



A Critical Analysis of South Africa's
Perceived Effectiveness in Enforcing
Marine Protected Areas

April 2024

Introduction

South Africa is bordered by the Indian Ocean to the southeast and the Atlantic Ocean to the Southwest, making up almost **3 000 kilometers of coastline** with an estimated **13 000 different species** recorded across our waters.

The National Environmental Management: Integrated Coastal Management Act, 2008 (ICM Act; Act No. 24 of 2008)¹ emphasises equitable access to, and utilisation of, the coastline and coastal resources by all South African citizens. The vast majority of coastal land in South Africa is primarily privately owned with a small portion belonging to the State: approximately 70% of coastal land is private and only 30% is public.²

South Africa is bordered by the Indian Ocean to the southeast and the Atlantic Ocean to the Southwest, making up almost 3 000 kilometers of coastline with an estimated 13 000 different species recorded across our waters. Discussions around protecting waters have historically been complicated, with an estimated 35% of our Gross Domestic Product coming from coastal goods and services alone, forcing legislators to weigh up the tradeoff between decreased Gross Domestic Product as a result of the creation of Marine Protection Areas (MPA) and the long-term safety and sustainability of the life that inhabits these waters.

The primary aim of this article is to unpack the mechanisms that South Africa has in place for protecting bordering oceans and for promoting the biodiversity and health

of the species that thrive across these waters in line with the United Nations (UN) Sustainable Development Goal (SDG) 14 – life below water. This article further aims to critically analyse the effectiveness of these Marine Protection Areas and whether or not the South African Government has been able to successfully enforce the rules and regulations attributed to an MPA.

Prior to 2019, there were 25 formally declared MPAs including 23 permanent coastal MPAs, one seasonal coastal MPA (Walker Bay) and the large Prince Edward Islands (PEIs) MPA in the Southern Ocean. The 24 MPAs around mainland South Africa covered 0.43% of the total ocean area, of which 0.16% was highly protected (no-take). After the 2011 National Biodiversity Assessment noted that offshore ecosystems were poorly protected, the Offshore MPA project (2007- 2011) initiated plans to increase protection of offshore ecosystems, which were advanced towards implementation during Operation Phakisa Oceans Economy. A total of 22 new MPAs were gazetted for comment in 2016 as part of a lengthy consultation process. The South African Cabinet granted permission to declare a revised network of 20 new MPAs in October 2018. It took several months to prepare the declaration notices

and final regulations. This culminated in the gazetting of 20 new MPAs on 23 May 2019.

The Marine and Coastal Management (MCM) is the regulatory authority responsible for managing all marine and coastal activities in South Africa and shares the management of its marine protected areas with the South African National Parks. In addition to fishing and diving, Marine and Coastal Management manages and monitors our coastal resources. These include our sensitive estuaries, diverse sea birds, dune systems and fishing harbours. MCM is also responsible for monitoring and preventing marine pollution. South Africa manages its coast and marine zones in an integrated way.

Marine and Coastal Management employees carry out research on more than 200 species of fish each year so that they can advise MCM and the Minister of Environmental Affairs and Tourism on the amount of fish allowed to be harvested by commercial fisheries. They also regulate the use of vehicles in the coastal zone – vehicles may not be used on any beach without the written authorisation of MCM. All boat launching sites must also be licensed in terms of these Regulations.

¹ National Environmental Management: Integrated Coastal Management Act, 2008 (ICM Act; Act No. 24 of 2008).

² Department of Environmental Affairs. 2015. State of the oceans and coasts around South Africa. Department of Forestry, Fisheries, and the Environment Report Card 15. Accessed on 08/01/2024. Available at: [stateoftheoceansreportcardno15.pdf \(dffe.gov.za\)](http://stateoftheoceansreportcardno15.pdf(dffe.gov.za)).

³ World Wildlife Fund. 2015. Oceans Facts and Futures: Valuing South Africa's Ocean Economy. Accessed on 08/01/2023. Available at: Oceans facts and futures: Valuing South Africa's ocean economy | WWF South Africa.

⁴ Department of Environmental Affairs. Unknown. Marine Protected Areas South Africa. Accessed on 08/01/2024. Available at: Protecting the ocean — Marine Protected Areas South Africa.

⁵ Southafrica.co.za. Unknown. Marine Life Conservation in South Africa. Accessed on 08/01/2024. Available at: Marine Life Conservation in South Africa.



The challenge

It has been highlighted that interlocking mechanisms do exist that are aimed at the protection of marine and coastal biodiversity. The effectiveness of these legislative powers, however, needs to be tested to establish:

1. The existence, if any, of issues in the legislation
2. The effectiveness of efforts aimed at enforcing marine protection areas and coastal protection zones.

Existing Marine Protection Areas

South Africa currently has 42 Marine Protection Areas as follows with zones that can be classified as either restricted or controlled:

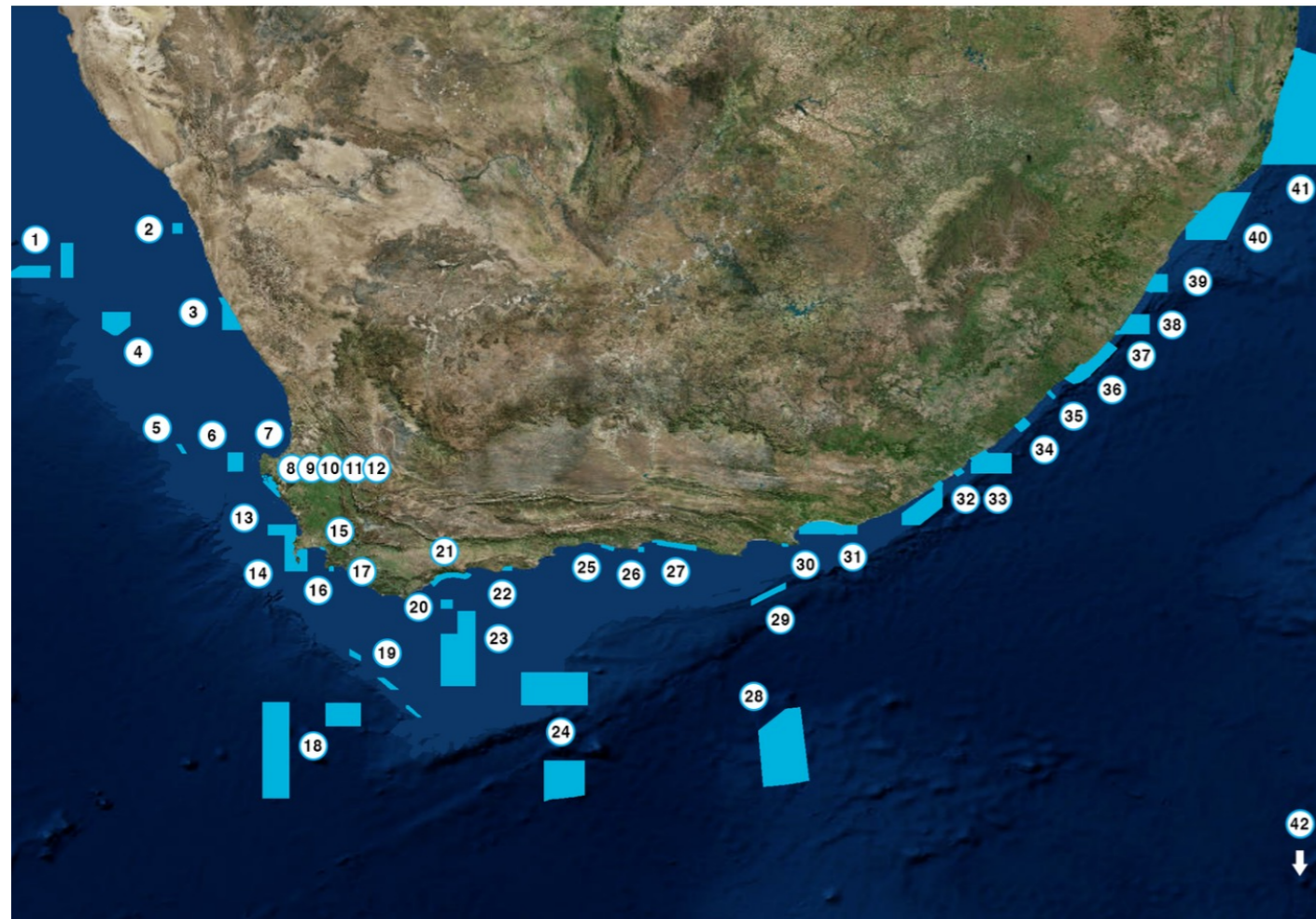


Figure 1: Marine Protection Areas mapped out across South Africa

Reference	Marine Protected Area	Location	Coastal / Offshore
1	Orange Shelf Edge MPA	Off Port Nolloth, Northern Cape	Offshore
2	Namaqua Fossil Forest MPA	Off Kleinsee, Northern Cape	Offshore
3	Namaqua National Park MPA	Off Namaqualand, Northern Cape	Offshore
4	Childs Bank MPA	West of Namaqualand, Western Cape	Offshore
5	Benguela Muds MPA	West of Saldanha Bay, Western Cape	Offshore
6	Cape Canyon MPA	West of Cape Columbine, Western Cape	Offshore
7	Rocherpan MPA	North of Saldanha, Western Cape	Coastal
8	Malgas Island MPA	Malgas Island, Western Cape	Coastal
9	Marcus Island MPA	Marcus Island, Western Cape	Coastal
10	Jutten Island MPA	Jutten Island, Western Cape	Coastal
11	Langebaan Lagoon MPA	Langebaan, Western Cape	Coastal
12	Sixteen Mile Beach MPA	Sixteen Mile Beach, Western Cape	Coastal
13	Robben Island MPA	Cape Town, Western Cape	Coastal
14	Table Mountain National Park MPA	Cape Town, Western Cape	Coastal
15	Helderberg MPA	Helderberg, Western Cape	Coastal
16	Betty's Bay MPA	Betty's Bay, Western Cape	Coastal
17	Walker Bay Whale Sanctuary	Seasonal, Western Cape	Offshore
18	Southeast Atlantic Seamounts MPA	South of Knysna, Western Cape	Offshore
19	Browns Bank Corals MPA	South of Cape Town, Western Cape	Offshore
20	Agulhas Muds MPA	South of Cape Agulhas, Western Cape	Offshore
21	De Hoop MPA	De Hoop, Western Cape	Coastal
22	Stillbaai MPA	Stillbaai, Western Cape	Coastal
23	Agulhas Bank Complex MPA	South of Cape Agulhas, Western Cape	Offshore
24	Southwest Indian Seamount MPA	South of Port Elizabeth, Eastern Cape	Offshore
25	Goukamma MPA	Goukamma, Western Cape	Coastal
26	Robberg MPA	Robberg Peninsula, Western Cape	Offshore
27	Tsitsikamma MPA	Tsitsikamma, Eastern Cape	Coastal
28	Agulhas Front MPA	South of Port Elizabeth, Eastern Cape	Offshore
29	Port Elizabeth Corals MPA	Off Port Elizabeth, Eastern Cape	Offshore
30	Sardinia Bay	Sardinia, Eastern Cape	Offshore
31	Addo Elephant National Park MPA	Nelson Mandela Bay, Port Elizabeth	Coastal
32	Amathole MPA	East London, Eastern Cape	Coastal
33	Amathole Offshore MPA	East London, Eastern Cape	Offshore
34	Dwesa-Cwebe MPA	Dwesa-Cwebe, Eastern Cape	Coastal
35	Hluleka MPA	Hluleka, Eastern Cape	Coastal
36	Pondoland MPA	Pondoland, Eastern Cape	Coastal
37	Trafalgar MPA	Trafalgar, Eastern Cape	Coastal
38	Protea Banks MPA	South Coast, KwaZulu-Natal	Offshore
39	Aliwal Shoal MPA	South Coast, KwaZulu-Natal	Coastal
40	uThukela Banks MPA	Off coast KwaZulu-Natal	Offshore
41	iSimangaliso MPA	North Coast, Eastern Cape	Coastal
42	Prince Edward Islands MPA	Southern Indian Ocean	Offshore

Marine Protection Areas (MPA) and Coastal Protection Zones (CPZ) – Legislative Review

Legislative powers were originally provided for in the Sea-shore Act 21 of 1935⁶ which granted Government, by way of the then Governor-General, the power to exercise control over the sea-shore, the sea, and the sea-bed within a three-mile (4.8 kilometer) radius.⁷ Section 10 of this Act⁸ further states that the Governor-General has the power to pass regulations pertaining to the general control of the sea-shore, the sea-bed and the sea itself within this three-mile limit.

The Marine Living Resources Act 18 of 1998 later clarifies this and provides legislative power to the Minister of the Department of Environmental Affairs to declare an area to be a marine protected area for the protection of fauna and flora or a particular species of flora or fauna and the physical feature on which they depend as well as to facilitate fishery management by protecting spawning stock, allowing stock recovery, enhancing stock abundance in adjacent areas and providing pristine communities for research, or to diminish conflict from competing uses in the area.⁹

The Act further goes on to state that, without obtaining written permission from the Minister, no person may fish or attempt to fish, take or destroy any fauna and flora other than fish; dredge, extract sand or gravel, discharge or deposit waste or any other polluting matter, or in any way disturb, alter or destroy the natural environment; construct or erect any building or other structure on or over any land or water within such a marine protected area; or carry on any activity which may adversely impact on the ecosystems of that area.¹⁰

Prior to the implementing of the ICMA, the National Ports Act 12 of 2005¹¹ introduced an element of confusion. Section 69 of the Act stated only that The National Ports

Authority must in the performance of its functions ensure that a fair and reasonable balance is achieved between the protection of the environment and the establishment, development, and maintenance of ports.¹² The question that arises here is, exactly what is a fair and reasonable balance and who should have the power to determine whether environmental considerations are weighed up in an equitable manner?

The Integrated Coastal Management Act (ICMA) 24 of 2008¹³ was then published with the aim 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.

The ICMA brought with it the term Coastal Protection Zone (CPZ) which was defined in section 16¹⁴ as land falling within an area declared in terms of the Environmental Conservation Act 73 of 1989.¹⁵ The latter Act was repealed, however, with only sections 31A, 34 and 37 remaining in force, as per the case of the Minister of Water and Environmental Affairs v Really Useful Investments (436/2015) [2016] ZASCA 156.¹⁶ The ICMA further expands that the CPZ can also include any part of the littoral active zone that is not coastal public property; any coastal protection area or part of such area which is not coastal public property; any land unit situated wholly or partially within one kilometer of the high water mark; any land unit not referred to that is situated wholly or partially within 100 meters of the high water mark; any coastal wetland, lake, lagoon or dam which

is situated wholly or partially within a land unit referred to previously; any part of the seashore which is not coastal public property, including all privately owned land below the high water mark; any admiralty reserve that is not coastal public property or; any land that would be inundated by a 1:50 year flood or storm event.¹⁷ Van Wyk (2013)¹⁸ unpacks some of the challenges associated with proclaimed fishing harbors (PFH) and these CPZ, in that PFH are always located within 100 meters of the high water mark.

According to the ICMA the CPZ were established to enable the use of the land that is adjacent to a coastal public property or that plays a significant role in a coastal ecosystem to be managed, regulated or restricted in order to protect the ecological integrity, natural character and the economic, social and aesthetic value of coastal public property; avoid increasing the effect or severity of natural hazards in the coastal zone; protect people, property and economic activities from risks arising from dynamic coastal processes; including the risk of sea-level rise; maintain the natural functioning of the littoral active zone; maintain the productive capacity of the coastal zone by protecting the ecological integrity of the coastal environment and making the land near the seashore available to organs of the state and authorised persons for performing rescue operations and temporarily depositing objects and materials washed up by the sea or tidal waters.¹⁹

This has provided us with some key insights, namely, that mechanisms exist in the legislation to allow both marine (MPA) and coastal (CPZ) zones to be declared by the Minister. The Minister is able to declare these zones, independent of the National Ports Authority, who will be unable to develop infrastructure on said land without written approval from the Minister despite their ability to undertake independent environmental impact assessments for development.

Navigating The Challenges of South Africa's Environmental Regulations

Van Wyk (2013)²⁰ provides us with the first taste of legislative issue when he unpacks in detail the challenges in the application of the ICMA within proclaimed fishing harbours (PFH). In his research, Van Wyk details the existence of twelve (12) proclaimed fishing harbors across the Western Cape alone. These PFH are governed by the National Department of Public Works (NDPW) with the Marine and Coastal Management performing functional management duties. Development that takes place within a PFH would likely always fall within the definition of a CPZ²¹ and without provision being made for "harbor infrastructure and/or precincts" there is a fundamental gap in the legislation that needs to be amended.

When observing, for example, how the legislation applies to the mining sector we need to also be cognizant of the Minerals and Petroleum Resources Development Act 49 of 2008²² where, according to Thornton et al (2009)²³ Additional regulatory guidance is required especially in relation to sand mining, a major issue threatening estuaries and with knock-on impacts on sediment dynamics and coastal erosion along the adjacent coast.

This issue is re-enforced when we dive into the water sector, where legislation covering issues such as environmental flows are in place for estuarine environments but not for nearshore coastal marine environments. Highlighting further gaps in the legislative universe. This is primarily because estuaries are classified as 'water resources' under the National Water Act. Unfortunately, unlike activities in most other sectors, environmental assessments in the mining sector are not regulated directly under the EIA Regulation of the NEMA, but rather under the MPRD Act. This leads to suboptimum decision-making with respect to long-term natural resource use and impacts on coastal communities.

This highlights our first observed issue: legislation is not practically sound and includes gaps impacting design adequacy.

Taljaard (2012)²⁴ unpacks for us what comprises the South Africa's legal landscape governing the protection and sustainable use of the coastal marine environment.

⁶ Sea-shore Act 21 of 1935.

⁷ Sea-shore Act 21 of 1935 at Section 3.

⁸ Sea-shore Act 21 of 1935 at Section 10(1)(e).

⁹ Marine Living Resources Act 18 of 1998 at Section 43(1).

¹⁰ Marine Living Resources Act 18 of 1998 at Section 43 (2).

¹¹ National Ports Act 12 of 2005.

¹² National Ports Act 12 of 2005 As above at Section 69.

¹³ National Environmental Management: Integrated Coastal Management Act 24 of 2008.

¹⁴ National Environmental Management: Integrated Coastal Management Act 24 of 2008 at Section 16(1)(a).

¹⁵ [repealed] Environmental Conservation Act 73 of 1989.

¹⁶ Minister of Water and Environmental Affairs v Really Useful Investments (436/2015) [2016] ZASCA 156.

¹⁷ National Environmental Management: Integrated Coastal Management Act 24 of 2008 at Section 16(1)(a-i).

¹⁸ Van Wyk, S., 2013. A Critical Analysis of the NEM: ICMA. Civil Engineering May 2013.

¹⁹ National Environmental Management: Integrated Coastal Management Act 24 of 2008 at Section (a-f).

²⁰ Van Wyk, S., 2013. A Critical Analysis of the NEM: ICMA. Civil Engineering May 2013.

²¹ National Environmental Management: Integrated Coastal Management Act 24 of 2008 at Section 17.

²² Mineral and Petroleum Resources Development Act 28 of 2002.

²³ Thornton, E.B., Sallenger, A., Sesto, J.C., Egley, L., McGee, T., Parsons, R., 2006. Sand mining impacts on long-term dune erosion in southern Monterey Bay. Marine Geology 229, 45- 58. <https://doi.org/10.1016/j.margeo.2006.02.005>.

²⁴ S. Taljaard, L. van Niekerk, S.P. Weerts. 2019. The legal landscape governing South Africa's coastal marine environment – Helping with the 'horrendogram'. Ocean & Coastal Management. Volume 178. 104801. ISSN 0964-5691. <https://doi.org/10.1016/j.ocecoaman.2019.05.003>. (<https://www.sciencedirect.com/science/article/pii/S0964569118309232>)

Mining & Exploration	Biodiversity	Tourism	Heritage	Water	Urban Development & Agriculture	Land-based Pollution	Shipping	Fisheries & Aquaculture
Regulations: Minerals & Petroleum Resource Development Guidelines: Environmental impact assessment/ management programmes Guidelines: Mining and biodiversity	Guidelines: Offshore MPAs Regulations: Threatened and protected species marine Strategy: National Protected Areas Expansion Strategy: National biodiversity Regulations: Alien and Invasive species Guidelines: Determination of bioregions and bioregion plans Policy: management of seals, seabirds and shorebirds	Guidelines: Recreation water quality Regulations: Management of boat based whale watching and protection of turtles Policy/Regulations: White shark cage diving Policy: Boat-based whale & dolphin watching	Regulations: iSimangaliso (world heritage) Regulations: Natural heritage resources	Methods: Environmental flow determination (estuaries) Regulations: Classification system Regulations: Conservation water Regulations: Water use mining Regulations: Irrigation Strategy: National water resources Regulations: Water use licensing	Methods: Environmental flow determination (estuaries) Regulations: Classification system Regulations: Conservation water Regulations: Water use mining Regulations: Irrigation Strategy: National water resources Strategy: Water use licensing	Regulations: General authorisation for effluent disposal Regulations: Coastal discharge permits Strategy: National waste management Guidelines: Waste Assessment for disposal to sea Regulations: Waste classification & management Guidelines: Coastal water quality Guidelines: Discharge of effluent from land-based sources to coastal environment Regulations/frameworks: Air quality Integrated waste management plans Regulations: Conservation of agricultural resources	Regulations: Inshore vessel traffic services Regulations: Marine traffic Regulations: Prevention of oil pollution Regulations: Garbage from ships/Reception facilities Port Rules Policy: National port environmental policy National Action List: Screening of dredged material proposed for marine disposal	Framework: Environmental integrity for marine aquaculture National aquaculture policy framework for SA Legal Guide for aquaculture sector in SA Regulations: Small scale fisheries Regulations: Night fishing (Breedee estuary) Regulations: Wild abalone Regulations: Microbiology in seafood Regulations: Metals in seafood Regulations: Marine food
Mineral & petroleum resources development (MPRD) Act (2002)	Biodiversity Act (2004) National Parks Act (1976) Marine Living Resources Act (1998) Sea Bird & Seal Protection Act (1973) Protected Areas Act (2004)	Marine Living Resources Act (1998) Health Act (2003) Sea Bird & Seal Protection Act (1073) Tourism Act (1993) Biodiversity Act (2004)	World Convention Act (1999) Natural Heritage Resources Act (1999) Wreck & Salvage Act (1996)	Water Act (1998) Water Services Act (1997)	GIAMA (2007) Disaster Management Act (2002) National Buildings Regulations/Std Act (1977) NEMA (1999) Agricultural Resources Act (2000) Spatial Planning and Land-use Management Act (2013) ICM Act (2008)	GIAMA (2007) Disaster Management Act (2002) National Buildings Regulations/Std Act (1977) NEMA (1999) Agricultural Resources Act (2000) Spatial Planning and Land-use Management Act (2013) ICM Act (2008)	SAMSA Act (1998) Maritime Zones Act (1994) Marine living Resources Act (1998) Marine Traffic Act (1981) Marine Pollution (prevention of pollution from ships) Act (1986) Int. Health Regulations Act (1974) Ports Act (2005) Marine Pollution (intervention) Act (1987) Merchant Shipping Act (1951) Government Immovable Asset Management Act (2007)	Marine Living Resources Act (1998) Foodstuffs, Cosmetics & Disinfectant Act (1972)
Mineral mining Diamond mining Oil & gas Sand mining	Management & protection Control alien & invasive species		Natural heritage Cultural heritage	Sewage treatment Environmental Flows	Disaster management Sustainable agriculture Coastal Protection Built Infrastructure Coastal Public Acces	Stormwater runoff Municipal wastewater Industrial wastewater Agricultural runoff Solid waste (plastic/litter) Dredge spoil disposal Atmospheric emissions	Ships traffic & safety Ballast water Small harbours Commercial ports Pollution from ships	Marine Aquaculture Sustainable wild fisheries Safe seafood
	Ramsar Convention (1971) Bonn Convention (1979) SADC Wildlife Protocol (1999) Regulation of Whaling (1946) CITES (1973)		World Heritage Convention (1972)	SADC Watercourses Protocol (2000)	Abidjan Convention (1981) Nairobi Convention (1985) GPA (Land-based activities) (1995)	Salvage Convention (1989) London Convention/Protocol (1972, 1996) Bern Convention (1992)	Civil Liability Convention/Protocol (1992, 2000) UNCLOS (1982) Ships' Ballast Water and Sediment (2004) MARPOL (1973, 1978)	Convention of Atlantic Tuna (1966) SADC Fisheries Protocol (2006) Conduct for Responsible Fisheries (1995) Fishery Resources in S-E Atlantic Ocean (2001)

Legend Norms & Standards National Act Key Issue International Agreements/Convention

Figure 2: Overview of the legal landscape governing the protection and sustainable use of the coastal marine environment in South Africa

According to Taljaard (2012)²⁵ While the department for transport oversees the shipping sector, there are several international conventions and agreements regulating the sustainable use of marine waters by the maritime community. The South African Maritime Safety Authority (SAMSA) is further mandated to oversee the safety of life and property at sea, the environmental matters such as prevention and combating of pollution from ships and, in the case of commercial ports, the National Ports Authority is mandated to oversee environmental matters in ports, while the small harbours are the responsibility of delegated government departments.

This highlights our second observed issue, namely, an overlap in responsibility as evidenced in the shipping sector.

Harley et al (2006)²⁶ highlights that although the legal landscape for urban development and agriculture has been well-defined, further effort is required in terms of coastal protection in the light of climate change threats. The ever-evolving environmental landscape requires Government to remain flexible and innovative and ensure that environmental management plans reflect the country's global commitments and reflect the United Nation's Sustainable Development Goals. Although the reviewed legislation does not contradict these commitments, the commitments have not been linked explicitly to legislation and appear, on face value, to

simply be a proverbial "hit and hope" without exact policies aimed at achieving these goals as a country.

This highlights to us our third issue, that legislation is being implemented in isolation, with the risk that processes, and strategies are misaligned to global commitments.

Taljaard (2012)²⁷ provides for us a RAG status on the comprehensiveness of legislation and implementation as set out below in figure 3. This table cements the three primary observations that have been noted thus far. This table has been completed with the results of a purely qualitative assessment.

²⁵ S. Taljaard, L. van Niekerk, S.P. Weerts. 2019. The legal landscape governing South Africa's coastal marine environment – Helping with the 'horrendogram'. Ocean & Coastal Management. Volume 178. 104801. ISSN 0964-5691. <https://doi.org/10.1016/j.ocecoaman.2019.05.003>. (<https://www.sciencedirect.com/science/article/pii/S0964569118309232>)

²⁶ Harley, C.D.G., Hughes, A.R., Hultgren, K.M., Miner, B.G., Sorte, C.J.B., Thornber, C.S., Rodriguez, L.F., Tomanek, L., Williams, S.L., 2006. The impacts of climate change in coastal marine systems. Ecology Letters 9, 228–241. <https://doi.org/10.1111/j.1461-0248.2005.00871.x>.

²⁷ S. Taljaard, L. van Niekerk, S.P. Weerts. 2019. The legal landscape governing South Africa's coastal marine environment – Helping with the 'horrendogram'. Ocean & Coastal Management. Volume 178. 104801. ISSN 0964-5691. <https://doi.org/10.1016/j.ocecoaman.2019.05.003>. (<https://www.sciencedirect.com/science/article/pii/S0964569118309232>).

Sector	Key Issue	Status of Legal Landscape and Implementation		
		Legislation	Norms and Standard	Enforcement and Compliance
Biodiversity	Management and protection	Good	Good	Good
	Control of alien and invasive species	Good	Fair	Poor
Urban development and agriculture	Built infrastructure	Good	Good	Good
	Coastal access	Good	Good	Good
	Coastal protection	Good	Good	Good
Mining and exploration	Sustainable agriculture	Good	Good	Good
	Diamond mining	Good	Good	Good
	Mineral mining	Good	Good	Good
	Sand mining	Good	Good	Good
Water	Oil gas	Good	Good	Good
	Environment flows	Good	Good	Good
Land-based pollution	Sewage treatment	Good	Good	Good
	Flood risk management	Good	Good	Good
	Stormwater runoff	Good	Good	Good
	Municipal wastewater disposal	Good	Good	Good
	Industrial wastewater disposal	Good	Good	Good
Shipping	Atmospheric emissions	Good	Good	Good
	Agricultural runoff	Good	Good	Good
	Solid waste	Good	Good	Good
	Dredge spoil disposal	Good	Good	Good
	Port infrastructure	Good	Good	Good
Fisheries and aquaculture	Pollution from ships	Good	Good	Good
	Ballast water	Good	Good	Good
Heritage	Ships traffic and safety	Good	Good	Good
	Sustainable wild fisheries	Good	Good	Good
Tourism	Aquaculture infrastructure	Good	Good	Good
	Safe seafood	Good	Good	Good
Tourism	Cultural	Good	Good	Good
	Natural heritage	Good	Good	Good
Tourism	Eco-tourism activities	Good	Good	Good
	Safe recreation	Good	Good	Good

Colour code Good Fair Poor Split colours Differing levels of comprehensiveness based on region

Figure 3: Qualitative Assessment of the Status of Legal Landscape and Implementation

It becomes clear following the legislative review that despite significant efforts to regulate Marine Protected Areas and Coastal Protection Zones, there remain some gaps within the legislation that need to be addressed in order to ensure that the implementation is seamless and fulfills the intention of the legislator. The overlaps in legislation across the legislative universe need to be isolated and clarified to guide applicable users on the scope of their responsibilities and to ensure that roles are well-defined. Furthermore, as is apparent on the RAG matrix provided, the standards enforcing these provisions continue to trail behind, making implementation of enforcement measures far more difficult. Government needs to prioritise enhancing the applicable standards relating to MPA and CPZ.

Enforcement of Marine Protection Areas and Coastal Protection Zones

In South Africa, the National Environmental Management: Protected Areas Act 57 of 2003 alongside the Marine Living Resources Act 18 of 1998 are the pieces of legislation that are enforced by marine, the staff responsible for protected areas. The marine protected areas staff are appointed as Fishery Control Officers (FCO) to enforce the Marine Living Resources Act and Environmental Management Inspectors to enforce the Protected Areas Act.

Through collaboration with the World Wildlife Fund (WWF) the National Government has established an MPA forum, as part of the SANBI-WWF Offshore MPA project. This forum is aimed at standardising the degree of enforcement that takes place across MPA and providing both the Fishery Control Officers and the Environmental Management Inspectors with useful resources to enhance their skillset.

The forum makes use of the Guidelines for Offshore Marine Protected Areas in South Africa that were published by the South African National Biodiversity Institute (SANBI) as the guiding light in the enforcement of regulations. The guidelines define a marine protected area as any defined area within or adjacent to the marine environment, together with its overlaying waters and associated flora,

fauna, and historical and cultural features, which have been reserved by legislation or other effective means, including custom, with the effect that its marine and/or It becomes clear following the legislative review that despite significant efforts to regulate Marine Protected Areas and Coastal Protection Zones, there remain some gaps within the legislation that need to be addressed in order to ensure that the implementation is seamless and fulfills the intention of the legislator. The overlaps in legislation across the legislative universe need to be isolated and clarified to guide applicable users on the scope of their responsibilities and to ensure that roles are well-defined. Furthermore, as is apparent on the RAG matrix provided, the standards enforcing these provisions continue to trail behind, making implementation of enforcement measures far more difficult. Government needs to prioritise enhancing the applicable standards relating to MPA and CPZ.

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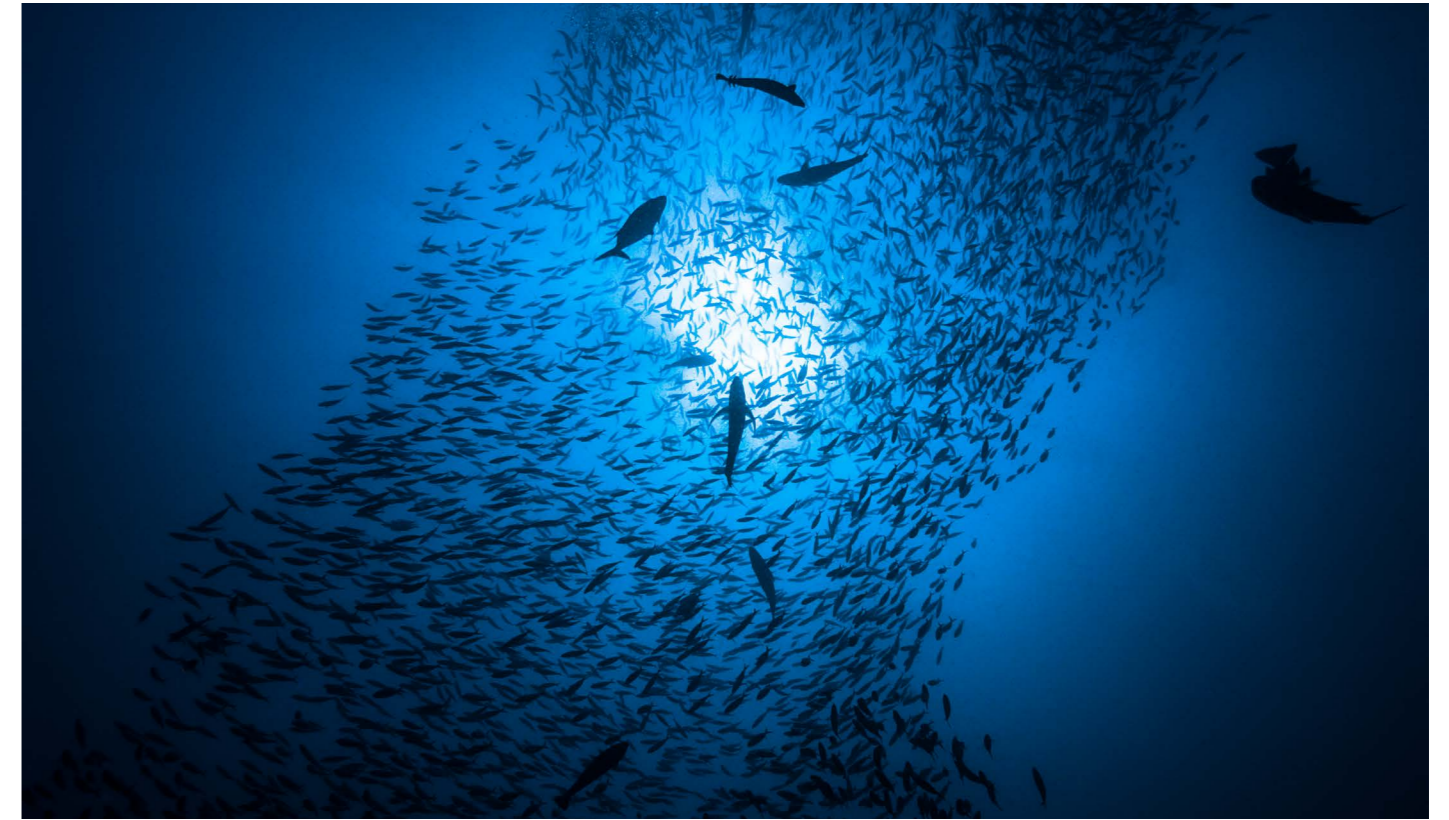
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The SANBI guidelines clarify the planning area for MPA across South Africa as extending from the 30-meter depth contour out to the 200 nautical mile boundary of the South African Exclusive Economic Zone (EEZ). The guidelines further provide context on biozones, habitats and biodiversity across the EEZ.

The MPA forum reports through the WWF on the state of MPAs. WWF introduced the Management Effectiveness Tracking Tool (METT) to the South African marine protected area (MPA) network in 2009, however, it should be noted that the most recent collaborative report was published in 2019, making it exceptionally difficult to base any assumptions on the reliability of data that is now five years old. This highlights our first enforcement issue, a clear lack of reliable and up to date data on the performance of marine protected areas across both coastal and offshore categories. The publications take place every five years and we should be seeing a publication in 2024 that includes all 42 MPAs and will provide us with a more relevant baseline to assess our progress against.

When compiling these progress reports, the METT allows MPA managers to identify needs, constraints, and priority actions to improve the effectiveness of MPA management. This rapid site-level self-assessment tool has since been adapted by Government and serves as the primary tool for monitoring the management effectiveness of protected areas (PAs) throughout South Africa. The questionnaire used in this tool assesses MPA management effectiveness by



scoring indicators in six major areas of MPA management: context, planning, inputs, outputs, process, and outputs. This raises a concern, self-assessments can be incredibly subjective, especially when the output of these assessments frames the key performance indicators relating to a functional role. To ensure accuracy and consistency, WWF and Department of Forestry, Fisheries, and the Environment (DFFE) representatives engaged in interviews, discussions, and site visits with the MPA managers and staff to verify the METT results for each MPA. It is unclear whether this will be done for all 42 MPAs in 2024.

The WWF further acknowledge that the METT approach brings with it several weaknesses, namely that the approach is weak in addressing the socio-economic contribution of MPAs to adjacent communities and the outcomes of measuring biodiversity objectives, does not directly address any climate change issues, lower scores are often attributed to management authorities and not necessarily the MPA managers, assessors can interpret indicators subjectively, immediate improvements are not guaranteed due to the frequent updating of the template questionnaires, it becomes difficult to track any trends in data.

³⁰ MPA Forum. Unknown. Legislation for Managing MPAs. Accessed on 08/01/2024. Available at: Legislation for Managing MPAs | MPA Forum.
³¹ MPA Forum. Unknown. Biodiversity Report. Accessed on 08/01/2024. Available at: biodiversity9.pdf (mpaforum.org.za).
³² MPA Forum. Unknown. Biodiversity Report. Accessed on 08/01/2024. Available at: biodiversity9.pdf (mpaforum.org.za).
³³ MPA Forum. Unknown. Biodiversity Report. Accessed on 08/01/2024. Available at: biodiversity9.pdf (mpaforum.org.za) at Page 7.
³⁴ World Wildlife Fund. 2019. State of Marine Protected Area Management Effectiveness in South Africa. Accessed on 08/01/2024. Available at: state_of_marine_protected_area_management_effectiveness_in_south_africa.pdf (panda.org).

The outcome of the METT signaled the following key thematic enforcement challenges:

1. The majority of MPAs continue to lack adequate funding

Most MPAs in South Africa are underfunded, which has trickle-down effects on many aspects of MPA management. Based on the present METT assessment, 73% of South Africa's MPAs have an inadequate capital budget, while 45% have either an inadequate or non-existent operational budget.

2. The majority of MPAs are under-staffed and under-resourced

64% of South Africa's MPAs have insufficient human resource capacity and/or vacant positions, which can severely limit management effectiveness. Furthermore, 23% of South Africa's MPAs are constrained by inadequate operational infrastructure and transport fleets.

3. Extensive monitoring to track performance is not undertaken

MPAs lack the funds to initiate research and monitoring projects that can assist MPA managers in making vital management decisions. Overall, the present METT assessment indicates that 27% of South Africa's MPAs do not have sufficient information on key species, habitats, ecosystems, and invasive species to inform the management of biodiversity objectives. Furthermore, 32% of South Africa's MPAs are not performing research relevant to achieving management objectives.

4. There are insufficient public awareness programmes

56% of South Africa's MPAs do not have an education, awareness and interpretation programme that is fully integrated into the MPA management plan.

5. There is ineffective law enforcement

73% of South Africa's MPAs have some deficiencies in their capacity to enforce rules and regulations, while 23% of MPAs face major deficiencies in this regard. While some success has been observed in terms of poaching reduction within a few MPAs, adequate enforcement is often impossible in many MPAs due to a lack of funds, training, and capacity. One of the main challenges raised during the METT process was that many MPA staff struggled to obtain FCO cards that designate them to enforce the MLRA. This lack of law enforcement capacity and capability can severely limit the effectiveness of MPAs in providing benefits to South Africans. Notably, 32% of South Africa's MPAs were not maintaining all ecological processes, with some ecological integrity being compromised. Furthermore, 23% of South Africa's MPAs were identified as only partially maintaining ecosystem services.

6. There is inadequate cultural heritage management

90% of the studied sites have not formally identified cultural heritage assets, while 86% of South African MPAs with (largely informally) identified cultural heritage assets did not have formal site management plans drawn up by an accredited heritage practitioner.

A strategic roadmap was compiled to address these issues in 2019 and we eagerly await the results on the effectiveness of this roadmap with the 2024 publication. The WFF makes use of the below evidenced approach to driving improvement across indicators.

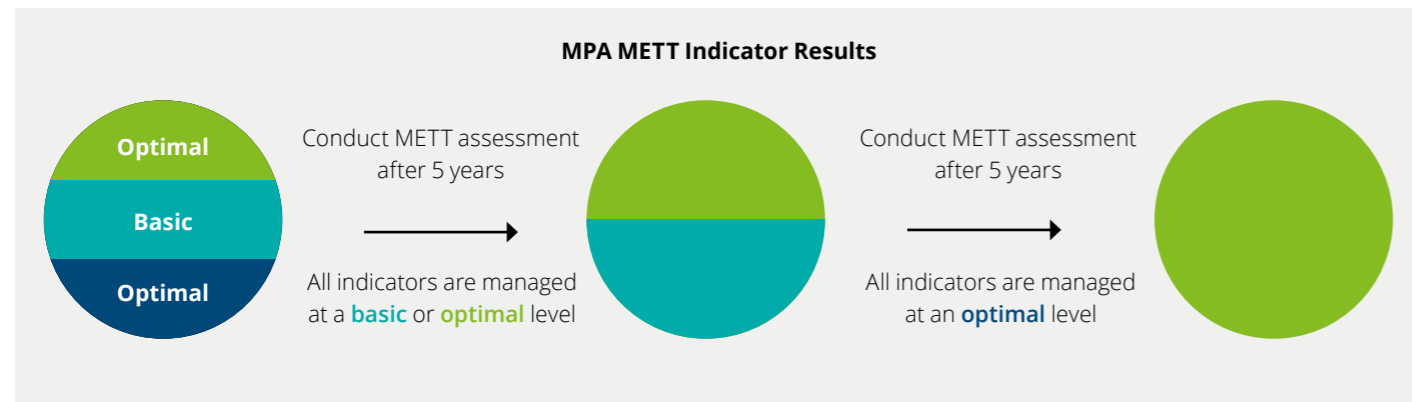


Figure 4: The phased approach to achieving optimal MPA management effectiveness using METT-SA 3 indicator results.

Conclusion

While legislators have the ability to classify areas as Marine Protected Areas and designate these areas as either restricted or controlled, there remain some critical challenges that need to be addressed to ensure that these areas are promoting biodiversity.

The challenges we have observed in this paper are split across two themes, namely, legislative challenges and enforcement challenges.

The legislative challenges observed are:

1. Legislation is not practically sound and includes gaps impacting design adequacy
2. There exists an overlap in responsibility as evidenced in the shipping sector
3. Legislation is being implemented in isolation, with the risk that processes, and strategies are misaligned to global commitments such as the Sustainable Development Goals

The enforcement challenges have been identified as follows:

1. There is a clear lack of reliable and up to date data on the performance of marine protected areas
2. The majority of marine protected areas continue to lack adequate funding
3. The majority of marine protected areas are under-staffed and under-resourced
4. Extensive monitoring to track performance is not undertaken at present
5. There are insufficient public awareness programmes underway

The report set to be published in 2024 by the WWF should provide us with additional insights on whether the challenges highlighted in the 2019 report have been addressed, however, with failing infrastructure and fruitless expenditure continuing to cripple South Africa across all provinces, one would deem it unlikely that MPA will have been provided with adequate funding and resources to address the challenges that they face.

As an immediate enhancement, legislators should prioritise consolidating legislation to clarify the delegations of authority and detailed roles and responsibilities across MPAs. The legislation should be reviewed and updated to align with the Sustainable Development Goals and to ensure that where gaps and areas of conflict in the legislation occur (whether theoretical or operational) these should be amended or repealed accordingly.

While constrained to the support received from local government, MPA management should prioritise tracking of performance of the MPAs which will demonstrate the value of these classifications to external stakeholders. MPA management should further leverage relationships with the private sector (through entities such as the WWF) to discuss the potential of sponsorship of prioritised MPAs that require financial, or otherwise resourcing assistance. These partnerships can be communicated through targeted public awareness campaigns that will provide the MPA with exposure and awareness, and the private sector partners with an opportunity to market their brand in a positive light.

My conclusion is that while we are optimistic about the future of MPAs, there is certainly work to be done to ensure we are able to enforce the regulations.



About the Author

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He assists in the strategic coordination of ESG-related offerings across multiple service lines with a passion for assisting clients in their decarbonisation journeys, their move towards sustainable and resilient supply chains, and their visualisation of data aimed at increasing their ability to achieve science-based targets. He is an expert in extended producer responsibility legislation and is passionate about improving waste management practices across the continent.

His experience further entails comprehensive engagement on Extended Enterprise Risk Management, specifically third party risk management, assisting his clients in designing and implementing frameworks aimed at mitigating their risk exposure from their third parties as well as performing an analysis of current frameworks in place to highlight pain points and make significant process improvements. Ryan has performed multiple third party risk management framework designs, one of which is in Saudi Arabia for the Central Payments Authority. He is a certified risk professional (CRisP) and sits as the Africa Chair for Deloitte's Global Young Purpose Leaders Council. He is also proudly positioned as a One Young World Ambassador.

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