and expertise have developed a Human Capital Development Strategy (HCDS) (DEA 2009) that arose out of the constitutional imperative for a clean, healthy environment that benefits current and future generations, and the impetus to strengthen opportunities associated with a green economy for South Africa. Significant to the HCDS is the Human Resource demands of achieving the Presidential Delivery Agreement for Outcome 10, which focuses on environmental assets and natural resources that are valued, protected and continually enhanced. The HCDS is also directly relevant to provincial and local government strategy and planning. Skills development demands outlined in this document were established in consultation with provincial government, and local government, and took account of the specific needs identified at provincial and municipal level. It is vital that the institutions for ICM, both formal and informal, provide input to an Oceans and Coasts sub-component of the HCDS. The capacity and skill indicated to

effectively engage ICM as a management paradigm requires a specific set of parameters within the broader environment HCDS.

Existing strategies, initiatives and training opportunities relevant to coastal management in South Africa include:

Working for the Coast Programme (DEA) providing jobs and training for unemployed people in coastal communities to create and maintain a cleaner and safer coastal environment.
Estuary Management Training Course accredited by the Nelson Mandela Metropolitan University (NMMU)
A User-friendly Guide to South Africa's Integrated Coastal Management Act (DEA) (Celliers et al., 2009)
Training course on the ICM Act (course developed by DEA: Oceans and Coasts)
Human Capital Development Strategy Environmental Sector. A system approach to skills development to support the environmental sector strategic plan 2009-2014 (DEA, 2009b)
Environmental Sector Skills Plan for South Africa. A systems approach to human capacity development and sector skills planning (DEA, 2010a)

Reflecting on the above, training and capacity building needs in terms of giving directives and guidance on coastal management in South Africa include:

- An National Human Capacity Development strategy complimentary and in addition to the existing DEA Human Capital Development Strategy - specifically aimed at coastal management – that includes specific actions to improve



the skills and expertise required to manage the coast

- Coordinated strategy for coastal [awareness, education and] training for South Africa to enable the effective planning, development, implementation monitoring and evaluation of various initiatives and programmes in the country
- Regular "in-job-training" courses on coastal management for government officials (and other authorities responsible for aspects of coastal management) (potentially collaborating with tertiary education institutions for accreditation of such training courses)
- Explore expansion of the role of the Working for the Coast Programme to further enhance training and capacity building for coastal management
- Develop a guide for coastal committees on establishment of coastal management programmes (in progress).

2.9.6. Financing mechanisms

The ICM Act assigns various role and responsibilities to national, provincial local government for which the various spheres of government should allow in their budgets. However, the reality in that since the proclamation of the Act in 2009, budgets (or budget allowances) for coastal management – especially the new roles and responsibilities assigned to authorities under the ICM Act – are either limited or lacking. Also, the extent to which these budget are limited or



lacking various from authority to authority. Therefore, it is important that coastal management programmes in South Africa do address the issue of funding.

In addressing issues around funding mechanism for coastal management it is important that requirements - including roles and responsibilities - under the following Act be closely explored:

- Public Finance Management Act (Act No. 1 of 1999);
- Municipal Finance Management Act (Act No. 56 of 2003); and
- Government Immovable Asset Management Act (Act No. 19 of 2007).

Furthermore, governing authorities need also to explore innovative ways in which to secure financial resources for coastal management, for example user pay systems. An avenue to secure political will to fund coastal management is to demonstrate and promote the value of the coastal zone in supporting government priorities such as poverty alleviation, economic development and job creation.

However, Section 83(2) requires the Minister (environment) obtain the consent of the Minister of Finance before making any regulation that will entail the expenditure of funds in future years or prescribes application fees for, or other monies in relation to, dumping permits or coastal waters discharge permits.



Towards securing financial sustainability for coastal management in South Africa the following needs come to the fore in terms of giving directives and guidance on coastal management in South Africa:

- A coastal socio-economic assessment and investment strategy (including an assessment coastal zone' value in supporting government priorities such as poverty alleviation, economic development and job creation)
- Strategy on securing sustainable funding mechanisms for coastal management
- Strategy promoting the value and role of coastal tourism (a specific mechanism through which to generate and secure funding for coastal management)
- National guidelines on appropriate funding mechanisms for coastal management, specifically at the aimed at generating these at provincial and municipal levels

2.9.7. Scientific research support

Sustainable coastal management is strongly reliant on sound scientific research support, continuously extending and improving the information and knowledge base, and ensuring that new learning are taken up in the coastal management and governance systems.



In South Africa, organized scientific research support – including support for coastal management - spans institutions. These include:

- South African Network for Coastal and Oceanic Research (SANCOR), a non-statutory body aimed at generating and communicating knowledge and advice in order to promote the wise and informed use and management of marine and coastal resources and environments (http://sancor.nrf.ac.za/)
- Consortium for Estuarine Research and Management (CERM), an organisation that concentrates on estuarine systems, providing a platform for South African scientists and resource managers to collaborate in promoting the wise management of estuaries through joint participation in research, training and technology transfer (http://www.nmmu.ac.za/cerm/default.htm)
- South Africa's Water Research Commission (WRC), that provides the country with applied knowledge and water-related innovation, by continuously translating needs into research ideas and, in turn, transferring research results and disseminating knowledge and new technology-based products and processes to end-users (http://www.wrc.org.za/).
- National Research Foundation (NRF), an independent government agency that promotes and supports research in all fields of knowledge – including coastal management (www.nrf.ac.za).

Furthermore, coastal research is also undertaken at several of the country's tertiary education institutions, science councils (e.g. CSIR), scientific institutions (e.g. SAEON, Southern African Institute for Aquatic Biodiversity, South African National Biodiversity Institute and the Oceanographic Research Institute), and through private consultancies. The DEA is also in the process of preparing coastal research plan.



Existing strategies relevant to coastal research in South Africa include:

Environment Sector Research, Development and Evidence framework. An approach to enhance sector science-policy interface and evidence-based policy making (DEA, 2012h)

Towards enhancing a coordinated scientific research support base for coastal management the following is required in terms of giving directives and guidance on coastal management in South Africa:

- Coastal research strategy that identifies research priorities for coastal management, as well as mechanisms to address priority research involving the various role players (including research funding mechanisms)
- The role and importance of freshwater (and sediment) flows to the coastal zone, also coastal areas other than estuaries.

2.9.8. Coordinated compliance and enforcement systems

The ICM Act (Section 1) includes *monitoring and enforcing compliance with laws and policies that regulate human activities within the coastal zone* as an integral element of coastal management, and therefore, integral to the cooperative governance framework supporting coastal management. The ICM Act (Section 83[k]) allows the Minister (Environment) to make regulations on the methods, procedures and conditions of enforcing compliance with authorisations under the Act. Section 32[2][h] tasks provincial lead agents to take all reasonably practical measures to



monitor compliance with, and to enforce, the ICM Act, [in their provinces] either alone or in cooperation with other enforcement agencies. The Minister may request provinces to implement or monitor compliance with national norms and standards, in instances where a province has not implemented adequate measures in this regard. In turn, an MEC may use any powers granted to the MEC under this Act to implement or monitor compliance with provincial norms and standards, if a municipality located in the province does not comply with directives given to the municipality.

While provinces are tasks to conduct compliance and enforcement of the ICM Act within their provinces, compliance and enforcement mechanisms outside the geographical jurisdiction of provinces (e.g. coastal waters) is complicated and dictated by the legislation governing various activities in the coastal zone (e.g. Table 4). The implementation of compliance and enforcement mechanisms in the coastal zone remains, however, a challenge, primarily blamed on inadequate financial and human resources. A possible solution to improve compliance and enforcement is collaboration among the various responsible departments and authorities. In 2011 the DEA published a document entitled *Enforcement manual for the integrated Coastal Management Act* to serve as a guide to official in the enforcement of the Act (DEA, 2011c).

Towards improving the implementation of compliance and enforcement in the coastal zone, the following is needed in terms of giving directives and guidance on coastal management in South Africa:

- Strategy for coordinated coastal compliance and enforcement, including the opportunities for collaboration, roles and responsibilities of various department, authorities and operators
- Compliance and enforcement strategy for involvement of local communities



Chapter 3: Roles & Responsibilities for Coastal Management



3. Roles and Responsibilities for Coastal Management

The Situation Analysis (Chapter 2) highlighted the numerous acts specifying roles and responsibilities of various government departments (and other role players) in an array of activity-based management programmes potentially affecting the coastal zone. However, the most central piece of legislation dealing roles and responsibilities of government departments (and other roles players) in the **coastal zone** is the ICM Act. This chapter, therefore, provides an overview of the roles and responsibilities assigned to each of the three spheres of government, as well as collaborative partnership with other role players, by this Act.

3.1. Mandatory Roles and Responsibilities

3.1.1. National Government

Table 5 summarises the key, mandatory roles and responsibilities of national government in coastal management in terms of the ICM Act.

Table 5: Summary of mandatory roles and responsibilities of national government in coastal management in terms of the ICM Act

ASPECT	RELATED SECTION/S IN ICM ACT	BRIEF DESCRIPTION OF ROLE & RESPONSIBILITY
The management of coastal public property	7, 8,9,10,11,12,13,14,15,21,26,27,32	Ensuring the state as a public trustee, provides for the protection, management and enhancement of coastal public property as an inalienable area within the coastal zone that belongs to the citizens of South Africa. This achieved by developing regulations to control the use of coastal public property, determine and adjust the boundaries of coastal public property as deemed appropriate, as well as designation and inclusion of certain portions of state-owned land as coastal public property to achieve the objectives of the ICM Act.
The National Estuarine Management Protocol	33,34	Ensure that the National Estuarine Management Protocol is developed and that Estuarine Management Plans for each estuary along the SA coast is place in collaboration with responsible bodies appointed for Estuary Management Plan development and implementation.
The National Coastal Committee	35,36,37	Establishment of the National Coastal Committee, determination of its powers and appointing representatives for the Committee.
Monitor the appointment of provincial lead agencies	38	Ensure that Provincial lead agencies for ICM are established and functioning on a continual basis.
Development and Implementation of the National Coastal Management Programme	44,45	Develop a National Coastal Management Programme aligned with the contents of the ICM Act.
Consistency and alignment between the National Coastal Management Programme and other statutory plans	51,52	Ensure that any plan, policy or programme adopted by an organ of state that may affect coastal management is consistent and aligned with the national coastal management programme.
Consultation and public participation	53	Ensure meaningful consultation with government and other coastal stakeholders.
Environmental authorizations for coastal activities	63,64	Ensure that the competent authority refers, in terms of S63 (4) applications that are inconsistent with S63 (2), but are in the public interest, to the Minister for consideration. Ensure that where an environmental authorization is not required for coastal activities, the Minister considers listing activities that will be requiring a permit or license in terms of S63 (6).
Discharge of effluent into coastal waters	69	Ensure that point source discharges of effluent are effectively assessed, controlled and monitored.
Dumping of waste into coastal	70,71	Prohibit incineration at sea and ensure that the overall intent of S70

waters		and S71 is understood by stakeholders.
Emergency dumping at sea	72	Ensure that consideration is given to emergency situations relating to the dumping of waste at sea.
The National Action List	73	Ensure that an effective screening mechanism is available to support assessment of dumping applications.
Determination of national appeals powers	78	Establish powers of Minister and MEC's and procedures to be followed in determining appeals.
Prescribing regulations and fees	83	Develop regulations for the management of activities within coastal public property and consult the Minister of Finance before making any regulations which will entail expenditure of funds in future years, application fees, or regulations imposing fees, costs or any other charges.
General provisions applicable to regulations	85	Specify general procedures relating to regulations, including penalties for contraventions.

3.1.2. Provincial Government

Table 6 summarises the key, mandatory roles and responsibilities of provincial government in coastal management in terms of the ICM Act.

Table 6: Summary of mandatory roles and responsibilities of provincial government in coastal management in terms of the ICM Act

ASPECT	RELATED SECTION/S IN ICM ACT	BRIEF DESCRIPTION OF ROLE & RESPONSIBILITY
The management of the coastal protection zone	16,17,22,26,28,30	Ensuring the protection, management and enhancement of the coastal protection zone. This achieved by developing regulations to control the use, determine and adjust the boundaries of the coastal protection zone as deemed appropriate, as well as designation and inclusion of certain portions of provincially controlled state-owned land as coastal public property to achieve the objectives of the ICM Act.
Imposition of fees within coastal public property	13	Obtain the approval of the Minister before charging any fee for access to coastal public property.
Establishment of coastal management lines	25	Establish coastal management lines in regulations to restrict or prohibit certain activities that may have an adverse effect on the coastal environment.
Marking coastal boundaries on zoning maps	31	Inform municipality of any coastal boundaries determined or adjusted in terms of S26
Designation of provincial lead agencies	38	In collaboration with the Premier, ensure that provincial lead agencies for coastal management are designated and function effectively to promote and coordinate coastal management within a coastal province.
Establishment and functioning of Provincial Coastal Committees	39,40,41	Establishment of the Provincial Coastal Committee, determination of its powers and appointing representatives for the Committee.
Development and Implementation of Provincial Coastal Management Programmes	46,47	Develop Provincial Coastal Management Programmes aligned with the contents of the ICM Act.
Consistency and alignment between Provincial Coastal Management Programmes and other statutory plans	51,52	Ensure that any plan, policy or programme adopted by an organ of state that may affect coastal management is consistent and aligned with provincial coastal management programmes, which in turn is aligned with the national coastal management programme.
Consultation and public participation	53	Adequate consultation and public participation precede the exercising of a power by the MEC, which this Act requires to be exercised in accordance with this section.
Environmental authorisations for coastal activities	63	Coastal management issues considered and requirements of this section complied with before an environmental authorisation is issued in terms of Chapter 5 of the National Environmental Management Act.
Regulations by MECs	84,85	Develop regulations for the management of activities within the coastal

		protection zone and specify general procedures relating to regulations, including penalties for contraventions.
Information and Reporting on Coastal Matters	93	Prepare a report on the state of the coastal environment in the province which must contain any information prescribed by the Minister
Co-ordination of actions between provinces and municipalities	94	Liaise with coastal municipalities in the province to co-ordinate actions taken in terms of this Act by provincial organs of state in the province with actions taken by municipalities

3.1.3. Local Government

Table 7 summarises the key, mandatory roles and responsibilities of local government in coastal management in terms of the ICM Act:

Table 7: Summary of mandatory roles and responsibilities of local government in coastal management in terms of the ICM Act

ASPECT	RELATED SECTION/S IN ICM ACT	BRIEF DESCRIPTION OF ROLE & RESPONSIBILITY
Access to coastal public property	18,19,20	Ensuring that the public has equitable access to coastal public property by designating coastal access land, designate in by-laws strips of coastal access land to promote access to CPP along the coast, withdraw inappropriate coastal access land and Follow an environmentally sensitive and socially responsible process in designating coastal access land.
Coastal management line demarcation on zoning maps	25	Delineate set-back lines in municipal zoning schemes maps (should participate in any provincial set-back line determinations, but this is discretionary; alternatively can work with province to determine set-back lines. Province will have to Gazette).
Determining and adjusting coastal boundaries of coastal access land	29	Ensure specified considerations are taken into account when determining or adjusting a coastal boundary of coastal access land.
Marking coastal boundaries on zoning maps	31	Delineate coastal boundaries determined or adjusted in terms of S26 on zoning scheme maps
Municipal Coastal Management Programmes	48,49,55	Prepare and adopt a municipal coastal management programme for managing the coastal zone or specific parts of the coastal zone in the municipality.
Consistency and alignment between Municipal Coastal Management Programmes and other statutory plans	51,52	Ensure that any plan, policy or programme adopted by an organ of state that may affect coastal management is consistent and aligned with municipal coastal management programmes, which in turn is aligned with provincial coastal management programmes and the national coastal management programme and ensure that IDPs (including its spatial development framework) is consistent with other statutory plans [See S52 (1) (a-f)] adopted by either a national or a provincial organ of state.
Consultation and public participation	53	Adequate consultation and public participation precede the exercising of a power by a municipality, which this Act requires to be exercised in accordance with this section.
Implementation of land use legislation in coastal protection zone	62	In implementing any legislation that regulates the planning or development of land, in a manner that conforms to the principles of co-operative governance contained in Chapter 3 of the Constitution, apply that legislation in relation to land in the coastal protection zone in a way that gives effect to the purposes for which the protection zone is established as set out in section 17.



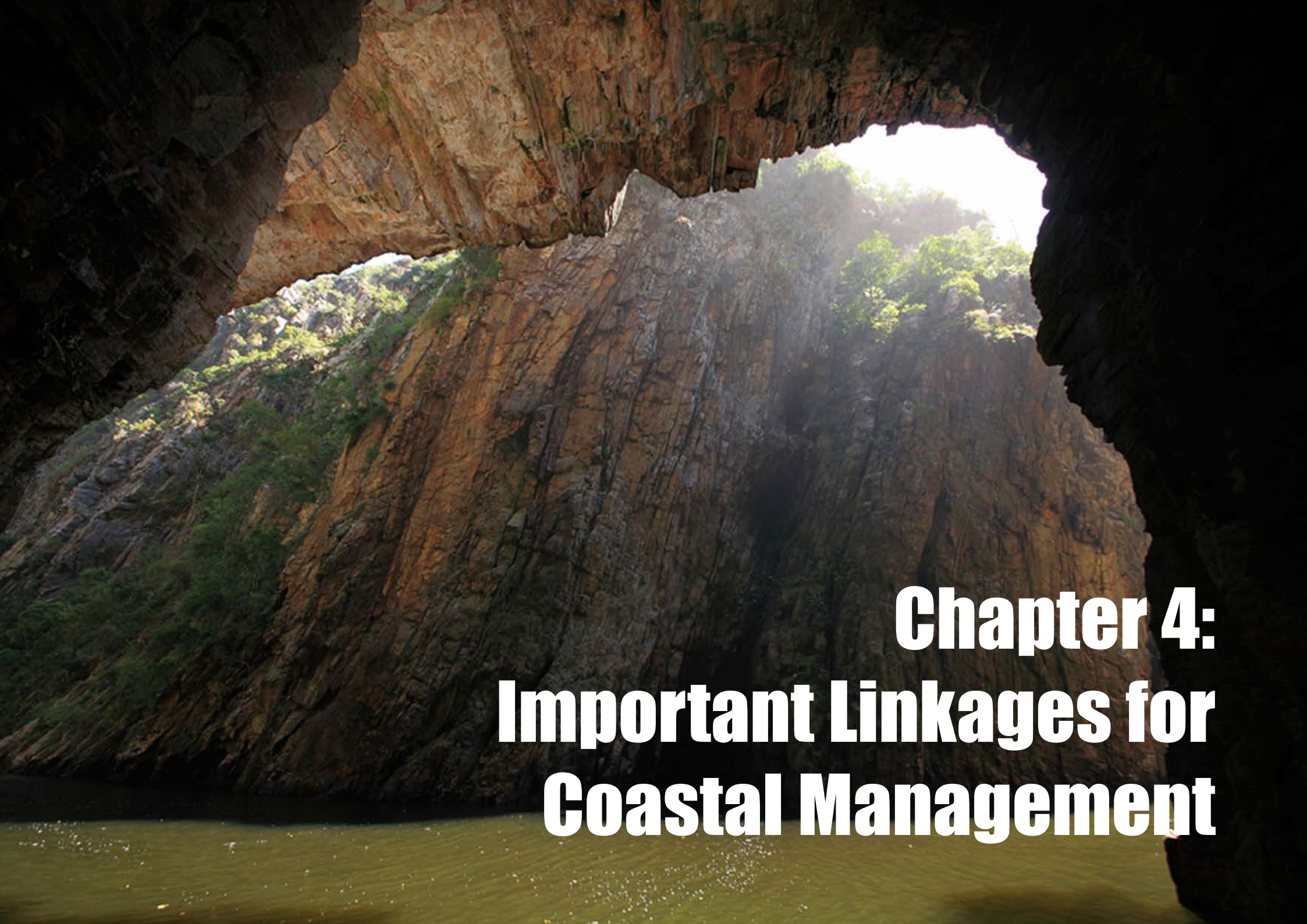
3.2. Collaborative Partnerships for Coastal Management

Addressing the need for co-operative governance is principle to the achievement of ICM in South Africa, by clearly defining the methods and approaches that must be employed to ensure that the adequate involvement of all stakeholders in decision-making processes for various coastal management projects and initiatives within the CMP is achieved.

As a result, collaborative partnerships may include, but are not limited to:

- Involve communities in coastal management;
- Improve partnerships between government, civil society and private sector to achieve effective and integrated coastal management;
- Improve relationships between communities and conservation Agencies;
- Improve conflict-resolution mechanisms;
- Improve communication between spheres of government and institutional structures;

- Improve co-ordination between sectors;
- Encourage sustainable development;
- Improve understanding of macro-economic policies;
- Facilitate public review of land use planning process;
- Reduce bureaucracy of development approvals;
- Elevate the priority of coastal management;
- Establish protocols for communication and time-frames of consultation within the context of PAIA and PAJA;
- Integrate coastal management principles into plans and strategies for all spheres and sectors of government; and
- Establish consistent policies for integrated coastal management with neighbouring countries.



Chapter 4: Important Linkages for Coastal Management

4. Important Linkages for Coastal Management

As a developing country, South Africa needs to continuously balance theeconomic opportunities which our oceans and coast affords us while maintaining its environmental integrity. For the true realisation of an integrated approach to the management of the coast of South Africa, it is imperative that linkages with ICM and other projects and initiatives taking place within the coastal zone by other sectors, government departments and institutions, as well as other environmental priorities within Environmental Affairs are recognised and given due consideration and, with particular emphasis on establishing and maintaining networks, partnerships and agreements that are facilitated and coordinated through the institutional mechanisms provided for within the ICM Act.

Below are some of the important linkages that need to be established and/or maintained for effective ICM. It is important to note that linkages will change over the course of time with the changing coastal environment, societal needs and the growing economy of South Africa.



4.1. The National Environmental Management of the Ocean White Paper

The challenge for SouthAfrica is how best to encourage research, investment and use of our ocean resources in order to contribute to job creation andeconomic upliftment while at the same time protecting the ocean asset for present and future generations.

South Africa has passed a number of environmental statutes which give effect to the environmental rights in our Constitution. The
general statutory framework provided by the National Environmental Management Act and associated supporting legislationenvisages a high degree of cooperative governance between organs of state pursuing economic development and those tasked withenvironmental responsibilities. For some years now the general approach has been to follow sectoral management strategies withclear environmental guidelines. There is a growing recognition that this sectoral approach does not allow for maximising economicopportunities, ensuring environmental protection or increasing our understanding of the ocean space. This recognition has led manymaritime states to adapt their ocean management approaches to better coordinate, monitor and regulate human use in their maritimezones. It has been clearly demonstrated that the adoption of a coordinated sectoral management approach to the ocean space cansupport and stimulate both economic and environmental sectors. South Africa is fortunate in that the existing environmentalregulatory framework has already identified the need for coordinated sectoral management.

This White Paper sets out an approach whereby South Africa can, in the short term, increasingly accommodate coordinated sectoralmanagement within the existing statutory framework. The White Paper envisages the simultaneous preparation of Ocean



Environmental legislation aimed at improving the regulation and coordination of the management and development of South Africa'socean.

While the ICM Act seeks to ensure that the coastal environment (up to and including the Exclusive Economic Zone) and its resources are utilised in a sustainable manner and that development within this zone is done so with due planning consideration of dynamic coastal processes and in a manner that does not result in adverse effects, the Oceans Policy White Paper endeavours toward an integrated approach for the management of the use of the ocean space by the various sectors with economic potential and requirements intrinsic to the process. As a result, both the White Paper and the ICM Act combined address the myriad of functions and uses that the coastal zone and its precious resources currently provide, as well as its future utilisation.

Linkages between coastal management principles, actions and efforts and those at work within South Africa's ocean space is therefore essential, with a focus on the harmonisation and alignment as a key driving factor.

4.2. Oil and Gas Exploration

Oil and gas are likely to continue to be key drivers of the world economy for theforeseeable future. The long-term growthin economies such as India, China and South Africa, as well as the demand for oil and gas fortransportation, power generation, petrochemical products and other industrial usesis likely to continue to drive demand. As existing

reservoirs are depleted, the searchfor oil and gas is taking the industry to new regions using technological advances toexplore for and produce hydrocarbons in increasingly hostile environments. Newdiscoveries are often remote from demand centres, posing new challenges in termsof transportation, whether by ship or pipeline.

Since the long-term economic growth of South Africa relies, in part, on oil and gas exploration, it is imperative that the environmental impacts of exploration and mining activities within coastal public property is conducted in the most environmentally sound manner possible, seeking to reduce the marine pollution and oil spills, as well as ensuring that conflicting use is reduced, the best interest of the public is considered and that the objectives of the ICM Act are adhered to.

4.3. Aquaculture and Mariculture

Aquaculture and offshore mariculture is an increasingly prominent featureof our coastal environments. Seafood productionfrom capture fisheries has ceased to increasesignificantly, while demand for their productsincreases each year. In an effort to fill that demand,aquaculture production has shown marked annualgrowth. In many areas much of that increase hascome from coastal aquaculture activities. However,this adds to the pressures on space, naturalresources and environmental services in coastalareas, and potentially to conflicts between differentstakeholders and activities in the coastal zone (GESAMP, 2008).



The recent dramatic growth in coastal aquacultureactivity on commercial scales has been concentratedin a few parts of the world, where conditionsare particularly suitable for the growth of high valuespecies for local consumption or export. Atlanticsalmon production, for example, has developedrapidly in the sheltered cool temperate fjordic environmentsof Norway, Chile, Scotland and westernCanada, whereas tropical shrimp production hasdeveloped in coastal areas of tropical Asia and LatinAmerica. The arrival of a relatively new industry tosuch areas has given rise to concerns and conflicts.The establishment of aquaculture sites may restrictthe options available for use of the space that theyoccupy.Environmental impacts and interactions of coastalaquaculture can be particularly contentious. Whilemethods for monitoring local effects of aquaculture(for example, the effects of particulate organic wasteon the seabed, or the effects of nutrient release onthe availability of nutrients in the surrounding waterbody) are now well established, other areas of interactions,such as the genetic interactions betweenescaped animals and wild stocks continue to behotly debated.

As a result of the above, the need for ICM linkages for the growth of South Africa's aquaculture industry is quite significant, recognising the simultaneous need for the expansion of the industry and the preservation of ecological integrity within the coastal zone.



4.4. Nuclear Energy and Renewable Energy

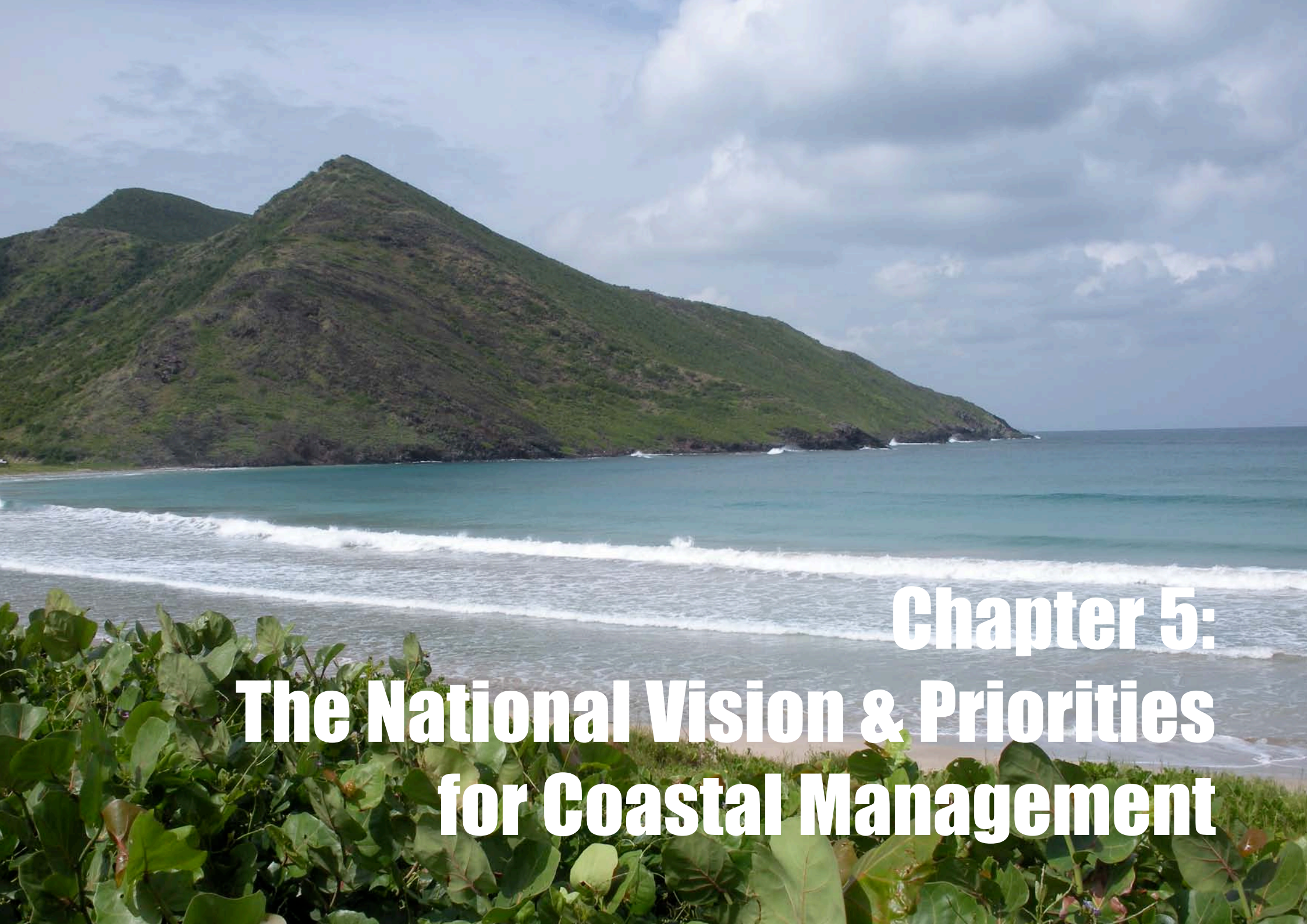
The very nature of Pressurised Water Technology reactors requires enormous amounts of water for coolant purposes. As a result, coastal locations for nuclear power plants will always be sought out, thus necessitating a strong link between environmental imperatives and those of the present and future energy demands for the nation.

Renewable energy methods which seek to harness the power of ocean currents, waves and wind similarly seek out locations within the coastal zone, and as such require linkages and partnerships which ensure that ICM objectives are met in the process of establishing a sustainable energy future.

4.5. Ports and Port Expansion

The need for new ports and the expansion of existing ports is a direct result of the expanding social and economic needs of the nation. While it is important to nurture this long-growth, it is equally important that coastal public property is utilised responsibly, maintained in as much of a natural state as possible and that the aesthetic beauty of the South African coast (an economic resource in itself) is retained, for the enjoyment of all South Africans.

Port and port expansion priorities will thus require a comprehensive governance effort, with emphasis of establishing networks and partnerships for present and future port initiatives in order to ensure that ICM is implemented in all decision-making processes in this regard.



Chapter 5:
The National Vision & Priorities for Coastal Management



5. The National Vision and Priorities for Coastal Management

5.1. The National Vision

During the development of the "White Paper" (DEAT, 2000) the first shared vision for the coast in South Africa was put forward through an extensive, consultative and participatory process. The "White Paper's" vision largely reflects the spirit of the National Development Plan 2030 and Sustainable Development and Action Plan visions by acknowledging the three pillar of sustainable development that is economic growth, social well-being and equity, and ecological integrity. In this context, it was therefore decided to keep the original vision for coastal management (DEAT, 2000) as the overarching vision for the coast, recognising that incremental refinements will emerge as ICM progresses in our country:



Vision

We, the people of South Africa, celebrate the diversity, beauty and richness of our coast and seek an equitable balance of opportunities and benefits throughout it.

We strive for sustainable coastal development – involving a balance between material prosperity, social development, cultural values, spiritual fulfilment and ecological integrity, in the interests of all South Africans.

We strive for a time when all South Africans recognise that the coast is ours to enjoy in a spirit of community.

We look forward to a time when all South Africans assume shared responsibility for maintaining the health, diversity and productivity of coastal ecosystems in a spirit of stewardship and caring.

We seek to guide the management of our coast in a way that benefits current and future generations, and honours our obligations and undertakings from local to global levels.

In the spirit of sustainable development (i.e. considering economic profitability, ecological functionality and social acceptability) the vision is underpinned by the following principles which provide a departure point for translating the vision into practice:

Principles

- **National asset: The coast must be retained as a national asset, with public rights to access and benefit from the many opportunities provided by coastal resources**
- **Economic development: Coastal economic development opportunities must be optimised to meet society's needs and to promote the wellbeing of coastal communities**
- **Social equity: Coastal management efforts must ensure that all people, including future generations, enjoy the rights of human dignity, equality and freedom**
- **Ecological integrity: The diversity, health and productivity of coastal ecosystems must be maintained and, where appropriate, rehabilitated**
- **Holism: The coast must be treated as a distinctive and indivisible system, recognising the interrelationships between**

coastal users and ecosystems and between the land, sea and air

- **<u>Assimilative capacity</u>: Acknowledging that coastal ecosystems have finite assimilative capacity to accommodate development and exploitation in a sustainable manner, both in terms of living and non-living resources**
- **<u>Risk aversion and precaution</u>: Coastal management efforts must adopt a risk-averse and precautionary approach under conditions of uncertainty**
- **<u>Accountability and responsibility</u>: Coastal management is a shared responsibility. All people must be held responsible for the consequences of their actions, including financial responsibility for negative impacts**
- **<u>Duty of care</u>: All people and organisations must act with due care to avoid negative impacts on the coastal environment and coastal resources**
- **<u>Integration and participation</u>: A dedicated, co-ordinated and integrated coastal management approach must be developed and conducted in a participatory, inclusive and transparent manner**
- **<u>Co-operative governance</u>: Partnerships between the government, the private sector and civil society must be built in order to ensure co-responsibility for coastal management and to empower stakeholders to participate effectively**
- **<u>Differentiated approach:</u> Recognising that the implementation of integrated coastal management is contextual. While a generic (standardised) management framework is important, mechanisms of implementation cannot be rigid (fit-for-all")**
- **<u>Adaptive management approach</u>: Incrementally adjusting practices based on learning through common sense, experience, experimenting, and monitoring ("learning-by-doing")**

5.2. The National Priorities for Coastal Management

The Situation Analysis (Chapter 2) reflects on the state of South Africa's coastal ecosystems. Further the assessment reviews the status of coastal management in South Africa, refined through contributions from stakeholder workshops



held in each of South Africa's four coastal provinces, as well as contributions from a national stakeholder workshop (DEA, 2013a).

The above information was used to distil key **priorities for coastal management** towards achieving the vision. Nine priorities emerged, as informed by the Situation Analysis (Chapter 2) and contributions from the stakeholder workshops (DEA, 2013a) (in no particular order of importance):

- **Priority 1: Effective planning for coastal vulnerability to global change (including climate change);**
- **Priority 2: Ensuring equitable public access in the coastal zone;**
- **Priority 3: Integrating management in estuaries;**
- **Priority 4: Managing pollution in the coastal zone;**
- **Priority 5: Establishing coastal monitoring and reporting systems to inform decision-making;**
- **Priority 6: Mechanisms for effective compliance and enforcement in the coastal zone;**
- **Priority 7: Provision of coastal information and research;**
- **Priority 8: Strengthening awareness, education and training to build capacity for coastal management; and**
- **Priority 9: Creating and strengthening partnerships for ICM.**



5.2.1. Priority 1: Effective planning for coastal vulnerability to global change

Goal: Ensuring that all planning and decision-making tools applied by all organs of state within the coast zone address coastal vulnerability by taking into account the dynamic nature of our coast, sensitive coastal environments, health of safety of people, protection of property rights, illegal structures within coastal public property, and appropriate placement of infra-structure not to compromise fiscal investment by the state, as well as the rehabilitation of coastal ecosystems.

Numerous vectors of global change, including rapid coastal urbanisation (e.g. demand for coastal infrastructure development), exploitation coastal resources (e.g. mining) and climate change (e.g. flooding, sea level rise and increase in storminess) increasingly threaten vulnerable and sensitive areas along South Africa's coastal zone – to the point where development becomes unsustainable and peoples' lives are at risk. To address this situation, coastal vulnerability to these stresses need to be assessed, and subsequently management strategies and interventions must be implemented accordingly to minimise or mitigate risk.



5.2.2. Priority 2: Ensuring equitable public access in the coastal zone

Goal: Ensuring that the public has safe and equitable access to coastal public property by virtue of establishing sufficient coastal access land that is cognisant of the sensitivity of coastal ecosystems, the needs and livelihoods of coastal communities or other socio-economic considerations, as well as the removal of inappropriate and unsafe coastal access points.

Public access to the coast is explicitly addressed in the ICM Act and was also identified as an important priority by stakeholders. The demarcation of coastal access land is a municipal function, although provincial and national governments play a key role in building commitment, providing guidance and fiscal and/or capacity strengthening mechanisms for municipalities to effectively implement, maintain and monitoring coastal access.

5.2.3. Priority 3: Integrating management in estuaries

Goal: Ensure that all estuaries along the South Africa coast are managed in an integrated, holistic manner in accordance with the National Estuarine Management Protocol and the extent to which activities within estuaries are consistent with the other key priorities for coastal management.



The National Biodiversity Assessment (NBA 2011) highlighted that a very small percentage of estuarine habitats in South Africa are still in an excellent condition. Only about 1% of total estuarine habitat is in an excellent state and only 14% of the total estuarine habitat is in a good state, mostly represented by systems in the Warm Temperate biogeographical region. The critical importance of these sensitive ecosystems - playing a disproportionally large role in providing ecological, social and economic benefits to South Africa - warrants a particular effort to minimize and mitigate further deterioration. Further, legislation addressing the protection and management of estuaries in South Africa spans four key pieces of legislation, namely the National water Act, Biodiversity Act, Protected Areas Act and the ICM Act. As a result it is very important that the roles and responsibilities of the government departments involved are defined to ensure effective implementation.

5.2.4. Priority 4: Managing pollution in the coastal zone

Goal: Ensure the effective management of waste and wastewater into the coastal zone and minimizing adverse effects on the health of coastal communities, and on coastal ecosystems and their ability to support the sustainable uses of coastal resources in manner that is socially, economically and ecologically justifiable.

The NBA 2011 rated pollution – specifically land-based effluent discharges - as one of the key pressures impacting on the coastal environment. This concern was also echoed by stakeholders in the provincial and national stakeholder workshops, where land-based sources pollution, such as effluent discharges and urban storm-water, was viewed as a key priority for coastal management.

5.2.5. Priority 5: Establishing coastal monitoring and reporting systems to inform decision-making

Goal: Ensure the development and implementation of a dedicated, cooperative, co-ordinated and integrated coastal monitoring and reporting system that includes compliance monitoring and reporting in accordance with laws and policies, performance monitoring and reporting to measure progress in coastal management, and descriptive monitoring and reporting to measure variability and trends in biophysical, social and economic characteristics and processes in the coastal zone.

Critical to effective coastal management is monitoring, not only monitoring for compliance or performance monitoring to evaluate the effectiveness of coastal management actions, but also descriptive monitoring to assess the ecological, social and economic status of coastal resource. Also, established reporting mechanisms are essential to support continuous, adaptive management, i.e. improving-by-learning.

5.2.6. Priority 6: Mechanisms for effective compliance and enforcement

Goal: Establish a committed compliance and enforcement system for coastal management in alignment with related laws and policies, and inclusive of cooperation and coordination between organs of state with enforcement responsibilities and NGO with appropriate capacity.



Stakeholders viewed inadequate compliance and enforcement systems as one of the main shortcomings for the effective implementation of the ICM Act, primarily attributed to lack of capacity, as well as lack of coordination and collaboration between the various responsible authorities. This is a priority to be addressed by all spheres of government exploring new, innovative ways in which to strengthen capacity and collaboration.

5.2.7. Priority 7: Provision of coastal information and research

Goal: To have an effective national information system and research framework to support integrated coastal management, that is able to promote a dedicated, cooperative, coordinated and integrated planning management approach accessible to all stakeholders, in particular, decision-makers and the general public to ensure meaningful participation.

The ICM Act, and in fact ICM in general, requires data and information as a key pillar supporting this management approach. The DEA therefore identified the establishment of an ocean and coastal information system as a strategic priority. Specifically the Act requires the Minister to progressively, and within the available resources of the Department, make sufficient information available and accessible to the public concerning the protection and management of the coastal zone to enable the public to make an informed decision of the extent to which the State is fulfilling its duty.



5.2.8. Priority 8: Strengthening awareness, education and training to build capacity

Goal: Ensuring that the general public and decision-makers are appropriately aware, educated and trained, and so as to be able to take collective responsibility for managing and protecting the coastal environment in a manner that is socially, economically and ecologically justifiable.

ICM, over the long-term can only survive with the support of the general public, therefore the priority to strengthen public awareness education that involves civil society and that create awareness of, and a sense of responsibility for, coastal issues among ordinary people. One of the main threats to sustainable coastal management in South Africa, is diminishing (or lack of) capacity in government, from national to municipal levels. This has a cascading effect on the effectiveness and efficiency of coastal management institutions. Effective training and capacity-building mechanisms, therefore, are a key priority to ensure long-term sustainability of ICM implementation and should not be dealt with in an *ad hoc* manner. Awareness, education and training are shared responsibilities between public, private and civil society sectors.



Goal: To ensure that institutional partnerships and mechanisms for ICM are established amongst all sectors and spheres of government, the private sector and civil society in a collaborative, problem-solving and consensus-building manner that promotes dialogue, cooperation, coordination and integration.

The ICM Act, for the first time mandates the establishment of cross-sectoral, multi-actor coastal management programmes and institutions for cooperative governance. However, it is not the only piece of legislation governing matters pertaining to the coastal zone; South Africa's coastal legal framework spans at least 19 international obligations and agreements, 11 national policies and 46 national acts involving various authorities across all spheres of government. A key priority for coastal management, therefore, is the establishment of formal institutions for coastal management, as well as partnerships among various role players to better understand roles and responsibilities in the quest for effective coastal governance. These partnerships should not only be limited to collaboration among government authorities, but also extend to business, the private sector and civil society.



Chapter 6: National Management Objectives & Actions

6. National Management Objectives and Actions

The vision, together with the nine priorities, provides the primary policy directive on coastal management for South Africa. Specific management objectives and actions, to address these priorities are required to give direction for implementation planning.

This chapter addresses the national management objectives –with respect to the nine priorities for coastal management in South Africa - focusing on the national mandate in terms of the ICM Act. In a similar manner, provincial and municipal CMPs need to identify management objectives – in alignment with these national management objectives - to fulfil their respective mandates in terms nine priorities for coastal management in South Africa.

Further this chapter lists specific actions that will be undertaken by national government - as part of the NCMP - to achieve the national management objectives. These actions are largely informed by the Situation Analysis (Chapter 2), considering needs expressed by municipal, provincial and national stakeholders (DEA, 2013a).

The priorities, together with the national management objectives, actions and performance indicators presented here, constitute national governments' (DEA's) commitment to implementing ICM over the next five years (2015-2020).

6.1. Priority 1: Coastal Vulnerability

Management Objective 1.1: Develop regulatory mechanisms (including norms and standards) to facilitate a uniform approach to assess coastal vulnerability and to establish conditions of use in the coastal zone		
Actions	**Targets**	
	Completion date	**Performance Indicator**
Develop guidelines for the adjustment of coastal boundaries	Mar 2017	• Completed guideline document
Regulations pertaining to the reclamation of land from the sea	Mar 2016	• Regulations published in *Government Gazette*
Develop norms and standards for the demarcation of the HWM	Mar 2016	• Phase 1 completion of the coastal risk and vulnerability study on mitigation and adaptation to dynamic coastal processes (including impacts from climate change)
Develop norms and standards for coastal set-back lines (e.g. as influenced by sea-level rise)	Mar 2016	• Phase 1 completion of the coastal risk and vulnerability study on mitigation and adaptation to dynamic coastal processes (including impacts from climate change)
Regulation on the control of use of vehicles in the coastal area	Mar 2015	• Regulations published in *Government Gazette*
Regulations for the management of boat launching sites in the coastal zone	Mar 2015	• Regulations published in *Government Gazette*
Prepare a nationally consistent spatial layer indicating the boundaries within the coastal zone for national planning	Mar 2016	• Completed spatial layer as component of a component of marine spatial planning tool
Develop Norms and standards for modelling of sea-level rise projections	Mar 2016	• Phase 2 completion of the coastal risk and vulnerability study on mitigation and adaptation to dynamic coastal processes (including impacts from climate change)
Develop norms and standards for modelling of storm surge projections	Mar 2016	• Phase 2 completion of the coastal risk and vulnerability study on mitigation and adaptation to dynamic coastal processes (including impacts from climate change)
Develop guidelines on the development of coastal planning scheme	Mar 2015	• Completed guideline document
Develop guidelines for coastal defence (e.g. environmental engineering approaches)	Mar 2017	• Completed guideline document
Review and revise the water and sediment quality guidelines for the protection of aquatic ecosystems in the coastal zone of South Africa	Mar 2016	• Completed guideline document

Management Objective 1.2: Develop appropriate data and decision-support for the identification of vulnerable coast areas to dynamic coastal processes and the effects of global change		
Actions	**Targets**	
	Completion date	**Performance Indicator**
Prepare a schedule of prohibited and restricted activities on coastal public property and condition of use	Dec 2015	• Regulation schedule published in *Government Gazette*
Mapping coastal boundaries inclusive of a comprehensive audit of all structures on coastal public property	Mar 2015	• Freely accessible mapping tool
Prepare a coastal hazard zone index and demarcate coastal hazard zones (including impacts from climate change)	Mar 2015	• Regulation schedule published in *Government Gazette*
Expand the database on illegal structures in coastal public property	Mar 2016	• Expanded and updated geo-data base
Prepare a database on the location of the Admiralty Reserve and condition of use	Mar 2016	• Completed geo- data base, including condition of use
Management Objective 1.3: Rehabilitation of areas along the coast		
Actions	**Targets**	
	Completion date	**Performance Indicator**
Guidelines of the stabilisation and rehabilitation in the coastal zone (e.g. dunes)	Mar 2016	• Completed guideline document
National guidelines on the procedures to prevent/remove unlawful structures in the coastal zone, specifically aimed at assisting provinces and municipalities (e.g. expansion to enforcement manual to the ICM Act)	Mar 2017	• Completed guideline document

6.2. Priority 2: Equitable Public Access

Management Objective 2.1: Provide a national commitment for the facilitation of safe and equitable access to coastal public property along South Africa's coast		
Actions	**Targets**	
	Completion date	**Performance indicator**
Regulations pertaining to the establishment and maintenance of coastal public access	Mar 2016	• Regulation schedule published in *Government Gazette*
A national strategy for facilitating coastal public access and incorporated into the NCMP	Mar 2015	• Completed strategy document available
Management Objective 2.2: Develop norms and standards to assist municipalities in carrying out their responsibilities with respect to coastal access		
Actions	**Targets**	
	Completion date	**Performance Indicator**
Develop guidelines for designation of coastal access	Mar 2015	• Completed guideline document
Develop norms and standards for coastal access	Mar 2016	• Completed guideline document
Develop a national electronic reporting and dissemination system for coastal access, incorporated into the National Oceans and Coast Information Management System	Mar 2017	• Completed electronic reporting system for coastal access

Management Objective 2.3: Provide capacity strengthening mechanisms for municipalities to effectively implement, maintain and monitoring coastal access		
Actions	**Targets**	
	Completion date	**Performance Indicator**
Develop a local government support strategy for the fulfilment of environmental mandates (including support for coastal access)	Mar 2016	• Signed Implementation Plan for the Local Government Support Strategy with test cases
Establish internal work plans to utilise Working for the Coast to support municipalities in the establishment, maintenance and monitoring of coastal access	Mar 2015	• Completed and approved work plans

6.3. Priority 3: Estuary Management

Management Objective 3.1: Develop and implement a national estuarine management protocol for a uniform approach to estuarine management, including individual estuary management plans that are tailored to suit the current and future requirements including social, economic and ecological considerations.		
Actions	**Targets**	
	Completion date	**Performance Indicator**
Develop a national sustainability plan for estuarine resources	Mar 2017	• Strategy developed
Develop guidelines for the development and implementation of estuary management plans, allowing for a differentiated approach across South Africa	Mar 2015	• Completed guideline document
Develop estuary management plans for estuaries assigned to national government (DEA)	Mar 2018	• Completed national estuary management plans
Ensure alignment between EIA regulations and the National Estuarine Management Protocol	2015-2020	• On-going updates

Management Objective 3.2: Establish appropriate institutional mechanisms for estuarine management to facilitate dialogue, collaboration and implementation of EMPs.		
Actions	**Targets**	
	Completion date	**Performance Indicator**
Develop guidelines for coastal committees that include institutional sub-structures for integration and coordination of estuary management	Mar 2015	• Completed guideline document
Prepare SOPs to facilitate an integrated approach towards the implementation of estuarine management plansacross relevant departments	Dec 2015	• Signed and implemented standard operation procedures

6.4. Priority 4: Coastal Pollution

Management Objective 4.1: Establish regulatory mechanisms for waste and wastewater disposal in the coastal zone		
Actions	**Targets**	
	Completion date	**Performance Indicator**
Develop an assessment framework for coastal waters discharge permits	Mar 2015	• Final assessment criteria developed
Permits and recommendations issued for all coastal waters discharge applications received up to December 2014	Mar 2016	• Permits and recommendations issued
Regulations and best practice guidelines to facilitate effective management and control of	Mar 2016	• Regulation schedule published in *Government Gazette*

dredging operations in South Africa		• Completed guideline document
Prepare a National contingency plan for oil spills	Dec 2015	• Completed oil spill contingency plan
Draft regulations on coastal waters discharges initiated	Mar2016	• Draft Regulations developed
Regulations on effluent disposal to coastal environment in terms of Section 69 of the ICM Act developed and finalised	Mar 2016	• Regulations finalised
Conduct review of all effluent discharge issued under the NWA, and in the case of estuaries a joint review with the department responsible for water affairs in order to determine compliance to the ICM Act, and where appropriate re-issue coastal water discharge permits	Mar 2016	• Completed review
Develop effluent emission limits or standardsfor at least 2 sectors or areas/zones	Mar 2017	• Standards or emission limits developed
Upgrade and revise of local oil spill contingency plans for coastal regions, including disaster management planning, and handling and disposal of waste originating from clean-up	2015 - 2020	• Continuously updated oil spill contingency plans

6.5. Priority 5: Coastal Monitoring and Reporting

Management Objective 5.1: Establish a national commitment for an effective coastal monitoring system in accordance with the ICM Act and other legislation that has a bearing on the coastal zone		
Actions	**Targets**	
	Completion date	**Performance Indicator**
Develop a national strategy for ocean and coastal monitoring	Mar 2018	• Strategy developed
Establish internal work plans to utilise Working for the Coast for coastal monitoring	Mar 2017	• Completed and approved work plans
Development of a National Coastal Water Quality Monitoring and Assessment Programme	Mar 2018	• Programme developed
Management Objective 5.2: Ensure that performance and status reporting on coastal management is conducted in accordance with the ICM Act and other legislation that has a bearing on coastal zone		
Actions	**Targets**	
	Completion date	**Performance Indicator**
Develop norms and standards on the content and information towards a unified approach to State of Coast Reporting, including the selection of indicators and associated data sources	Mar 2016	• Norms and standard developed and implemented in State of the Coast Reporting
Prepare a National State of Coast report	Mar 2018	• National state of coast Report completed

6.6. Priority 6: Compliance and Enforcement

Management Objective 6.1: Ensure a coordinated, uniform approach to implementation of compliance and enforcement in the coastal zone across all spheres of government		
Actions	**Targets**	
	Completion date	**Performance Indicator**
Standardised reporting templates for compliance and enforcement reporting under the ICM Act	Mar 2017	• Reporting templates completed
Develop a National strategy for oceans and coast compliance and enforcement	Mar 2019	• Completed strategy
Management Objective 6.2: Ensure that the necessary capacity within all spheres of government is available to conduct compliance and enforcement under the ICM Act		
Actions	**Targets**	
	Completion date	**Performance Indicator**
Develop regulations for the appointment and functioning of vulnerary coastal officers under the ICM Act (e.g. involving local communities)	Mar 2019	• Regulation schedule published in *Government Gazette*
Establish internal work plans to utilise Working for the Coast to strengthen compliance and enforcement in the coastal zone	Mar 2017	• Completed and approved work plans

6.7. Priority 7: Coastal Information and Research

Management Objective 7.1: Ensure that information in support of integrated coastal management is collated, maintained and managed in a responsible manner, and made accessible to all stakeholders		
Actions	**Targets**	
	Completion date	**Performance Indicator**
Develop a Marine Spatial Planning decision support tool	Mar 2019	• Decision support tool developed
Establish a nationwide ICM hotline/support service	Mar 2020	• Support service available
Develop an ocean and coastal information management system with public access	Mar 2020	• Operational information management system
Management Objective 7.2: Conduct relevant research in support of coastal management in collaboration with various role players, nationally and internationally		
Actions	**Targets**	
	Completion date	**Performance Indicator**
Prepare a national coastal research plan to inform management decision under the ICM Act	Mar 2015	• Completed research plan

6.8. Priority 8: Awareness, Education and Training

Management Objective 8.1: Develop enabling mechanisms for the effective implementation of coastal awareness and education for South Africa, including empowerment of coastal communities		
Actions	**Targets**	
	Completion date	**Performance Indicator**
Develop a National strategy for awareness, education and training in the coastal zone	Dec 2013	• Completed strategy
Develop a concurrent strategy for the adoption of a nationwide brand for coastal awareness and education	Mar 2018	• Brand established
Develop a Strategy to strengthen coastal awareness in school curricula	Mar 2018	• Strategy completed including educational materials
Develop a practical guide to coastal management in South Africa, including a series of user-friendly fact sheets	Mar 2018	• Completed guide and fact sheet series
Management Objective 8.2: Develop enabling mechanisms for effective training to build capacity in coastal management in South Africa		
Actions	**Targets**	
	Completion date	**Performance Indicator**
Develop a guide for development of coastal management programmes	Mar 2015	• Completed guide
Expand DEA's existing Human Capital Development Strategy to specifically address issues related to coastal management	Mar 2016	• Completed strategy addressing coastal management issue
Establish internal work plans to utilise Working for the Coast to strengthen training and capacity building for coastal management	Mar 2015	• Completed work plan
Prepare SOPs for conduction regular ICM training courses on coastal management for government officials involving coastal provinces	Mar 2017	• Signed and implemented standard operation procedures
Develop a Strategy to include coastal management as a national qualifications framework (NQF) accredited module within appropriate tertiary institutions	Mar 2017	• Accredited NQF module for coastal management

6.9. Priority 9: Strengthening Partnerships

Management Objective 9.1: Develop enabling formal, institutional mechanisms for promotion and coordination of ICM		
Actions	**Targets**	
	Completion date	**Performance Indicator**
Establish National Coastal Committee	Mar 2014	• National Coastal Committee established
Develop guidelines for the establishment of coastal committees including the formalisation of powers and representation	Mar 2015	• Completed guide
Management Objective 9.2: Establish and strengthen collaborative partnerships with local structures for empowerment, knowledge sharing and implementation of coastal management		
Actions	**Targets**	
	Completion date	**Performance Indicator**
Develop Strategy for engaging coastal traditional councils in management	Mar 2018	• Completed strategy

Establish formal agreements with coastal traditional councils towards the implementation of the ICM Act	Mar 2019	• Number agreements established
Establish a reporting mechanism for reporting on success with coastal access facilitation by municipalities, provinces and national government	Mar 2020	• Reporting templates for coastal access developed for municipalities and provinces and submitted to national DEA once a year

Management Objective 9.3: Establish and strengthen collaborative partnerships with other institutions and organs of state for empowerment, knowledge sharing and implementation of coastal management

Actions	Targets	
	Completion date	Performance Indicator
Establish Memorandum of Understanding (MoUs) with other departmentsgoverning the management and control of activities in the coastal zone not legislated under the ICM Act, e.g. mining, infra-structure development, fisheries and marine aquaculture, renewable energy, state assets, shipping, oil and gas, and biodiversity and protected areas planning	2015 – 2020	• Number of MoUs established
Establish MoUs with other institutions to strengthen research and capacity building for coastal management in South Africa	Mar 2018	• Number of MoUs established
Strategy to coordinate disaster management in the coastal zone in collaboration with various competent authorities	Mar 2019	• Strategy completed

Management Objective 9.4: Facilitating partnerships towards the long-term integration of the principles of integrated coastal management in all sectors of South African economy

Actions	Targets	
	Completion date	Performance Indicator
Economic valuation of coastal resources in relation to its contribution to the South African economy	Mar 2018	• Completed valuation
Collaboration with insurance industry to combat inappropriate coastal development and promote the managed retreat from sensitive coastal area	Mar 2019	• Integration of hazard zone indices into insurance premium evaluations
Development of a Strategic Infrastructure Plan for ICM	Mar 2018	• Formalised SIP for coastal management with associated funding



Chapter 7: Towards Implementation



7. Towards Implementation

The overall plan to advance integrated coastal management in South Africa – as presented in this NCMP – is conceptually summarised in Figure 12. First, a vision was established, setting out the desired future for South Africa's coast and the people using this valuable resource. Following a detailed Situational Analysis and a key stakeholder consultation process, nine key priorities for coastal management was identified, that is key issues that are currently preventing South Africa from achieving the Vision for our coast. For each of the key priorities the NCMP then set out a series of national management objectives specifically aimed at areas which coastal management efforts at national government level must address. Finally a list of specific actions that will be undertaken by national government - as part of the NCMP - to achieve the national management objectives over the next five years (2013-2017).



Figure 17: Generic approach proposed for the development of specific strategies as part of the NCMP

Several of the actions to be undertaken as part of the NCMP involves the development of **specific strategies**. In the development of these strategies a generic approach is proposed as illustrated in Figure 17.

The next step in the overall plan for the NCMP is to develop detailed implementation plans (IPs) for each of the listed actions. The IPs for various actions typically will include the following information (after IUCN, 2003):

- Specific requirements stipulated in policy and legislation;
- Specific methods, protocols and best practice-guides to assist with implementation;
- Spatial planning and conditions of use that need to complied with (these should be extracted from situational analysis or relevant documentation);
- A detailed work plan identifying different tasks;
- Responsibilities for the different tasks;



- Scheduling of task, indicating start and finish dates;
- Interim milestones and associated interim performance indicators;
- Monitoring and reporting plan to verify the effectiveness of the implementation process and to assess compliance with the related management objective and, ultimately the vision;
- Human resource plan, for implementation indicating specific service providers, where relevant; and
- Financial resource plan.

The IPs will be developed and embedded in the business plan of the DEA: Oceans and Coasts over the next five years (2015 to 2020) to enable committed and effective execution of the listed actions over the next five years following the gazetting of the NCMP.



ACTION	**Develop a strategy for coastal access**
COMPLETION DATE	**March 2015**
PERFORMANCE INDICATOR	**Final strategy publish in *Government Gazette***
Requirements stipulated in policy and legislation	ICM Act, Section 18
Available methods, protocols and best practice-guides	Check for any methods, policies and best practice guides available on coastal access
Spatial planning considerations and Conditions of use	Specific aspects to consider in terms of existing spatial planning frameworks and conditions of use in the coastal zone
Detailed work plan	Task 1: Prepare situational analysis Task 2: Stakeholder consultation Task 3: Prepare final draft for gazetting and public comment Task 4: Prepare final strategy and gazette
Scheduling	

TASK	TIME (months)								
	1	2	3	4	5	6	7	8	9
1									
2									
3									
4									

Milestone/interim performance indicator

MILESTONE	INTERIM PERFORMANCE INDICATOR	DUE DATE
1	Draft strategy available	May 2014
2	Stakeholder meetings completed	Jan 2015
3	Final draft strategy gazetted for comment	Jan 2015

Figure 18: An example template for an Implementation Plan



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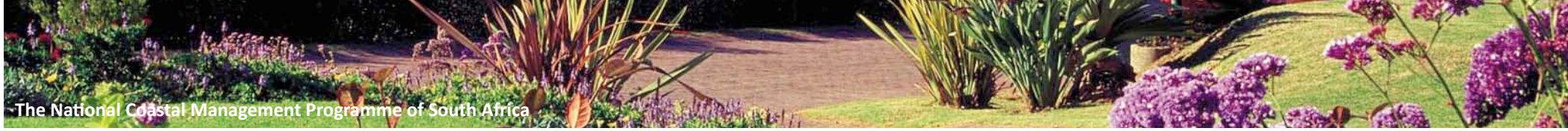

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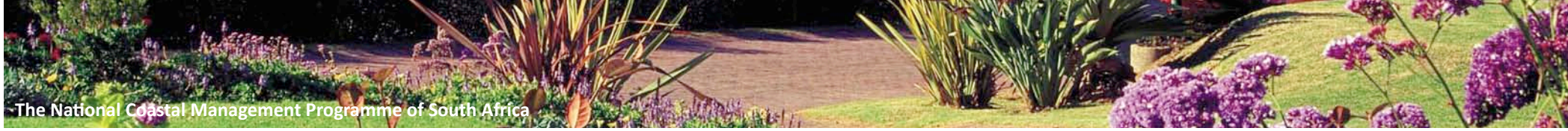

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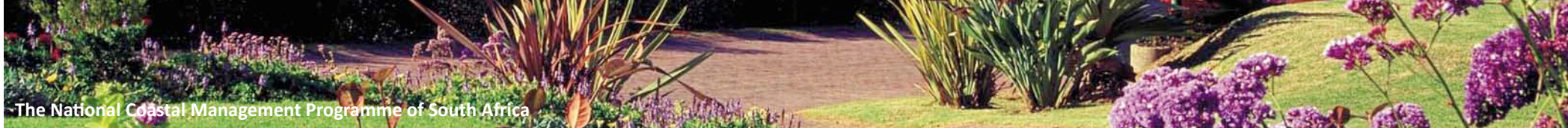

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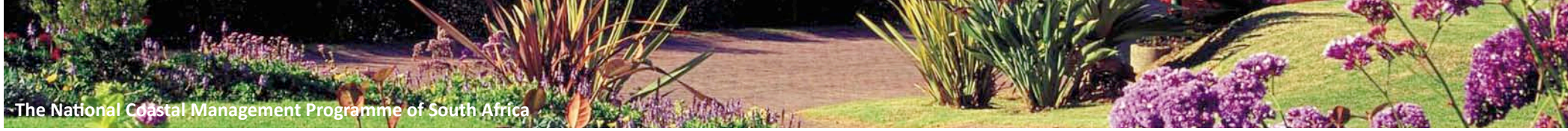

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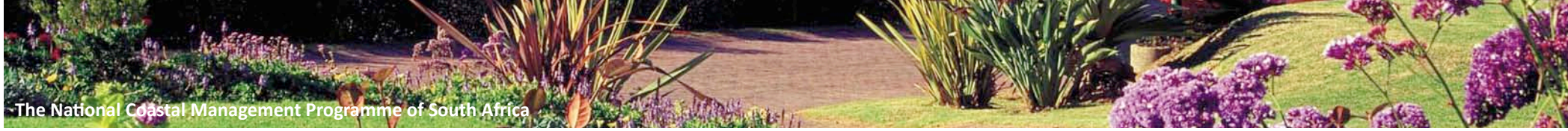

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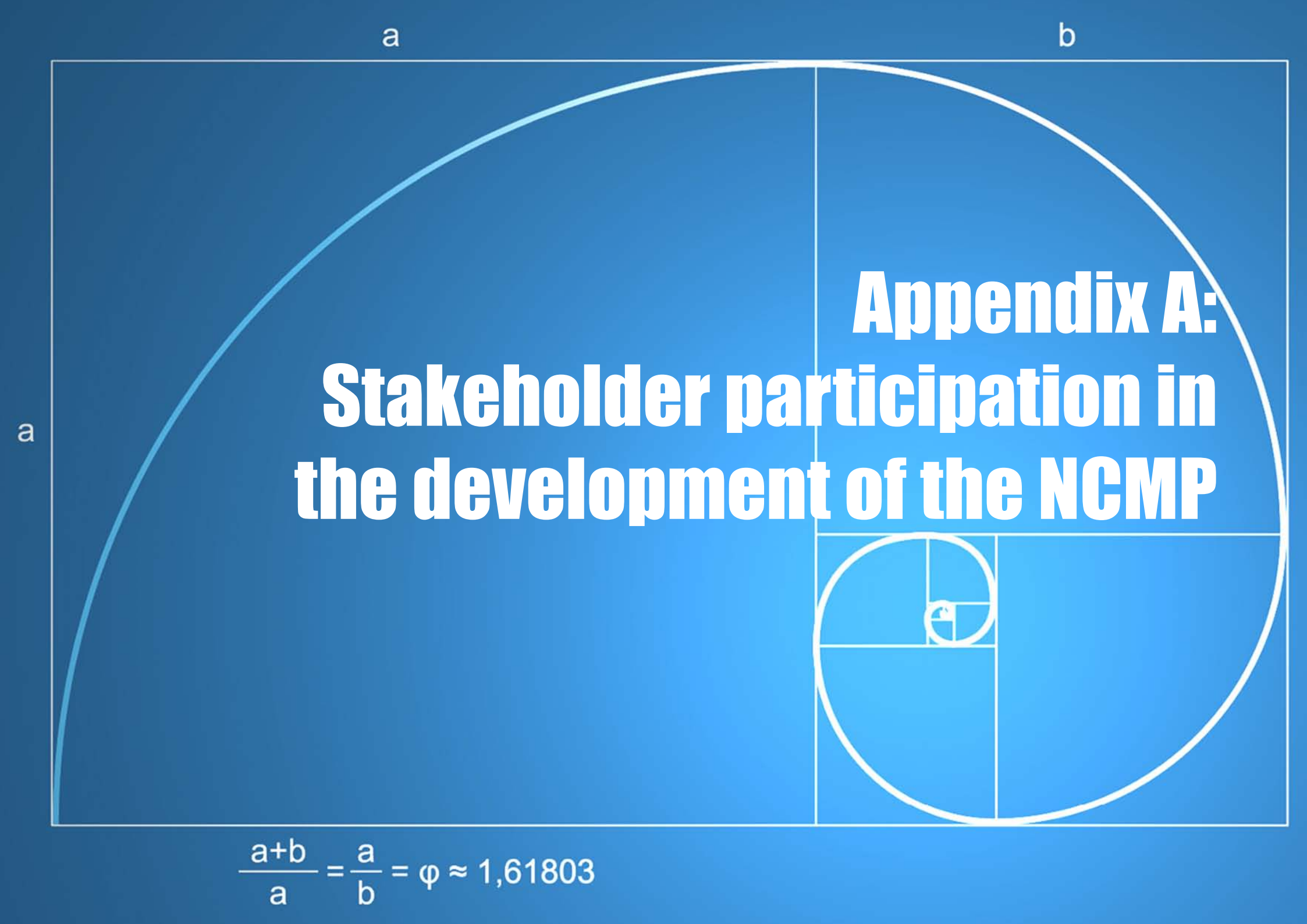
Appendices



9. Appendices



Appendix A: Stakeholder participation in the development of the NCMP



National Stakeholders:

NATIONAL REPRESENTATIVE	ORGANISATION/AFFILIATION
Alan Boyd (Dr)	Department of Environmental Affairs (DEA)
Andile Mangcengega	SANBI
André Riley	SANParks
Andrea Bernatseder	Department of Agriculture Forestry vand Fisheries (DAFF) (Marine Aquaculture)
Ané Oosthuisen (Dr)	SANParks
Athayanda Mbanjwa	Transnet NPA
Bridget Corrigan	Endangered Wildlife Trust
C. Ofori	Afri-Coast Eng
Chuma Mkonjna	Transnet National Ports Authority (Transnet NPA)
Delricia A	DAFF
E. Motsoahole	Transnet NPA
E. Mwibana	DEA
Elijah Ramulifho	DEA
F.P. Angwenyl	DEA
Faizal Paulsen	Department of Public Works (DPW) (National)
Fatima Samodien	DAFF
Hlanganani Ngema	DPW (Asset Investment Management)
Kgomotso	DEA
Liwalam Madikiza	DEA
Mphakamisi Fifane	DAFF (Fisheries)
N. Madlokazi	DEA
N. Mpende	DEA
Nelisa Ndulama	Transnet NPA
Niel Malan (Dr)	DEA
Nokukhanya Gabela	Transnet NPA
Nomkhitha Kwinana	Transnet NPA
Nomtandazo Hoza	DAFF
Nyameka Makitshi	DPW: Asset Investment Management
Nziweni N.	DEA
Ossie Lamb	DPW (National)
Patrick Zake	ECP&TA
Paul Steyn	Nelson Mandela Metropolitan University (NMMU)
Peter Myles	Tournet Africa
Razeena Omar	DEA
Rodney Taai	DPW (Asset Investment Management)
Saroor Ali	South African Maritime Safety Authority (SAMSA)
T Mosiane	DRDLR

NATIONAL REPRESENTATIVE	ORGANISATION/AFFILIATION
Tommy Bornman (Dr)	SAEON (Lwandle Node)
Vicky Stevens	Worley Parsons
Vusumzi Sihawu	Transnet NPA
Xola Mkefe	DEA
Z. Mapekula	DEA

Provincial Stakeholders:

EASTERN CAPE REPRESENTATIVE	ORGANISATION/AFFILIATION
A.M Jara	Eastern Cape: Department of Economic Affairs, Environment and Tourism (DEAET)
Alan Carter	Coastal and Environmental Services (CES)
Albert Mfenyana	DEAET
Bev Geach	Eastern Cape Parks and Tourism
Bonginkosi Salelo	DEAET
Briant Noncembu	DEAET
Clement Ofori	Afri-coast engineers
Dolly Ganashe	ECPTA
G Murrell	Nelson Mandela Bay Metro
Gerry Pienaar	DEAET
Gert Barnardt	Amathole MPA
Greg Brett	Eastern Cape Museum
Ken Pressly	Nelson Mandela Bay Metro
Kibi Makhaya	Mnquma Local Municipality
Kojo Gyan	Dept. of Local Government and Trade Affairs
Lelethu Sawuti	DEAET
Leonard Dyani	Dept. of Local Government and Trade Affairs
Loyiso Nondlebe	DEAET
Neliswa Piliso	DEAET
Nomhkitha Kwinana	Transnet National Ports Authority
Nosinondi Ntola	DEAET
Patric Zakhe	DEAET
Peter Myles	International Coastal & Marine Tourism
Phumla Mzazi-Geja	DEAET
Qaphela Mpotulo	DEAET
Reo Schutte	Buffalo City Metro
Ricky Hannan	DEAET
Sandiso Zide	DEAET
Stanford Spotsi	DEAET
T Tyali	DEAET
Ted Avis	Coastal and Environmental Services (CES)



EASTERN CAPE REPRESENTATIVE	ORGANISATION/AFFILIATION
Tony Williams	Department of Local Government and Trade Affairs
Tshililo Vele	Department of Local Government and Trade Affairs
Vuyisile Alven	DAFF (Fisheries)
Xolani Nikelo	DEAET
Zelda Matwele	DEAET
Zonwabele Plata	Great Kei Municipality

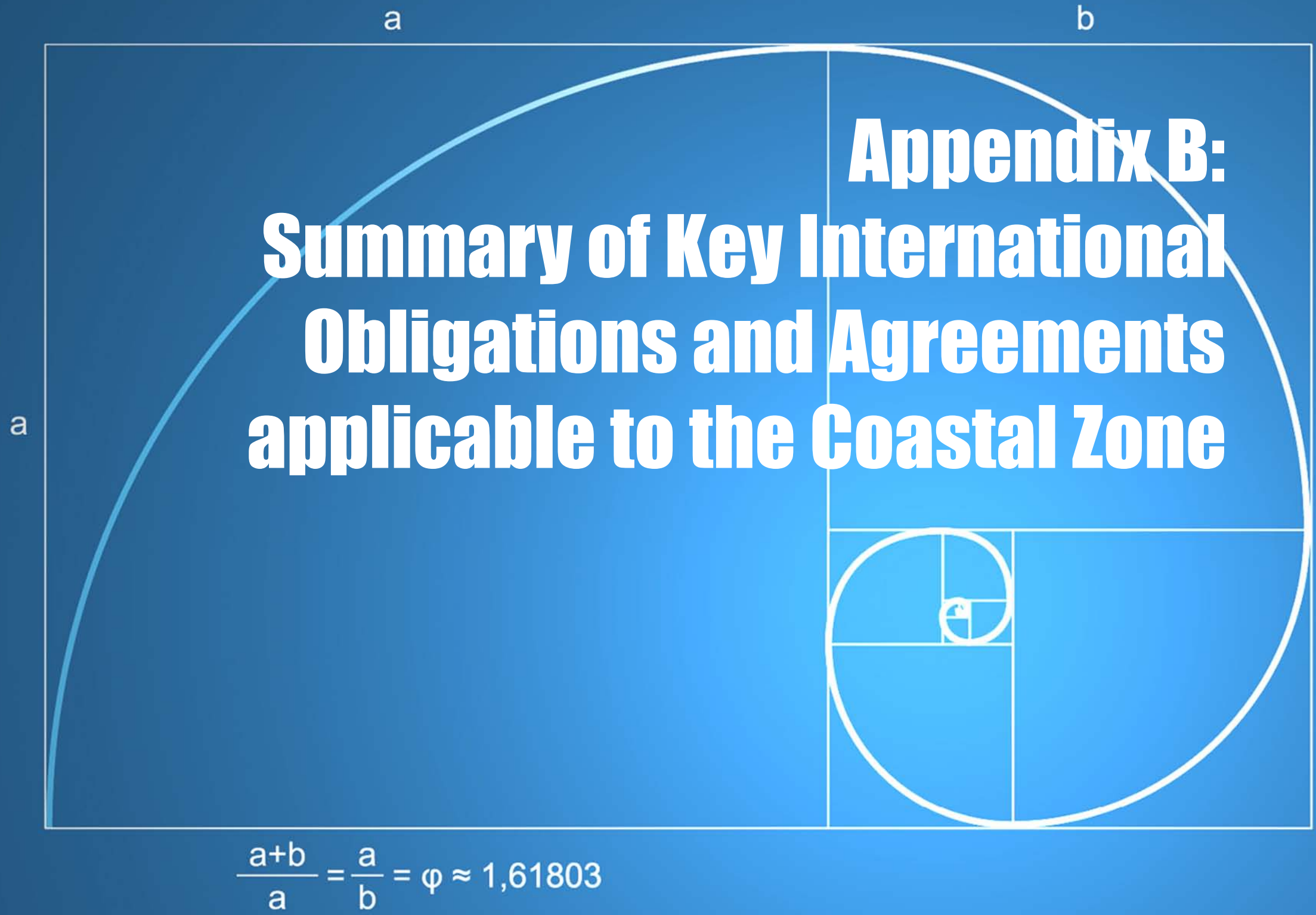
KWAZULU-NATAL REPRESENTATIVE	ORGANISATION/AFFILIATION
Adrienne Edgson	AFE & Associates/Ugu Coastal Working Group
Alfred Matsheke	Dept. Agriculture and Environmental Affairs (DAEA) - apologies
Bonga Sithole	Transnet-NPA
Bronwyn Goble	Oceanographic Research Institute (ORI)
Cedric Coetzee	Ezemvelo KZN Wildlife
Di Jones	Coastwatch
Godfrey Vella	eThekwini Metro Municipality
Hennie Smit	uThugulu District Municipality
Hlamalani Phephenyane	TNPA Richards Bay
Iain Bickerton	Independent Consultant
July Bell	Coastwatch
Kabelo Motumi	Department of Economic Development and Tourism (KZN)
Karen Kohler	TKZN
Lisa Guastella	BCRE/UCT Oceanography
Neal Naidoo	Transnet – Port of Durban
Nelson Mbtha	Transnet-NPA
Nicolette Forbes	MER – apologies
Omar Parak	DAEA
Phumzile Mhlangu	Umzumbe Municipality
Pippa la Cock	Environmental Solutions/ Ugu Coastal Working Group
Randeer Kasserchun	eThekwini Metro Municipality
Rod Bulman	Phelamanga Projects
Santosh Bachoo	Ezemvelo KZN Wildlife
Siyanda Mkhize	Dept. of Economic Development and Tourism (KZN)
Sizwe Khuzwayo	Mandeni Local Municipality
Tandi Breetzke	Roal Haskoning DHV
Thanda Madlala	Dept. of Economic Development and Tourism (KZN)
Theresia Ott	Richards Bay Minerals
Vuyo Keswa	TNPA RCB
Wade Holland	Coastwatch Umdloti Conservancy

KWAZULU-NATAL REPRESENTATIVE	ORGANISATION/AFFILIATION
Wendy Forse	Coastwatch Umdloti Conservancy

NORTHERN CAPE REPRESENTATIVE	ORGANISATION/AFFILIATION
Abraham de Wet	Richtersveld Municipality
Adeleen Cloete	Northern Cape: Northern Cape Department of Environment and Nature Conservation (DENC)
Anze Yephi	DENC
Bernard van Lente	SANParks
Bronwen Cornelius	DENC
Corrie van Zyl	Northern Cape: Department of Co-Operative Governance, Human Settlement and Traditional Affairs (COGHSTA)
Eddie Julius	Northern Cape: Department of Economic Development and Tourism (DEDaT)
Elsabé Stewers	Kamiesberg Municipality
Hendrik Louw	Northern Cape: Department of Economic Development and Tourism
Klaas van Zyl	DENC
Lesley van Gensen	DEDat
Sakkie Jenner	Kamiesberg Municipality
Schalk Grobbelaar	COGHSTA
Thandeka Mlatha	DENC
Valda Cloete	DEA
Wilna Oppel	DENC

WESTERN CAPE REPRESENTATIVE	ORGANISATION/AFFILIATION
Caren George	Western Cape: Department of Environmental Affairs and Development Planning (DEADP)
Christelle du Plessis	PDNA Consulting
Clement Arendse	DEADP
Darryl Colenbrander	City of Cape Town
Gregg Oelofse	DEADP - apologies
Ieptieshaam Bekko	DEADP
Kishan Sankar	DEADP
Kobie Brand	DEADP
Makwarela Matshili	DEADP
Pierre de Villiers	CapeNature
Sinethemba Shelembe	DEADP
Vernon Gibbs	Eden District Municipality - apologies
Washiela Anthony	DEADP
Wilna Kloppers	Department of Water Affairs (Western Cape regional office)

Appendix B: Summary of Key International Obligations and Agreements applicable to the Coastal Zone



INTERNATIONAL OBLIGATION	SHORT DESCRIPTION
International Convention for the Regulation of Whaling (1946)	The convention was established in order to provide for the proper conservation of whale stocks and thus make possible the orderly development of the whaling industry. It was one of the first international fisheries conventions ever to be established and many more followed in its wake to cater for the conservation and rational use of marine living resources. South Africa ratified the convention in 1946.
International Convention for the Conservation of Atlantic Tunas (ICCAT) (1966)	This convention is responsible for the conservation of tunas and tuna-like species in the Atlantic Ocean. Through the Convention, it is established that ICCAT is the only fisheries organisation that can undertake the range of work required for the study and management of tunas and other large pelagics in the Atlantic Ocean. South Africa was a founder member and ratified the Convention on 7 October 1967.
Civil Liability Convention (1969) as replaced by its 1992 Protocol and amended in 2000Civil Liability Convention (1969) as replaced by its 1992 Protocol and amended in 2000Civil Liability Convention (1969) as replaced by its 1992 Protocol and amended in 2000	This Convention (www.imo.org) was adopted to ensure that adequate compensation is available to persons who suffer oil pollution damage resulting from maritime casualties involving oil-carrying ships. The Convention places the liability for such damage on the owner of the ship from which the polluting oil escaped or was discharged. The Marine Pollution (Control and Civil Liability) Act (No. 6 of 1981) gives legal effect to this Convention in South Africa.
Convention on Wetlands of International Importance especially as Waterfowl Habitat (1971) (Ramsar Convention)Convention on Wetlands of International Importance especially as Waterfowl Habitat (1971) (Ramsar Convention)Convention on Wetlands of International Importance especially as Waterfowl Habitat (1971) (Ramsar Convention)	The broad aims of this Convention (www.ramsar.org) are to stem the loss and to promote wise use of all wetlands. The Convention includes estuaries in its definition of wetlands. The Convention defines wetlands as 'areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres' (which includes estuaries). South Africa presently has 17 sites designated as Ramsar sites with a total surface area of 498 721 ha, including estuaries such as the Orange, Verlorenvlei, Sout (De Hoop Vlei), Heuningnes (De Mond), St Lucia and Kosi Bay. A Wetland Conservation Bill has been proposed which will further assist South Africa in meeting the aims of the Convention.
Convention Concerning the Protection of the World Cultural and Natural Heritage (1972) (World Heritage Convention)Convention Concerning the Protection of the World Cultural and Natural Heritage (1972) (World Heritage Convention)Convention Concerning the	The Convention (http://whc.unesco.org/en/conventin/) states that each state party to that Convention recognises the duty of ensuring the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage situated in its territory (which may include estuaries).

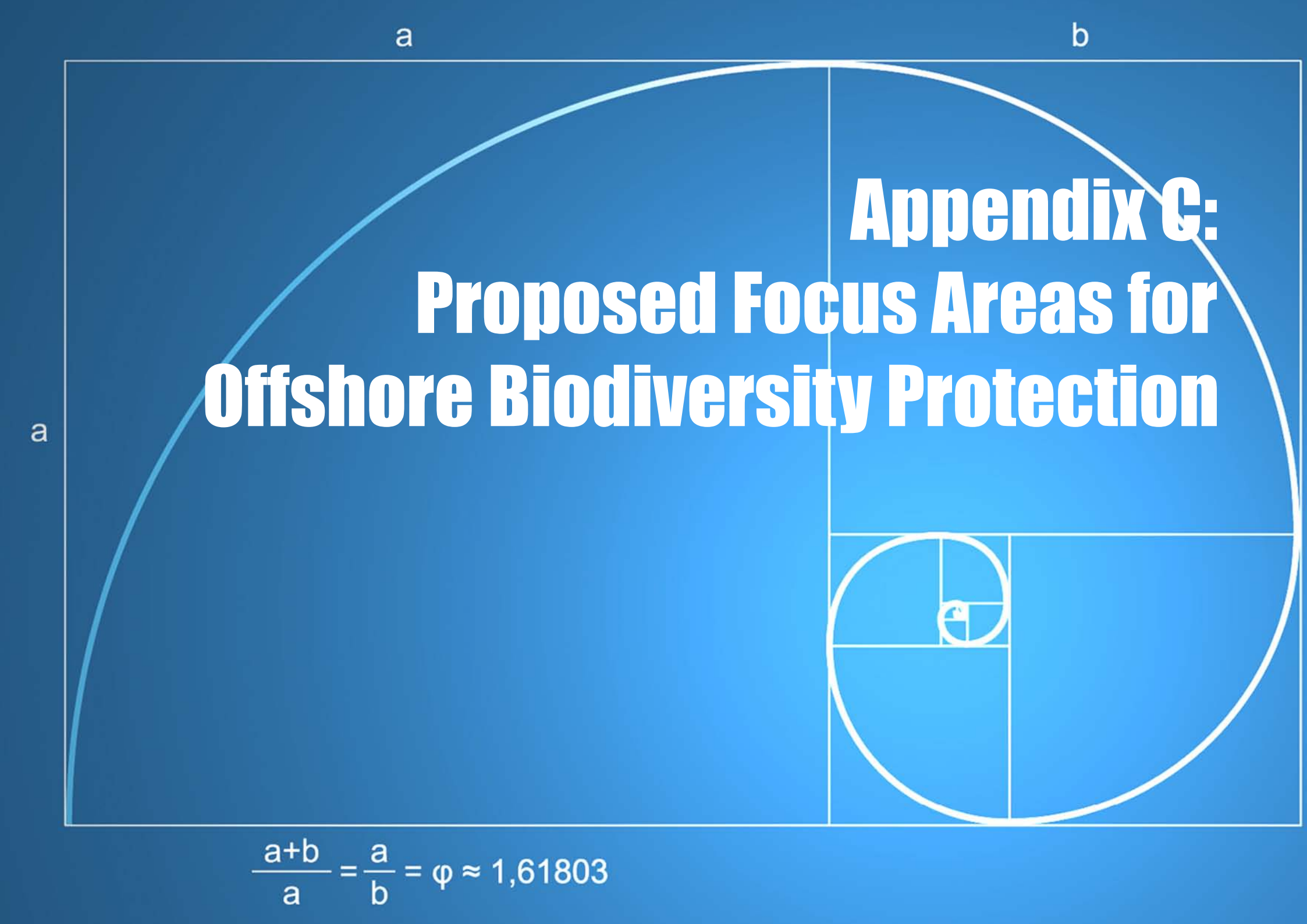
INTERNATIONAL OBLIGATION	SHORT DESCRIPTION
Protection of the World Cultural and Natural Heritage (1972) (World Heritage Convention)	South Africa acceded to the Convention in 1997, given legal status through the World Heritage Conservation Act (Act 49 of 1999). The Greater St. Lucia Wetland Park (1999) (renamed to the iSimangiliso Wetland Park) and the Cape Floristic Region (2004) for example, were given international recognition as World Heritage Sites.
International Convention for the Prevention of Pollution from Ships (MARPOL) (1973/1978)International Convention for the Prevention of Pollution from Ships (MARPOL) (1973/1978)International Convention for the Prevention of Pollution from Ships (MARPOL) (1973/1978)	The MARPOL Convention (www.imo.org/) is the main international convention covering prevention of pollution of the marine environment by ships from operational or accidental causes. It is a combination of two treaties adopted in 1973 and 1978 respectively and updated by amendments through the years. The Convention includes regulations aimed at preventing and minimising pollution from ships and currently includes six technical Annexes: Annex I Regulations for the Prevention of Pollution by Oil Annex II Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk Annex III Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form Annex IV Prevention of Pollution by Sewage from Ships Annex V Prevention of Pollution by Garbage from Ships Annex VI Prevention of Air Pollution from Ships (entry into force in May 2005) States Parties must accept Annexes I and II, but the other Annexes are voluntary. In October 2006 amendments to MARPOL designating the waters off Southern South Africa as a Special Area under the Convention. The designation will provide measures to protect wildlife and the marine environment in an ecologically important region used intensively by shipping. The International Convention for Prevention of Pollution from Ships Act (No. 2 of 1986) gives legal

INTERNATIONAL OBLIGATION	SHORT DESCRIPTION
	effect to MARPOL in South Africa, as well as Annex I and Annex II. The Marine Pollution (Intervention) Act (No. 64 of 1987) – as last amended by the South Africa Maritime Safety Authority Act (No. 5 of 1998) – also incorporates this convention into South African law.
Convention of Migratory Species of Wild Animals (1979) (Bonn Convention)Convention of Migratory Species of Wild Animals (1979) (Bonn Convention)Convention of Migratory Species of Wild Animals (1979) (Bonn Convention)	The Convention (www.cms.int/) was a response to the need for nations to co-operate in the conservation of animals that migrate across their borders. These include terrestrial mammals, reptiles, marine species and birds. Special attention is paid to endangered species. South Africa is a major partner in this Convention as it is the terminus for many of the migratory species, both the Palaearctic (birds) and the Antarctic species (whales and birds). South Africa acceded to the Convention in December 1991.
Abidjan Convention (1981) and Nairobi Convention (1985)Abidjan Convention (1981) Nairobi Convention (1985)Abidjan Convention (1981) and Nairobi Convention (1985)	In 1974, the United Nations Environment Programme (UNEP) initiated the Regional Seas Programme (www.unep.org/regionalseas/) with a view to improving the control of marine pollution and management of marine and coastal resources (including estuaries). The Programme covers eleven regions. For each region an action plan was developed which included a Regional Convention and technical protocols signifying the commitment of participating countries to address, individually and jointly, their common problems. The regions including South Africa are the West and Central African region (Abidjan Convention, came into force in South Africa in 1984) and the Eastern African or West Indian Ocean (WIO) region (Nairobi Convention, came into force in South Africa in 1996).
United Nations Convention on the Law of the Sea (UNCLOS) (1982)	UNCLOS (www.un.org/Depts/los/convention_agreements/convention_overview_convention.htm) is an attempt by the international community to regulate all aspects of the resources of the sea and its uses. Among the most important features of the treaty are included navigational rights, territorial sea limits, economic jurisdiction, legal status of resources on the seabed beyond the limits of national jurisdiction, passage of ships through narrow straits, conservation and management of living marine resources, protection of the marine environment, a marine research regime and, a more unique feature, a binding procedure for settlement of disputes between States.
Southern African Developing Countries (SADC) Protocol on Fisheries (1992)	The objective of the Protocol (www.sadc.int/fanr/naturalresources/fisheries/index.php) is to promote responsible and sustainable use of the living aquatic resources and ecosystems of interest to State Parties in order to promote and enhance food security and human health, safeguard the livelihood of fishing communities, to generate economic opportunities for nationals in the region, to ensure that future generations benefit from these renewable resources and to alleviate poverty with the ultimate

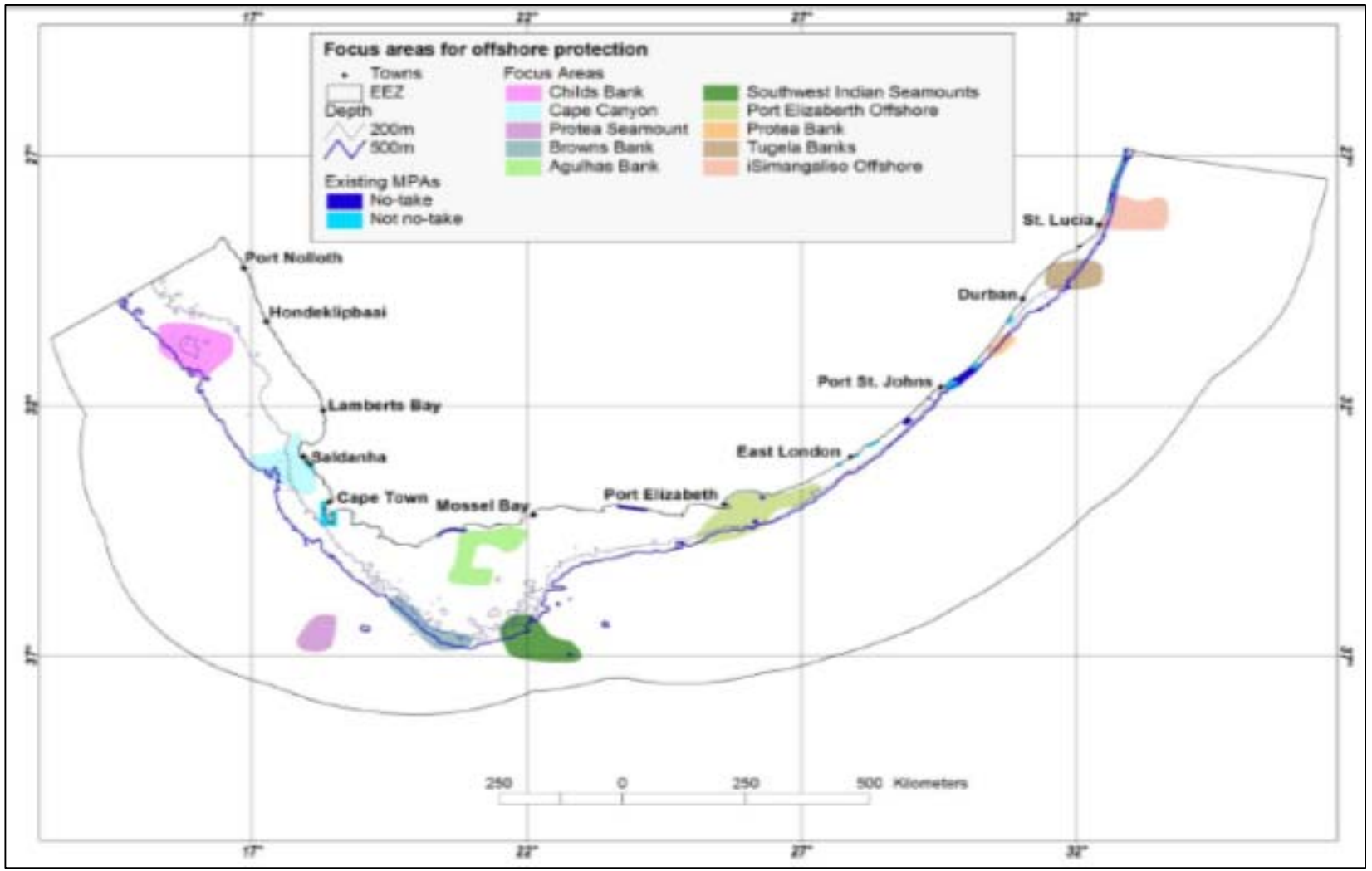
INTERNATIONAL OBLIGATION	SHORT DESCRIPTION
	objective of its eradication
Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (1992) (Basel Convention)	The main objectives of the convention (www.basel.int/) are the reduction of the production of hazardous waste and the restriction of transboundary movement and disposal of such waste. It also aims to ensure that any transboundary movement and disposal of hazardous waste, when allowed, is strictly controlled and takes place in an environmentally sound and responsible way. South Africa ratified the convention in May 1994.
Agenda 21 (1992) as reaffirmed at the subsequent United Nations World Summits (e.g. RIO +20) in 2012Agenda 21 (1992) as reaffirmed at the subsequent United Nations World Summits (e.g. RIO +20) in 2012Agenda 21 (1992) as reaffirmed at the subsequent United Nations World Summits (e.g. RIO +20) in 2012	Agenda 21 (www.unep.org/Documents.Multilingual/Default.asp?documentid=52) is an internationally accepted strategy for sustainable development, decided upon at the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro in 1992. Agenda 21 is, however, not legally binding on states, and merely acts as a guideline for implementation. Agenda 21 requires, for example, the preparation of a State of the Environment Report prepared on national, provincial and local level (responsibility of the National Department of Environmental Affairs and Tourism, Provincial Departments of Environmental Affairs and Local Authorities, respectively.
United Nations Framework Convention on Climate Change (1992)United Nations Framework Convention on Climate Change (1992)United Nations Framework Convention on Climate Change (1992)	The United Nations Framework Convention on Climate Change (http://unfccc.int/2860.php) sets an "ultimate objective" of stabilising greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Countries ratifying the Convention agree to take climate change into account in such matters as agriculture, energy, natural resources, and activities involving sea coasts. They agree to develop national programmes to slow climate change. The Convention encourages parties to cooperate to reduce greenhouse gas emissions, share technology and carry out scientific research. South Africa ratified the Convention in 1997. The Department of Environmental Affairs and Tourism published a Climate Change Policy Discussion Document in 1998 to begin the process of formulating policies to respond to climate change both locally and internationally.
United Nations Convention on Biological Diversity	The Convention on Biological Diversity (www.biodiv.org/convention/default.shtml) has three

9.

INTERNATIONAL OBLIGATION	SHORT DESCRIPTION
(1993)United Nations Convention on Biological Diversity (1993)United Nations Convention on Biological Diversity (1993)	objectives: the conservation of biological diversity; the sustainable use of biological resources; and the fair and equitable sharing of benefits arising from the use of genetic resources. As a party to the Convention, South Africa is required to develop national strategies, plans or programmes, or adapt existing ones, to address the provisions of the Convention, and to integrate the conservation and sustainable use of biodiversity into sectoral and cross-sectoral plans, programmes and policies. South Africa's response to this requirement is contained in the White Paper on the Conservation and sustainable use of South Africa's biological diversity (July 1998), given legal status through the National Environmental Management: Biodiversity Act (No. 10 of 2004).
Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA) (1995)Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA) (1995)Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA) (1995)	The GPA (www.gpa.unep.org/) builds on the principles of Agenda 21 and was adopted in November 1995. The programme is designed to assist states in taking action, individually or jointly, within their respective policies, priorities and resources, that will lead to the prevention, reduction, control or elimination of the degradation of the marine environment, as well as to its recovery, from the impacts of land-based activities (including pollution and developments/activities leading to the destruction of marine habitat). The GPA identifies the Regional Seas Programme of UNEP as an appropriate framework for delivery of this programme at regional level. South Africa upholds the principles of GPA.
Code of Conduct for Responsible Fisheries (1995)	The Code (www.fao.org/fishery/ccrf/en) takes cognisance of the state of world fisheries and aquaculture, and proposes actions towards implementing fundamental changes within the fisheries sector to encourage the rational and sustainable utilisation of fisheries and aquaculture. The Code is a voluntary instrument rather than a legally binding international agreement and was approved by South Africa's government in January 2002.
Convention on the Conservation and Management of Fishery Resources in the South East Atlantic Ocean (2001)	The main objective of this convention (www.fao.org/fishery/rfb/seafo) is to ensure the long-term conservation and sustainable use of fish stocks other than highly migratory stocks found in areas of the South East Atlantic beyond the limits of national jurisdiction. South Africa signed the convention in April 2001 which came into force in April 2003.
International Convention for the Control and Management of Ships' Ballast Water and Sediments (2004)International Convention for the Control and Management of Ships' Ballast Water and Sediments (2004)International Convention for the Control and Management of Ships' Ballast Water and Sediments (2004)	The Convention (www.imo.org/) was adopted by consensus at a Diplomatic Conference held at the International Maritime Organisation (London) in February 2004. Invasive aquatic species are one of the four greatest threats to the world's oceans, and can cause extremely severe environmental, economic and public health impacts. The GEF/UNDP/IMO Global Ballast Water Management Programme (GloBallast) (http://globallast.imo.org/index.asp) is assisting developing countries to reduce the transfer of harmful aquatic organisms and pathogens in ships' ballast water; Implement ballast water guidelines of the IMO; Prepare for the Convention on ballast water.
'Minamata' Convention Agreed by Nations Global Mercury Agreement to Lift Health Threats from Lives of Millions World-Wide (2013)	In January 2013 the negotiations on a future global legally binding instrument on mercury concluded where 147 governments agreed on draft text for this convention. The draft Minamata Convention on Mercury is scheduled to be adopted and opened for signature at a Conference of Plenipotentiaries in Japan during October 2013.



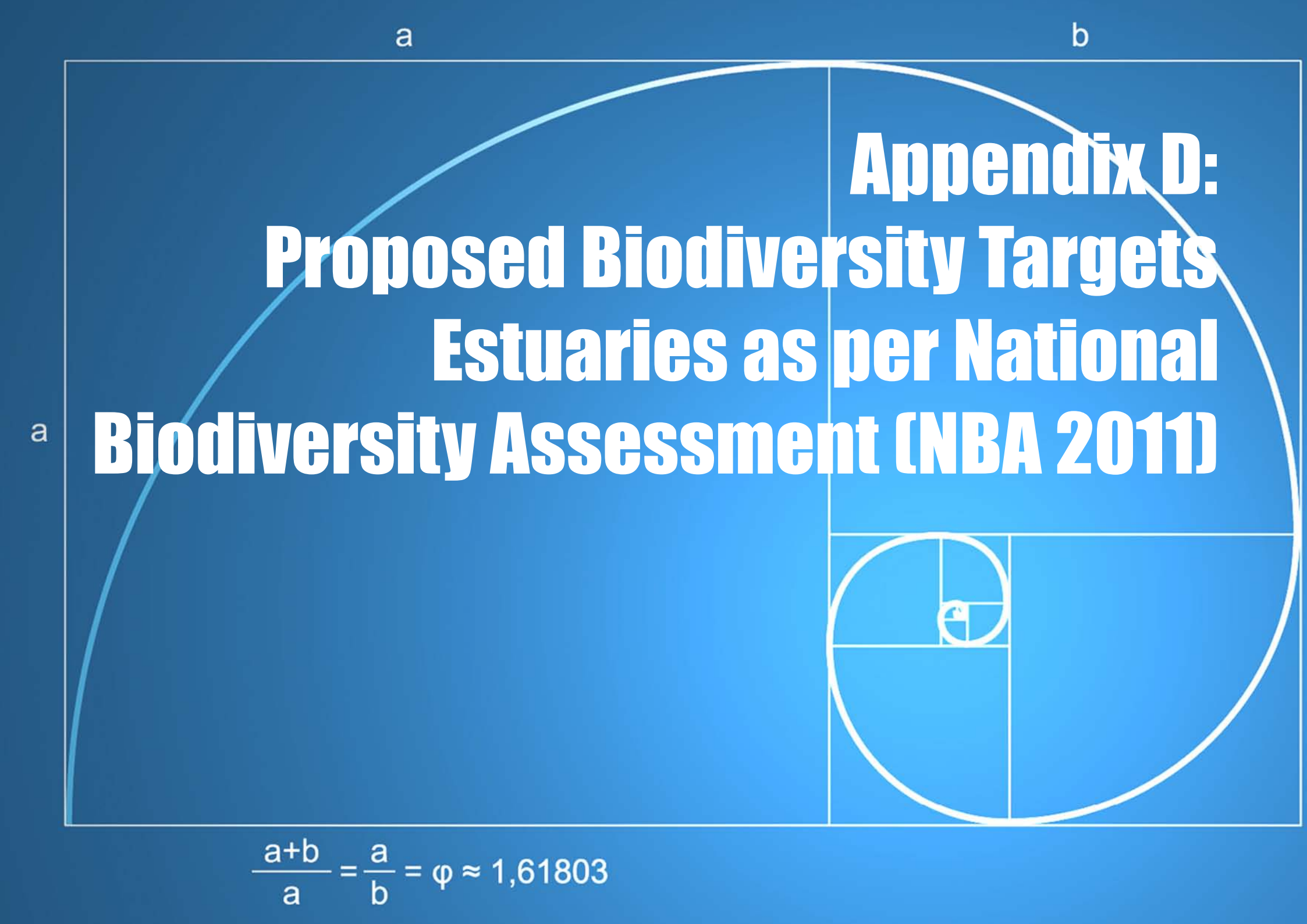
Appendix C: Proposed Focus Areas for Offshore Biodiversity Protection


Focus areas for offshore protection
Towns
EEZ
Depth
200m
500m
Existing MPAs
No-take
Not no-take
Focus Areas
Childs Bank
Cape Canyon
Protea Seamount
Browns Bank
Agulhas Bank
Southwest Indian Seamounts
Port Elizaberth Offshore
Protea Bank
Tugela Banks
iSimangaliso Offshore
Port Nolloth
Hondeklipbaai
Lamberts Bay
Saldanha
Cape Town
Mossel Bay
Port Elizabeth
East London
Port St. Johns
Durban
St. Lucia
250
0
250
500 Kilometers

Focal Area Name	Objectives	Key stakeholders	Potential spatial management measures & other considerations
Childs Bank	• Offshore habitat representation • Benthic protection (submarine bank, shelf, shelf edge and cold water corals) • Bycatch management (offshore trawl) • Fisheries management (demersal trawl)	Offshore trawl fishery Demersal longline fishery Petroleum Mining	Experimental closure for benthic fisheries along the shelf (linked to the SADSTIA proposed trawl closure committed as part of eco-certification conditions) is recommended. Full seabed protection is advised for the Child's Bank submarine feature and it is suggested that this is effected prior to implementation of the closure so as not to shift effort onto this potential vulnerable marine ecosystem. iBhubesi reef is also recommended as a seabed protection zone and further engagement with the petroleum sector is needed in this regard. The broader focus area is important for large pelagic fishing, seabed protection and support for the management of demersal resources. It may not be necessary to exclude pelagic fisheries from this area.
Cape Canyon	• Offshore habitat representation • Pelagic habitats and processes • Benthic protection (canyon) • Threatened species • Fisheries sustainability	Offshore trawl fishery Demersal longline fishery Small pelagic Petroleum Mining	A zoned MPA including no-take areas, seabed protection zones and zones to minimise user conflict could help achieve multiple objectives in this area. The existing MPAs (Langebaan, Sixteen Mile Beach, Marcus Island, Malgas Island and, Jutten Island) in the area should be considered for consolidation, extension or re-zoning to resolve existing resource conflicts, protect threatened species in core areas and minimise stakeholder impacts. This area is important for small pelagic fisheries who are interested in negotiation to achieve increased protection of core seabird habitat in return for access to part of the Sixteen mile beach MPA.
Protea Seamount	• Offshore habitat representation • Benthic protection (seamount)	Large pelagic Mining	Two seamounts in this area should be included within a zoned MPA that includes a no-take area and a benthic protection zone. Fishing could be excluded from the seamount where lowest effort has been exerted. A portion of the Ferro-manganese nodule habitat must be included in the MPA.
Browns Bank	• Offshore habitat representation • Benthic protection • Fisheries sustainability (demersal trawl & longlining) • Bycatch management (offshore trawl)	Offshore trawl fishery Demersal longline fishery Demersal shark South coast rock lobster	Sector specific Fishery management Areas, seabed protection zones or MPAs can be considered in this area. The Browns Bank area is an important spawning area for hake and data suggests that large hake frequent this area. As such a small closed area, including the more vulnerable hard ground habitat, could support the sustainability of the hake fisheries. There are hard grounds in this focus area which should receive formal protection (effected in legislation) from fishing and mining. Activities that affect the seabed should be prevented from extending into deeper water along this shelf edge area.
Agulhas Bank	• Offshore habitat representation • Benthic protection (deep reefs) • Bycatch management (inshore trawl) • Fisheries sustainability (linefish, hake) • Threatened species (linefish)	Inshore trawl Linefish Demersal shark South coast rock lobster Petroleum	A zoned MPA is recommended in this area to represent poorly protected habitats (especially mud and gravel habitats), protect vulnerable marine ecosystems (deep reefs, hard grounds) and support fisheries sustainability. This could include or supplement independent spatial management aimed at supporting bycatch management for the inshore trawl sector. A network of linked (but not necessarily contiguous) spatial management measures across the bank may be most appropriate in this focus area. Key features for inclusion include the Alphard Banks, the 45 Mile Bank, unrepresented gravel and mud habitats and different fish communities that are caught by the inshore trawl sector.
Southwest Indian Seamounts	• Offshore habitat representation • Benthic protection (seamount, shelf edge) • Fisheries sustainability (small pelagic species) • Bycatch reduction (large	Offshore trawl Large pelagic	A fully protected or zoned MPA is suggested to achieve the multiple objectives for this area. Very rough ground and strong currents already offer some protection to this area which has lower cost than many other shelf edge areas. Unprotected habitats of very limited spatial extent should be considered for inclusion (e.g. shelf edge gravels). Two separate management areas or a large single zoned area could be considered.



Focal Area Name	Objectives	Key stakeholders	Potential spatial management measures & other considerations
	pelagic)		
Offshore Port Elizabeth	• Offshore benthic habitat representation • Benthic protection (cold water corals, canyon, shelf edge, deep reefs) • Fisheries sustainability (kingklip, hake, linefish, squid) • Bycatch management (inshore and offshore trawl) • Threatened species (seabirds)	Inshore trawl fishery Offshore trawl fishery Midwater trawl fishery Linefishery Demersal longline fishery Demersal shark fishery Large pelagic fishery South coast rock lobster fishery Petroleum	Seabed Protection zones, Fishery Management Areas and expansion of existing or proposed Marine Protected Areas should all be considered in this complex area. There are offshore features in this area that have few alternative options for conservation which is why this area is still selected despite relatively high cost values in this area. Existing planning for the proposed Addo MPA and the existing seasonal kingklip closure should also be considered in the development of offshore spatial management measures in this area and a suite of smaller appropriately zoned areas across this focus area could be appropriate.
Protea Bank	• Offshore benthic habitat representation • Pelagic habitats and processes representation • Benthic protection (cold water corals, canyon, shelf edge, deep reefs) • Fisheries sustainability (linefish) • Threatened species (linefish)	Linefishery Recreational fishers Scuba divers Large pelagic fishery (if offshore of 20 nm)	A zoned Marine Protected Area should be considered in this area which also has potential to provide for non-consumptive resource use. This focus area was also identified by fine-scale planning conducted in KwaZulu-Natal through the SeaPlan project. The presence of 4 submarine canyons, deep reefs and 7cold water coral records highlight the need for effective seabed protection in this area although there is evidence that this area is important for pelagic processes (high frequency of fronts) and sharks. This area could contribute to reef types that are currently underprotected in the bioregion and could help recovery of overexploited linefish. Conflict between divers and fishers needs to be addressed but there is currently some voluntary effort to stop fishing in some areas.
Tugela Banks	• Offshore habitat representation • Benthic protection (cold water corals, canyon, shelf edge, deep reefs) • Bycatch management (crustacean trawl) • Threatened species (turtles, linefish)	Crustacean trawl fishery Linefishery Large pelagic Petroleum (new leases) Mining	A zoned Marine Protected Area and industry –specific fisheries or bycatch management areas should be considered for implementation in this area. Unprotected pelagic and seabed habitats (such as Natal shelf muds and gravels and submarine canyons) warrant protection in this area which has complex sedimentary patterns and complex oceanography. This area is highly productive and serves a nursery area for many species. This focus area was also identified by fine-scale planning conducted in KwaZulu-Natal through the SeaPlan project led by Ezemvelo KZN Wildlife.
iSimangaliso Offshore	• Offshore benthic habitat representation • Pelagic habitats and processes representation • Benthic protection (canyons, corals) • Bycatch management (crustacean trawl) • Fisheries sustainability (linefish) • Threatened species (turtles, linefish)	Crustacean trawl fishery Linefishery Large pelagic fishery (if extends beyond 20 nm) Recreational fishers	Southern and offshore expansion of the existing Marine Protected Area and World Heritage Site with appropriate zonation is recommended in this area. Large pelagic fishing is not permitted within 20 nm of the coastline and costs are low within this zone of the focus area. This focus area was also identified by fine-scale planning conducted in KwaZulu-Natal (SeaPlan project). This area is important for threatened species, particularly turtles and linefish. Entire canyons and cold water coral records offshore of the current MPA must be included.



Appendix D: Proposed Biodiversity Targets Estuaries as per National Biodiversity Assessment (NBA 2011)

Proposed biodiversity targets and priorities for South Africa's estuaries have been included in the NBA 2011 (Turpie et al., 2012) and are summarised in this Appendix. For details please refer to the original report or updates thereof.

These target and priorities are based on stakeholder discussions on an initial proposed set of goals and targets. Note that these pertain to estuary ecosystem type, habitats, fish and birds only, and that other elements, such as invertebrates are not directly targeted. The latter omission is due to lack of data, and the assumption was that the inclusion of habitats, fish and birds will be sufficient to cover the needs of other taxonomic groups, although this should be checked in future as further information becomes available.

Overall area target

In line with national policy objectives for conserving inland water ecosystems (Roux et al., 2006), a biodiversity target of 20% of estuarine area was used in this plan. For estuaries selected for partial protection, half the area was assumed to be protected, irrespective of whether the partial-protection strategy for that estuary would be area-based. This applied to biodiversity targets for habitat types as well.

Habitat targets

Biodiversity targets were not set for mangroves or swamp forest per se, but instead all estuaries that contained >5ha of these habitats were automatically included into the set of priority estuaries. Targets for all other habitat types (apart from rocks) were set at 20% (see Table below) (Turpie et al., 2012). No target was set for rocks due to the lack of estuarine dependence of the associated fauna and/or flora.

Targets for estuarine habitat types and for the total estuarine area

ESTUARINE HABITAT TYPE	TOTAL AREA (ha) WITHIN THE PLANNING DOMAIN	TARGET (% of area)
Supratidal salt marsh	7051	20%
Intertidal salt marsh	4310	20%
Reeds and sedges	11 806	20%
Swamp forest	4843	All occurrences of > 5ha
Mangroves	2111	All occurrences of > 5ha
Sand/mud banks	4017	20%
Submerged macrophytes	1327	20%
Open water area	55 284	20%
Rocks	96	No target
Total estuarine area	**90 844**	**20%**

Species targets

Fish and bird population targets were calculated as a proportion of the total abundance for each species. The following population targets were applied to the estuary-dependent fish and bird species, agreed in workshop discussions:

- 50% of the population of threatened species (based on Red Lists) and overexploited/collapsed species;
- 40% of the population of exploited species; and
- 30% of the population of all other species.



Based on the list of priority estuaries generated in this analysis, plus preliminary estimates of their present ecological status (health; this analysis) and their importance rating (Turpie et al., 2012). The table below lists the national and regional priority estuaries provides recommendations regarding the extent of protection required for each, the recommended extent of the estuary perimeter that should be free from development, and a provisional estimate of the Recommended Ecological Category, or recommended future health class determining the limitations on future water use, as required under the NWA.

National and/or sub-national (CAPE) priorities, the extent of protection required (full = full no-take protection, partial includes no-take sanctuary zone where feasible), the recommended proportion of the estuary margin that should remain undeveloped and provisional estimate of the Recommended Ecological Category (Source: Turpie et al. 2012)

ESTUARY (WEST TO EAST)	CURRENT HEALTH CATEGORY	PRIORITY SET FOR NATIONAL AND/OR CAPE	RECOMMENDED EXTENT OF PROTECTION	RECOMMENDED EXTENT OF UNDEVELOPED MARGIN	PROVISIONAL ESTIMATE OF RECOMMENDED ECOLOGICAL CATEGORY
Orange	D	SA/CAPE	Full	50%	C*
Buffels	C				C
Spoeg	B	SA	Full	100%	A or BAS
Groen	B	SA	Full	100%	A or BAS
Sout	D				D
Olifants	C	SA/CAPE	Partial	50%	B*
Jakkalsvlei	D				D
Wadrift	E				D

ESTUARY (WEST TO EAST)	CURRENT HEALTH CATEGORY	PRIORITY SET FOR NATIONAL AND/OR CAPE	RECOMMENDED EXTENT OF PROTECTION	RECOMMENDED EXTENT OF UNDEVELOPED MARGIN	PROVISIONAL ESTIMATE OF RECOMMENDED ECOLOGICAL CATEGORY
Verlorenvlei	D	SA	Partial	50%	C
Berg	D	SA/CAPE	Partial	25%	C*
Rietvlei/ Diep	E	SA/CAPE	Partial	50%	C
Sout W	F				D
Hout Bay	E				D
Wildevoëlvlei	D				B
Bokramspruit	C				C
Schuster	A				A
Krom	A	SA/CAPE	Full	100%	A or BAS
Buffels Wes	F				D
Elsies	E				D
Silvermine	D				D
Sand	D	SA/CAPE	Partial	20%	C
Zeekoei	E				D
Eerste	E	SA/CAPE	Full	75%	D
Lourens	C	SA/CAPE	Full	75%	D
Sir Lowry's Pass	E				D
Steenbras	B				B



ESTUARY (WEST TO EAST)	CURRENT HEALTH CATEGORY	PRIORITY SET FOR NATIONAL AND/OR CAPE	RECOMMENDED EXTENT OF PROTECTION	RECOMMENDED EXTENT OF UNDEVELOPED MARGIN	PROVISIONAL ESTIMATE OF RECOMMENDED ECOLOGICAL CATEGORY
Rooiels	B				B
Buffels (Oos)	B				B
Palmiet	C	SA/CAPE	Full	50%	B*
Bot / Kleinmond	C	SA/CAPE	Partial	50%	B
Onrus	E				D
Klein	C	SA/CAPE	Partial	50%	B
Uilkraals	D	SA	Partial	75%	C
Ratel	C	SA	Full	75%	C
Heuningnes	D	SA/CAPE	Partial	75%	A or BAS
Klipdrifsfontein	A	SA/CAPE	Full	75%	A
Breede	B	SA	Partial	50%	B*
Duiwenhoks	B				A
Goukou	C	SA/CAPE	Partial	50%	B
Gourits	C	SA/CAPE	Partial	50%	B
Blinde	B				B
Hartenbos	D				C
Klein Brak	C				C
Groot Brak	E				C*

ESTUARY (WEST TO EAST)	CURRENT HEALTH CATEGORY	PRIORITY SET FOR NATIONAL AND/OR CAPE	RECOMMENDED EXTENT OF PROTECTION	RECOMMENDED EXTENT OF UNDEVELOPED MARGIN	PROVISIONAL ESTIMATE OF RECOMMENDED ECOLOGICAL CATEGORY
Maalgate	B				B*
Gwaing	B				C*
Kaaimans	B	SA	Full	50%	B*
Wilderness	B	SA/CAPE	Partial	50%	A or BAS
Swartvlei	B	SA/CAPE	Partial	50%	B*
Goukamma	B	SA/CAPE	Full	75%	A*
Knysna	B	SA/CAPE	Partial	50%	B*
Noetsie	B	CAPE			A*
Piesang	C	SA	Partial	50%	B
Keurbooms	A	SA/CAPE	Partial	50%	A*
Matjies	B				B*
Sout (Oos)	A	SA/CAPE	Full	100%	A*
Groot (Wes)	B	SA/CAPE	Full	75%	A or BAS
Bloukrans	A	SA/CAPE	Full	100%	A or BAS
Lottering	A	SA/CAPE	Full	100%	A or BAS
Elandsbos	A	SA/CAPE	Full	100%	A or BAS
Storms	A	SA/CAPE	Full	100%	A or BAS
Elands	B	SA/CAPE	Full	100%	A or BAS

ESTUARY (WEST TO EAST)	CURRENT HEALTH CATEGORY	PRIORITY SET FOR NATIONAL AND/OR CAPE	RECOMMENDED EXTENT OF PROTECTION	RECOMMENDED EXTENT OF UNDEVELOPED MARGIN	PROVISIONAL ESTIMATE OF RECOMMENDED ECOLOGICAL CATEGORY
Groot (Oos)	B	SA/CAPE	Full	100%	A or BAS
Tsitsikamma	B	SA	Full	50%	B*
Klipdrif	D				D
Slang	D				D
Kromme	D	SA/CAPE	Partial	25%	C*
Seekoei	D	SA/CAPE	Partial	25%	B*
Kabeljous	C				B
Gamtoos	C	SA/CAPE	Partial	50%	A or BAS
Van Stadens	B	SA/CAPE	Full	50%	A or BAS
Maitland	C	SA/CAPE	Full	75%	C
Bakens	E				D
Papkuils	F				D
Swartkops	C	SA/CAPE	Partial	25%	B
Coega (Ngcura)	F				D
Sundays	C	SA/CAPE	Partial	50%	A or BAS
Boknes	C				C
Bushman's	B	SA/CAPE	Partial	50%	A*
Kariega	C	SA/CAPE	Partial	50%	B

ESTUARY (WEST TO EAST)	CURRENT HEALTH CATEGORY	PRIORITY SET FOR NATIONAL AND/OR CAPE	RECOMMENDED EXTENT OF PROTECTION	RECOMMENDED EXTENT OF UNDEVELOPED MARGIN	PROVISIONAL ESTIMATE OF RECOMMENDED ECOLOGICAL CATEGORY
Kasuka	B				A
Kowie	C				B
Rufane	C				C
Riet	B				A
West Kleinemonde	B				A
East Kleinemonde	B				B*
Klein Palmiet	D				D
Great Fish	C	SA/CAPE	Partial	50%	B
Old woman's	C				C
Mpekweni	B				A
Mtati	B	CAPE			A
Mgwalana	B	SA	Partial	50%	A
Bira	B	SA	Partial	50%	A
Gqutywa	B	SA/CAPE	Full	75%	A
Ngculura	B				B
Freshwaterpoort	A				A
Mtana	B				B
Keiskamma	C	SA/CAPE	Partial	50%	B



ESTUARY (WEST TO EAST)	CURRENT HEALTH CATEGORY	PRIORITY SET FOR NATIONAL AND/OR CAPE	RECOMMENDED EXTENT OF PROTECTION	RECOMMENDED EXTENT OF UNDEVELOPED MARGIN	PROVISIONAL ESTIMATE OF RECOMMENDED ECOLOGICAL CATEGORY
Ngqinisa	B	SA	Full	75%	B
Kiwane	B				B
Tyolomnqa	B				A
Shelbertsstroom	C				C
Lilyvale	B				B
Ross' Creek	B				B
Ncera	B	SA	Full	75%	B
Mlele	B				B
Mcantsi	C				C
Gxulu	B				B
Goda	B	CAPE	Full	75%	B
Hlozi	B				B
Hickman's	B				B
Mvubakazi	B				B
Ngqenga	C				C
Buffalo	D				C
Blind	C				C
Hlaze	C				C

ESTUARY (WEST TO EAST)	CURRENT HEALTH CATEGORY	PRIORITY SET FOR NATIONAL AND/OR CAPE	RECOMMENDED EXTENT OF PROTECTION	RECOMMENDED EXTENT OF UNDEVELOPED MARGIN	PROVISIONAL ESTIMATE OF RECOMMENDED ECOLOGICAL CATEGORY
Nahoon	C				B*
Qinira	B				A
Gqunube	B	SA	Partial	50%	A
Kwelera	B	SA	Partial	50%	A
Bulura	B				B
Cunge	A				A
Cintsa	C				C
Cefane	B				A
Kwenxura	B	SA/CAPE	Full	75%	A
Nyara	A				A
Mtwendwe	B				B
Haga-haga	B				B
Mtendwe	B				B
Quko	A	SA/CAPE	Full	50%	A
Morgan	C				C
Cwili	B				B
Great Kei	C	SA/CAPE	Partial	50%	B*
Gxara	B				B



ESTUARY (WEST TO EAST)	CURRENT HEALTH CATEGORY	PRIORITY SET FOR NATIONAL AND/OR CAPE	RECOMMENDED EXTENT OF PROTECTION	RECOMMENDED EXTENT OF UNDEVELOPED MARGIN	PROVISIONAL ESTIMATE OF RECOMMENDED ECOLOGICAL CATEGORY
Ngogwane	B				B
Qolora	B				A
Ncizele	B	SA	Full	75%	B
Timba	A				A
Kobonqaba	B				B
Nxaxo/Ngqusi	B	SA/CAPE	Full	75%	A
Cebe	B				B
Gqunqe	A				A
Zalu	A				A
Ngqwara	A	SA	Full	75%	A
Sihlontlweni/Gcini	B				B
Nebelele	A				A
Qora	B	SA/CAPE	Partial	75%	A
Jujura	B				B
Ngadla	A	SA	Full	75%	A
Shixini	B	CAPE			B
Beechamwood	A				A
Un-named EC	A				A

ESTUARY (WEST TO EAST)	CURRENT HEALTH CATEGORY	PRIORITY SET FOR NATIONAL AND/OR CAPE	RECOMMENDED EXTENT OF PROTECTION	RECOMMENDED EXTENT OF UNDEVELOPED MARGIN	PROVISIONAL ESTIMATE OF RECOMMENDED ECOLOGICAL CATEGORY
Kwa-Goqo	A				A
Ku-Nocekedwa	A				A
Nqabara	B	SA	Partial	75%	A
Ngoma/Kobule	A				A
Mendu	A	SA			A
Mendwana	A	SA			A
Mbashe	C	SA/CAPE	Partial	75%	A or BAS
Ku-Mpenzu	B	SA/CAPE	Full	75%	B
Ku-Bhula/Mbhanyana	A	SA/CAPE	Full	75%	A
Kwa-Suka	B	SA			B
Ntlonyane	B	SA/CAPE	Full	75%	B
Nkanya	B	SA/CAPE	Full	75%	B
Sundwana	A	SA	Full	75%	A
Xora	B	SA	Partial	75%	A
Bulungula	B				B
Ku-amanzimuzama	A				A
Ngakanqa	A	SA	Full	75%	A
Un-named KZN	A				A



ESTUARY (WEST TO EAST)	CURRENT HEALTH CATEGORY	PRIORITY SET FOR NATIONAL AND/OR CAPE	RECOMMENDED EXTENT OF PROTECTION	RECOMMENDED EXTENT OF UNDEVELOPED MARGIN	PROVISIONAL ESTIMATE OF RECOMMENDED ECOLOGICAL CATEGORY
Mncwasa	B				B
Mpako	B				B
Nenga	C				C
Mapuzi	B				B
Mtata	D	SA	Partial	50%	C*
Tshani	B				B
Mdumbi	B	CAPE			A
Lwandilana	A	SA	Full	75%	A
Lwandile	A				A
Mtakatye	B	SA	Partial	75%	B
Hluleka	A	SA	Full	75%	A or BAS
Mnenu	B				B
Mtonga	B				B
Mpande	B				B
Sinangwana	B				B
Mngazana	B	SA	Partial	50%	B
Mngazi	C				C
Gxwaleni	A				A

ESTUARY (WEST TO EAST)	CURRENT HEALTH CATEGORY	PRIORITY SET FOR NATIONAL AND/OR CAPE	RECOMMENDED EXTENT OF PROTECTION	RECOMMENDED EXTENT OF UNDEVELOPED MARGIN	PROVISIONAL ESTIMATE OF RECOMMENDED ECOLOGICAL CATEGORY
Bulolo	B				B
Mtambane	B				B
Mzimvubu	C	SA	Partial	50%	C
Ntlupeni	B				B
Nkodusweni	B	SA	Partial	75%	A or BAS
Mntafufu	B	SA	Full	75%	A or BAS
Mzintlava	B	SA	Full	75%	A or BAS
Umzimpunzi	B	SA	Full	75%	B
Kwa-Nyambala	B	SA	Partial	50%	B
Mbotyi	B	SA	Partial	50%	A or BAS
Mkozi	A	SA	Full	75%	A
Myekane	A	SA	Full	75%	A
Sitatshe	A	SA	Full	75%	A
Lupatana	A	SA	Full	75%	A
Mkweni	A	SA	Partial	75%	A or BAS
Msikaba	A	SA	Full	75%	A or BAS
Butsha	A	SA	Partial	100%	A
Mgwegwe	A	SA	Partial	100%	A

ESTUARY (WEST TO EAST)	CURRENT HEALTH CATEGORY	PRIORITY SET FOR NATIONAL AND/OR CAPE	RECOMMENDED EXTENT OF PROTECTION	RECOMMENDED EXTENT OF UNDEVELOPED MARGIN	PROVISIONAL ESTIMATE OF RECOMMENDED ECOLOGICAL CATEGORY
Mgwetyana	A	SA	Partial	100%	A
Mtentu	A	SA	Full	75%	A or BAS
Sikombe	A	SA	Partial	75%	A
Kwanyana	B	SA	Partial	75%	B
Mtolane	A	SA	Partial	75%	A
Mnyameni	B	SA	Partial	75%	A or BAS
Mpahlanyana	A	SA	Full	75%	A
Mpahlane	A	SA	Partial	75%	A
Mzamba	B	SA	Partial	75%	A
Mtentwana	C	SA	Full	75%	C
Mtamvuna	B	SA	Full	75%	A or BAS
Zolwane	B				B
Sandlundlu	C				C
Ku-Boboyi	B				B
Tongazi	B				B
Kandandhlovu	B				B
Mpenjati	B	SA	Partial	75%	A or BAS
Umhlangankulu	C				C

ESTUARY (WEST TO EAST)	CURRENT HEALTH CATEGORY	PRIORITY SET FOR NATIONAL AND/OR CAPE	RECOMMENDED EXTENT OF PROTECTION	RECOMMENDED EXTENT OF UNDEVELOPED MARGIN	PROVISIONAL ESTIMATE OF RECOMMENDED ECOLOGICAL CATEGORY
Kaba	B				B
Mbizana	B				B
Mvutshini	B				B
Bilanhlolo	C				C
Uvuzana	C				C
Kongweni	C				C
Vungu	B				B
Mhlangeni	C				C
Zotsha	C	SA	Partial	50%	C
Boboyi	C				C
Mbango	E				D
Mzimkulu	C	SA	Partial	50%	B
Mtentweni	C				C
Mhlangamkulu	C				C
Damba	C	SA	Partial	50%	C
Koshwana	C	SA	Partial	50%	C
Intshambili	B	SA	Partial	50%	B
Mzumbe	D				D



ESTUARY (WEST TO EAST)	CURRENT HEALTH CATEGORY	PRIORITY SET FOR NATIONAL AND/OR CAPE	RECOMMENDED EXTENT OF PROTECTION	RECOMMENDED EXTENT OF UNDEVELOPED MARGIN	PROVISIONAL ESTIMATE OF RECOMMENDED ECOLOGICAL CATEGORY
Mhlabatshane	B	SA	Partial	50%	B
Mhlungwa	C				C
Mfazazana	C	SA	Partial	50%	C
Kwa-Makosi	B	SA	Partial	75%	B
Mnamfu	C				C
Mtwalume	D				D
Mvuzi	C				C
Fafa	D				D
Mdesingane	C				C
Sezela	D				D
Mkumbane	C				C
Mzinto	C				C
Mzimayi	C				C
Nkomba	C				C
Mpambanyoni	C				C
Mahlongwa	C				C
Mahlongwana	B				B
Mkomazi	C	SA	Partial	25%	B

ESTUARY (WEST TO EAST)	CURRENT HEALTH CATEGORY	PRIORITY SET FOR NATIONAL AND/OR CAPE	RECOMMENDED EXTENT OF PROTECTION	RECOMMENDED EXTENT OF UNDEVELOPED MARGIN	PROVISIONAL ESTIMATE OF RECOMMENDED ECOLOGICAL CATEGORY
Ngane	B				B
Umgababa	B	SA	Full	50%	B
Msimbazi	B	SA	Full	75%	B
Lovu	C	SA	Partial	50%	C
Little Manzimtoti	D				D
Manzimtoti	D				D
Mbokodweni	E				D
Sipingo	F				D
Durban Bay	E	SA	Partial	25%	B
Mgeni	D	SA	Partial	25%	A or BAS
Mhlanga	D	SA	Full	75%	B*
Mdloti	D				C*
Tongati	E				D
Mhlali	C	SA	Partial	50%	B
Bobs Stream	C				C
Seteni	C				C
Mvoti	D	SA	Full	75%	D
Mdlotane	B	SA	Full	75%	A



ESTUARY (WEST TO EAST)	CURRENT HEALTH CATEGORY	PRIORITY SET FOR NATIONAL AND/OR CAPE	RECOMMENDED EXTENT OF PROTECTION	RECOMMENDED EXTENT OF UNDEVELOPED MARGIN	PROVISIONAL ESTIMATE OF RECOMMENDED ECOLOGICAL CATEGORY
Nonoti	B				B
Zinkwasi	C	SA	Partial	50%	B
Thukela	C				C*
Matigulu/Nyoni	B	SA	Partial	50%	A
Siyaya	F	SA	Full	50%	B*
Mlalazi	B	SA	Full	75%	A or BAS
Mhlathuze/R.Bay	C	SA	Partial	50%	A or BAS
Nhlabane	D				C
St Lucia/Mfolozi	D	SA	Full	75%	A*
Mgobezeleni	B	SA	Full	75%	A or BAS
Kosi	B	SA	Full	75%	A or BAS

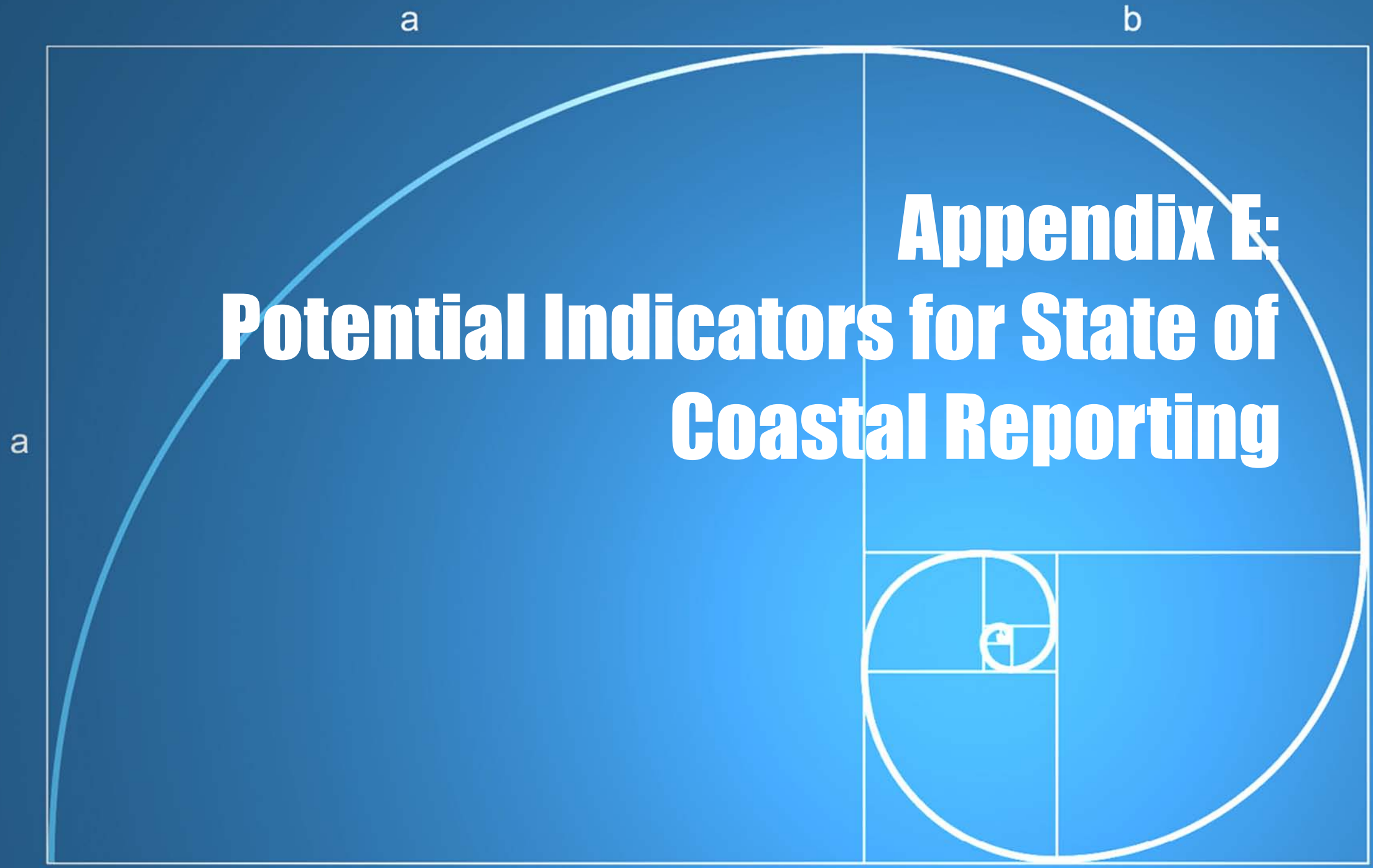
* Actual Recommended Ecological Category from Department of Water Affairs RDM study that has been conducted on the estuary

The national Estuaries Biodiversity Plan, which included area targets for estuary ecosystem type, suggested that 133 estuaries, including those already protected, would be required to meet the defined biodiversity targets, with some of these requiring partial protection. Of these, 61 should be fully protected, and 72 require partial protection. This amounts to about 46% of estuaries and 79% of estuarine area.

The following proposed criteria apply:

- Fully protected estuaries are taken to be full no-take areas.
- Partial protection might involve zonation which includes a no-take zone, or might address other pressures with other types of action.
- In both these cases, the management objective would be to protect 50% of the biodiversity features of the partially protected estuary.

Appendix E: Potential Indicators for State of Coastal Reporting



$$\frac{a+b}{a} = \frac{a}{b} = \varphi \approx 1{,}61803$$



The information presented in Appendix D was adapted from previous studies conducted for the Department of Environmental Affairs as part of project investigating State of Environment (coast, marine and estuarine) and State of Coast indicators for South Africa (Harrison et al., 2001; Harrison et al., 2002; Van Niekerk et al., 2002). The Table below presents a list of potential indicators for coastal management indicating suitability for condition of coastal zone (state), extent of activities and climate change (pressure), management and governance efforts (response), and finally, indicators for measuring outcome targets associated with the vision for the coast (outcome).

RELEVANCE	POTENTIAL INDICATOR	No.
Condition of coastal zone (state)	Distribution and abundance of introduced/exotic species	1
	Distribution and abundance of indigenous species and/or communities	2
	Number of species/communities/habitats endangered or vulnerable	3
	Threatened and extinct species	4
	Distribution and abundance of resource species	5
	Extent and distribution of natural habitats	6
	Erosion setback lines (shoreline stability- sand movements and stability)	7
	Nutrient concentrations in coastal waters	8
	Concentration of metals and toxic organic compounds in sediment and biota	9
	Pathogenic contamination of coastal waters	10
	Frequency of algal blooms and dominant species of algae	11
	Health status of estuaries	12

RELEVANCE	POTENTIAL INDICATOR	No.
	Estuarine sedimentation	13
	Estuarine mouth condition	14
Extent of activities and climate change (pressure)	Development in coastal areas (e.g. land-cover change)	15
	Population density and growth in coastal areas	16
	Tourist frequency during peak periods	17
	Freshwater inflows (quality and quantity) to coastal waters (estuaries)	18
	Catches and maximum sustainable yield per fishery sector	19
	Foreign fishing	20
	Catch per unit effort per fishery sector	21
	Marine aquaculture production by major groups	22
	Shipping traffic in coastal waters	23
	Alerts and oil pollution accidents	24
	Litter in the coastal zone	25
	Number of effluent discharges into coastal waters	26
	Number of mining activities in the coastal zone	27
	Sea level rise (climate change)	28
	Changes in water pH and temperature (climate change)	29
Management and governance efforts	Environmental protection laws and permits	30
	Multilateral environmental agreements	31

RELEVANCE	POTENTIAL INDICATOR	No.
(response)	Number of education and awareness programmes	32
	Number of training and capacity building programmes	33
	Number of coastal/estuarine management programmes operational	34
	Number of monitoring programmes in coastal zone	35
	Environmental expenditure	36
	Budgetary allocation for coastal research	37
	Budgetary allocation for coastal zone management	38
	Budgetary allocation for awareness and education programmes	39
Vision targets (outcome)	GDP generated in coastal zone	40
	Number of people employed in coastal areas	41
	Number and location of Blue Flag beaches	42
	Commercial fishing rights supporting SMME development	43
	Distribution and extent of formally protected areas	44
	Value of fishery catch/resource	45

The data requirements were assessed and rated using the following criteria:

- Type 1: Adequate data is available now and can be used to support the indicator without significant additional costs

- Type 2: The indicator is presently feasible, but cannot be provided without additional investment in the data collection process
- Type 3: No (or very limited) data currently exist for the indicator and there is no immediate intention to collect the data.

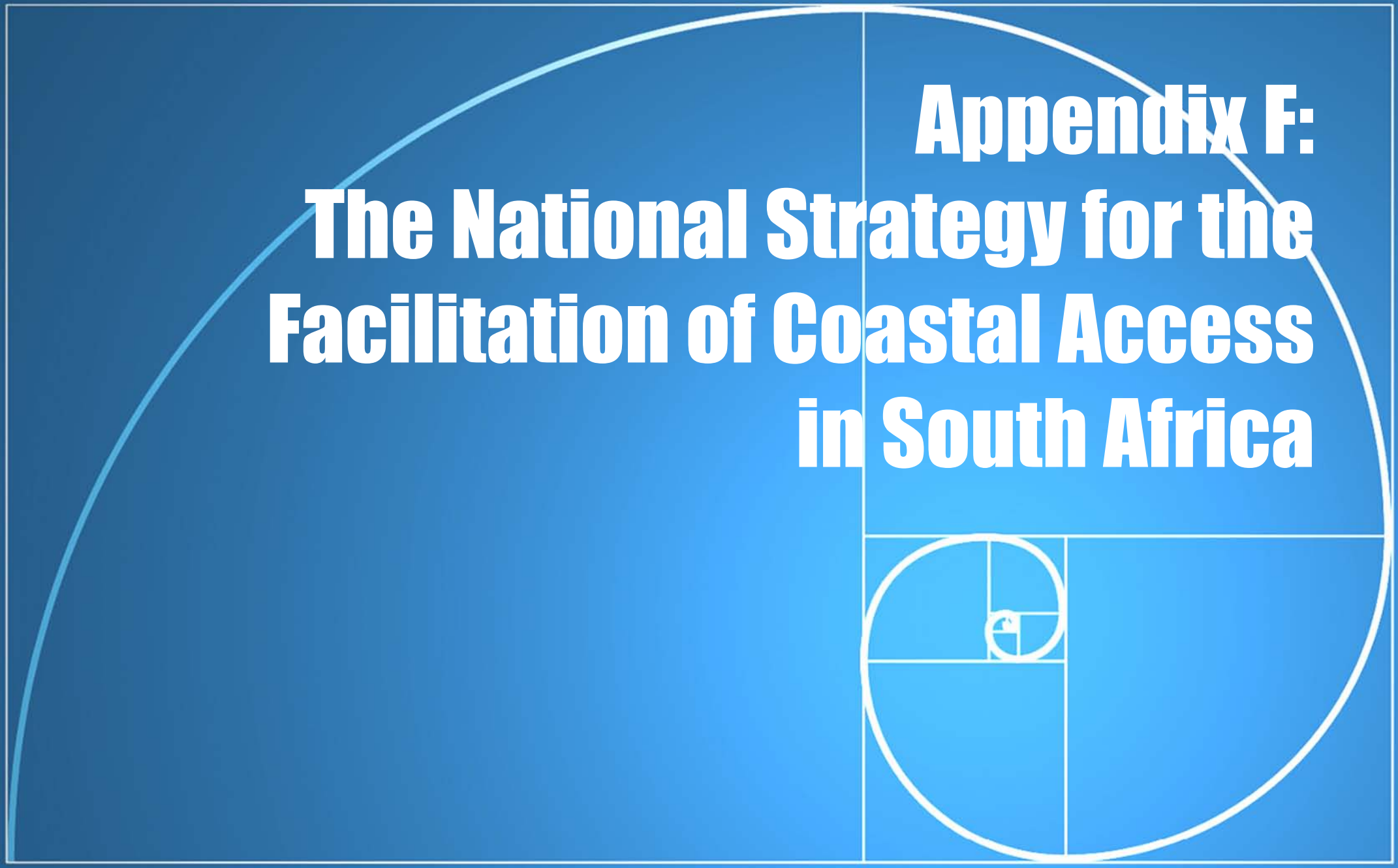
No.	POTENTIAL INDICATOR	DATA	TYPE
1	Distribution and abundance of introduced/exotic species	• Checklists of introduced / exotic terrestrial biota • Satellite imagery/referenced aerial photography with ground trothing • Number of invading alien species for a specific coastal areas	2
2	Distribution and abundance of indigenous species and/or communities	• Checklists of introduced / exotic terrestrial biota • Satellite imagery/referenced aerial photography with ground-truthing	2
3	Number of species / communities / habitats endangered or vulnerable	• Checklists of introduced / exotic terrestrial biota • Satellite imagery/referenced aerial photography with ground-truthing	2
4	Threatened and extinct species	Number of species of IUCN category for threatened species	1
5	Distribution and abundance of resource species	Species checklists, extent (and relative abundance) of resource biota, e.g. as listed in the South African Fishing Handbook (DAFF)	1
6	Extent and distribution of natural habitats	Satellite imagery/referenced aerial photography to determine the area of natural habitats	2
7	Erosion setback lines	Level of erosion set back line (the application of this measure is useful at a local level, but does not make sense at a national level)	2
8	Nutrient concentrations in coastal waters	Water quality monitoring programs and scientific surveys along the coast	3
9	Concentration of metals and toxic organic compounds in sediment and biota	• Estuarine (and harbour) sediment monitoring programs • Monitoring programs such as Mussel watch / pesticides in seabird eggs / mammal tissues • Pesticides in mammal tissues	1-3
10	Pathogenic contamination of coastal waters	Bacteriological monitoring programs undertaken by local authorities along the coast	1-2
11	Frequency of algal blooms and dominant species of algae	Chlorophyll-a measurements, Remote sensing (satellite images) or volunteer	3

No.	POTENTIAL INDICATOR	DATA	TYPE
		observations	
12	Health status of estuaries	Distribution of various classification on SA estuaries (e.g. National biodiversity assessment 2011)	1
13	Estuarine sedimentation	• Erosion losses from catchments (e.g. Rooseboom Atlas) • Changes in the bathymetry of estuaries, e.g. through cross section profiling	1-3
14	Estuarine mouth condition	• Continuous water level recorders inside the estuary mouth • Volunteer mouth condition observations (% open; % closed)	1-3
15	Development in coastal areas (e.g. land-cover change)	• Satellite imagery/Referenced aerial photography of coastal zone together with demographic survey data. • Change in land cover (ha) in the coastal zone per land cover category. Obtained from national land cover data base and local government integrated development plans (IDPs)	2
16	Population density and growth in coastal areas	• Demographic survey data (census surveys) • Number of boating, fishing and diving permits issues	1
17	Tourist frequency during peak periods	• Number of tourists visiting different coastal areas of the country (e.g. hotel, B&B, caravan park, etc) occupation. • Number of boating, fishing and diving permits issues	1
18	Freshwater inflows to coastal rivers and estuaries	Comparisons between natural MAR and present MAR	1-3
19	Catches and maximum sustainable yield per fishery sector	• Estimation of recreational and subsistence fishing catch (including bait organisms?) • Number of anglers, fishing and boat permits Number of species over-exploited	1
20	Foreign fishing	Proportion of fishing quota's held by foreign fishing fleets	3
21	Catch per unit effort per fishery sector	Catches (mass) and effort (trawl days/diver hours) estimates of major species in each fishery sector. Extract relevant data from the Fishing Industry Handbook and South African Commercial Fisheries Review Series	1
22	Marine aquaculture production by major groups	Number and location of mariculture permits issues in South Africa	1
23	Shipping traffic in coastal waters	Number of ships rounding the South African coast per year	1
24	Alerts and oil pollution accidents	• Alerts and accidents as alerted by the 'Kuswag' patrols along the South African • Number of oiled seabirds as provided by SANCOB	1

No.	POTENTIAL INDICATOR	DATA	TYPE
25	Litter in the coastal zone	• Litter from clean-up campaigns • Quantification of litter collected by local municipalities • Proportion of litter comprising shipping flotsam	2
26	Number of effluent discharges into coastal waters	Obtain data (e.g. location and volume) from DEA/DWA license/permit data base (all point source discharges to the marine environment requires a license)	1
27	Number of mining activities in the coastal zone	• Number of permits and location (sand mining, diamond mining, mineral extraction and oil exploration) issues along the South African coastal areas (including exploration) • Rehabilitation associated with coastal mining activities	1
28	Sea-level rise	Long-term tide recordings using tidal gauges	1
29	Change in water pH and temperature	Temperature and pH obtained from regular monitoring programmes, scientific surveys or satellite imagery	1-3
30	Environmental protection laws and permits	• List of Environmental protection laws and associated permits, Reserve allocations, etc. • Proportion of illegal versus legal (permitted) resource exploitation • Proportion of illegal exploitation/activities 'captured' in arrests/prosecutions/fines	1-2
31	Multilateral environmental agreements	Number of Agreements	1
32	Number of education and awareness programmes	Number of national environmental awareness campaigns	1
33	Number of training and capacity building initiatives and programmes	Number of local municipalities with environmental officers	3
34	Number of coastal/estuarine management programmes operations	National and provincial programmes (number and extent) aimed atconservation, contingency planning and rehabilitationin the coastal zone	2
35	Number of monitoring programmes in coastal zone	Inventory of environmental monitoring programs related to the coastal and marine environment, including a list of prominent gaps in the inventory	2
36	Environmental expenditure	Proportion of national/provincial budgets allocated toenvironmental protection, science and technology, environmental monitoring, rehabilitation/clean-up and conservationin the coastal zone	1
37	Budgetary allocation for coastal research	Annual average budgetary allocation to environmental research over total budget. This indicator is already being measured by the Foundation for Research Development and Department of Arts, Culture, Science and Technology.	1

No.	POTENTIAL INDICATOR	DATA	TYPE
38	Budgetary allocation for coastal zone management	Annual average budgetary allocation to natural resource management over total budget. Data can be obtained from the local, provincial and national government departments, as well as SA National Parks and other appropriate government bodies	2
39	Budgetary allocation for awareness and education programmes	Annual average budgetary allocation to environmental education and awareness over total budget. The data can be acquired from the annual budgets of local governments. Environmental reports as prepared by Cape Town and Durban may also provide this information.	2
40	GDP generated from coastal zone	GDP distilled for coastal areas	2
41	Number of people employed in coastal areas	• Proportion of coastal population unemployed. • Proportion of coastal population employed in terrestrially based activities.	3
42	Number and location of Blue Flag beaches	Location and number of Blue flag beaches	1
43	Commercial fishing rights supporting SMME development	Number and size of new medium and long-term commercial fishing rights granted to small, micro and medium scale enterprises (reported as number and % per quota size category). Data can be obtained from the Rights Verification Unit, an independent unit established for this purpose.	1
44	Distribution and extent of formally protected areas	Area of terrestrial coastal land, number of estuaries, length of coastline areas of inshore/offshore habitats protected	1
45	Value of fishery catch/resource	Extract data from South African Fishing Handbook (DAFF)	1

Appendix F:
The National Strategy for the Facilitation of Coastal Access in South Africa



$$\frac{a+b}{a} = \frac{a}{b} = \varphi \approx 1{,}61803$$



Purpose of this Document

The National Environmental Management: Integrated Coastal Management Act, 2008 (ICM Act; Act. no. 24 of 2008) emphasises on equitable access to and utilisation of the coastline and coastal resources by all South African citizens, after 20 years post-Apartheid, still is not a reality everywhere.

The intention of coastal access land provision as per ICM Act is to ensure that the public can gain access to coastal public property via public access servitudes – in perpetuity. All municipalities with coastal public property must declare these servitudes within four years of the establishment of the ICM Act. They are also required to report to the MEC their progress towards declaring coastal access land within two years of the ICM Act coming into effect. Municipalities are also required to establish coastal access land using by-laws.

The purpose of this document is to provide strategic direction to the establishment and maintenance of coastal access in South Africa.

It aims to provide the framework within which coastal municipalities must designate coastal access and coastal access land (as per Section 18 of the ICM Act) within their respective coastal public property.

While the ICM Act is a mechanism for ensuring co-ordinated action and policy-planning around the coastal zone through a governance approach that is facilitating, integrated and cross-cutting, practical advice on how to achieve equitable access is not given.

Therefore, the DEA Oceans and Coasts branch commissioned the development of a National Coastal Access Strategy (NCAS) in order to provide coastal access land management with national guidance coupled with practical step-by-step implementation at municipal level, acknowledging that at this management level, frequently resources are scarcest.

This document presents the National Coastal Access Strategy under ICM Act and provides a framework for the National Guide to Coastal Access for South Africa, which focuses on the practical step-by-step implementation. This Guide is provided in an affiliated Guide document[6].

[6] *Department of Environmental Affairs (2014) A Guide for the Designation and Management of Coastal Access in South Africa 2014. Guide 2 to the Implementation of the ICM Act, March 2014. Cape Town.*



1. Introduction

The coast of South Africa is rich in resources and as a result has a high demand for its use whether it is, amongst a multitude of uses, for extracting living resources, opportunity for economic development and growth, the expansion of the built environment and infrastructure, or open space for recreation or tourism. In this context, gaining access to the coast and its resources is not a trivial matter. This is evident from the prominence that this matter enjoys in the Constitution of South Africa, 1996 (Act no. 108 of 1996).

Access to resources is imbedded in the Bill of Rights of the South African Constitution. This provides for the basic right of every citizen of the Republic to an environment that is not harmful to their health and well-being and the right to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures. These measures include the right to secure ecological sustainable development and the use of natural resources while promoting justifiable economic and social development.

Our coast is a special national asset that must be planned for and managed in the long-term public interest. All South Africans, particularly organs of State, have a responsibility to ensure that its use is planned and managed in the public interest.

In response to this, the Department of Environmental Affairs tasked the development of a National Coastal Access Strategy (NCAS) which is this document. The goals and objectives of this Strategy address the following key coastal issues:

- Improve pedestrian access above the high water mark;
- Improve infrastructure for access;
- Prevent exclusive use;
- Address conflicting rights between public interest, private property owners and communal and traditional users;
- Minimise adverse impacts on the environment.
-

The White Paper for Sustainable Coastal Development in South Africa (DEA, 2000) emphasises the central role the coast and its resources can play in the transformation and development of the South African economy and society. The Act highlighted the need for better access to coastal resources and economic opportunities on the coast for all South African citizens in an ecologically sustainable way.

The ICM Act presents a strong focus on and commitment to equitable access to and utilisation of the coastline and coastal resources by all South African citizens. The ICM Act is a mechanism for ensuring co-ordinated action and policy-planning around the coastal zone through a governance approach that is facilitating, integrated and cross-cutting. In essence, the ICM Act seeks to co-ordinate all other coastal legislation and coastal management approaches,



including the "Working for the Coasts Programme". It places the coast and its resources in public ownership and promotes enhanced social inclusion in the utilisation of the coastal zone and its resources.

The NCAS, through the interpretation of the relevant clauses of the ICM Act, presents a case for three key messages to coastal stakeholders in the three spheres of government. These messages are at the heart of pragmatic management of an important coastal issue in South Africa. The three key messages are:

1. The designation and management of coastal access is locally contextual and most appropriately assigned to municipalities which can effectively respond to the complexity of providing and maintaining access;
2. Providing coastal access is a management issue that influences the state of the natural environment on the coast and concomitantly enables many of the potential social and economic benefits offered by the coast and its resources;
3. The social and economic value of appropriate coastal access makes it imperative that both national and provincial governments, as co-beneficiaries, also contribute to the sustainable provision of coastal access. Provinces, in particular, have an important role to play by undertaking or facilitating (by co-ordinating municipal action) a provincial scale assessment of existing coastal access.

Management Goal for Coastal Access

A management goal is a desired result from the actions and activities initiated by the objectives. The term "coastal access" conceals a complex and multi-dimensional human activity that potentially have equally intricate legal and management considerations. While some of the more practical aspects of providing coastal access can be consistent, the issue of fair and equitable access to the coastal zone and the shoreline follows a strategic process and must involve most, if not all, coastal stakeholders.

Goal: To ensure, protect and manage, in perpetuity, public right of physical access to and along the coastal zone.

The intention of the ICM Act, in relation to facilitating, regulating and managing access to coastal public property, is to provide inalienable coastal public access in perpetuity. It is essential that our coast is retained as a national asset for the benefit of all South Africans.

Equally important is the fact that uncontrolled access can result in environmental degradation and a loss in the value and functioning of the coastal system. Physical access to and along the coast therefore needs to be managed appropriately. It is recognised that the establishment and maintenance of coastal access is dependent on the environmental, financial and social context of both the province and local area.

Management Objectives for Coastal Access

Management objectives for coastal access are clearly defined objectives established by a coastal management programme for a specific area within the coastal zone which coastal management must be directed at achieving. There are two management objectives for the provision of coastal access and the designation of coastal access land.

Objective 1: Opportunities for public access must be provided at appropriate coastal locations in context of the environmental, financial and social opportunities and constraints.

Objective 2: Public access must be maintained, managed and monitored to minimise adverse impacts on the environment and public safety and to resolve incompatible uses.

Provision will need to be made for public recreation and enjoyment. Public access will need to be directed to identified and established locations. Public facilities and services will need to be provided where necessary and appropriate. Education and awareness about public access will need to be promoted. Historical inequities in public access will need to be given particular attention. Planning for new developments will need to ensure that public access along the coast is not impeded.

Strategies to improve public access to the coast will need to be developed for those areas in which it is currently limited or where access points are inappropriately located. In providing public access, existing rights, including private-property and traditional-user rights, sensitive coastal ecosystems, public health, safety and security, will need to be considered. Attention will need to be given to providing access to public coastal recreational facilities for disabled people.

Existing rights, including private-property and traditional-user rights, and public health, safety and security, will need to be considered when providing physical access. Measures will need to be implemented to prevent public access from causing degradation of coastal ecosystems. Appropriate management arrangements will need to be established. Sustainable financing and maintenance provisions will need to be developed. Other existing national programmes such as “Working for the Coast” will need to be considered for accessing funds to locally implement the goals of this strategy. Different forms of access will need to be provided according to the nature of different kinds of activities, for instance walking, off-road vehicles and boats.



Cross-cutting issues in SA coastal municipalities

In many cases, municipalities recognise the importance of both coastal accessibility and shoreline access and have initiated processes that would guide the development of beach tourism, nodal or recreation hubs, areas of high interest, etc. A number of municipalities and some Provinces have also embarked on highly detailed assessment of coastal access routes (e.g. City of Cape Town, 2012[7]; Barnett, 2011[8]; NMMM, 2004[9]; Western Cape Province). These assessments are based on identification of all access routes through data collection and field visits and have assigned a number of useful attributes to them. In very few cases, the information is used to make management decisions on the placement and nature of specific access routes. The connection between the physical characteristic of access routes and the degree of management interventions has not been made yet. Smaller Municipalities, however, are concerned about the lack of funding for implementing a coastal access management system.

Opportunities to gather funding from other programmes such as **"Working for the Coast"**[10] are usually not considered. This Government Programme sets aside R292 million in 2014-15 for project activities such as:

- Contribution to the development and maintenance of coastal infrastructure;
- Assisting municipalities in obtaining and maintaining blue flag status for beaches;
- Regular coastal clean-ups;
- Removal of illegal and abandoned structures;
- Improvement of access to and along the coast;
- Removal of invasive alien vegetation;
- Rehabilitation of degraded areas including dunes and estuaries.

It is recommended that municipalities explore the Working for the Coast Programme for (co-)funding for their coastal access management activities.

[7] *City of Cape Town, 2012. A preliminary assessment towards a Coastal Access Management Plan for the City of Cape Town in terms of section 18(1) of the Integrated Coastal Management (ICM) Act (No. 24 of 2008).*

[8] *Barnett, K., 2011. eThekwini Coastal Accesses: Status Update: September 2011. PowerPoint Presentation, Cape Town, 2011.*

[9] *NMMM, 2004. Nelson Mandela Metropolitan Municipality: Integrated Beachfront DevelopmentPlan. Report No. P1566/01. Nelson Mandela Metropolitan Municipality (IDBP).*

[10] *http://www.sabinetlaw.co.za/environmental-affairs-and-water/articles/r292-million-working-coast-project-launched*

It is recommended that coastal Municipalities and Provinces explore working relations with the Department of Environmental Affairs through the Environmental Programme Branch of the Working for the Coast Programme for (co-)funding for their coastal access management activities

Current National Practice

The status quo of coastal access and coastal accessibility in South Africa is highly variable in the four coastal provinces. Access and accessibility is influenced by protected areas, mining leases, coastal geomorphology (high dunes and rocky shores), limited or lack of infrastructure, climate change, financial constraints and private land ownership.

In many cases, municipalities recognise the importance of both coastal accessibility and coastal access and have initiated processes that would guide the development of beach tourism, nodal or recreation hubs, areas of high interest, etc. A number of municipalities and some Provinces have also embarked on highly detailed assessment of coastal access routes (e.g. City of Cape Town, 2012[11]; Barnett, 2011[12]; NMMM, 2004[13]; Western Cape Province). These assessments are based on identification of all access routes through data collection and field visits and have assigned a number of useful attributes to them. In very few cases, the information is used to make management decisions on the placement and nature of specific access routes. The connection between the physical characteristic of access routes and the degree of management interventions has not been made yet. Smaller Municipalities, however, are concerned about the lack of funding for implementing a coastal access management system.

Coastal access as a management issue as identified by the ICM Act has been dealt with in a number of ways by different municipalities. A number of common elements of the process were identified. These are grouped thematically in Table 8 below.

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[11] *City of Cape Town, 2012. A preliminary assessment towards a Coastal Access Management Plan for the City of Cape Town in terms of section 18(1) of the Integrated Coastal Management (ICM) Act (No. 24 of 2008).*

[12] *Barnett, K., 2011. eThekwini Coastal Accesses: Status Update: September 2011. PowerPoint Presentation, Cape Town, 2011.*

[13] *NMMM, 2004. Nelson Mandela Metropolitan Municipality: Integrated Beachfront Development Plan. Report No. P1566/01. Nelson Mandela Metropolitan Municipality (IDBP).*



Table 8: Elements in the process of providing coastal access and designating coastal access land as required by the ICM Act.

ELEMENT	DESCRIPTION
Strategic planning for access	Recognition of the value and importance of understanding the strategic placement of coastal access. This is typically captured in strategic documents such as spatial development framework, integrated development plans, coastal management programmes, beach management and development plans etc.
Access assessment and data collection	The actual assessment of the access point during a field visit. Photos taken at the site can be helpful for decisions on the installation of signposts etc. The assessment can also be done from aerial photographs and satellite images if the resolution is sufficient and the image acquisition date is adequate. This element is most commonly associated with access "management" but is in fact only a data collecting activity. The assessment stage also includes some degree of capture and manipulation of spatial data. This element results in a *description* of the existing access sites.
Decision-making	Not only is it important to understand where existing coastal access point are located and what they look like, but also to be able to make decisions relating to the appropriateness of access points. Access to the shoreline must not result in environmental degradation at the site or due to the number of access points in an area. The placement of access points must also be appropriate in terms of existing amenities and infrastructure. It also follows that access points must be created in such a position that beach users would agree to and use the site which will attract an investment and maintenance cost to the ratepayers.
Provision and designation	None of the existing coastal access management strategies in South Africa have engaged in the specific provision of coastal access, or the designation of coastal access land. This will require land set aside to improve coastal access and must be endorsed by the Registrar of Deeds. There may be cases where a public access servitude already provides access to the shoreline. The complexity and cost of the process as described in the ICM Act suggests that there may be an issue with the practicality of the current intent and wording of the Act.
Management and monitoring	In many cases, municipalities are already managing and monitoring highly-used access points, irrespective of their status according to the ICM Act. Much of the existing monitoring of access is included in the day-to-day operational management of parks and gardens of municipalities.
Reporting	Coastal access, other than boat launch sites, off-road vehicle (ORV) and disabled access have not yet been reported on consistently. The approaches described in this guide will enable the consistent collation and effective (online) dissemination of coastal access information in order to direct users (recreational, tourism etc.) to the most appropriate access location.

Some facts about South Africa's coasts

4 Provinces are bordering to the sea shore. Within them there are ○ 16 Districts, constituting of ○ 44 municipalities (including Metros) broken up into ○ 198 Wards bordering directly to the sea shore.	The total population in these 198 coastal wards is 1,263,423. Their distribution per province: ○ NC: 13,860 ○ WC: 556,494 ○ EC: 306,798 ○ KZN: 386,271
The most densely populated wards can be found in ○ Mossel Bay (4,210 habitants per sqrkm) ○ Cape Town (4,132 – 2,460 per sqrkm) ○ eThekwini (3,067 per sqrkm) ○ Kouga (2,994 – 2,053 per sqrkm)	The least densely populated wards can be found in: ○ NC (All wards 5.5 – 0.3 per sqrkm)

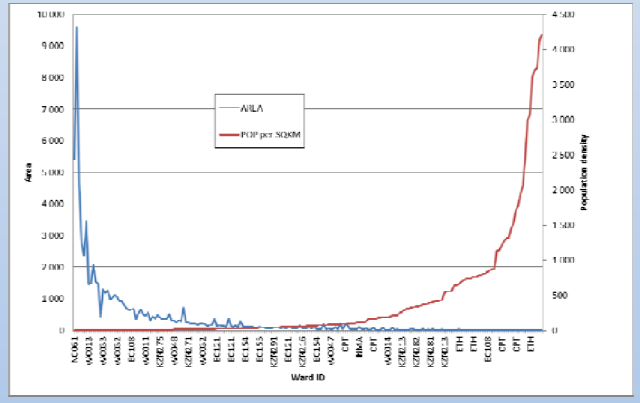


Figure 19: Size (AREA) and population density (POP per SQKM) per ward, for all South African wards adjacent to the coast.

The wards with high population density per km^2 are usually very small spatially, i.e. a high number of people is crowded very close to the shore. The densely populated wards are likely the wards were intense coastal access planning will be required.

Source of data: StatsSA from http://www.demarcation.org.za/.

International Examples

Internationally, a very variable picture with regards to coastal access can be drawn. Generally, documentation on coastal access regulations can be found in areas where conflicts between different coastal use types occur. These are usually areas where high density of population, industry and natural assets occur.

In Africa, most important usage types for coastal resources are fishery and tourism. This frequently results in access conflicts, if hotel complexes on the beach or next to it prohibit access to the shore for local fishermen. While this problem has been identified in several countries (Algeria, Kenya, Tanzania) a legal solution is not provided. A similar situation has been documented for Malaysia.

Other issues arise when looking at examples from First World countries. For instance, when comparing the coastal management documents of the different States of the USA, it becomes obvious that the different States are facing very different challenges in terms of coastal access. For example, in the State of New York coastal access is restricted by the high degree of urbanization and industrialization of the coast with docks, highways, railway and metro lines cutting off the access to the coast. Local initiatives on improving the value of and access to the coast for the public (e.g. creating “water fronts”) are supported by higher government spheres. In contrast, in Louisiana the major part of the low lying coast consists of swamps and marshlands. Improving public access to the coast is therefore of no priority for the State. In Maine access is important for local commercial and recreational fishing. Privatisation of parts of the coast, even of the intertidal, poses a major challenge here.

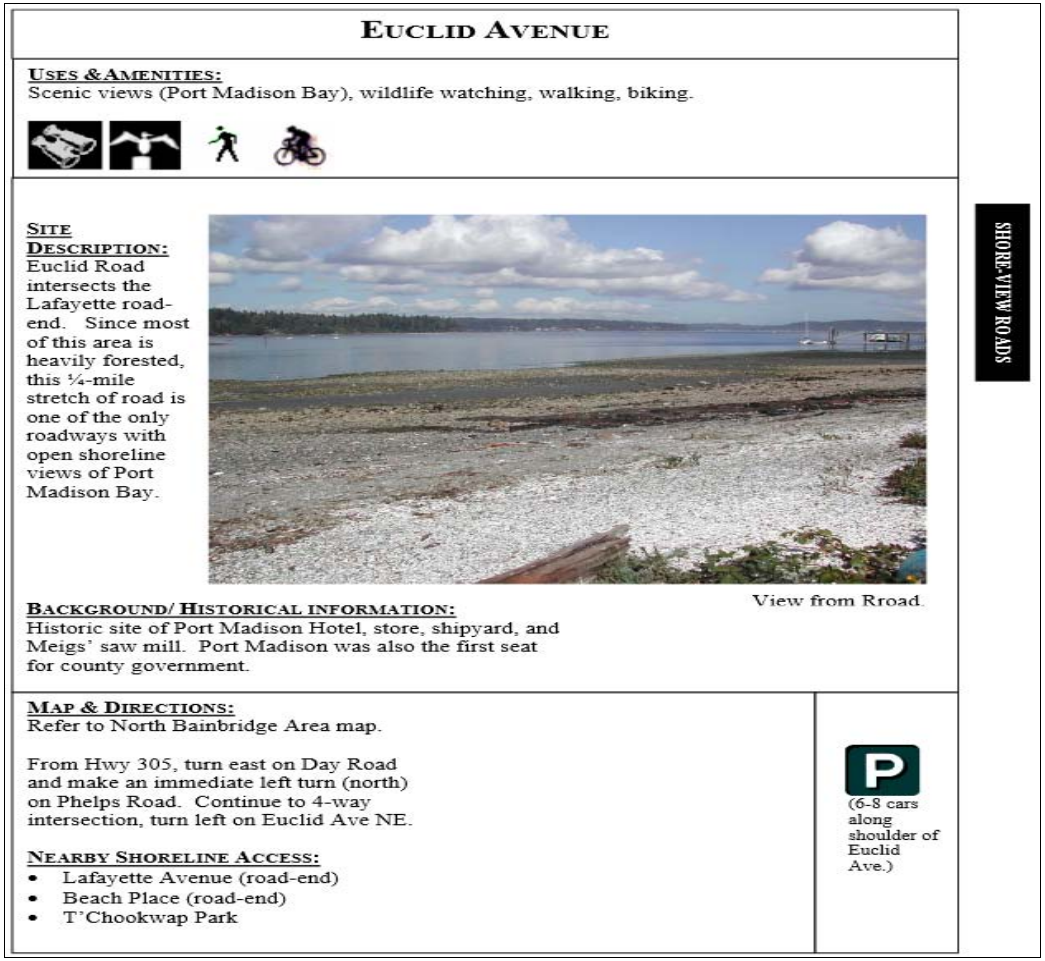
In Europe, the coast is usually valued for its recreational/touristic value, which might be conflicting mainly with protected or sensitive natural environment. In the different countries there, coastal access is either granted to the public generally – or to areas of recreational value only. This is certainly due in countries where a large percentage of the coast has been industrialised.

Internationally, coastal management is legislated on a national level and executed on the local level, with some reporting duties on the provincial level. In Europe, overarching European legislatives complement the picture. Management of the coast and coastal access is overly in the responsibility of local government, partly subsidised with provincial or national grants.

With regards to the level of detail on different access types, the international examples cannot add much to the picture we put together from the South African examples. Main categories of access types mentioned are pedestrian/ bicycle/ vehicular access through public road ends (cul-de-sac), parking areas, walkways, boat launching sites etc. over public or privately owned or other types of restricted areas.

However, the international review gave inspiring insights on how to actively active outreach to the public itself – the final beneficiary of the provided access. A local example of a “coastal Access Map” can be found in the Shoreline Access Guidebook for the Municipality of Bainbridge (Washington State, USA). In this online-available Guidebook (http://www.ci.bainbridge-isl.wa.us/186/Shoreline-Access-Guidebook) all local access points are described and characterised and

local amenities such as toilets, picnic facilities, disabled access, and lifesavers are listed. A map is included as well. This guidebook provides an effective tool for guiding the visitors to suitable access points.



EUCLID AVENUE

USES & AMENITIES:
Scenic views (Port Madison Bay), wildlife watching, walking, biking.

SITE DESCRIPTION:
Euclid Road intersects the Lafayette road-end. Since most of this area is heavily forested, this ¼-mile stretch of road is one of the only roadways with open shoreline views of Port Madison Bay.

View from Rroad.

BACKGROUND/ HISTORICAL INFORMATION:
Historic site of Port Madison Hotel, store, shipyard, and Meigs' saw mill. Port Madison was also the first seat for county government.

MAP & DIRECTIONS:
Refer to North Bainbridge Area map.

From Hwy 305, turn east on Day Road and make an immediate left turn (north) on Phelps Road. Continue to 4-way intersection, turn left on Euclid Ave NE.

NEARBY SHORELINE ACCESS:
- Lafayette Avenue (road-end)
- Beach Place (road-end)
- T'Chookwap Park

P
(6-8 cars along shoulder of Euclid Ave.)

SHORE-VIEW ROADS

Figure 20: Example of a Site Description page from the Bainbridge Island Shoreline Access Guidebook, December 2003.

Comparable tools for reaching the public can be found e.g. in New Zealand's "Walking Access" online tool (http://wams.org.nz/wams_desktop/index.aspx), which provides information for all (not just coastal) public access areas. See also the Connecticut Coastal Access Guide (http://www.lisrc.uconn.edu/coastalaccess/index.asp).



Figure 21: Example of Access Site Description from the Connecticut Coastal Access Guide.

In addition, many international examples can be found of "off-line" i.e. printed brochures and maps with coastal hiking / cycling / kayaking trails. The benefits of these (interactive) online or static printed information sources are obvious. The stream of coastal users/visitors can be guided much better. People who want to have picnics (and potentially cause a lot of littering) can be guided to picnic sites (with litter bins provided). Swimming can be directed to sites with lifeguards and toilets on site. Kayaking tourists will choose points where the landing or launching of boats is possible, and so on. Thinking of an interactive "coastal atlas" a feedback solution can be installed, where visitors can report site-specific incidents or broken facilities etc. to the respective coastal management.

Technically these public information tools do not stand isolated from the respective local or regional coastal management system and do therefore not pose much of an extra burden to the coastal manager. As we have seen for some of the South African examples above, much information on coastal access will be collected and managed in a geo-spatial (GIS) way. Packaging this information in a user-friendly online format, or even extraction of "static" printed information map does not take much more effort.

Therefore, we envisage that an efficient coastal access management strategy for South Africa should optimally consist of three pillars; 1) the strategic, practical and technical strategy and tools for the local coastal manager, 2) a comprehensive geo-spatial data and information base, which then forms the basis for 3) public coastal information tools (Figure 22).



Figure 22: Interlinked elements of coastal access management proposed for South Africa.

How to achieve this model is elaborated in the national coastal access guide under Sections B and C.

Coastal Access Priorities per Province

The status quo of shoreline access and coastal accessibility in South Africa is highly variable in the four coastal provinces. Access and accessibility is influenced by protected areas, mining leases, coastal geomorphology (high dunes, rocky shore, and estuaries), lack of infrastructure and private land ownership. The availability of resources at municipal level is another important barrier to the effective designation and management of coastal access land. An overview of the provincial status quo and associated access priorities are provided in Table 9 below.

Table 9: Coastal access *status quo* and management priorities in the four coastal provinces of South Africa.

Area	Status Quo	Priorities
KwaZulu-Natal	High to medium levels of access and accessibility. In urban areas, mostly characterised by ribbon development, access to the shoreline is excessive to the point where management interventions are required to maintain dune cordon stability and integrity. Access and accessibility of rural areas of particularly northern KwaZulu-Natal is limited to reasonable but there is an increasing trend to restrict access and accessibility to the coast through enclosed residential estates such as Zimbali, and others. In some remote places of Zululand, specialised vehicles may be required to access the shoreline. Access to the shoreline and accessibility of the coastal area is controlled in the iSimangaliso Wetland Park. Activities governed under the Marine Living Resources Act include boat-based commercial line-fishing that requires access to boat launch sites. In addition to the boat-based activities, the annual sardine run also creates a need for temporary coastal access for commercial sein-net fishers. This normally takes place on the KZN South Coast.	• Undertake a provincial-level assessment and stakeholder validation of the state of coastal access. • Rationalise the number of access points on the coast in order to reduce habitat fragmentation. • Manage and maintain formalised access points in the province.
Eastern Cape	Low accessibility and limited coastal access. In the former Transkei area, both access and accessibility is limited. In the predominantly nodal urban areas, access and accessibility are good. In rural areas, accessibility and access are limited and may require specialised vehicles due to the lack of road infrastructure. The national government approval of the proposed N2 highway extension may rapidly change accessibility to the coast. This change may prove to be both beneficial to the socio-economic development of the province if the associated development is sensitive to the environmental limits of the area. In addition to the lack of infrastructure, the Eastern Cape geographical land scape is characterised by hills and steep cliffs along the coast. It is rocky and this will need engineers in designing the type of access that are suitable and safe to be used by the public. Physical access to parts of the coast is difficult. Access is constrained by land privatisation, nature reserve areas, topography and access fees. Wild Coast Poor public access due to topography, lack of infrastructure, state-owned land.	• Undertake a provincial-level assessment and stakeholder validation of the state of coastal access. • Increase the access to the coast and formalise safe access to the shoreline; • Equitable and reasonable access to the coast; • Development of amenities and infrastructure to accompany the provision of public access.
Western Cape	Good access and accessibility. Urban areas have good access and accessibility. Accessibility is controlled in protected areas in the province. Some rural areas may have limited accessibility to the coast by virtue of the lack of road infrastructure. The Western Cape also hosts a number of small-harbours that provide direct access to the ocean. Poorly managed and controlled access points associated with illegal activities due to the private land ownership. • West Coast: Physical access to the West Coast is restricted by private land holdings, private	• Undertake a provincial-level assessment and stakeholder validation of the state of coastal access. • Increase the accessibility to the coast in rural areas and formalise access to the shoreline;



Coastal Access Priorities

Area	Status Quo	Priorities
	development and nature conservation areas; • West Coast: There is controversy over access to marine resources and how the benefits could be more equitably distributed • West Coast: Conflict between industrial development, nature conservation and tourism activities, particularly in the Saldanha-Langebaan area • West Coast: Uncontrolled ribbon-development is taking place. • Cape Town: Access to certain beaches is restricted • Cape Town: Highly urbanised requiring intensive management • Agulhas Coast: Pedestrian access above the HWM must be ensured • Agulhas Coast: Privatisation of state land on the coast limits public access • Agulhas Coast: Appropriately designed or controlled access to beaches is needed to protect the sensitive environment, and • Garden route: Public access is limited by private development, privatisation f beaches and nature reserves.	• Equitable and reasonable access to the coast; • Development of amenities and infrastructure to accompany the provision of public access; • Maintain and promote existing public access to the coast; • Ensure that infrastructure does not degrade the coastal environment; • Maintain or reduce the number of access points in urbanised areas.
Northern Cape	Large parts of the Northern Cape are not accessible to the public due to no-go mining areas and limited or no road access. Road access to most estuaries provides tourist or recreational access to specific locations. Otherwise access only with permits due to mining concessions. Gaining access to the coast often requires specialised vehicles. Most estuaries can be reached by vehicle even though there is a lack of road infrastructure. • Physical access to the coast and its resources is limited by mine security issues; • The coastal area of the province is relatively undeveloped; • Mining, recreation, conservation and fishing activities is very limited.	• Undertake a provincial-level assessment and stakeholder validation of the state of coastal access. • Increase the accessibility to the coast and formalise access to the shoreline; • Equitable and reasonable access to the coast; Development of amenities and infrastructure to accompany the provision of public access. • Develop a strategic vision for coastal-related economic development facilitated by improved coastal accessibility.

Providing coastal access and designation of coastal access land

The ICM Act makes provision for more than one way of providing public access to the coast (Table 8) The first and more specific and more important category of access is created by Section 18 of the ICM Act that states that municipalities whose areas of jurisdiction includes coastal public property must designate strips of land as coastal access land in order to secure public access to coastal public property. Section 19 of the Act describes the process for designating and withdrawing coastal access land, and Section 20 the ICM Act stipulates the responsibilities of municipalities with regards to coastal access land.

The other broadest category of access is provided by means of coastal public property (ICM Act Section 7). In addition to the composition of coastal public property as described in Section 7 of the ICM Act, the Minister may extend coastal public property over state land for many reasons to improve coastal management and amongst others is the express purpose of improving public access to the coastal zone (ICM Act Section 8(1)(a)). The Minister may also acquire private land for the purpose of declaring that land as coastal public property (ICM Act Section 9), and the intent as provided for in Section 8.

Therefore, in this document, the concept of "providing coastal access" by virtue improved access to the coastal public property refers to the Sections 18-20 of the ICM Act "designate coastal access land".

NB: Table 2 is based on the Legal Conditions as of the date of this document, which is before the enactment of the ICM Amendment Bills. Subject to the enactment thereof, the content might change.

Table 10: The most relevant of sections of the ICM Act relating to the provision of coastal access and the designation of coastal access land (CAL).

SECTION OF THE ICM ACT	§	CONTENT	RESPONSIBILITY
(7) Composition of coastal public property	(a)-(h)	Description of what constitutes coastal public property. In conjunction with Section 8, this section describes an area of the coastal zone that is intended to promote general access and accessibility to the coast.	Minister
(8) Extending coastal public property	(1)(a)	The Minister (of the Department of Environmental Affairs) may, by notice in the Gazette, extend coastal property over state land with the specific purpose of improving public access to the seashore.	Minister
	(2)-(4)	Conditions of extending coastal public property over state owned land, the method of withdrawing such land.	Minister
(9) Acquisition of private land by the State	(1)-(2)	The Minister may also declare coastal public property of private land in order to improve coastal access to the shoreline (see Section 8(1)(a)). The Minister may acquire private land by way of purchase, exchange or expropriation.	Minister
(13) Access to coastal public property	(1)-(5)	Stipulates the rights and responsibility of all people relating to access to coastal public property. This section also outlines the reasons why the Minister may prohibit or restrict access to coastal public property. This section also deals with fees that may be charged for access to coastal property.	Minister
(18) Designation of CAL	(1)	Assigns, to municipalities, the responsibility for designating strips of land as coastal access land in order to secure public access to coastal public property.	Municipality
	(2)	Defines the method by which coastal access land is designated, i.e. subject to public access servitude in favour of the municipality. Public access servitude is a term defined in law.	Municipality
	(3)-(5)	Conditions of coastal access land and its alignment with provincial and national legislative and management tools. Some restrictions on where coastal access land may not be designated. Withdrawal of coastal access land.	Municipality
(19) CAL designation and withdrawing process	(a)-(c)	Conditions for the designation and withdrawal of coastal access land.	Municipality
(20) Responsibility of municipalities with regards to CAL	(1)-(2)	Responsibility of the municipality in terms of management of coastal access land. This includes site management and reporting. This section also specifies that coastal access must be incorporated in the municipal coastal management programme and the spatial development framework.	Municipality
(29) Determining and adjusting coastal boundaries of CAL	(a)-(f)	List of issues that must be taken into account when determining and adjustment of coastal access land boundaries. These are practical issues that determine the nature and use of the coastal access land.	Municipality



The public has an expectation to be able to access the coastal zone. Accessibility of the coastal zone and free and unhindered access to it are two key features of integrated coastal management as expressed by the ICM Act. In South Africa, access is not only an inalienable civil right, but also provides benefit to our society in terms of use and enjoyment of the coastal zone, as well as a variety of potential economic benefits. The ICM Act also requires that access to the coast and related infrastructure and amenities must be planned and managed to protect coastal resources, their values and public safety. This is however not a right "at all costs", and the responsibility to plan, manage and control appropriate coastal access is assigned to the local municipalities.

Coastal access and accessibility (see Encyclopaedia of Coastal Science, 2006) are terms often used interchangeably but for the purposes of this document they have different meanings.

Coastal accessibility refers to the means and ways to gain access to the wider coastal zone that is not always spatially explicit i.e. cannot always be mapped. Accessibility is often impeded by a lack of parking facilities, high entry fees, or a lack of public transportation to the beach. Accessibility to the coast and coastal resources is typically a strategic planning issue that would form part of an Integrated Development Plan (as specified in the Municipal Systems Act, 2000; Act no. 32 of 2000) directly, or through the inclusion in a Coastal Management Programme (as specified in the ICM Act). The term macro-level access planning would also be correct in this context.



Coastal access, in contrast, is a local management or site specific issue that refers to the physical route or way that one traverses to arrive at the coast. This can be a road, an informal pathway or public parking area, or any number of combinations of these. This is in all likelihood a route that provides direct access to the coast and that can be indicated on a map. Although coastal access is often referred to as a point, i.e. coastal access point, it most frequently consists of an entry point, back of the beach, that is located in the vicinity of an existing transport network, formal or informal, to a point on the coast. The coastal access entry and exit points are connected by a path that can be depicted by a line on a map. However, in some cases, features such as public parking areas, or municipal infrastructure such as boardwalks that is located parallel to the beach provides an access area, rather than a point and a path. This document refers to coastal access as meaning the general area, line or point that can be considered as the means to access the coast.

Public coastal access refers to people's ability to view, reach and move along the coast of both the mainland and nearby islands including publicly owned land and privately owned land. Issues include:

- Whether the public can physically use or view the coast;
- Whether the public can legally pass over land to reach the coast;
- Whether the public can access coastal lands from the water;
- Whether the public can afford to access the coast through fees or other expenses; and
- Whether the public can use coastal areas without placing undue stress on ecosystems.

Coastal Access in Context

Coastal access is a coastal management issue at various levels of spatial scale:

- At a strategic level, coastal access must be addressed in the spatial development framework (SDF) and ultimately in the integrated development plan (IDP) of municipalities. Part of this strategic planning also involves the inclusion of the management objectives relating to access in the municipalities

Coastal Management Programme (CMP). The CMP needs to identify and create a database of the access points in order for proper management of the coastal access and addressing issues on the ground.

- Every municipality must also have a land use management system which must include at least a *scheme* recording the rights and restrictions applicable to erven or plots within the municipal area. Coastal access is also an important aspect of municipal zoning schemes.

- At the lowest scale, the intent of the ICM Act is to provide coastal access that is inalienable and therefore provides for the creation of public access servitudes and the endorsement of such servitude by the Registrar of Deeds.

Providing access to coastal resources is a strategic issue best dealt with in the SDF of municipalities. The primary purpose of the SDF is to represent the spatial development goals of a local authority that result from an integrated consideration and sifting of the spatial implications of different sectoral issues. The coast and its resources are a power driver of economic development and are widely used by a large proportion of society. The resources of the coast, including the water and the land, provide opportunity for recreation, tourism, industry and business, amongst others. It is important for municipalities to consider the provision of coastal access at a macro or jurisdiction-wide scale (accessibility).

Coastal managers must understand the role and potential of coastal access and accessibility to ensure that the SDF informs the directions of growth, major movement routes, special development areas for targeted management to redress past imbalances, conservation of both the built and natural environment, areas in which particular types of land use should be encouraged and others discouraged and areas in which the intensity of land development could be either increased or reduced.

Critical strategic issues relating to coastal access include:

- The identification of coastal areas as growth points for local economic development;
- The provision of sufficient shoreline access for recreational use in urban and rural areas;
- The use of the coast for special events e.g. surfing or fishing competition, filming;
- The appropriate placement of access to promote coast and ocean specific business e.g. scuba diving operators, whale and dolphin watching;
- The provision of boat launch sites for recreational and commercial use;
- The provision of access for historically disadvantaged and displaced communities;
- The management and control of access to prevent habitat fragmentation;
- The management and control of access in coastal and marine protected areas;
- Determining and demarcating the boundaries of state owned land, the coastal public property, and the coastal protection zone; and,

- The management and control of access to the coast for historical and cultural purpose.

The timing of the process of compiling the SDF corresponds with that of the IDP. The preparation and approval of SDFs, as an integral part of each municipality's IDP is the most critical planning responsibility within all three spheres of government. Once the spatial development framework is approved it will have a binding effect not only on the private sector but also on all spheres of government. It will thus become a central element in the system of cooperative governance[14].

With the CMPs, which each coastal municipality must develop, the ICM Act provides a clear mechanism through which coastal access can be addressed as a strategic issue (ICM Act Section 48). A CMP is a policy directive on integrated coastal management that provides for a co-ordinated, integrated and uniform approach by government departments, NGOs, the private sector and local communities (ICM Act Section 49). One of the key objectives of the municipal CMP is to deal with coastal access issues (ICM Act Section 49(2)(v)). The CMP of any coastal municipality must be consistent with the national and respective provincial CMP, and also with the National Estuary Management Protocol (ICM Act: Section 33). The municipal CMP must include the coastal management objectives for the coastal zone within the jurisdiction of the municipality, including the sustainable use of coastal resources. One of the more pragmatic ways to include coastal access issue in the CMP is as a specific action or management activity.

Measuring Progress

The issue of setting performance targets for providing coastal access and designating coastal access land is highly contextual at a municipal level and is dependent on a variety of factors including the bio-physical environment, human capacity and financial resources, existing access status, growth ambitions and long-term planning objectives. Therefore it is difficult to come up with a widely applicable rule-of-thumb figure for the envisaged number of access points per kilometre coast.

Table **11** outlines a number of actions that must result in the achievement of the strategy.

[14] *For more information on spatial development frameworks refer to:*

- *Ministry of Agriculture and Land Affairs. 2001. White Paper on Spatial Planning and Land Use Management - Wise Land Use. Ministry of Agriculture and Land Affairs, Republic of South Africa. July 2001 (www.info.gov.za).*
- *Republic of South Africa. 2013. Spatial Planning and Land Use Management (SLUMA, Act No. 16 of 2013). Minister of Rural Development and Land Reform, Republic of South Africa.*



Table 11: Required actions relating to the provision of coastal access and the designation of coastal access land in South Africa.

National Perspective

Management Objective 1.1: Provide a National commitment for the facilitation of safe and equitable access to coastal public property along South Africa's coast		
Actions	**Targets**	
	Completion date	**Performance indicator**
Regulations pertaining to the establishment and maintenance of coastal public access	Mar 2015	• Regulation schedule published in *Government Gazette*
A national strategy for facilitating coastal public access and incorporated into the NCMP	Mar 2014	• Completed strategy document available

Management Objective 1.2: Develop norms and standards to assist municipalities in carrying out their responsibilities with respect to coastal access		
Actions	**Targets**	
	Completion date	**Performance Indicator**
Develop guidelines for designation of coastal access	Mar 2014	• Completed guideline document
Develop norms and standards for coastal signage towards facilitating a unified approach for the South African coast	Mar 2015	• Completed guideline document

Management Objective 1.3: Provide capacity strengthening mechanisms for municipalities to effectively implement, maintain and monitoring coastal access

Actions	Targets	
	Completion date	**Performance Indicator**
Develop a local government support strategy for the fulfilment of environmental mandates (including support for coastal access)	Mar 2015	• Signed Implementation Plan for the Local Government Support Strategy with test cases
Establish DEA internal work plan between Oceans and Coasts and Working for the Coast (Wfc) to support provinces and municipalities in the establishment, maintenance and monitoring of coastal access	Mar 2015	• Completed and approved work plan for implementation • Identification 2-4 test cases and facilitate coastal access in different Provinces

Management Objective 1.4: Regular reporting to the Members of the Executive Committee (MEC) and Minister on the status of coastal access		
Actions	**Targets**	
	Completion date	**Performance Indicator**
Reviewing and evaluation of the coastal access reports to the MEC on the progress made in the implementation and facilitation of coastal access land	Mar 2014	• Request all coastal access reports submitted to the MEC for status update
Develop a national electronic reporting and dissemination system for coastal access, incorporated into the National OC Information Management System	Mar 2017	• Completed electronic reporting system for coastal access

Provincial Perspective

Management Objective 1.1: Support Provincial commitment for the facilitation of safe and equitable access to coastal public property along South Africa's coast		
Actions	**Targets**	
	Completion date	**Performance Indicator**
Undertake a provincial assessment of existing coastal access per municipality including stakeholder consultations	Mar 2014	• A provincial coastal stakeholder engagement process, facilitated through the PCC in order to validate the assessment; and • An evaluation of the assessment against the PSDF
A Provincial strategy for facilitating coastal public access and incorporated into the PCMP		

Management Objective 1.2: Regular reporting to the Members of the Executive Committee (MEC) and Minister on the status of coastal access		
Actions	**Targets**	
	Completion date	**Performance Indicator**
Submission of reports to the Minister on the status of the Provincial Coastal Access and the progress made in the implementation and facilitation of coastal access land in relation to the Coastal Management Programme and the Spatial Development Framework	March 2014	• Complete the coastal access template and submit to DEA

Municipal Perspective

Management Objective 1.1: Provide a Municipal commitment for the facilitation of safe and equitable access to coastal public property along South Africa's coast		
Actions	**Targets**	
	Completion date	**Performance Indicator**
Undertake an inventory and assessment of existing coastal access within a Municipal Jurisdiction		• A municipal coastal stakeholder engagement process, facilitated through the MCC in order to validate the assessment; and • An evaluation of the assessment against the Municipal or District SDF
Include the development of a Municipal Coastal Access Management Plan as part of the Municipal Coastal Access Management Programme		• Upon development of Municipal or District CMP

Management Objective 1.2: Regular reporting to the Members of the Executive Committee (MEC) on the status of coastal access		
Actions	**Targets**	
	Completion date	**Performance Indicator**
Report to the MEC on an five yearly basis on the status of coastal access in relation to the Coastal Management Programme and the Spatial Development Framework		• Upon development of Municipal or District CMP

As part of the strategy, DEA Oceans and Coast will develop an implementation plan over a five (5) year period of which the targets and actions will be in line with the National Coastal Management Programme once finalised.

It is important for Provinces and Municipalities to develop their coastal access strategies as part of their coastal management programmes priorities and align it with national strategy including the implementation plan. The municipal implementation plan needs to talk to the Provincial as well as National and all should be over a five (5) year period.

A Guideline for the Designation of Coastal Access

It is recommended that municipalities and provinces take note of the document accompanying the NCAS entitled *A Guide for the Designation and Management of Coastal Access in South Africa 2014* (DEA, 2014[15]). The purpose of the document is to provide guidance to coastal municipalities when designating and managing coastal access and coastal access land (as per Section 18 of the ICM Act) within their respective coastal public property. It is understood that the intention of the ICM Act in relation to facilitating and regulating access to coastal public property is to provide such inalienable access in perpetuity.

The Guide describes six elements of coastal access designation using the requirements of the ICM Act and practices already in place at municipalities. The six elements are summarised below:

1. **Coastal Access in the ICM context**. This element describes the strategic issues related to providing coastal access and the designation of coastal access land. The provision of coastal access must be seen in the context of the development ambitions of the municipality and the broader coastal management objectives contained in the CMP. Such objectives will refer to the coastal management vision of the municipality, which is a shared expression of all coastal stakeholders.

2. **Data Collection.** The second element of the designation process is the assessment of the status of coastal access in the municipal area. This element describes the data collection that must be undertaken in order for the municipality to make informed decisions on the provision of well managed

[15]Department of Environmental Affairs (2014) A Guide for the Designation and Management of Coastal Access in South Africa 2014. Guide 2 to the Implementation of the ICM Act, March 2014. Cape Town.

access points. Typically, this would rely on some degree of field surveys and visits, and the collection of ancillary data that will be required for decision making. This element includes all aspects of data collection, capture and storage.

3. **Assessment and Decision-making.** Once all relevant data and information regarding the existing coastal access points are gathered, such data must be interpreted to conclude with a first assessment of *potential* access points. This can also be termed a situation assessment. At this time it becomes necessary, in fact critical, to engage with stakeholders in order to reach agreement on the placement of potential access points. It is also necessary to undertake some level of environmental screening of existing access points in order to comply with the ICM Act. This element of the NCAS must result in a final list of appropriate access points as well as a list of access points which will no longer be considered for that purpose.

4. **Provision and Designation**. Once the municipality has an agreed list of access points, these must be formalised as per the ICM Act. This element describes the various methods by which the access points can be formalised. The result of activities in this element is the formal provision of coastal access and the designation of coastal access land. In both cases, coastal access will be formalised with the Registrar of Deeds.

5. **Management and Monitoring**. Once coastal access has been formalised and registered, the municipality must put in place management procedures to ensure the access points comply with the ICM Act. The responsibilities of the municipality to manage and monitor the access points are outlined in this element.

6. **Reporting**. The final element describes the responsibility of the municipality to report on the provision of coastal access and the designation of coastal access land.

How to report on Coastal Access Land

13.1 Reporting templates to MEC

Municipal reporting to the provincial MEC on the state of coastal access and coastal access land is required by Section 20 of the ICM Act. It states that a municipality in whose area coastal access land is located, must report to the MEC within two years of this Act coming into force on the measures taken to implement this section.

A flow of actions relating to reporting on the provision of coastal access and the designation of coastal access land is provided in Figure 23.

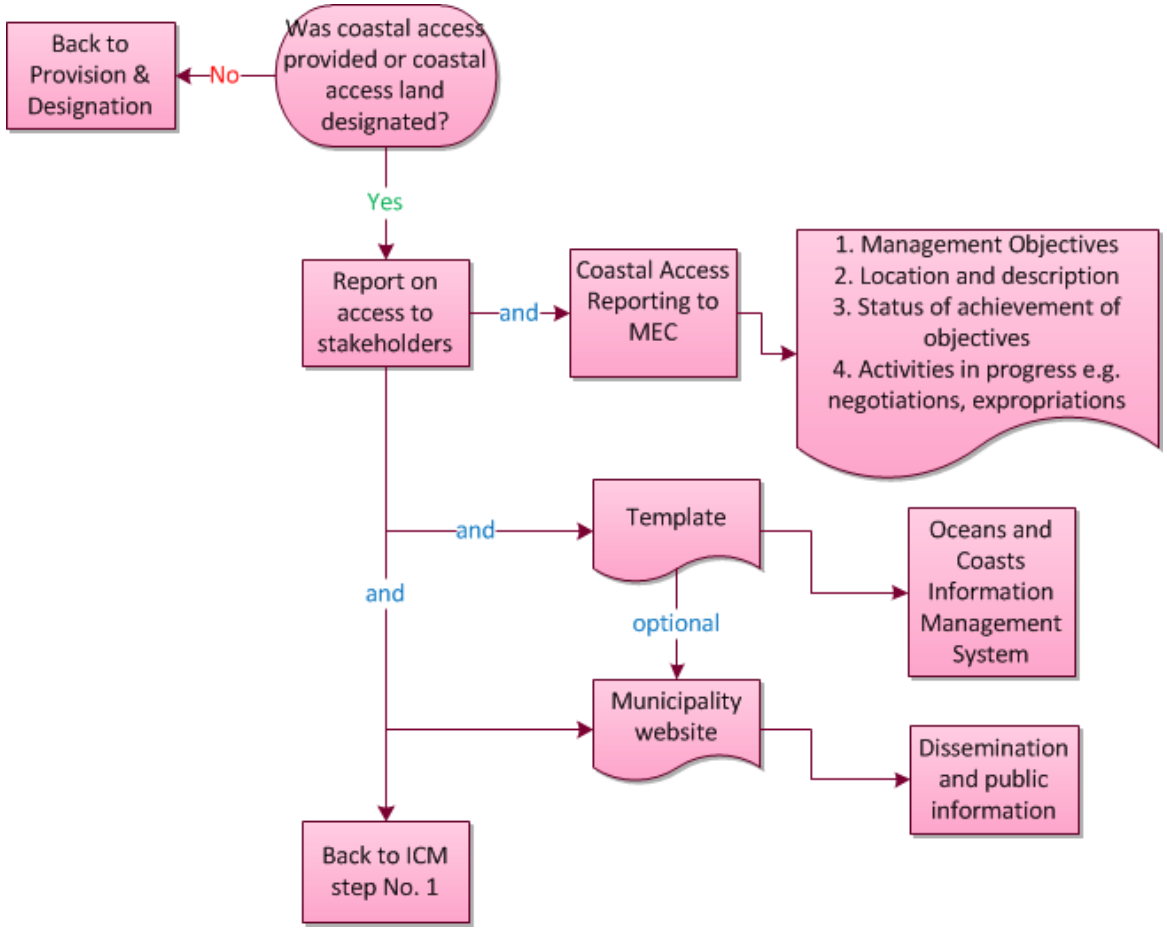


Figure 23: Actions by the municipality relating to reporting on the provision of coastal access and the designation of coastal access land.

The report must contain, as a minimum, the sections outlined in Table 12 below.

Table 12: Suggested sections and content for reporting to the MEC on the provision of coastal access and the designation of coastal access land coastal.

Section	Description
Municipal Context	• Local context as it relates to the coastal resources sector-specific growth and development e.g. industrial and commercial development, tourism, small coastal businesses (local economic development) and opportunities for sustainable coastal livelihoods. • Description of the strategic use of coastal access to promote the development of the municipality (from the spatial development framework and integrated development plan); • Management objectives of the municipality as it relates to the provision of coastal access and the designation of coastal access land (from the municipal coastal management programme).
Coastal Access Status Quo	Provide a summary of the existing state of coastal access and its management by the municipality. This includes a breakdown of the location and description of access provided by means of coastal public property and coastal access land. A summary of how the existing coastal access configuration is assisting or limiting the achievement of growth and development goals (see section above). The status *quo report* must include (per access site) information on the: • Signposting of entry points to coastal access land; • Measures to control the use of, and activities on coastal access land and to protect and enforce the rights of the public to use that land to gain access to coastal public property; • Provision of facilities that promote access to coastal public property, including parking areas, toilets, boardwalks and other amenities, taking into account the needs of physically disabled persons.
Future Actions	• Rationale for the designation of new coastal access to achieve the goals identified in the first sections. This will include opportunities and constraints for designation of new coastal access; • Development of a plan to maintain coastal access land so as to ensure that the public has access to the relevant coastal public property; • Provision and use of coastal access land and associated infrastructure in such a way as not to cause adverse effects to the environment;

	• Removal of any public access servitude that is causing or contributing to adverse effects that the municipality is unable to prevent or to mitigate adequately. • Any other actions that may be prescribed.
Implementation of Actions	Timeline and budget for implementation of corrective actions in relation to the designation of new coastal access, and management of existing access.
Assistance Required	A summary of assistance or actions required by non-municipal officials including e.g. the MEC; Provincial Coastal Committee; Provincial Lead Agent.
Sign-off	The report to the MEC must be signed off by the Municipal Manager.

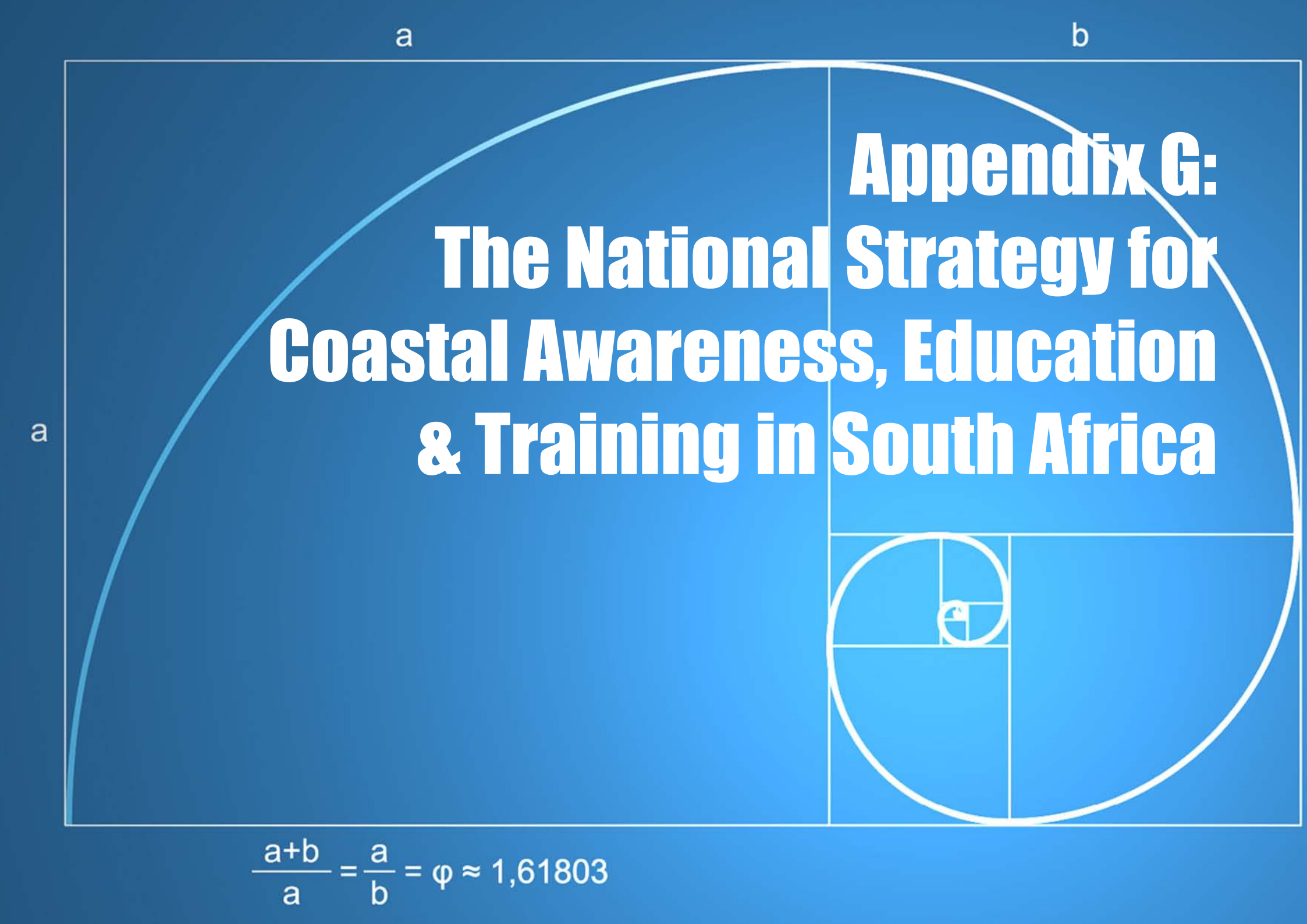
NB: This section is based on the Legal Conditions as of the date of this document, which is before the enactment of the ICM Amendment Bills. Subject to the enactment thereof, the content might change.

- Provisions to allow Provinces to report to the Minister:

  The report of the MEC to the national Minister will follow the same pattern as described above in Table C.7.1. The emphasis will however be on the coastal management objectives of the Provincial CMP and the growth and development objectives of the province. The reporting duties, however, might be subject to changes with the enactments of the ICM Amendment Bills

13.2 **Reporting to a central coastal and marine information management system**

The DEA Oceans and Coasts Branch is in the process of developing an online *Ocean and Coastal Information Management System*. This system will provide a platform from which the public and other stakeholders can view the location and nature of all coastal access in South Africa. In order to manage the data from the various provinces and municipalities, there is certain to be a national data reporting format. The actual national decision-support or dissemination tool has not yet been developed and once that is in place, the reporting format will follow.



Appendix G: The National Strategy for Coastal Awareness, Education & Training in South Africa



Introduction

South Africans have used and managed coastal and ocean resources for millennia. Despite this long trajectory of coastal and marine use, the discipline of coastal management is relatively young. It only started to emerge as a distinct field during the late 1970s and early 1980s when concerns grew in other areas of the world about the impact of human activities on coastal environments.

The development and adoption of the White Paper for Sustainable Coastal Development in South Africa (2000) provided a comprehensive, people-centred approach for governing our coasts and prioritised awareness, education and training for improved coastal management. The recently enacted Integrated Coastal Management Act (Act No. 24 of 2008) (hereafter referred to as the 'ICM Act'), enables the implementation of the policy provisions.

Implementation of the ICM Act will require government at all levels and in different sectors to take on a number of new functions to manage the coast effectively. Officials will need targeted training to understand their responsibilities and how to implement the ICM Act and also to develop solid partnerships in general awareness. Other stakeholders using or influencing coastal and ocean resources, also need to recognise and understand the value to South Africa of maintaining healthy coastal and ocean ecosystems over the long term. Effective coastal management will therefore need long-term coastal awareness, education and training (CAET) efforts to build up adequate capacities within and outside of government and to take advantage of the opportunities offered in the sustainable use of our rich coastal resources and understanding the benefits of protecting coastal ecosystems.

Government has embarked on a number of CAET initiatives. Many of these were successfully conducted under the former CoastCare banner, the national brand guiding policy implementation. Existing coastal training efforts by government are however, uncoordinated and lack sufficient funding. There is a need for a common vision and a uniform approach that align with current and proposed institutional arrangements and legislative frameworks to guide awareness, education and training initiatives. The Department of Environmental Affairs (DEA) has developed the National Coastal Management Programme, which requires a number of guiding strategies of which the National Coastal Awareness, Education and Training Strategy is one.

The ICM Act which enables the implementation of the White Paper, aims: *"To establish a system of integrated coastal and estuarine management in the Republic, including norms, standards and policies, in order to promote the conservation of the coastal environment, and maintain the natural attributes of coastal landscapes and seascapes, and to ensure that development and the use of natural resources within the coastal zone is socially and economically justifiable and ecologically sustainable; to define rights and duties in relation to coastal areas; to determine the responsibilities of organs of state in relation to coastal areas; to prohibit incineration at sea; to control dumping at sea, pollution in the coastal zone, inappropriate development of the coastal environment and other adverse effects on the coastal environment; to give effect to South Africa's international obligations in relation to coastal matters; and to provide for matters connected therewith."*



The purpose of a Strategy is to provide a systematic plan of action to accomplish a specific goal. The purpose of this National CAET Strategy (hereafter referred to as the Strategy) can therefore be said to provide systematic guidance for CAET initiatives over the long term that will support the implementation of the ICM Act and will help to address challenges in the coastal zone and strengthen the management of South Africa's valuable coastal and marine resources.

Goals of the Strategy

Vision Statement: All South Africans, particularly coastal authorities and other relevant organisations, are appropriately capacitated through awareness, education and training to take collective responsibility for the sustainable use, management and protection of their coastal and marine environments.

The four main goals of the Strategy are to:

1. Provide guidance for effective awareness, education and training programmes for all stakeholders for improved coastal governance in South Africa;
2. Ensure the long term sustainability and efficient operation of CAET initiatives through appropriate resource allocation, information exchange and partnership arrangements;
3. Facilitate closer communication and co-ordination among all responsible authorities and between government and other stakeholders for coastal awareness, education and training efforts in coastal areas; and
4. Ensure the quality and relevance of the CAET initiatives over the long term through efficient administration that includes monitoring, evaluation and adaptation to changing circumstances.

Principles of the Strategy

1. **National priorities:** Support the integrated coastal management efforts, approach and principles as outlined in the policy and legal framework.
2. **Co-operation:** Nurture a co-ordinated, participatory and integrated coastal management approach to buildpartnerships between government, the private sector and civil society to ensure co-responsibility for CAET.

3. **Relevance:** Consider the relevance of the education in the lives of all stakeholders and build on existing knowledge, skills and competencies.

4. **Empowerment:** Recognise that knowledge, understanding and education empowers individuals and develop practical skills and support individuals to access information and boost their ability to find, interpret, critically analyse and use information effectively.

5. **Multi-disciplinary:** Link environment to heritage, culture, socio-economic development, political context, equity and social justice and quality of life**.**

6. **Complexity and diversity:** Recognise the complexity of coastal issues and the diversity of issues in different areas of the country and promote the need for a collective approach to problem solving.

7. **Equity:** Consider learners of all ages, levels and sectors and promote the rights of human dignity, equality and freedom and must promote the wellbeing of coastal communities.

8. **Ecological integrity:** Recognise the linkages between coastal ecosystems and users and promote the maintenance and rehabilitation of the diversity, health and productivity of coastal and ocean ecosystems.

9. **Precaution:** Promote a precautionary and risk-averse approach where necessary.

10. **Accountability and responsibility:** Instila consciousness and pride of the value of our coasts and boost the commitment, capacity and accountability to act on coastal issues and opportunities.

Governance Framework

International and regional agreements

South Africa is party to a host of international and regional agreements for improved ocean and coastal governance that require implementation by DEA (see Table 1 below).

Table 13: International and regional agreements supporting coastal governance

Coastal and Marine-related Agreements Ratified/Acceded to by South Africa

1. United National Law of the Sea Convention (UNCLOS)
2. Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR)
3. The Protocol on Environmental Protection to the Antarctic Treaty (Madrid Protocol)
4. Convention on Biological Diversity (CBD)
5. Convention on the Prevention of Marine Pollution by Dumping Wastes and Other Matters (London Convention and Protocol)
6. MARPOL: Particularly Sensitive Sea Areas
7. Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention)
8. Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
9. Convention on Wetlands (Ramsar Convention)
10. World Heritage Convention
11. Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (Nairobi Convention)
12. Nairobi Convention Protocol concerning Protected Areas and Wild Fauna and Flora (SPAW Protocol) in the Eastern African Region
13. Nairobi Convention Protocol concerning Cooperation in Combating Marine Pollution in Cases of Emergency (Emergency Protocol) in the Eastern African Region)
14. Protocols under the Abidjan and Nairobi Conventions/ SADC Protocol
15. Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (Abidjan Convention)



16. Benguela Current Convention

17. Abidjan Convention

18. Nairobi Convention (ICZM and LBSA Protocols)

National directives and legal requirements

Policy framework

Section 24 of South Africa's Constitution, states, inter alia, that all South Africans have a constitutional right to an environment that is not harmful to their health or well-being. The Constitution also bestows everyone with the right to have the environment protected for the benefit of present and future generations through reasonable legislative and other measures that: i) prevent pollution and ecological degradation; ii) promote conservation; and (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

South Africa's guiding policy for coastal governance, the White Paper for Sustainable Coastal Development (2000) highlighted the value of the coast for socio-economic development and promoted the involvement of resource users and other stakeholders in all aspects of management. The White Paper identified as a key goal: "to promote public awareness about the coast and to educate and train coastal managers and other stakeholders to ensure more effective coastal planning and management" (DEAT, 2000: 66). To achieve this goal, the White Paper highlighted Awareness, Education and Training as one of four key elements of the Action Plan for implementation and proposed two objectives:

1. Development and implementation of a public coastal-awareness programme to sensitise South Africans to the importance of the coast and coastal management; and

2. Development and implementation of education and training programmes for coastal managers and other stakeholders at all levels to equip coastal managers and stakeholders with the necessary knowledge and skills to implement coastal management effectively.

The current coastal policy and legislative framework focuses largely on management of coastal areas in isolation from the country's offshore areas. To address this, the DEA is currently finalising a draft Policy that aims to enable South Africa to achieve a co-ordinated sectoral environment management in the next 5 years. The green paper entitled*: The South African Policy on the National Environmental Management of the Ocean (October 2012)* recognizes the importance of ocean ecosystem services as they directly and indirectly impact on human livelihoods, food security and agriculture, trade and Industry (DEA, 2012). The draft Policy highlights four key objectives and associated aims: i) Ocean Environmental Information; ii) Ocean environmental knowledge for sustainable development decision-making; iii) Environmental management of South Africa's ocean; and iv) Ocean Environmental Integrity. Many of the objectives and policy statements of the draft Oceans Policy are directly relevant to CAET issues and will need to be considered in the ongoing implementation of the National CAET Strategy.

Legal and regulatory framework

The National Environmental Management: Integrated Coastal Management Act (Act No. 24 of 2008) (ICM Act), is the principal Act enabling the implementation of the provisions of the White Paper for Sustainable Coastal Development. The ICM Act falls under the umbrella National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA).

The ICM Act makes provisions for, amongst others: i) Zoning of the coastal areas through coastal planning schemes; ii) Improving access to and along the coast; iii) Strengthening the institutional framework for ICM at the local, provincial and national level; iv) protecting sensitive estuarine environments through development of an estuarine management protocol and individual estuarine management plans; v) Controlling marine and coastal pollution; and vii) Identifying vulnerable coastal areas.

The ICM Act alludes briefly to the need for awareness, education and training and empowers the Minister to make regulations for the promotion thereof. Section 38 of the ICM Act states that awareness, education and training is a function of the provincial lead agency that should collaborate with appropriate bodies and organisations to promote training, education and public awareness programmes relating to the protection, conservation and enhancement of the coastal environment and the sustainable use of coastal resources (Government of South Africa, 2008). While CAET is not a central feature of the provisions of ICM Act itself, a much greater effort will be needed to raise awareness and build capacity for coastal governance over the long term to ensure implementation of the ICM Act.

The ICM Act enables the implementation of its provisions through the development and implementation of coastal management programmes at the national, provincial and local government (coastal municipality) levels. The ICM Act requires consistency among the National Coastal Management Programme (NCMP), Provincial Coastal

Management Programme (PCMPs) and Municipal Coastal Management Programmes (NCMPs) and between the coastal management programmes and other statutory plans policies or programmes adopted by an organ of state that may affect coastal management.

Institutional frameworks

The Department of Environmental Affairs (DEA), South Africa's lead agency for environmental management, is mandated to ensure that the protection of the environment and conservation of natural resources is balanced with sustainable development and the equitable distribution of the benefits derived from natural resources (DEA, 2013). The Oceans and Coasts Branch, located within the DEA, has the responsibility to provide guidance for establishing, managing and maintaining systems of coastal protected and management areas to advance the heritage of humankind and to contribute to the Millennium Development Goals (MDGs).

The ICM Act provides for the establishment of a comprehensive framework for coastal governance at all levels of government.

The National Coastal Committee (NCC), currently located within Working Group 8 of the Ministerial Technical Advisory Committee (MINTECH) for environment, involving representatives from coastal provinces, municipalities, national departments and statutory environmental management agencies, plays a significant leadership role in regulating activities that may negatively impact the coastal environment.

The Provincial Coastal Committees (PCCs) are operating in all four coastal provinces but currently only three PCCs have been formally established (Western Cape; Northern Cape and Eastern Cape). The PCCs consist of representatives of DEA, provincial environment departments, DAFF, coastal municipalities, CBOs and NGOs, and experts in fields relevant to coastal management including scientific or coastal research institutes. Representatives of relevant government departments that play a significant role in regulating activities that may negatively impact the coastal environment are also included.

Many Municipalities have also established Municipal Coastal Committees (MCCs), some of which are formally established while others are operating informally, with the institutional structures still being set up. The ICM Act provides that MCCs include experts in fields relevant to coastal management, representatives of the management authorities of coastal protected areas or special management areas within the municipality, communities or organisations interested in contributing to effective coastal management. The ICM Act also provides for the appointment of members of the public who have appropriate expertise as a voluntary coastal officer.

Relevant role-players

The DEA relies heavily on sectoral role-playing departments to fulfil its coastal management mandate and to meet its strategic objectives. Many other departments have a role to play in achieving coastal management objectives and initiatives at the national and sub-national levels. Improved information sharing, cooperation and recognition of the importance of coastal and ocean ecosystems and resources can contribute considerably to implementing coastal governance initiatives. The following section provides a selected list of some of the key government departments and other agencies that are relevant to establish coordination with or on coastal governance issues.

Relevant Core National Departments: Departments of Tourism (NDT), Transport (DoT), Agriculture, Forestry and Fisheries (DAFF), Higher Education and Training (DHET) and associated Skills Education Training Authorities (SETAs), Basic Education (DBE), Mineral Resources (DMR), Water Affairs (DWA), Rural Development and Land Reform (DRDLR); Cooperative Governance and Traditional Affairs (CoGTA); Science and Technology (DST), and National Treasury.

Provincial Departments from the four coastal Provinces: Northern Cape Department of Environment and Nature Conservation (DENC), Western Cape Department of Environmental Affairs and Development Planning (DEADP) Eastern Cape Department of Economic Development, Environmental Affairs and Tourism (DEDEAT), and KZN Department of Agriculture and Environmental Affairs (DAE). Coastal Municipalities from all coastal areas.

Public Entities: South African National Biodiversity Institute (SANBI); Council of Geo-Science (CGS); Council for Scientific and Industrial Research (CSIR); South African National Parks (SANParks), World Heritage Management authorities; Provincial conservation agencies; and the South African Environmental Observation Network (SAEON), South African Weather Service (SAWS), South African Maritime Safety Authority (SAMSA), Transnet National Ports Authority (TNPA).

A number of other stakeholder groups are involved in or have an impact on coastal governance in South Africa. These include research and education bodies, the private sector, non-governmental, non-profit and community-based organisations (NGOs, NPOs and CBOs respectively) and broader civil society.

Research and education bodies include primary, secondary and tertiary education institutions as well as scientific research bodies. Private sector industries are many and range from extractive industries or those that may have significant transformative impact on coastal and marine areas such as mining and mineral exploitation, fishing, forestry, agricultural, construction, development, and real estate industries, tourism entities and transport companies to name but a few. Other private sector entities include environmental managers and coastal practitioners.

NGOs, NPOs and CBOs have long been involved in coastal matters working towards goals such as improved livelihoods for coastal inhabitants, environmental conservation and greater awareness and education. These stakeholders continue to play an essential role in improving coastal governance and particularly in coastal awareness, education and training.



Civil society stakeholders represent the broader sector of society that is either directly or indirectly involved in coastal and ocean use and management issues. These include coastal inhabitants, land owners, coastal visitors and users and the general public. These stakeholders represent a largely untapped resource for the DEA in terms of involvement in improved governance of ocean and coastal resources.

Coastal issues, management and sustainable development: Implications for CAET

Management of South Africa's ocean and coastal resources is a complex and multi-faceted task that involves a vast array of role-players and stakeholders. In preparation of the National CAET Strategy, a needs analysis was conducted using rapid assessment techniques to recognise the key needs and opportunities within CAET. The analysis identified all key challenges (See Annex 1) faced by coastal stakeholders and the findings informed the goals and objectives of this National CAET Strategy. It should be noted that the purpose of the National CAET Strategy will not be to solve every issue. It will rather direct effort towards creating a better enabling environment for strengthening coastal governance.

The DEA has recognised that current coastal environmental management arrangements are not optimal and that its ability to fulfil its coastal environmental management mandate is heavily reliant on the efforts of sectoral departments, the private sector and other partners. The need for a National CAET Strategy has long been recognised as a priority for effective implementation of policy and legal provisions.

It is clear from the needs analysis that a multi-faceted and coordinated approach to awareness, education and training for coastal management is urgently needed. On the one hand there exists quite an extensive pool of experience and capacity within the country to boost the general awareness and understanding of the need for more sustainable coastal use. On the other hand, a great deal more effort is needed to increase awareness and strengthen the long term skills base for essential coastal governance services and improved management. The diversity of stakeholders, levels of knowledge, understanding and awareness, and coastal contexts requires an innovative and targeted strategy that is implemented in a highly coordinated manner.

Feedback received from practitioners during the needs analysis, inventory of CAET initiatives and stakeholder consultations, revealed a significant number of CAET efforts and a high willingness of many specialists, practitioners and educators to provide assistance to the DEA in the implementation of a National CAET Strategy. Given the lack of resources and capacity within government for undertaking extensive CAET activities over the long term, partnerships with relevant stakeholders that are guided by government and implemented by stakeholders, will be essential.

Scope of the CAET Strategy



Motivation

This Strategy is based on the understanding that coastal awareness, education and training complements and supports various core functions of the DEA and other national government departments and particularly provincial environmental departments and helps to address the needs and aspirations of all coastal stakeholders in managing their coasts better.

The underlying assumptions of the Strategy are that: i) various national and sub-national policies, legal and regulatory mechanisms and initiatives would benefit from strategic guidance on the application of CAET in different sectoral strategies; ii) CAET can support local government to fulfil their mandates and core functions more effectively both in terms of environmental management functions mandated through the ICM Act, and provision of utility services; iii) the business sector, industry, research and educational institutions, NGOs, CBOs and other civil society representatives will be better informed about the value and importance of maintaining healthy, productive coastal resources and will partner with the authorities to work to achieve this.

Perhaps the strongest motivation for implementation of this National CAET Strategy is that a failure to implement it would result in a host of missed opportunities for government at all levels and other stakeholders to take advantage of the benefits gained through improved coastal governance. Existing CAET initiatives would likely continue on an ad hoc and uncoordinated manner and the health and productivity of our coastal and ocean ecosystems would continue to degrade. Implementation of the Strategy by DEA should take advantage of the momentum built towards implementation of the ICM Act and work to strengthen institutional capacity and resources significantly over the next 5 years.

Scope of the Strategy

This National CAET Strategy undertakes to support coordinated, relevant and targeted awareness, education and training for South Africa. Current CAET initiatives are undertaken throughout South Africa's coastal areas by a number of different role-players in a somewhat ad hoc and uncoordinated manner. In order to maximize on existing capacities and reduce duplication of efforts and inefficient allocation of resources, the Strategy follows a clear scope of work.

The Strategy promotes the priorities of the DEA and supports the close collaboration with other core departments and agencies at all levels of government that have a role in or an impact on coastal governance and the effective implementation of the ICM Act. The Strategy also promotes the collaboration with individuals and organisations outside of government who are involved in or supportive of sustainable coastal development in South Africa.

Terminology

Coastal awareness, education and training have a clear objective to improve how people use the coast and how to manage the use of resources. CAET itself is a broad field that draws strongly on the discipline of environmental education and touches on a number of different issues and functions by multiple role-players in the country. The terms awareness, education and training are often used interchangeably. Although they are closely linked, they do however, require different approaches.

Awareness is often achieved through education, training, or life experience. Awareness raising tries to connect people to the consequences of their actions, to cause a shift in thinking and behaving. Individuals gain an understanding in their own context, and can be guided and supported with targeted materials and training. Awareness raising efforts most often involve communication campaigns designed to reach different audiences, through development of messages and appropriate media and resources (City of Cape Town, 2011a).

Education is strategic in nature and involves life-long learning. Education extends beyond schools and is relevant to every individual at any life stage. Ideally coastal education includes topics on the biophysical environment of oceans and coasts as well as socio-economic, cultural, and political aspects. Using the field of environmental education as a platform, useful methods for coastal education include:

3. Developing the ability of learners to change from existing action to more sustainable practices;
4. Encouraging problem solving, critical thinking and informed decision-making;
5. Supporting interactive and collaborative learning;
6. Engaging with social and cultural values; and
7. Building the capacity to act with understanding and responsibility (City of Cape Town, 2011b).



Training is the process of imparting "how to" knowledge through practice and memorization. It is a particular form of education, which focuses on the development of specific skills for particular tasks. For instance, skills are needed to implement a coastal management programme or to assess the health of fish stocks, or to engage with stakeholders to monitor changes in a sensitive coastal ecosystem. Experience has shown that it is important for people to understand the reasons underlying certain tasks for them to commit to developing the skills to implement them (City of Cape Town, 2011a). Training is therefore closely linked to and informed by awareness and education.

Who will use the National CAET Strategy

DEA has determined the stakeholders for the development of the National CAET Strategy to be national, provincial and local government, tertiary institutions and NGOs. Research and education institutions, conservation agencies, NPOs, CBOs, the private sector and the broader South African civil society are also included in the target audience list. Some stakeholders have a direct legal mandate for specific coastal management activities, such as government authorities and parastatals, while others fulfil a supporting role in the management or a service provision role to government. All stakeholders have an interest in the health of coastal ecosystems for the sustainable development of our coasts.

Results of the needs analysis and inventory of existing CAET initiatives highlight a diverse array of needs across both the user groups/target audiences and across geographical locations along the coastline. The DEA and partners at all levels can address the needs of the various user groups/target audiences and provide access to information and the economy through effective local level CAET.

Approach and Methodology

Our coastal areas and resources provide a vast array of goods and services and host many different activities. An underlying principle of this Strategy is cooperation through building of partnerships. This is particularly important at the level of local individuals and communities. Many individuals are still removed from the coast as an asset to support them economically and socially. An approach is therefore needed to empower individuals, support participation and instil a sense of understanding and stewardship over the coastal assets. An inclusive approach to identifying needs and priorities for CAET is thus required to reflect the multi-disciplinary nature of the discipline and to identify options for enabling coastal users and managers to address the broad spectrum of issues and opportunities.

Coastal governance in the South African policy framework follows a people-centred approach. It prioritises the value of our coastal and ocean resources in terms of the opportunity they provide to reduce poverty, improve livelihoods and to promote sustainable development. The National CAET Strategy was therefore, developed on the basis of the effective protection and improved management of coastal ecosystems for sustainable development and a rights-based approach that considers issues of rights, obligations, empowerment and compliance. A number of facets underlie this approach:



1. Building the institutional core for coastal governance.

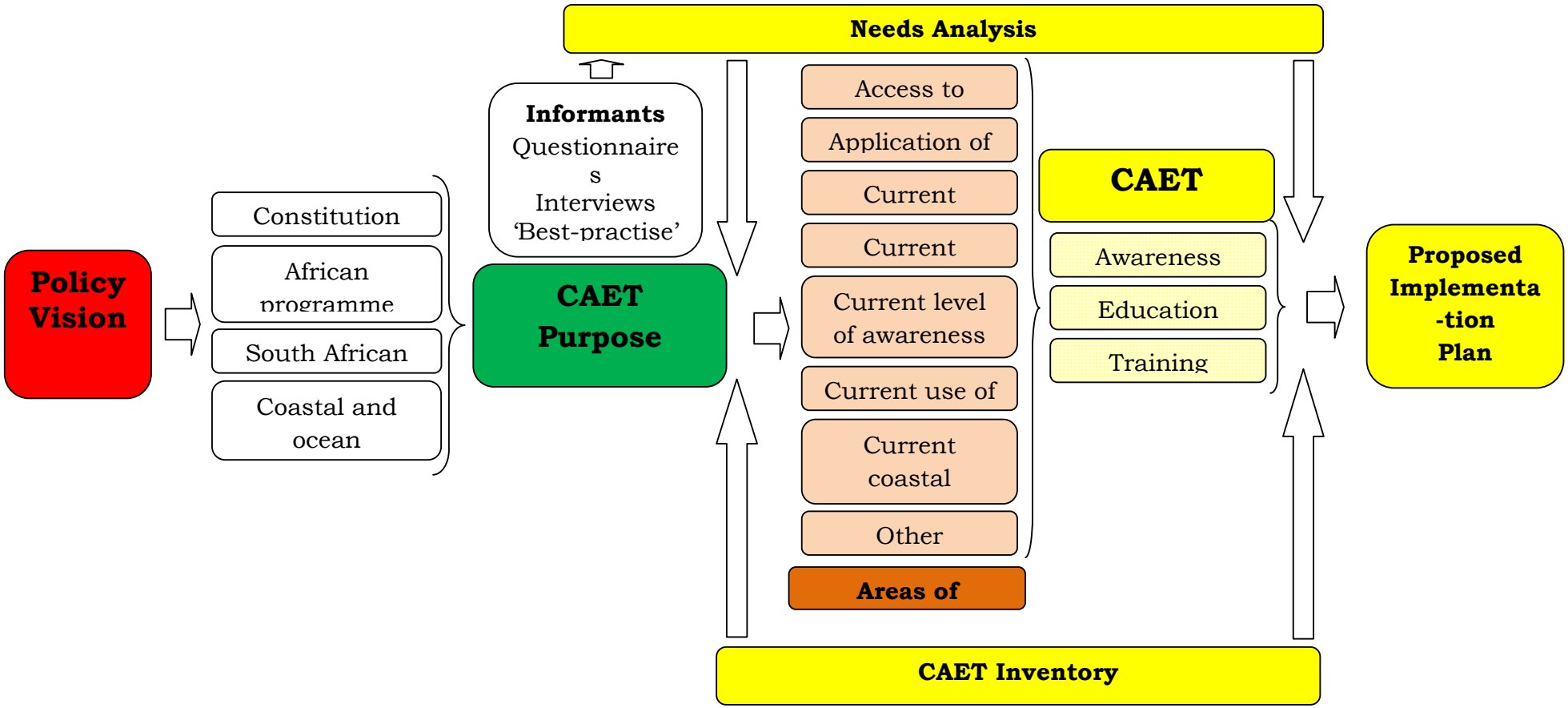
2. Integration and coordination with existing and proposed CAET strategies, programmes and processes within and outside of Government.

3. Incorporation of CAET activities within the National Coastal Management Programme and all other provincial and municipal management programmes.

4. Continued monitoring, evaluation and adaptation of the Strategy implementation and reporting of issues in relevant government processes.

The methodology for development of the Strategy involved a review of best practices and lessons from CAET, an inventory of all CAET initiatives in the country, and a needs analysis to identify coastal management challenges, issues and potential solutions. Figure 1 below illustrates the process followed in the development of the National CAET Strategy.

Figure 24: Process structure for the development of the National CAET Strategy



A framework for CAET in South Africa

Goals, strategic objectives and programmes for implementation

The framework for this National CAET Strategy is structured according to four overarching goals as outlined in section 2 above. Strategic objectives and associated programmes are identified for each of the goals to guide implementation.

Goal 1: Provide guidance for effective awareness, education and training programmes for all stakeholders for improved coastal governance in South Africa

Objective 1:Support awareness, education and training of relevant government officials at all levels on the ICM Act provisions goals and strategies and how implementation thereof affects their functions and responsibilities.

1. Guide the development and incorporation of CAET strategies in provincial and municipal coastal management programmes.

2. Develop targeted policy briefs, guidelines and other informative materials to distribute to different levels and sectors of government to promote better coastal governance.

3. Provide regular CAET strategy presentations,implementation updates and feedback reports to relevant committees and stakeholders within and outside of the government sector and as part of the NCMP.

4. Support the development and implementation by relevant provincial role players of an annual ICM training programme for all relevant coastal municipal officials on implementation of the ICM Act and options for strengthening coastal governance.

Objective 2:Build the capacity of future coastal management specialists employees through a comprehensive programme of bursaries for staff and students, internships, and learnerships.

5. Work with tertiary and research institutions to identify coastal governance research priorities and promote options for developing a series of accredited coastal management course modules (in line with the National Qualifications Framework and relevant associated legislation) to be incorporated into broader degree, diploma, certificate and short courses.

6. Support longer term education and capacity development for coastal governance through the provision of staff and post graduate bursaries; establishment of a graduate intern and learnership programme to build practical experience and the required skill sets and to contribute to institutional strengthening at all levels of government.

7. Develop learning materials, in line with the school curriculum, to introduce ocean and coastal careers to learners

Objective 3:Conduct an on-going awareness programme to support the private sector and developers in undertaking their work in coastal areas in a more environmentally and socially responsible manner, and in complying with applicable environmental legislative frameworks.

8. Develop and disseminate guidelines on the ICM Act for the general public as well as for different sectors (i.e. tourism, real estate, infrastructure development, insurance, etc.) operating in coastal areas to inform them of the roles of the local authorities, highlight their responsibilities to comply with the regulations and promote best environmental practices.

Goal 2: Ensure the long term sustainability and efficient operation of CAET initiatives through appropriate resource allocation, information exchange and partnership arrangements

Objective 4:Align all CAET programmes with regional, national, provincial and local government training and education priorities and strategies and ensure that they respond to the diverse and changing needs and aspirations of all coastal stakeholders, particularly the most vulnerable coastal communities.

9. Undertake a process to identify key regional, national, provincial and local training, education and skills development priorities and align CAET efforts with these to ensure relevance and long-term sustainability of programmes with greater government support.

Objective 5:Support access of all relevant stakeholders and partners to locally relevant and informative CAET materials and tools to maximise efficiency, and limit duplication of efforts.

10. Work with stakeholders within and outside of government to identify and review all available and relevant CAET materials and tools and agree on options for strengthening, replicating, translating and/or developing additional materials and tools and disseminating appropriately to ensure uptake and use by target audiences.

Objective 6:Build partnerships with business, industry, NGOs, CBOs, tertiary education and research institutions and relevant national, provincial and local government departments to promote and support continued development and implementation of CAET programmes.

11. Using the results of the CAET needs analysis and inventory, undertake a process to invite relevant potential partners to collaborate with DEA to develop and implement innovative CAET programmes.

12. Source funding from all relevant sources to support and ensure the continued implementation of coordinated CAET initiatives.

Goal 3: Facilitate closer communication and co-ordination among all responsible authorities and between government and other stakeholders for coastal awareness, education and training efforts in both coastal and inland areas

Objective 7: Improve communication and coordination by supporting the establishment and operation of a CAET mechanism that can meet and/or communicate on a regular basis and provide guidance to CAET efforts throughout the country.

13. Strengthen existing and/or establish alternative communication networks for supporting greater coordination among CAET partners, sharing of resources, lessons learned and best practices.

14. Improve the coordination of regular awareness-raising events on a national level that highlight the value of our coastal and marine assets and facilitate involvement of all stakeholders (i.e. National Marine Week).

Objective 8: Create a nationally recognized brand for coastal management initiatives, to improve awareness of the value of the coastal environment as a national asset.

15. Assess the successes and weaknesses of the CoastCare brand and revise or create a new generic coastal brand, associated frameworks and roll-out protocols.

Goal 4: Ensure the quality and relevance of the CAET initiatives over the long term through efficient administration that includes monitoring, evaluation and adaptation to changing circumstances.

Objective 9: Develop capacity within DEA for efficient and coordinated administration of the CAET Strategy implementation.

16. Lobby for institutional strengthening to support CAET activities at the national level, including establishment of an institutional mechanism to administer the implementation of the CAET Strategy.

Objective 10: Design and implement an adequate M&E programme for administering the implementation of the National CAET Strategy as part of the NCMP.

17. Design, develop and imbed the CAET Strategy M&E programme within the NCMP that is aligned with relevant performance monitoring systems within government and promotes adaptation to changing circumstances and emerging issues and includes evaluation of activities for each CAET programme and adaptation.

Monitoring and evaluation (M&E)

In order to ensure that CAET programmes remain effective, relevant and adapt to changing circumstances and emerging issues, there is a need to ensure regular and adequate monitoring of efforts and follow up. For each CAET Strategic Objective, key outcomes and indicators are recommended as part of the Implementation Plan to measure and monitor both the state of the coastal resource as well as the success of the various management programmes implemented. To ensure that programmes remain on track, the outcomes should be evaluated every two years and adjusted where necessary.

The entire Strategy should be reviewed every four to five years, to keep the contents of the document updated and to ensure that targets and indicators are adapted to changing circumstances and emerging issues. Monitoring and evaluation of the impact of this Strategy should also be undertaken at the time of review based on indicators identified during the development of the M&E Framework. Recommendations from the evaluation of the Strategy should then be implemented in an adaptive way.

The impact and implementation of this CAET Strategy must be incorporated and monitored within the National Coastal Management Programme (NCMP) and reported on in relevant government reporting processes.

The following process for M&E of the Strategy and for each of the programme interventions may be useful:

1. Determine key outcomes;

2. Identify relevant indicators to assess progress towards the outcomes;

3. Monitor progress of processes and deliverables during implementation;

4. Evaluate effectiveness, relevance, quality and impact at stages of completion; and

5. Report on the results with recommendations for modification or continuation of programmes (City of Cape Town. 2011a).

An element of performance monitoring could be included, particularly in terms of training of government officials. This could be incorporated into annual performance reviews of individuals or environmental reviews of local and provincial government departments. In addition, to ensure that adequate and efficient M&E is done for each CAET programme and intervention, an M&E requirement should be built into all partner arrangements and service provider contracts and should feed into the national M&E system.

Potential partners and service providers

A number of respondents who provided feedback during consultations indicated their willingness to partner with the DEA on CAET initiatives. Annex 2 provides an initial list of potential partners emerging from the inventory and questionnaires. The list will need to be reviewed upon implementation of the strategy and updated on a continual basis to confirm the partnership offers and reflect the precise roles and support offered.

Outline of an Implementation Plan

A conceptual implementation plan with identified tasks and an indication of priority timing for implementation (i.e. High, medium or long term priority) is outlined in Annex 3. This implementation plan will need to be aligned with scheduling and existing strategies and programmes within DEA and broader government departments before finalisation and implementation.

How to use the CAET Strategy

The National CAET Strategy is primarily an overarching internal policy framework to guide the long term strategic direction of the Oceans and Coasts Branch of the DEA and also inform government policy and legislation on coastal governance in the country. This draft document provides a key starting point for further discussion and detailed planning and implementation. Key government representatives should assess the Strategy to gauge whether it reflects the needs and context accurately to support implementation of the provisions of the ICM Act and whether it covers all necessary steps for both short and long term actions for strengthening CAET capacity and coordination in government. Other role-players both within and outside of government should assess the Strategy to determine whether it is inclusive enough to support participation by the broader community of CAET practitioners adequately in meeting the needs and aspirations of stakeholders.



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Annex 1:

Challenges for Coastal Management and Responding CAET Needs

Stakeholder/Audience	Challenges	AET Solutions
Government		
General	1. Lack of understanding of the value of ocean and coastal goods and services	1. Greater information production and dissemination in relevant, accessible formats (i.e. policy briefs) of the need for improved management of coastal and marine goods and services
	2. Lack of a common vision for coastal governance and of mainstreaming coastal management priorities and approaches into all relevant government departments, and into development planning	1. Communication of a common vision for coastal governance
	3. Implementation of the law inadequately monitored and applied by authorities	2. Adequate resource allocation for implementation of the ICM Act, to ensure adequate knowledge and experience at the local government level for effective coastal management
	4. Lack of awareness of and ability to manage pollution threats from land-based sources of pollution	3. Targeted training and education for different sectors to incorporate coastal management considerations into planning efforts
	5. Lack of cohesive, standard environmental and conservation messaging for all levels to promote common understanding	1. Training for national and provincial officials on content and implementation of coastal laws
		1. Awareness drive on threats of land-based sources of

Stakeholder/Audience	Challenges	AET Solutions
		2. Training for relevant officials on planning for improved catchment management and pollution reduction
		1. Stronger coordination by DEA and improved collaboration among all relevant agencies at the national level to develop and disseminate messaging on an ongoing and efficient basis
National government	1. Lack of guidance for provincial and municipal authorities on adaptation to global change (including climate change)	1. Support the development of educational and training materials on adaptive management, including guidelines and planning tools
	2. Need for greater consideration of challenges facing coastal communities regarding access to coastal areas and resources	1. Training in participatory planning to ensure uptake of community issues into national coastal management/development plans
	3. Inadequate CAET opportunities available to stakeholders and lack of monitoring of effectiveness of initiatives	1. Prior to each CAET initiative, undertake an analysis of the preferred modes of learning of audiences and monitor effectiveness of CAET initiatives to understand how to best target efforts over the long term
	4. Lack of clarity of institutional structure, mandate and responsibilities for ocean and coastal management	1. More effective and up-to-date information provided to the public on the government role and responsibilities for coastal management
Provincial government	1. Need for greater consideration of challenges facing coastal communities regarding access to coastal pollution	1. Training in participatory planning to ensure uptake of community issues into Provincial coastal



Stakeholder/Audience	Challenges	AET Solutions
	areas and resources	management/development plans
	2. Lack of clarity of institutional structure, mandate and responsibilities for ocean and coastal management	1. Technical support for officials to strengthen administrative capacity within government structures 2. More effective and up-to-date information provided to the public on the provincial role and responsibilities for coastal management
Local government	1. Difficulties meeting basic service provision needs 2. Low awareness and understanding of environmental law and regulatory requirements 3. Ability to adhere to or enforce provisions of regulations is weak 4. Lack of skills to manage the coastal public property and mitigate threats to the ocean and coastal areas from threats such as erosion and pollution 5. Threats from inadequate infrastructure on health of the coast such as failing waste water treatment works 6. Need for greater consideration of challenges facing coastal communities regarding access to coastal areas and resources	1. Communication of weaknesses and needs to potential partners (private sector, NGOs) and to lobby for more resources 1. Training of legal provisions and opportunities for strengthening coastal management (i.e. ICM Act provides for Voluntary Coastal Officers) 1. Training on responsibilities for enforcement 1. Training on coastal planning and management and threat assessment and mitigation 1. Awareness and training for sectors that have a significant impact on the health of coastal areas and inhabitants (i.e. mining, waste management etc.) 2. Promotion of and training for development of waste management strategies 1. Training in participatory planning to ensure

Stakeholder/Audience	Challenges	AET Solutions
	7. Lack of capacity for planning and adaptive management to mitigate threats of climate variability and change	consideration of coastal community issues into Municipal coastal management and development plans
	8. Lack of skills and financial resources to undertake CAET	1. Education and training for planning and adaptive management to mitigate threats of climate variability and change
	9. Difficulties in communication with stakeholders	1. Training for CAET Strategy implementation
	10. Lack of clarity of institutional structure, mandate and responsibilities for ocean and coastal management	1. Training for improved communication between the local municipalities and stakeholders
		1. Technical support for officials to strengthen administrative capacity within government structures
Parastatals	1. Poor integration of sectoral activities and responsibilities into coastal management efforts	1. Awareness and training for relevant parastatals on coastal issues, threats and responsibilities
	2. Lack of coordination with government on dissemination of information / research findings in an accessible format to coastal managers	1. Development of information sharing protocols and tools for improving access of coastal managers and stakeholders to relevant information
Private sector		
General	1. Lack of awareness of and/or concern for impacts on coastal and marine ecosystems and inhabitants	1. Awareness activities highlighting value of coast, impact of private sector activities on coastal inhabitants and resources and options for promoting sustainable and responsible practices
	2. Restriction of access of coastal inhabitants to coastal areas and resources (i.e. mining areas)	1. Guidelines produced for coastal development and



Stakeholder/Audience	Challenges	AET Solutions
	3. Inadequate partnership arrangements with government to address some of the key coastal management issues and needs	resource use that highlight EIA requirements and private sector responsibilities as well as rights of access of other stakeholders 1. Identification of opportunities for private sector involvement or support for CAET needs i.e. bursaries for training and education.
Environmental managers/coastal practitioners	1. Lack of clarity on the inter-relationship between provisions of ICM Act and other environmental legislation (i.e. NEMA, NEMWA, NEMBA and their regulations) 2. Inadequate clarity and sectoral integration of information on environmental assessment and approval procedures	1. Awareness products/guidelines on the linkages of different environmental legislation provisions 2. Mechanism for communication with DEA about implementation of the ICM Act provisions (i.e. dedicated line/contact) 3. Build a common understanding on the application and integration of the necessary approvals required for most activities within the coastal zone, (i.e. integration between EIA authorisations and Water Use Licensing processes which are currently misaligned)
Research and educational institutions	1. Lack of education and training courses/resources on adaptation to global change (including climate variability and change) for coastal managers 2. Inadequate links with government agencies to align education with management needs	1. Research on and development of educational resources on adaptive management 1. Government research priorities for management outlined and communicated with educational and training institutions on a regular basis

Stakeholder/Audience	Challenges	AET Solutions
NGOs, NPOs and CBOs	1. Inadequate resources and support from government for long term CAET programmes for research and action to support sustainable coastal use, poverty reduction and conservation	1. Opportunities for collaboration with government on priority coastal projects communicated with NGOs, NPOs and CBOs
	2. Regulations for conducting CAET activities are restrictive (i.e. Limited outings allowed per learner per year; insufficient beach facilities; lack of required lifesaving staff)	2. Mechanisms created to strengthen communication and collaboration between government and NGOs
	3. Inadequate information on the policy and legal provisions	1. Greater support from government for CAET activities (materials/brochures, funding, guidance) and for training of trainers
		1. More information on provisions provided in an accessible form
Civil Society		
Coastal inhabitants	1. Lack of access to coastal areas and resources for subsistence and recreation	1. Awareness initiatives to inform inhabitants of rights of coastal access and use and responsibilities of authorities
	2. Threats from coastal storm events and other impacts of global change	2. Mechanisms created to strengthen communication of issues at the local level to government (i.e. workshops within communities)
	3. Unsustainable coastal resource extraction (fishing and harvesting) due to low understanding of the fishing regulations and also a lack of alternative livelihood	3. Training in participatory planning to ensure consideration of coastal community issues into National, Provincial and Municipal coastal management and development plans
		1. Training for local inhabitants on adaptation to global



Stakeholder/Audience	Challenges	AET Solutions
		change (impacts of climate variability and change)
		1. More information on regulations, disseminated in an appropriate manner (i.e. translated, disseminated in relevant formats).
		2. Awareness activities to explain the importance of the regulations for future health of stocks.
		3. Educational materials developed on marine ecosystems and species, the state of the stocks and best practices in sustainable management and use
		4. Training for Fisheries control officers to communicate the regulations and enforce them consistently and justly.
		5. AET activities of government should be linked to and highlight alternative livelihoods initiatives and opportunities for income generation for coastal poor
Land owners	1. Lack of awareness of the requirements of environmental and coastal laws	1. Awareness/guidelines to increase knowledge of coastal and environmental laws and their application to coastal landowners
	2. Perceptions of negative impact on security in implementation of ICM Act provisions (increased public access routes to the coast)	1. Mechanisms created to strengthen communication of issues to government
	3. Increased efforts at protection of property against coastal storms through coastal protection using	1. Awareness of options for coastal storm mitigation and establishment of set-backs

Stakeholder/Audience	Challenges	AET Solutions
	hard structures	
Coastal visitors/users	1. Lack of awareness and understanding of the value of ocean and coastal resources, the impacts of activities on coastal environments and inhabitants and options for co-management of resources.	1. Ongoing awareness campaigns and materials highlighting the importance and options for responsible coastal use 2. Guidelines for responsible coastal use and co-management approaches communicated in accessible and appropriate ways
General public	1. Lack of awareness and sense of ownership of coastal resources and lack of concern among the general public (and particularly inland inhabitants) about individual activities on the health of ocean and coastal species and ecosystems 2. Lack of compliance of individuals with legal provisions of the law due to lack of monitoring and enforcement by authorities	1. Ongoing awareness campaigns of options for individuals to support coastal and marine conservation and sustainable use (i.e. coastal clean-up events, waste management, sustainable seafood choices etc.) 2. Greater diversity of information dissemination i.e. environmental awareness as a regular feature in the weekly papers 1. Training for local authorities such as police, fisheries control officers and other relevant enforcement officials in all areas of the country to enforce the regulations (including inland areas such as Gauteng)

Annex 2:

Potential Partners and Service Providers for implementation of the CAET Strategy

Type of Support Key
Support for conducting CAET Programmes
Institutional support
Support for access to funding

Institution	**Type of Support**		
Marine Research Institute (Ma-Re) - University of Cape Town	▒	▒	▒
Runette Louw Design Consultancy	▒		
Worley Parsons	▒	▒	
The Field Guides Association of Southern Africa (FGASA)	▒	▒	
Plastics SA	▒	▒	
Tourism KwaZulu-Natal	▒		
Bayworld Centre for Research and Education	▒	▒	
ISIZIBA Community Based Organisation of South Africa	▒	▒	

Hessequa Municipality			
Whale Coast Conservation			
Ezemvelo KZN Wildlife			
Matzikama Municipality			
Olifants Estuary Management Forum			
ORCA Foundation			
AfriOceans Conservation Alliance			
WESSA - Southern KwaZulu-Natal Branch			
Working for the Coast			
KZN Department of Agriculture & Environmental Affairs (DAEA)			
City of Cape Town (Local Government)			
The Seals of Nam			
Environmental Affairs and Development Planning: Coastal Management Unit			
Department Environment and Nature Conservation			
Save Our Seas			
SANParks			
Department Environment and Nature Conservation			

Bayworld Centre for Research and Education			
Private Sector (RHDHV)			
AfE & Associates			
Ngqushwa Local Municipality			
Oceanographic Research Institute			
Plettenberg Bay Community Environment Forum			
Verlorenvlei Estuary Management FORUM			
CapeNature			
iSimangaliso Wetland Park			
Department of Economic Development, Environmental Affairs & Tourism (DEDEAT)			
Eden District Municipality			
West Coast District Municipality			
Overstrand Municipality			
Whale Coast Conservation			
SANCCOB			
South Africa Association for Marine Biological Research (uShaka Sea World)			
Swartland Municipality			

Annex 3:

Draft Implementation Plan for the National CAET Strategy

Goal	Objective	Programme	Priority	Outcome	Indicator	Responsible	Time
Provide guidance for effective awareness, education and training programmes for all stakeholders for improved coastal governance in South Africa.	**Objective 1:** Support awareness, education and training of relevant government officials at all levels on the ICM Act provisions goals and strategies and how implementation thereof affects their functions and responsibilities.	Guide the development and incorporation of CAET strategies in provincial and municipal coastal management programmes (CMPs).	High	All coastal management programmes have an effective National CAET Strategy.	Number of CAET strategies developed and incorporated into CMPs.	DEA, relevant national, provincial & municipal government departments, NGOs & environmental practitioners	1 - 2 years & ongoing thereafter as CMPs are established.
		Develop targeted policy briefs, guidelines and other informative materials to distribute to different levels and sectors of government to promote better coastal governance.	Medium	Relevant information available in accessible formats to support decision-making for coastal governance.	Number and type of CAET materials developed and disseminated to government.	DEA, relevant national government departments, parastatals, research community, NGOs & environmental practitioners	2 years.
		Provide regular CAET strategy presentations,implementation updates and feedback reports to the NCC and all other relevant committees and stakeholders within and outside of the government sector as part of the NCMP.	Medium	Regular updates or presentations to the NCC, PCCs, MCCs and other relevant committees per year (quarterly).	System for development and dissemination of updates List of presentations, implementation updates and feedbackreports.	DEA, relevant national, provincial & municipal government departments	1 year & ongoing thereafter.



Goal	Objective	Programme	Priority	Outcome	Indicator	Responsible	Time
		Support the development and implementation by relevant provincial role players of an annual ICM training programme for all relevant coastal municipal officials on implementation of the ICM Act and options for strengthening coastal governance.	High	Greater capacity at the municipal level for implementing the provisions of the ICM Act.	Number of municipal representatives and municipalities effectively trained in coastal management training.	DEA, environmental practitioners & NGOs.	6 months – 2 years.
	Objective 2: Build the capacity of future coastal management specialists employees through a comprehensive programme of bursaries for staff and students, internships, and learnerships.	Work with tertiary and research institutions to identify coastal governance research priorities and promote options for developing a series of accredited coastal management course modules (in line with the National Qualifications Framework and relevant associated legislation) to be incorporated into broader degree, diploma, certificate and short courses.	Medium-Long-term	More comprehensive information base available for improved decision-making and greater capacity for integrated coastal, ocean and environmental governance built over time.	National research strategy for coastal governance. Number and type of courses available.	DEA, relevant national government departments, research & educational institutions & NGOs.	1 + years ongoing thereafter.

Goal	Objective	Programme	Priority	Outcome	Indicator	Responsible	Time
		Support longer term education and capacity development for coastal governance through the provision of staff and post graduate bursaries; establishment of a graduate intern and learnership programme to build practical experience and the required skill sets and to contribute to institutional strengthening at all levels of government.	Medium-Long-term	Greater opportunities for students to enter coastal management disciplines and improved skills for ICM & ocean and environmental governance. Government benefits from extra capacity and a greater pool of experienced workers to draw from.	Number of staff and students completing postgraduate degrees through bursary support. Number of individuals completing intern/ learnerships in coastal -related government agencies.	DEA, relevant national government departments, research & educational institutions, private sector & NGOs.	1 year ongoing thereafter.
		Develop learning materials, in line with the school curriculum, to introduce ocean and coastal careers to learners	Medium	Learners more aware of coastal and marine issues and solutions as well as career opportunities.	Relevant learning materials developed and incorporated into school curriculum	DEA, research and education institutions, NGOs.	1 year ongoing thereafter.
	Objective 3: Conduct an on-going awareness programme to support the private sector and developers in undertaking their work in coastal areas in a more environmentally and socially responsible manner, within the applicable environmental legislative framework.	Develop and disseminate guidelines on the ICM Act for the general public as well as for different sectors (tourism, real estate, developers) operating in coastal areas to inform them of the roles of the local authorities, highlight their responsibilities to comply with the regulations and promote best environmental practices.	High	Private sector and public access to policy and legal directives and government responsibilities improved, resulting in greater awareness of and compliance with the provisions of the ICM Act as well as greater accountability of local government for meeting their mandate.	Guidelines on the ICM Act available to different sectors operating in or impacting on coastal areas and resources.	DEA, relevant provincial & municipal government departments, research & educational institutions, environmental practitioners & NGOs	1 month ongoing thereafter.



Goal	Objective	Programme	Priority	Outcome	Indicator	Responsible	Time
Ensure the long-term sustainability and efficient operation of CAET initiatives through appropriate resource allocation, information exchange and partnership arrangements.	Objective 4: Align all CAET programmes with regional, national, provincial and local government training and education priorities and strategies and ensure that they respond to the diverse and changing needs and aspirations of all coastal stakeholders, particularly the most vulnerable coastal communities.	Undertake a process to identify key regional national provincial and local training, education and skills development priorities and align CAET efforts with these to ensure relevance and sustainability of long-term programmes with greater government support.	High	Coastal issues are reflected and addressed in crosscutting training, education and skills development priorities and strategies thus increasing efficiency and opportunities for wider government support. Alignment with the diverse and changing needs and aspirations of all coastal stakeholders will ensure longer-term effectiveness and sustainability of efforts	Relevant regional, national, provincial and local government training and education priorities identified and reviewed in terms of CAET opportunities. CAET programmes aligned with all relevant priorities.	DEA, relevant national, provincial & municipal government departments, parastatals, research & educational institutions, the private sector & NGOs.	6 months -2 years.
	Objective 5: Support access of all relevant stakeholders and partners to locally relevant and informative CAET materials and tools to maximise efficiency, and limit duplication of efforts.	Work with stakeholders within and outside of government to identify and review all available and relevant CAET materials and tools and agree on options for strengthening, replicating, translating and/or developing additional materials and tools and disseminating appropriately to ensure uptake and use by target audiences.	High	Greater availability and utilisation of locally relevant, high quality and informative materials and tools to for CAET.	All relevant CAET materials and tools identified and reviewed. Gaps in information recognized according to stakeholder needs and aspirations. Additional materials and tools developed to address the gaps.	DEA, relevant national, provincial & municipal government departments, parastatals, research & educational institutions, the private sector &NGOs.	6 months -2 years.

Goal	Objective	Programme	Priority	Outcome	Indicator	Responsible	Time
	Objective 6: Build partnerships with business, industry, NGOs, CBOs, tertiary education and research institutions and relevant national, provincial and local government departments to promote and support continued development and implementation of CAET programmes.	Using the results of the CAET needs analysis and inventory, undertake a process to invite relevant potential partners to collaborate with DEA to develop and implement innovative CAET programmes.	High	CAET efforts are adequately resourced and effectively implemented throughout all relevant geographic areas and sectors and levels of government by a well-coordinated network of partners within and external to government.	CAET programme operates with a well-coordinated network of partners with clear roles, responsibilities delineated.	DEA & all relevant stakeholders.	2 months & ongoing thereafter.
		Source funding from all relevant sources to support and ensure the continued implementation of coordinated CAET initiatives.	High	CAET efforts are adequately resourced from a diversity of funding sources for comprehensive array of efforts and long term sustainability.	Potential funding sources from within and outside of government identified and approached for support. Reliable and adequate financial support secured.	DEA & all relevant stakeholders.	2 months & ongoing thereafter.
Facilitate closer communication and co-ordination among all responsible authorities and between government and other stakeholders for coastal awareness, education and training efforts in both coastal and inland areas.	**Objective 7:** Improve communication and coordination by supporting the establishment and operation of a CAET mechanism that can meet and/or communicate on a regular basis and provide guidance to CAET efforts throughout the country.	Strengthen existing and/or establish alternative communication networks for supporting greater coordination among CAET partners, sharing of resources, lessons learned and best practices.	High	Greater support for and coordination of CAET efforts among partners throughout the country thereby increasing efficiencies for sharing information resources, lessons learned and best practice.	Establishment and operationalization of CAET communication mechanism that links all relevant stakeholders.	DEA & all relevant stakeholders.	6 months & ongoing thereafter.



Goal	Objective	Programme	Priority	Outcome	Indicator	Responsible	Time
		Improve the coordination of regular awareness-raising events on a national level that highlight the value of our coastal and marine assets and facilitate involvement of all stakeholders (i.e. National Marine Week)	High	More efficient and effective CAET events held on a regular basis and improving awareness of all South Africans of the value of our natural heritage	Number of efficiently coordinated annual awareness-raising events. Number of stakeholder groups involved in events	DEA & all relevant stakeholders.	Immediate and ongoing thereafter.
	Objective 8: Create a nationally recognized brand for coastal management initiatives, to improve awareness of the value of the coastal environment as a national asset.	Assess the successes and weaknesses of the CoastCare brand and revise or create a new generic coastal brand, associated frameworks and roll-out protocols.	High	An over-arching branding concept for all coastal management initiatives.	Creation and roll-out of an over-arching branding concept for all coastal management initiatives.	DEA, environmental practitioners.	6 months.
Ensure the relevance of the CAET initiatives over the long term through efficient administration that includes monitoring, evaluation and adaptation to changing circumstances.	Objective 9: Develop capacity within the Oceans and Coasts Branch of DEA for efficient and coordinated administration of the CAET Strategy implementation.	Lobby for institutional strengthening to support CAET activities at the national level, including establishment of a unit within the Oceans and Coasts Branch to administer the implementation of the CAET Strategy.	Medium-High	Increased capacity and presence within the Oceans and Coasts Branch of DEA for effective CAET to support improved coastal governance.	A unit or office mandated to drive national CAET is established and operational.	DEA, relevant national, provincial and municipal departments, Parastatals & relevant research institutions.	1 month ongoing thereafter until the capacity is adequately developed.

Goal	Objective	Programme	Priority	Outcome	Indicator	Responsible	Time
	Objective 10: Design and implement an adequate M&E programme for administering the implementation of the National CAET Strategy as part of the NCMP.	Design develop and imbed the CAET Strategy M&E programme within the NCMP that is aligned with relevant performance monitoring systems within government and promotes adaptation to changing circumstances and emerging issues and includes evaluation activities for each CAET programme and adaptation.	Medium	CAET initiatives within and outside of government are regularly monitored and adjusted to maintain relevance and effectiveness and to respond to emerging issues, opportunities, innovations and changing circumstances.	Annual CAET needs assessment or updates conducted to ensure relevance of CAET effortsover the long term. Relevant indicators are developed and distributed to partners for monitoring CAET initiatives. Regular M&E of all CAET programmes. Periodic assessment of the effectiveness of CAET interventions undertaken and results incorporated into adjusted programmes.	DEA relevant national, provincial and municipal departments, Parastatals, research institutions & NGOs.	6 – 18 months.



The National Coastal Management Programme is conceived through a cooperative governance process, involving organs of state, NGOs, academic institutions, the private sector and public with the intent of providing a national commitment to Integrated Coastal Management with tangible outcomes that benefit the nation.

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