De Hoop
Marine Protected Area
Management Plan

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Table of Contents

List of Appendices

List of Tables

List of Figures

Photograph on cover

Southern Right whale (Eubalaena australis) mother and calf taken by Peter Chadwick in De Hoop Marine Protected Area in October 2005

1.0 INTRODUCTION

The management of marine living resources in South Africa is a national responsibility, and marine protected areas (MPAs) are declared under the *Marine Living Resources Act (No. 18 of 1998)* (MLRA) (see Appendix 1). The De Hoop Marine Protected Area Management Plan describes how CapeNature and Marine and Coastal Management (MCM) intend to manage the De Hoop Marine Protected Area. The intent of this Plan is, in conjunction with other management mechanisms (see Appendix 2 and Appendix 3), to protect and conserve the values of the MPA while allowing for reasonable opportunities to access and use the MPA.

This management plan serves a very important function: it communicates to a variety of stakeholders (including the management agencies) the purpose and operational framework for the De Hoop MPA. It is a living, public document subject to periodic review. The management plan will also serve as the basis of a business plan for CapeNature, which manages the marine resources in that province on behalf of MCM. The "user-pays" principle will be applied, with the aim of covering part of the management costs. The financial sustainability of the MPA underlies the sustainability of the resource.

The involvement of the community will occur through the De Hoop Nature Reserve and Marine Protected Area Liaison Committee.

De Hoop MPA was declared on 1 January 1985 and the adjacent De Hoop Nature Reserve was World Heritage listed under the *World Heritage Convention Act 1999* in July 2004. The De Hoop MPA is situated in the Western Cape along the southern coast about 50km east of Bredasdorp and 50km south of Swellendam. The marine protected area covers an area of approximately 25 300 ha (253 km^2), includes a coastline of 46 km (from Stilbaai Point in the east to a point between Ryspunt and Skipskop in the west) and extends three nautical miles offshore into the Indian Ocean (Figure 1).

1.1 DEVELOPMENT OF THE MANAGEMENT PLAN

The management plan was developed by Stephanie Lemm (stephanielemm@aol.com), consultant to CapeNature, in collaboration with CapeNature and MCM. Funding to develop the management plan was provided by WWF-SA.

The current plan draws on international experience of marine protected area management and relevant guidelines published by the International Union for the Conservation of Nature and incorporates legal and institutional requirements.

An annual review of the management plan and regulations must be undertaken for the first three years. Thereafter the management plan will be reviewed every five years.

1.2 STRUCTURE OF THE PLAN

The goals of De Hoop MPA are outlined in Chapter 1 and have been separated into three categories: Biophysical, Socio-economic and Governance. To fulfil these goals, a Strategic Plan has been determined in Chapter 5 which outlines overarching strategies that are required to fulfil these goals and many will need to be conducted in collaboration with Marine and Coastal Management. Key Performance Areas have been determined in Chapter 6 which are day-to-day requirements that managers must address to fulfil the goals. In many instances, the actions needed to achieve the goals require significant review of legislation and/or policy (governance issues). Therefore, Chapter 10 has been devoted to governance issues, i.e. the specific requirements needed in legislation/policy to fulfil the goals. There are also chapters devoted to Compliance, Education/Awareness and Research/Monitoring as it is considered these require specific information to ensure the goals are fulfilled. Appendix 5 outlines definitions of terms used in this management plan.

1.3 GOALS OF THE DE HOOP MARINE PROTECTED AREA

1.3a Biophysical

1. To protect marine ecosystems that are representative of the warm temperate south coast zone and to maintain biodiversity and ecological functioning in these ecosystems.

2. To protect depleted, endangered and endemic species and populations and to protect habitats which are important for the survival and revival of these species and populations.

3. To contribute towards the long-term viability of marine fisheries.

1.3b Socio-economic

4. To promote non-consumptive, ecotourism opportunities.

5. To provide opportunities for marine ecological research and monitoring of environmental effects of human activities on marine ecosystems.

6. To facilitate the interpretation of marine ecosystems for the promotion of conservation among scholars and tourists.

1.3c Governance

7. To reduce conflicts between competing users in the MPA and surrounding areas.

8. To ensure that appropriate and effective legal structures are developed for protecting the biodiversity of the MPA and the activities that benefit from it.

9. To fulfil South Africa's international commitment to marine protection in terms of international protocols and conventions.

2.0 DESCRIPTION OF THE AREA

2.1 GEOGRAPHY AND HABITAT

South Africa has three major bio-geographic zones: (a) The cool temperate West Coast; (b) The warm temperate South Coast; and (c) The sub-tropical East Coast. De Hoop Marine Protected Area falls within the warm temperate South Coast zone which covers the area from Cape Point to East London.

The wind patterns in the South Atlantic and South Indian oceans are influenced by a number of dominant meteorological features. The significance of the interactions between the cyclonic and anti-cyclonic systems and the sub-tropical warm Agulhas current however, is that neither system predominates to the exclusion of the other. The Agulhas current generally enhances the convectional processes and encourages rainfall development. In the Southern Cape, the cyclonic coastal lows are confined to areas below the escarpment of the Outeniqua and Langeberg mountains. They show sharp changes in the wind direction, temperatures and humidity as they move eastward along the coast, typically bringing high intermittent rains. The wind change is generally to the south west. Due to the northward shift of the "Roaring Forties" belt there is an increase in coastal lows and associated cold fronts in winter. During summer, the southern Indian Ocean anti-cyclone ridging in south of the sub-continent, causes a predominance of easterly winds along the coast. These easterly (SE) winds cause upwelling and bring cold water into the coastal areas (10°C). Precipitation is caused by advection of cool moist air by this anti-cyclone and by the influence of the mountains. The prevailing winds are SE during summer and SW during winter, while very strong winds are uncommon. (Department of Transport 1995).

Between Waenhuiskrans and De Hoop, the extensive beaches are backed by dune-fields, between De Hoop and Cape Infanta is a rocky coast of rugged dune-rock including limestone and sandstone cliffs with wave-cut rocky shelves extending into the subtidal zone.

The Waenhuiskrans/Cape Infanta region is situated adjacent to the broadest part of the continental shelf off the southern African continent, a feature known as the Agulhas Bank. Thus the 1000m depth contour lies about 300km offshore, south of Cape Infanta. The Agulhas Bank represents a large area on which marine life can respond to the mixing of waters of various origins which contributes to the high biotic diversity of this region.

The intertidal zone has faunal elements representing both warm-water east coast species and cold-water west coast species. There is also an endemic south coast component. The richness and diversity of intertidal organisms attracts a large variety of fish species to this coast.

De Hoop MPA has been successful in actively protecting populations of sought-after reef fishes, and in providing migrant recruits of over-fished fish species such as red steenbras to other areas. The importance of this area lies in the fact that it represents an intertidal system of large, eroding, soft sandstone and limestone platforms which have not been protected elsewhere on our coastline. The sandy beaches support a variety of interstitial bacteria, diatoms and invertebrates.

South Africa has various marine ecotypes including: (a) *Rocky and sandy shores*; (b) *Offshore reefs;* (c) *Offshore soft sediment*; and (d) *Estuaries.* In De Hoop MPA, there are three different coast types - these are: (i) Sandstone wave-cut rocky platforms; (ii) Exposed sandstone rocky-headlands; and (iii) Fine-grain sandy beaches. The subtidal part of the MPA includes low profile sandstone reef interspersed by large areas of soft sediment. The reefs are important for many endemic species of sea breams (Sparidae).

(i) Rocky and sandy shores

De Hoop MPA consists of approximately 12km of sandy shores, 22km of rocky shores and 21.5km of mixed rocky/sandy shore.

(ii) Offshore reefs

De Hoop MPA contains offshore rocky reefs, however, these are fairly sparse.

(iii) Offshore soft sediment

De Hoop MPA contains offshore soft sediment areas close inshore between the offshore reefs. Very little is known about the invertebrate or fish communities of

the soft sediment areas in De Hoop MPA, however, it is known that this habitat is important for East Coast Sole.

Southern Right whales (*Eubalaena australis)* have been recorded off the southern Cape coast every month of the year, but mostly from April to January, with peak abundance in September and October. Individuals (particularly cows with calves) may spend up to four months on the coast. De Hoop MPA is very important for the conservation of this endangered species.

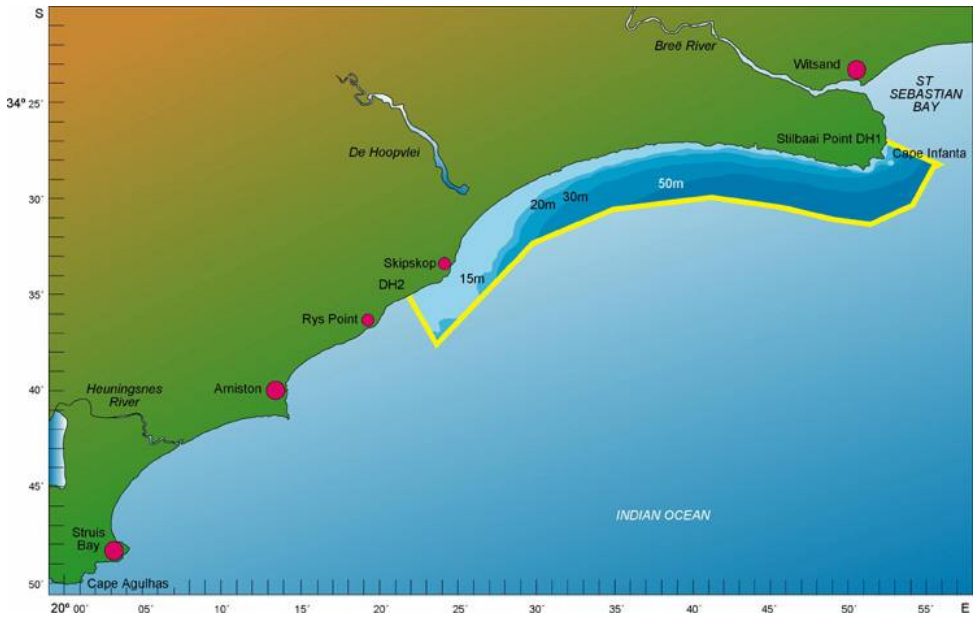

Figure 1 – The De Hoop Marine Protected Area

2.2 MARINE FLORA AND FAUNA

Marine mammals (particularly Southern Right whales, *E. australis*), reptiles, fish, birds (bird breeding/roosting sites), invertebrates, plants and habitats could potentially be impacted in the MPA (see Appendix 5). These real and potential impacts need to be managed.

Three species of fish known to be present in the MPA are listed as "vulnerable" under the *Draft List of Threatened and Protected Species* issued in terms of *NEMA: Biodiversity Act.* These species are the great white shark (*Carcharodon carcharius*), white steenbras

(*Lithognathus lithognathus*) and red steenbras (*Petrus rupestris*). "Vulnerable" is defined under NEMA as indigenous species facing a high risk of extinction in the wild in the medium-term future, although they are not a critically endangered species or an endangered species.

De Hoop MPA is an extremely important area for Southern Right whales. Southern right whales arrive at De Hoop MPA in June, reach peak abundance in September and depart in December or January (Best & Scott 1993). De Hoop MPA, together with St. Sebastian Bay contain 70-80% of cow-calf pairs on the South African coast and ranks as probably the most important nursery area for Southern Right whales in the world (Best & Scott 1993). De Hoop MPA has the highest number and the highest density (~1-3 pairs per kilometre) of cow-calf pairs along the South African coast (Elwen & Best 2000a). The MPA also contains an important breeding area for the rare (near-threatened) African black oystercatcher (*Haematopus moquini*). The MPA supports breeding sites for various seabird species (see Appendix 6). An African penguin (*Spheniscus demersus*) breeding colony has recently established within the MPA, it was first located in October 2003 at Witklip on the eastern end of the MPA and the colony appears to be increasing. Witklip is also becoming an important breeding site for other seabirds. Many species of marine mammals have been sighted and also stranded in the De Hoop MPA including various species of whales, dolphins and seals. Invertebrate surveys have been conducted of the rocky shoreline/intertidal area. The alien Mediterranean mussel (*Mytilus galloprovincialis*) occurs on the intertidal zone of the rocky shoreline. Abalone (*Haliotis midae)* is also present in the low sandstone reef areas. During December/January, large numbers of schooling hammerhead pups have been observed in the MPA..

2.3 HUMAN SETTLEMENTS

Communities close to the MPA include Witsand, Infanta, Arniston, Swellendam, Bredasdorp, Malgas, and Ouplaas. Recreational vessels are launched from Witsand/Infanta, the Breede River Mouth and Arniston. Commercial fishing boats launch from Mossel Bay, Stillbaai, Struisbay and Gansbaai. The Witsand and Infanta launch sites are licensed under NEMA. CapeNature are addressing the unlicensed launch sites in the Breede River.

2.4 HISTORY

There are twelve stone wall fish traps located adjacent to Denel's Overberg Test Range/South African Air Force Test Flight and Development Centre (TFDC). These are protected under the *National Heritage Resources Act 1999*.

There is vast evidence of late stoneage human presence as there are midden heaps found along the coast.

According to the South African Heritage Resource Agency (SAHRA), there are potentially eight shipwrecks within the MPA including: Bella Gambi 1974, Debonair 1964, Dirkie Uys 1968, James Shepherd 1851, Maid of the Thames 1848, Mary Ann 1965, Sri Rezeki 1971 and Texanita 1922. Artefacts from shipwrecks are defined as "archaeological" under the *National Heritage Resources Act 1999* once they are 60 years old.

3.0 BOUNDARIES AND ZONING

Boundaries

The boundary of De Hoop MPA is gazetted under Section 3 of *Government Notice 1429 (20 December 2000)* as follows:

(3) The **De Hoop Marine Protected Area** in the Western Cape Province is bounded by the high water mark, a line (1 14° true bearing) drawn from the beacon marked D1-fl, situated near Stilbaai Point (34 °27'.13S; 020o52 .25 E), another line (150' true bearing) drawn from the beacon marked DH2, situated between Rys Point and Skipskop (34 °34'.94S; 020°21'.89E), and a seaward boundary, which is a series of straight lines joining the following positions, each three nautical miles from the shore:
34°28'.378 S; 20°55'.653E,
34°28' .385S; 20°55'.397E – note that this point is erroneous and should be corrected
34°30' .378S; 20°53'.904E,
34°31'.295S; 20°51'.277E,
34°31'.088S; 20°48'.865E,
34°30'.416S; 20°45'.593E,
34°29'.850S; 20°41'128E,
34°30'.438S; 20°34'.900E,
34°32' 329S; 20°29'.699E,
34°37'.600S; 20°23'.757E.

Zoning

The De Hoop MPA is currently one zone where fishing is not permitted (Figure 2).

Figure 2 – Current Zoning of De Hoop MPA – MCM TO PROVIDE THIS MAP

4.0 REGULATIONS

There are no regulations specific for De Hoop MPA. Section 43 of the MLRA is applicable.

5.0 STRATEGIC PLAN

5.1 BIOPHYSICAL

OBJECTIVES

- To protect typical marine systems within the warm temperate south coast zone and to maintain biodiversity and ecological functioning.
- To protect depleted, endangered and endemic species and populations and to protect habitats which are important for the survival of these species and populations.
- To contribute towards the long-term viability of marine fisheries.

Action	Lead Agency (and partners)
5.1.1 Assess and monitor ecosystem health and integrity in the MPA	
5.1.1(a) Develop a set of fundamental indicators of MPA health at national and local level.	MCM
5.1.1(b) Facilitate effective coordination for the collection and analysis of MPA health indicators	MCM CapeNature
5.1.2 Assess the impacts of resource use on the MPA (including cumulative impacts) to identify priority areas and/or species in the MPA and determine management measures to mitigate impacts	
5.1.2(a) Develop and apply methods of multiple-use risk assessment for threats to the MPA.	MCM CapeNature
5.1.2(b) Use ecological risk assessment of fishing activities to determine priority issues and areas for research and management.	MCM CapeNature
5.1.2 (c) Develop refined zoning maps to protect species and habitats.	MCM CapeNature
5.1.3 Develop approaches to ecosystem-based management in the area	
5.1.3(a) Facilitate the development of approaches and tools to achieve integrated and ecosystem-based management (i.e. manage all the key links in the ecosystem as well as manage human activities and their impacts).	MCM CapeNature
5.1.4 Implement strategic control programmes for the effective mitigation and, where possible, elimination, of marine pests in the MPA.	
5.1.4(a) Develop agreed protocols for the development and implementation of National Control Plans at regional level.	MCM (CapeNature)
5.1.4(b) Conduct baseline surveys within the MPA in line with agreed national protocols and priorities.	MCM CapeNature

5.1.5 Manage marine pollution from land-based activities so that it is within acceptable limits

5.1.5(a) Ensure that management planning protects coastal and marine receiving waters from land-based pollution through: • Identification of the environmental values of marine waters; • Water quality targets to enhance or maintain those environmental values; • Monitoring attainment of water quality targets.	MCM (CapeNature)

5.1.6 Build capacity to enable effective integration of conservation measures across sectors and with stakeholders.

5.1.6(a) Provide industry with clear information on conservation management arrangements in the area (particularly for listed marine species), including compliance requirements.	CapeNature
5.1.6(b) Enhance coordination between key groups and agencies involved in conservation and resource management, through information sharing, communication and informal reporting.	CapeNature

5.2 SOCIOECONOMIC

OBJECTIVES

- To optimise the benefits of MPAs for communities and resource users.
- To provide opportunities for research, training of marine scientists and monitoring of environmental effects of human activities on marine ecosystems.
- To facilitate the interpretation of marine systems for the purpose of conservation and tourism.

Action	Lead Agency (and partners)
5.2.1 Increase knowledge and awareness of MPA management in the area	
5.2.1(a) Identify needs and advise on priorities for education and training in MPA management/issues through a coordinated approach.	MCM (CapeNature)
5.2.2 Enhance community and industry capacity for, and participation in, marine protected area management in the area	
5.2.2(a) Support initiatives that raise community and industry awareness of the importance of, and build capacity for their participation in marine ecosystem monitoring in the MPA.	MCM (CapeNature)
5.2.2(b) Review existing stakeholder consultation mechanisms regarding the MPA to ensure effective and efficient ongoing participation in marine planning and management.	CapeNature (MCM)
5.2.2(c) Build community capacity to contribute to management of priority issues and promote the development and use of best practice community-based management, particularly through codes of conduct and other non-regulatory approaches such as guidelines.	CapeNature
5.2.2(d) Develop volunteer programmes.	CapeNature
5.2.3 Support the development of partnership approaches to marine research and monitoring	
5.2.3(a) Build on existing research partnerships and support the development of new partnerships in the area between researchers and members of the community and industry.	MCM (CapeNature)
5.2.3(b) Communicate the contribution that marine industries and the community make to marine research in the area	MCM
5.2.4 Improve access to research, data and expert ecological advice for the management of the MPA	
5.2.4(a) Develop a web-based tool that identifies what marine data is available for the area, and encourage relevant agencies to make data available and accessible through this tool.	MCM (CapeNature)

5.2.5 Involve previously disadvantaged communities in management of the MPA in a manner that recognises and respects their rights, custodial responsibilities, contributions and knowledge

5.2.5(a)	Identify management and capacity building mechanisms to enable such communities to participate in the management and use of the MPA.	MCM (CapeNature)

5.3 GOVERNANCE

OBJECTIVES

- To reduce conflict between competing users in the MPA and surrounding areas.
- To ensure appropriate and effective legal structures are developed and maintained.
- To fulfil South Africa's international commitment to marine protection in terms of international protocols and conventions.

Action		Lead Agency (and partners)
5.3.1 Increase efficiencies in enforcement and compliance activities in the MPA		
5.3.1(a)	Investigate the enforcement and compliance challenges and opportunities associated with the increasing use of spatial management of marine resources in the MPA.	CapeNature
5.3.1(b)	Implement appropriate MPA Permit processes, including database development.	MCM (CapeNature)
5.3.2 Review legislation		
5.3.2(a)	Investigate the development of MPA-specific regulations, including revenue generation ability.	MCM (CapeNature)
5.3.2(b)	Manage impacts of all users in the MPA through zoning and permit requirements/conditions.	MCM (CapeNature)
5.3.3 Promote co-operative governance		
5.3.3(a)	Nurture co-operative relationships with local, provincial and national authorities and stakeholders	CapeNature
5.3.3(b)	Manage transboundary impacts between the MPA and adjacent coastline	MCM (CapeNature)

6.0 KEY PERFORMANCE AREAS

6.1 OVERVIEW

De Hoop MPA was established for the protection of a representative example of the warm temperate south coast and the protection of fishery resources, particularly reef fish and surf zone fish, intertidal shellfish and soft sediment trawling grounds. It was also established to protect specific species, for example, the Southern Right whale (*E. australis)* as this area is an important calving area.

The basic management approach for De Hoop MPA has been the total exclusion of all extractive activities. This is still the basic management approach but the management of all non-extractive activities that could occur in the MPA are considered in this management plan. To provide a rewarding experience for recreational users in the MPA it may be necessary to separate certain activities through zoning. The Key Performance Areas in this chapter are considered the critical areas where management actions are required to ensure that De Hoop MPA meets the objectives.

Various recreational and tourist programmes are currently occurring in the MPA. The present situation is uncontrolled and not all boating sectors are managed. With the growing number of user groups and activities, it is advisable to implement management strategies prior to the development of conflict and undesirable environmental impacts. Current MPA legislation is not designed for managing such impacts on the natural resources effectively. Therefore a proactive approach needs to be taken to revise legislation to enable effective management of these activities to ensure that they do not have undesirable and unsustainable impacts on the MPA.

Various issues have been identified that need to be resolved to protect the values in the MPA. Considerations include minimising the impacts on rocky reef habitat, the disturbance to marine mammals (particularly the Southern Right whale calving areas), shark species and birds, particularly when birds are nesting or roosting.

De Hoop Nature Reserve and De Hoop MPA are adjacent to Denel's Overberg Toetsbaan and the South African Air Force Test Flight and Development Centre (TFDC) on the west

and due to missile tests, total no access restrictions may be applicable at times for limited periods.

Table 1 summarises activities that currently can occur in the MPA either with a permit or without a permit and activities that are not permitted. Activities not included in Table 1 will be considered on application to MCM.

6.2 FISHING

1. At present, all forms of fishing are prohibited.
2. At present, no flora or fauna (including bait) may be removed from the MPA.
3. The only exception for extractive use would be under a Section 81 Exemption for Scientific Research. However, these applications will be subject to stringent assessment and only issued when appropriate.
4. Further restrictions on fishing gear may be considered (e.g. restrictions on carrying fishing gear on vessels and stowage of fishing gear) to reduce impacts on the values of the MPA (also see Action 5.3.2(a)).
5. Voluntary compliance with regulations will be encouraged through education and awareness programmes.

6.3 SCUBA DIVING

1. At present, the whole MPA is open to SCUBA diving and this activity may occur without a permit.
2. The "De Hoop MPA Diver Code of Conduct" will be promoted (see Appendix 7). This Code of Conduct has been developed based on discussions with the dive community and is designed to ensure that safe and low impact diving occurs. Specialised guidelines for diving with sharks have been developed (see Action 5.2.2(c)).
3. Restrictions on activities associated with diving that may have an impact on the values of the MPA will be considered including the use of cages for the purposes of cage diving, the use of electro/acoustic-discharging devices, the use of Diver Propulsion Vehicles and the removal of historical artefacts from shipwrecks (see Actions 5.3.2(a) and 5.3.2(b)).

4. If necessary, additional zones will be created for resource protection or to separate user groups to ensure that the natural resources are protected, user-conflicts are reduced, and to ensure safety for all user groups (see Action 5.3.2(b)).
5. If necessary, further restrictions on times, days, and locations may be considered to reduce impacts on the values of the MPA (see Action 5.3.2(b)).
6. The involvement of previously disadvantaged communities in the SCUBA diving sector will be encouraged. This measure is part of the national commitment to transformation (see Action 5.2.5(a)).
7. See Actions 5.1.2, 5.1.3(a), 5.1.3(a) and 5.2.2(c).

6.4 USE OF VESSELS

1. At present, the whole MPA is open to all types of vessels.
2. The management of certain vessels will be considered (e.g. motorised vessels, hovercraft, kayaks, personal watercraft) as some vessels may impact on the values of the MPA (see Action 5.3.2(a)).
3. There will be consideration of areas to be designated for certain non-motorised watersports (e.g. kite surfing) to reduce potential user-conflict and the impacts on the values of the MPA (see Action 5.3.2(b)).
4. The management of motorised watersports will be considered as this activity may impact on the values of the MPA (see Action 5.3.2(a)).
5. To ensure the safety of divers, all vessel operators will be urged to abide by the "De Hoop MPA Diver Code of Conduct" (see Appendix 7) (see Action 5.2.2(c)).
6. At present, all users may anchor in the MPA. The management of this activity will be considered as this may impact on the values of the MPA.
7. At present, under the MLRA, users may install a private mooring with a permit in the MPA. This activity is also managed under the *Seashore Act No. 21 of 1935* which prescribes that a lease is required to let any portion of the sea to install a private mooring. CapeNature is generally not supportive of allowing private moorings within the boundaries of an MPA (see Action 5.3.2(a)).
8. At present, the lighting of fires and camping may occur in the MPA. The management of these activities will be considered as they may impact on the values of the MPA (see Action 5.3.2(a)).

6.5 TOURIST PROGRAMMES

1. At present, the whole MPA is open to all types of tourist programmes (excluding commercial whale watching) and tourist programmes may occur without a permit. No formal tourist programmes are known to operate at this time.
2. The management of tourist programmes will be considered to manage the potential impacts on the values of De Hoop MPA and to avoid user-conflict. There will be consideration of all potential types of tourist programmes such as:
   (i) operators who have their own vessel(s);
   (ii) craftless operators (i.e. operate from beach, or charter a vessel);
   (iii) scenic tours;
   (iv) marine animal watching;
   (v) motorised watersports;
   (vi) non-motorised watersports;
   (vii) aircraft (e.g. sea planes);
   (viii) cruise ship operations; and
   (ix) hire operations (See Actions 5.3.2(a) and 5.3.2(b)).
3. The carrying capacity of the MPA for tourist programmes will be considered, and, if necessary, there will be consideration of limiting tourist operator numbers, as well as times, days and locations of activities. This measure may be needed because of increasing tourist activities and their associated impacts. If necessary, additional zones will be created for resource protection or to separate user groups. This strategy is essential to ensure that the natural resources are protected, user conflicts are reduced, and ensure safety for all user groups. Carrying capacity will be determined through appropriate research (see Action 5.3.2(b)).
4. The involvement of previously disadvantaged communities in the tourist programme sector will be encouraged. This measure is necessary because of the national commitment to transformation (see Action 5.2.5(a)).

6.6 OTHER ACTIVITIES

1. The *National Environmental Management Act 107/1998* (NEMA) and specifically Government Notice Number 1399 (proclaimed 21 December 2001) prohibit the general use of off-road vehicles along the entire shoreline of the MPA.

2. At present, aircraft have no height restrictions above the MPA and seaplanes may land in the MPA. However, under Section 58(2) of the *Marine Living Resources Regulations*, a person must not approach closer than 300 metres to any whale by means of an aircraft.
3. The management of aircraft will be considered as aircraft may impact on the values of the MPA, particularly breeding birds, whales and amenity issues (see Action 5.3.2(a)). The adjoining De Hoop Nature Reserve has a height restriction of 2500ft.
4. Littering is not permitted in the MPA.
5. At present, commercial and recreational photography may occur in the MPA without a permit. There will be consideration to managing this activity (See Actions 5.3.2(a) and 5.3.2(b)).
6. At present, organised events may occur in the MPA without a permit. There will be consideration to managing such activities (See Actions 5.3.2(a) and 5.3.2(b)).

6.7 SCIENTIFIC RESEARCH AND MONITORING

Researchers wishing to conduct scientific research in the De Hoop MPA are issued *Exemptions* under Section 81 of the MLRA. CapeNature also requires a Research Agreement (MOU) with the researcher (See Actions 5.1.1, 5.1.2, 5.1.3, 5.1.3, 5.1.3 and 5.1.3).

Applications to undertake scientific research are assessed according to a set of criteria (Appendix 8). A database on research programmes is maintained by CapeNature

The following must be considered when research applications are assessed:

- The requirements outlined in Appendix 8.
- The criteria in Appendix 12.
- All permits will have standard conditions applicable to all researchers (see Section 9.7) whilst there will be very specific conditions determined on a case by case basis.

Table 1
Summary of Current Statutory Provisions for the De Hoop Marine Protected Area

Activity	**MPA**
Fishing	
All Forms of Fishing	No
Recreational/Tourist Activities	
Tourist Programmes (including marine animal watching, excluding motorised watersports)	Yes
Tourist Programmes involving motorised watersports and aircraft use below 2500ft*	Yes(a)
Recreational vessel use (excluding motorised watersports)	Yes
Recreational Motorised watersports (excluding Personal watercraft)	Yes
Recreational aircraft use below 2500ft*	Yes(a)
Commercial Boat-based whale watching	No
Use of Personal Watercraft	Yes
Use of Hovercraft	Yes
Dogs	Yes
Camping	Yes
Light a fire	Yes
SCUBA diving	
Recreational diving	Yes
SCUBA diving business	Yes
Anchoring/Mooring	
Anchoring	Yes
Installation of private moorings	P43(b)
Competitions	
Organised Event	Yes
Photography	
Recreational	Yes
Commercial photography	Yes
Scientific Research	P81
Vehicles	No(c)

Yes Allowed without a Permit
No Prohibited
P13 Permit required under Section 13 of the MLRA (**Fishing Permit**), *which must have specific endorsements to allow access to De Hoop Marine Protected Area*
P43 Permit required under Section 43 of the MLRA
P81 Exemption issued under Section 81 of the MLRA to conduct scientific research
***** The adjacent De Hoop Nature Reserve is listed under the *World Heritage Convention Act 1999* and aircraft may not fly below 2500ft
(a) Under Section 58(2) of the MLR Regulations, a person must not approach closer than 300 metres to any whale by means of an aircraft.
(b) Note that there are also requirements under the *Seashore Act (Act 21 of 1935)* regarding installation of moorings
(c) Unless issued with an Exemption under NEMA

7.0 COMPLIANCE PLAN

7.1 OBJECTIVES

The law enforcement objective for the De Hoop Marine Protected Area is to achieve resource protection through compliance with the declaration as a MPA and the related Regulations, and other applicable laws. The Compliance Plan is intended to contribute to resource protection, facilitate fishery management, and reduce user conflict arising from competing uses in the MPA. It is intended to complement other elements of the Management Plan and lead to an increased level of success. High-profile, visible enforcement will require proper funding, supervision, staffing, and equipment.

The Compliance Plan recognises that compliance can be achieved partly through community involvement and education, in addition to traditional enforcement operations, including patrols, apprehension, confiscation and convictions for offences. Signage is used to advise the community of the MPA and what activity may or may not occur in the area. Unfortunately planned poaching syndicates and commercial enterprises knowingly commit offences for financial gain.

Historically, compliance patrols have been limited due to inadequate equipment and staff availability.

At times, commercial fishing vessels have entered the MPA and conducted hand-lining and limited trawling. There have also been instances of abalone diving occurring and inflatable vessels have accessed the shoreline to collect shellfish. Some recreational linefishing has occurred from shore and at times recreational vessels have accessed the MPA and carried out linefishing and spearfishing activities.

7.2 ZONE DEMARCATION/SIGNAGE

The boundary beacons need to be correctly surveyed, placed and upgraded. This may include two beacons that can be used for the alignment of the boundary.

Signs must be installed at all entrances to the De Hoop Nature Reserve, at the three licensed public launch sites at the Breede River Estuary including Witsand, Moddergat and Cape Infanta. There are also public launch sites at Arniston, Stillbaai and Struisbay where signs should also be installed. It is also necessary to have signs at Koppe Alleen and at the Whale Trail Reception Point.

7.3 COMMUNITY INVOLVEMENT

CapeNature will encourage user groups and all members of the public to report offences of MPA regulations through an incident reporting system. CapeNature encourages honorary ranger involvement.

7.4 COMPLIANCE THROUGH EDUCATION

The Awareness Plan (Section 8.0) includes elements designed to help the public understand why it is important to comply with the MPA regulations. This will promote voluntary compliance by the public through education and awareness programmes regarding MPA enforcement.

7.5 ENFORCEMENT OPERATIONS

7.5.1 Patrol Schedules

Compliance will require vessel patrols in the MPA, diver patrols and shore patrols. The intention is to conduct patrols daily and it is considered that this will run more effectively by having staff strictly dedicated to marine activities.

Patrols are currently conducted on foot along the beaches. Vehicle patrols are conducted on management roads to cover larger areas quickly and are conducted at night. Regular vessel patrols will be conducted. Foot patrols should take place daily with *ad hoc* night operations taking place. Weekends, public holidays and school holidays are heavy utilisation periods and extra patrols will be implemented. Field rangers operate in small teams throughout the MPA. There are MCM vessels, "Victoria Mxenge", "Ruth First" and "Lilian Ngoya" that conduct roving patrols along the South African coastline and can be accessed for compliance activities in certain situations. It

is envisioned that MPA staff will mainly be a land-based support team (to receive boat arrests and facilitate land-based procedures) during arrests made by the above mentioned boats.

7.5.2 Staffing Requirements

The staff required to patrol/manage the MPA and conduct monitoring programmes would consist of Field Rangers who have passed a recognised Field Ranger course (CapeNature approved) with emphasis on marine ecology, marine protected area management techniques and law enforcement. Ideally, MPA dedicated staff will be assigned. One MPA Manager (reporting to the De Hoop Conservation Manager) and four field rangers, one administration post with additional support from the terrestrial staff when required. [Currently there are no dedicated MPA staff, there is one Conservation Manager, two Nature Conservator, six field rangers and 2 general assistants and one Administrative Assistant].

The equipment needed to manage the MPA is outlined in Appendix 13.

8.0 AWARENESS PLAN

8.1 OVERVIEW

CapeNature and Marine and Coastal Management recognise that their proficiency as managers of South Africa's marine resources depends on their ability to inspire public support and participation through awareness. The focus of this awareness plan is to promote an understanding of the importance of healthy ocean ecosystems, the importance of MPAs and the role that the community may play in their care.

Marine protected area management has developed because of the growing recognition of the importance of marine ecosystems to our communities, economy and environment. Marine protected area management is emerging as a national priority due to undesirable and unsustainable impacts on the marine ecosystem. An important management tool to protect marine resources will be to implement an awareness programme that improves understanding of the De Hoop MPA.

8.2 PRESENT STATE OF MPA AWARENESS

At Potberg there is an environmental education centre which can accommodate sixty learners at one time. A limited general marine component is included in the educational programme, however, there is a need to incorporate a specific MPA component. There is also a need to revamp the centre to include MPA displays.

Currently there is educational signage regarding whales at each of the whale trail huts and at Koppie Alleen. It is also envisaged that during the black oystercatcher breeding season, additional students will be specifically allocated at Koppie Alleen to protect the oystercatchers. This would also include a large awareness component.

8.3 AWARENESS OBJECTIVES AND STRATEGIES:

8.3.1 Protect the marine biodiversity of De Hoop MPA and the surrounding areas.

- Achieve market and public awareness of the De Hoop MPA and the values, services and products offered.
- Provide information on the benefits/importance of De Hoop MPA.
  - Children from 5-10 years will be catered for by means of poster competitions and "touch pools or tanks". These can be carried out on the coast, at schools or in the visitor centre if the weather is bad. Visitor Centre needs to be updated and include more specific MPA information. Beach clean-ups and competitions will also be conducted.
  - Children of 10 years and older can also use touch pools, poster manufacture as well as snorkelling in tidal pools. The use of video material can be utilised as well as beach clean-ups.
  - For SCUBA divers, marine awareness SCUBA diving certificates/speciality courses can be introduced as well as under-water clean-ups and fishing line removal. Video presentations and pamphlets will be used to promote awareness.
  - Snorkelling education would consist of environmentally friendly ways of snorkelling using underwater trails and information cards.
  - An underwater trail on the Koppie Alleen section of the MPA could be constructed with underwater markers and a plastic information card with interpretation of the habitat printed on it.
  - Interpretative boards for tourists, e.g. " MTN Whale boards " etc pamphlets, booklets, flyers. Visitor Centre with interpretation material at De Hoop Headquarters.
- Promote marine conservation through local, national and international media (Internet, newspapers, magazines, TV, etc.).
- Interpret and disseminate De Hoop MPA research for use by the non-research community.
- Ensure that staff, permanent and voluntary, are suitably trained to be competent and capable to carrying out their duties and have a complete knowledge of the De Hoop MPA environment and management issues.

8.3.2 Provide opportunities for the multiple use of the area that are consistent with the long term protection of natural resources.

- In consultation with user groups, develop user group guidelines, codes of conduct, and environmental briefing standards that allow for use in a manner that protects the environment. Periodic evaluations to monitor their effectiveness should be undertaken to recommend changes when necessary.
- Promote non-consumptive activities in the De Hoop MPA.

8.3.3 Address conflict between user groups over access to, and use of, the MPA.

- In partnership with user groups, develop appropriate signage, information on zoning and resource information to reduce user conflicts and ensure protection of the marine environment.
- Facilitate communication between user groups to address user issues.

8.3.4 Promote compliance with Regulations and awareness of the marine ecosystem through education of interested and affected parties.

- Provide information on the De Hoop MPA for inclusion in awareness at the community level, and provide support to educators to implement these materials.
- Conduct a public information campaign on the De Hoop MPA rules and regulations.
- Meet with other education stakeholders and interested and affected parties to coordinate and plan education programmes and messages.
- Disseminate information and encourage individual and community participation in the De Hoop MPA through the De Hoop Nature Reserve and Marine Protected Area Liaison Committee.
- Provide training opportunities for all reserve staff (including camp management staff as these staff are the frontline with visitor interaction regarding the MPA).

8.3.5 Encourage opportunities for the involvement and upliftment of previously disadvantaged communities in the vicinity of the Marine Protected Area.

- Promote the understanding of the benefits of the MPA to the local community.
- Encourage local representation in De Hoop Nature Reserve and Marine Protected Area Liaison Committee.
- Provide existing and future educational materials in a manner consistent with community educational backgrounds.

8.3.6 Enhance marine protected area management through partnerships at the local, provincial, national, and international levels.

- Consider development of a local MPA interpretative centre using the current Potberg Visitor Centre as a partnership opportunity.

8.3.7 Encourage public participation and voluntary compliance with Regulations through use of volunteers.

- Develop/enhance the volunteer training programme for the De Hoop MPA.
- Prioritise working with previously disadvantaged communities to encourage and support volunteer opportunities.
- Develop formal and informal education-based volunteer programmes.
- Introduce community-based volunteer research and monitoring programmes such as REEF (Reef Environmental Education Foundation).
- Develop recognition and benefits for volunteers (letter of reference, community recognition through media, hats, t-shirts, etc).

9.0 SCIENTIFIC RESEARCH AND MONITORING

9.1 OVERVIEW

Scientific research and monitoring are key components of MPA management. Scientific research is commissioned into specific fields to inform managers of biological or socio-economic processes that are important for the running of the MPA. Monitoring forms part of important feedback mechanisms that indicate the effectiveness of the MPA in achieving its defined goals. In addition, MPAs are used to support research projects of academic or commercial interest. All scientific research and monitoring should be compatible with MPA objectives. Existing and completed research and monitoring projects are listed in Appendix 9.

Two issues involving scientific research and monitoring in the De Hoop MPA are addressed here:

1) the research and monitoring requirements of the Managing Agency (see 9.3); and
2) the management of other research and monitoring within the MPA (see 9.5).

9.2 OBJECTIVES

1. To provide information for management decisions and strategies.
2. To maintain a current understanding of the state of the values of the MPA, and to identify threats at an early stage.
3. To facilitate scientific research and understanding of the physical, biological and socio-economic systems of the De Hoop MPA.

9.3 BASELINE COLLECTION, SCIENTIFIC RESEARCH AND MONITORING PRIORITIES

The baseline collection, scientific research and monitoring requirements of the Manager may either be conducted by (a) the Manager, (b) a contractor or (c) the Manager may encourage separately-funded research institutions to conduct this work.

The baseline collection, scientific research and monitoring requirements are separated into three categories:

1. Biodiversity and ecological processes;
2. Fisheries; and
3. Non-consumptive activities.

9.3.1 Biodiversity and Ecological Processes

- Analyse and compile existing data to facilitate management of the MPA and to identify critical gaps in our information.
- Map the physical environment (bathymetry) to determine the distribution of ecosystems (e.g. reef vs sand).
- Survey the ecosystems of the MPA to determine habitat diversity and community structure (e.g. fish, corals, sponges).
- Identify and investigate ecological processes to gain an understanding of the MPAs ecosystem functioning.
- Conduct monitoring of episodic events (e.g. red tides, bleaching events).
- Identify biodiversity targets (e.g. rare and threatened species).
- Identify threats to biodiversity targets.
- Measure trends in the state of biodiversity and the magnitude of threats.
- Identify and establish benchmark areas for monitoring and scientific research and investigate the possibility of zoning to provide protection for research and monitoring sites.
- Measure impacts/change as a result of activities occurring in the MPA.
- Develop a spatial database that includes biodiversity information, threats and trends in their status (GIS system).
- Develop, implement and maintain databases of information relevant to the management of De Hoop MPA and develop a meta-database that will provide an interface capable of accessing information from all these databases.
- Interpret and feed research and monitoring data to management (compliance and educators) and the community.

- Establish protocols and methods to determine threshold limits of acceptable change on a site specific basis (related to zoning). In particular, determine acceptable levels of use by tourism/recreation.
- Develop collaborative research and monitoring arrangements with tertiary institutions and other research groups.
- Ensure information from stranded marine animals is collected, collated and interpreted.

9.3.2 Fisheries Management Actions

- Quantify and describe marine resource use and measure trends.
- Assess impacts of fisheries on biodiversity and ecosystem functioning.
- Assess impacts of the subsistence fishery.
- Collect data on impacts of line fishing on non-target species, especially impacts on ragged-tooth sharks.

9.3.3 Non-consumptive user activities

- Analyse and compile existing data to facilitate management of the MPA and to identify critical gaps in our information.
- Identify and document activities occurring in the MPA.
- Quantify user activities and measure trends.
- Determine socio-economic profiles (e.g. questionnaires, value of the MPA, financial gain to the surrounding community), to target education and understand issues leading to the displacement of users.
- Develop a spatial database that collates user information (GIS system).

9.4 EVALUATING MANAGEMENT EFFECTIVENESS

Research and monitoring projects will be designed to determine whether the objectives of the MPA are being met. Monitoring will be designed to accurately reflect the changes that require a management response and must be integral to the biophysical management and management effectiveness process. The choice of indicators/monitoring must be scientifically credible, easy to understand, easy to regularly monitor, be cost effective, have relevance to policy and management needs

and purposely contribute to monitoring of the management plan towards its improvement. Appendix 10 includes some references of research/monitoring that has already been conducted in De Hoop MPA.

The following Guidebook offers managers a process and methods to evaluate the effectiveness of their MPA for the purposes of adaptive management:

Pomeroy, Robert S., Parks, John E. and Watson, Lani M. (2004) How is your MPA doing? A Guidebook of Natural and Social Indicators for Evaluating MPA Management Effectiveness, IUCN, Gland, Switzerland & Cambridge, U. K.

MCM has developed a generic list of monitoring that should be conducted at MPAs (Appendix 11). This monitoring is focused on a national level rather than at a local level. That is, it is envisaged that this monitoring should occur at all South African MPAs to get an overall view of the state of the marine environment in South Africa.

10.0 ADDITIONAL STATUTORY PROVISIONS AND POLICY REQUIREMENTS

These requirements are based on the Key Performance Areas described in the previous section and are considered necessary to adequately manage De Hoop MPA in addition to the MLRA. These additional requirements need to be included in legislation to enable their enforcement. It has been indicated in each case how this activity should be managed as follows:

- via "Permit conditions"; or
- via "Marine Protected Area Regulations" under Section 43 of the MLRA; or
- Regulations under the MLRA.

Table 2 summarises the extra statutory provisions required to ensure the proper management of the MPA.

10.1 MPA Boundary and Zoning

(a) There needs to be some clarification on the MPA boundaries.

Justification
To enable enforcement of MPA requirements, the current boundary definition needs to be more accurately defined.

(b) The MPA boundary coordinates must be reviewed to include airspace as part of the MPA and the MPA should be registered as a "restricted airspace" with the Civil Aviation Authority through a legal process.

The revised boundary coordinates as follows: The Marine Protected area includes the air space to 2500ft above sea level.

Justification – There needs to be an ability to manage airspace, i.e. low flying aircraft that may impact on the natural values of the MPA (e.g. whales and seabirds/shorebirds) and to manage amenity issues. The adjacent De Hoop Nature Reserve was listed under the World Heritage Convention Act 1999 in 2004 and under

this legislation aircraft must not fly below 2500ft. For consistency, the height restriction should also be 2500ft for the MPA.

(c) There should be two types of zones named within the MPA as follows (Figure 3):

Restricted Zone (no fishing but vessel access allowed); and

Sanctuary Zone (no fishing and no vessel access). [Regulations under the MLRA].

(i) The Restricted Zone is as follows:

The De Hoop MPA Restricted Zone is between Hamerkop (34°26'55S, 20°40'063E) and the eastern boundary of the MPA.

(ii) The Sanctuary Zone is as follows:

De Hoop Sanctuary Zone is between Hamerkop (34°26'55S, 20°40'063E) and the western boundary of the MPA.

Justification – Research suggests that the area from Hamerkop to the western boundary of the MPA is extremely important to Southern Right whales. To reduce detrimental impacts on these whales, it is considered appropriate for vessels to be excluded from this area.

Figure 3 - Proposed New Zoning of De Hoop Marine Protected Area – MCM TO PROVIDE

(d) Consideration to be given to extending the MPA offshore and in eastward and westward directions.

Offshore

A representation of the soft sediment habitat should to be included in the MPA.

Justification - The soft sediment habitat is not adequately represented in the MPA. This habitat is productive for fisheries and there needs to be an ability to manage fishing activity in this habitat more effectively.

Westward

Extend the western boundary of the MPA to cover the whole area adjacent to *Denel's Overberg Toetsbaan and the South African Air Force Test Flight and Development Centre (TFDC)* and to include the Heuningnes Estuary.

Justification - OTB/DENEL are supportive of this extension to include the entire marine area adjacent to Denel's Overberg Toetsbaan and the South African Air Force Test Flight and Development Centre (TFDC) (Chadwick pers comm.).

Inclusion of the estuary would increase the fisheries productivity of this MPA by protecting spawning grounds. The westward extension would also increase protection of the whales that frequent this area.

Eastward

Extend the eastern boundary to include St. Sebastian Bay and the Breede River Estuary.

Justification - Currently there are no MPAs in South Africa that include two estuaries. There is very limited protection (i.e. no fishing areas) of estuaries in South Africa generally and including estuaries adjacent to MPAs. Protection of a spawning area will improve general fisheries production.
St. Sebastian Bay is also a very important area for the Southern Right whales so inclusion of this area into the MPA would give more ability to manage and protect these animals.

Attempts are also being made to expand the terrestrial conservation area to include land on the western bank of the Breede River thus complementing an extension of the MPA.

10.2 Fishing

(a) Fishing gear on board vessels that enter the MPA for the purpose of passage must be stowed [Marine Protected Area Regulation].

Justification – Fishing is not permitted in the MPA, therefore fishing gear should not be easily accessible when traversing the MPA in a vessel.

(b) No person may be in possession of a speargun in the Marine Protected Area [Marine Protected Area Regulation].

Justification – Spearfishing is not permitted in the MPA, therefore people should not be carrying spearguns.

(c) No person may be in possession of fish when in a vessel in the MPA [Marine Protected Area Regulation].

Justification – Fishing is not allowed in De Hoop MPA, therefore, fish should not be present on vessels in the MPA.

10.3 SCUBA diving

(a) No person may SCUBA dive or attempt to SCUBA dive in the Marine Protected Area except on the authority of a Recreational SCUBA diving permit [Marine Protected Area Regulation].

Justification - SCUBA diving has the potential to impact on the natural resources of the MPA. Specific management is required to ensure dive sites are protected.

(b) No person may operate or attempt to operate a SCUBA diving business in the Marine Protected Area except on the authority of a SCUBA diving business permit [Marine Protected Area Regulation].

Justification – SCUBA diving businesses have the potential to impact on the natural resources of the MPA, especially large groups that regularly access particular sites. Specific management is required to ensure dive sites are protected.

(c) No person may SCUBA dive or attempt to SCUBA dive in the Marine Protected Area before sunrise and after sunset [Marine Protected Area Regulation].

Justification – Many illegal activities occur in MPAs during the night hours so to ensure greater compliance with the MLRA, diving will be restricted to daylight hours. Codes of Conduct have been developed to ensure that only low impact diving occurs, this would be difficult to manage during the night hours.

(d) The following should be included as standard conditions on SCUBA Diving Business Operators permits:

- The permittee must submit to MCM the previous month's data on the "Monthly Data Return Sheet" by the 7th day of the subsequent month.
- The permittee must radio the staff at the access gate at De Hoop Nature Reserve of their arrival into the MPA and advise how many clients are on board and where in the MPA they will be accessing.

Justification - It is essential that CapeNature collects data on the number of divers accessing various locations to manage cumulative impacts and this will also assist with compliance activities.

(e) The following must be included as standard conditions on all SCUBA Diving Permits (Recreational and SCUBA Diving Business Operators):

- The permittee must not conduct fish feeding, chumming or dump any material, or discharge any attractants in the MPA.
- The permitte must not use cages for the purposes of cage diving in the MPA.

- The permittee must not use or possess any electro/acoustic-discharging devices in the MPA.
- The permittee must not use or possess a Diver Propulsion Vehicle in the Restricted Zones of the MPA.
- The permittee must not remove or attempt to remove any historical artefact.
- The permittee must operate in accordance with the "De Hoop MPA Diver Code of Conduct".

Justification – These conditions are considered necessary to ensure that only low impact diving occurs reducing impacts on the values of the MPA.

10.4 Use of Vessels

(a) The following activities are prohibited:
- Removal, moving, possessing, damaging or interfering with a demarcation buoy or sign in the MPA
- Placing any buoy or sign in the MPA except under a Section 81 Exemption. [Marine Protected Area Regulation]

Justification – Indiscriminate placing of buoys or signs in the MPA can create amenity issues and become navigation hazards.

(b) The installation of private moorings is prohibited [Marine Protected Area Regulation].

Justification – The installation of private moorings technically creates private ownership of a portion of the MPA. Private moorings have the potential to create amenity and navigation problems in the MPA, especially if these moorings are not well maintained. The installation of private moorings without a permit is prohibited in terms of the Seashore Act (Act 21 of 1935) and CapeNature would not support the installation of a private mooring within a MPA.

(c) No person may conduct or attempt to conduct any motorised watersports within the marine protected area [Marine Protected Area Regulation].

Justification – Motorised watersports are considered to have an impact on the natural values of the MPA and are in most instances not compatible with the objectives of De Hoop MPA. They have potential to disturb shorebirds/seabirds and impact on the amenity values of the MPA. Forty percent of Southern Right whale calving occurs in this MPA, with a possibility of resident populations in the area year round. Therefore, operation of motorised watersports would impact on these animals.

(d) Permitted non-motorised watersports may only occur in the designated areas [Marine Protected Area Regulation].

Justification – Non-motorised watersports can range from very low impact (e.g. kayaking) to fast moving higher impact activities (e.g. kite surfing). There needs to be an ability to designate areas within the MPA to ensure there is no conflict between users and to reduce impact on the MPA.

(e) No person may attempt to conduct kite surfing or wind surfing in the Marine Protected Area.

Justification – These activities are very visual and fast moving and have the potential to create amenity issues and may disturb Southern Right whales.

(e) No person may attempt to use any type of personal watercraft or hovercraft within the Marine Protected Area [Marine Protected Area Regulation].

Justification – Personal watercraft and hovercraft are considered to have an impact on the natural values of the MPA and are in most instances not compatible with the objectives of De Hoop MPA. They have potential to disturb shorebirds/seabirds and impact on the amenity values of the MPA. Forty percent of Southern Right whale calving occurs in this MPA, with a possibility of resident populations in the area year round. Therefore, operation of a personal watercraft and hovercraft would impact on these animals.

(e) No person may moor or anchor any vessel within the Marine Protected Area (except under a Section 81 Exemption for Research) [Marine Protected Area Regulation].

Justification – The installation of moorings is not permitted in the MPA (as noted in 9.4(b)) and anchoring may cause damage to habitat.

(g) All vessels that deploy divers must display an alpha flag [Marine Protected Area Regulation].

Justification – To reduce user conflict and ensure diver safety.

10.5 Tourist Programmes

(a) No person may operate or attempt to operate a Tourist Programme in the Marine Protected Area except on the authority of a Tourist Programme permit. [MPA Regulation]

Justification – There is the potential for many tourist programmes to occur in the MPA apart from the SCUBA Dive Business Operations. This regulation is required to adequately manage all activities and to ensure equity among commercial user groups.

(b) The permittee must not operate between Hamerkop (34°26'55S, 20°40'063E) and Noetsie (34°27'9.0"S, 20°43'59.1"E [Permit condition].

Justification – This area is considered a "buffer zone" to reduce possible impacts of regular vessel activity on the Southern Right whales.

10.6 Other activities

(a) No person may conduct commercial photography or attempt to conduct commercial photography in the Marine Protected Area except on the authority of a commercial photography permit [Marine Protected Area Regulation].

Justification – This regulation is required to ensure equity among commercial user groups and to adequately manage this activity.

The following should be included as standard conditions on MPA Permits issued for Commercial Photography:

- Commercial photography will be levied at a daily charge for:
  (a) Documentary;
  (b) Feature or advertising; or
  (c) Filming with assistance of CapeNature staff or facilities.
- The holder of the MPA Permit for Commercial Photography must ensure CapeNature has free access to any footage/photographs collected in the MPA for non-commercial purposes.
- No object or equipment may be fixed to or rest upon any part of the substrata during filming activities in the Restricted zones.
- A permitte must advise the Conservation Manager on their arrival.

(b) No person may use aircraft or attempt to use aircraft in the Marine Protected Area except on the authority of a permit to use aircraft in the Marine Protected Area [Marine Protected Area Regulation].

Justification – There is the potential for user conflict regarding low flying aircraft, including amenity issues and impacts on natural values, including breeding birds.

(c) No person may camp or attempt to camp in the Marine Protected Area [Marine Protected Area Regulation].

Justification – This activity is not compatible with the natural values of the MPA and to ensure consistency with the adjacent De Hoop Nature Reserve where camping is only permitted at designated sites.

(d) No person may light or attempt to light a fire in the Marine Protected Area [Marine Protected Area Regulation].

Justification – The MPA is adjacent to De Hoop Nature Reserve which contains high fire danger habitat - fynbos.

(e) Dogs are permitted in the MPA if contained within a vessel [Marine Protected Area Regulation].

Justification – Uncontrolled dogs cause disturbance to breeding shorebirds.

(f) No person may conduct an organised event or attempt to conduct an organised event in the Marine Protected Area except on the authority of a permit [Marine Protected Area Regulation].

Justification – Events involving concentrated groups of people can have undesirable impacts on the MPA which must be managed.

10.7 Scientific Research

The following must be included as standard conditions on Exemptions under Section 81 of the MLRA for Scientific Research:

- The permittee must submit a report after each field visit.
- The permittee must submit annual reports and final reports to CapeNature and MCM at the completion of their scientific research programmes.
- The permittee must ensure that all equipment deployed in the MPA is marked with the permit holder's name and their permit number.
- The permittee must ensure that all equipment is removed at the end of the study and prior to the expiry of the Scientific Research Permit.
- The permittee must inform the Conservation Manager of their arrival date one month in advance and must advise the Conservation Manager on their arrival to conduct activities.
- The permittee must not use rotenone, poisons, or chemicals to catch fish in the MPA.
- The permittee must ensure that where footage/photographs are collected, CapeNature has free access to these footage/photographs.
- The permittee must ensure that any footage/photographs collected may only be used for financial gain with written permission from MCM/CapeNature.

Justification – These conditions are necessary to adequately manage Scientific Research. Section 44 of the MLRA states that no person may use, permit to be used, or attempt to use any poison or other noxious substance for the purpose of killing, stunning, disabling or catching fish, or of in any way rendering fish to be caught more easily. However, holders of Section 81 Exemptions under the MLRA may be excluded from this requirement, therefore wording from Section 44 should be included as a standard

condition. The use of these chemicals is indiscriminate and not compatible with the goals of the MPA.

10.8 Permit Types

Two types of permits will be issued for activities in De Hoop Marine Protected Area:

(a) Marine Protected Area Permits

Marine Protected Area Permits are issued under Section 43 of the *Marine Living Resources Act (No. 18 of 1998)*. Until specific permit requirements are promulgated, these permits will authorise activities not covered under Section 13 or Section 81.

(b) Section 81 Exemptions for Scientific Research

Research Permits are issued under Section 81 of the MLRA which states "*If in the opinion of the Minister there are sound reasons for doing so, he or she may, subject to conditions that he or she may determine, in writing exempt any person or group of persons or organ of state from a provision of this Act*".

All permits will be subject to a fee under Section 25 of the *Marine Living Resources Act (No. 18 of 1998*).

Permittees and general users should be made aware of the fact that the South African Defence Force conducts activities at times requiring users in the MPA and terrestrial reserve to evacuate the area.

Table 2
Summary of Additional Statutory Provisions Required for the De Hoop MPA (see Action 5.3.2)

Activity	**MPA**
All forms of fishing	No(a)(b)
Recreational/Tourist Activities	
Tourist Programmes (including marine animal watching, excluding motorised watersports)	P[43](c)(d)
Tourist Programmes involving motorised watersports and aircraft use below 2500ft	No
Recreational vessel use (excluding motorised watersports)	Yes (a)(b)(d)(e)
Recreational Motorised watersports (excluding Personal watercraft)	No
Recreational aircraft use below 2500ft	P[43]
Commercial Boat-based whale watching	No
Use of Personal Watercraft	No
Use of Hovercraft	No
Dogs	Yes(f)
Camping	No
Light a fire	No
SCUBA diving	
Recreational diving	P[43](e)(g)
SCUBA diving businesss	P[43](c)(g)
Anchoring/Mooring	
All users	No
Installation of private moorings	No (h)
Competitions	
Organised event	P[43](c)(e)
Photography	
Recreational	Yes
Commercial photography	P[43]
Scientific Research	P[81]
Vehicles	No(i)

P[43] Permit required under Section 43 of the MLRA (**Marine Protected Area Permit**)
P[58] Permit required under Section 58 of the Regulations in terms of the *Marine Living Resources Act 1998* (Currently De Hoop MPA is outside of permitted commercial whale watching area)
Yes Allowed without a Permit
No Prohibited
(a) Must not be in possession of fishing gear/spearguns in the MPA
(b) Must not be in possession of fish in the MPA
(c) Tourist programme vessels may only access between Noetsie and the eastern boundary of the MPA (no tourist programme vessel access between Noetsie and the western boundary of the MPA)
(d) Kite surfing and wind surfing are not permitted
(e) Recreational vessels may access between Hamerkop and the eastern boundary of the MPA (no vessel access between Lekkerwater and the western boundary of the MPA)
(f) Dogs only permitted in the MPA if contained within a vessel
(g) The Plan states that all SCUBA diving will be restricted to daylight hours. Recreational and SCUBA Diving Business Operators may not dive before sunrise and after sunset. A permit condition will also be included requiring the vessel operators to log all trips with CapeNature.
(h) Note that there are also requirements under the *Seashore Act (Act 21 of 1935)* regarding installation of moorings
(i) Must only occur with a Permit issued in terms of the National Environmental Management Act.

11.0 DE HOOP NATURE RESERVE AND MARINE PROTECTED AREA LIAISON COMMITTEE

11.1 OVERVIEW

A De Hoop MPA Liaison Committee will be amalgamated with the De Hoop Nature Reserve Liaison Committee to discuss management activities, monitoring and research in the MPA.

There is no statutory requirement to convene a Liaison Committee, however, to ensure community involvement in managing the MPA, it is recommended that a Liaison Committee be established. The Committee will aim to involve all stakeholders associated with the De Hoop MPA (See Actions 5.2.1, 5.2.2, 5.2.3, 5.2.4 and 5.2.5).

11.2 IMPLEMENTATION PROCESS FOR A LIAISON COMMITTEE

CapeNature recognises the importance of co-management of our marine resources. The Committee will be representative of the current stakeholders (see Actions 5.1.3, 5.2.1 to 5.2.5).

- **Composition of the Committee**

The Committee will be formalised as soon as possible. A formal letter of invitation and advertisements placed in local newspapers calling for nominations to participate will be forwarded to appropriate groups. Each group will nominate in writing a representative and also an alternative representative, who will represent their constituency only when the nominee is unavailable, and forward this name to CapeNature. Representatives will include:

- CapeNature (MPA manager, management representative);
- Marine and Coastal Management (MCM);
- Recreational diving community;
- SCUBA Dive Business Operators;
- Commerce;
- Tourism industry;
- Recreational fishers;
- Fishing charter operators;

- Rate Payers Association
- SAMSA;
- SAPS Coast Patrol;
- Municipality
- NGOs.

The current De Hoop Nature Reserve Liaison Committee has the following representatives:

- Chair – CapeNature;
- Vice-Chair – CapeNature
- Secretary – CapeNature;
- Any member of public.

Chair's role: The Chair will be a CapeNature staff member. The Chair schedules and sets agendas for the Committee meetings and presides over all meetings of the Committee, and ensures that meetings are run according to accepted meeting practices, signs all correspondence and documents authorised by the Committee, and generally represents the Committee's interests and concerns to the public.

Vice-Chair: The Vice-Chair will be a CapeNature staff member, which will serve as Chair in the absence of the Chair and assists as necessary in performing executive duties of the Committee.

Secretary: Prepares and convenes meetings, circulates notices and takes minutes. The secretariat (secretary plus resources will be supplied by CapeNature).

Roles of the Liaison Committee

1. Provide input to CapeNature on De Hoop MPA plans and proposals.
2. Help identify and resolve issues and conflicts, including emerging issues.
3. Serve as a liaison between the Committee and the community, disseminates information about De Hoop MPA to the various stakeholders and brings the concerns of stakeholders and the public to the CapeNature staff.
4. Assist in identifying potential partners and stakeholders with which the De Hoop MPA should be working.
5. Assist in identifying and securing priority partnerships, with special reference to previously disadvantaged communities.

6. Provide technical and background information on issues facing the De Hoop MPA.

- **Committee meetings**

  It is anticipated that the Liaison Committee may meet every sixth month. The Chair will develop meeting agendas and make those available to Committee members in advance. Meeting notes will be taken by a CapeNature staff member, and be available to the public upon request.

- **Financing of the Liaison Committee**

  The cost of the secretary, the hiring of venues, paper postage, and miscellaneous items required for meetings will be covered by CapeNature, provided MCM is forthcoming with their annual budget commitment.

APPENDIX 1
LEGISLATION

Authority for the establishment of MPAs is provided by Section 43 of the *Marine Living Resources Act 18 of 1998*, (hereinafter described as the Act), as follows:

(1) The Minister may, by notice published in the Gazette, declare an area to be a marine protected area--
   (a) for the protection of fauna and flora or a particular species of fauna or flora and the physical features on which they depend;
   (b) to facilitate fishery management by protecting spawning stock, allowing stock recovery, enhancing stock abundance in adjacent areas, and providing pristine communities for research; or
   (c) to diminish any conflict that may arise from competing uses in that area.

(2) No person shall in any marine protected area, without permission in terms of subsection (3)
   (a) fish or attempt to fish;
   (b) take or destroy any fauna or flora other than fish;
   (c) 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;
   (d) construct or erect any building or other structure on or over any land or water within such a marine protected area; or
   (e) carry on any activity which may adversely impact on the ecosystems of that area.

(3) The Minister may, after consultation with the Forum, give permission in writing that any activity prohibited in terms of this section may be undertaken, where such activity is required for proper management of the Marine Protected Area.

APPENDIX 2

OTHER RELEVANT LEGISLATION/POLICY

- *National Environmental Management: Protected Areas Act (No. 57 of 2003)* – Section 38(4) states "*Marine and terrestrial areas with common boundaries must be managed as an integrated area by a single management authority*"

- *National Environmental Management: Biodiversity Act (No. 10 of 2004)*

- *Maritime Zones Act (No. 15 of 1994)*

- *Sea Birds and Seals Protection Act (No. 46 of 1973)*

- *Sea Shore Act (No. 21 of 1935)*

- *Nature and Environmental Conservation Ordinance, (Ordinance 19 of 1974)*

- *National Heritage Resources Act 1999*

- Coastal Management Policy Programme 1998: Coastal Policy Green Paper: Towards Sustainable Coastal Development in South Africa, Cape Town: The Department of Environmental Affairs and Tourism

- Coastal Management Policy Programme 2000: White Paper for Sustainable Coastal Development in South Africa, Cape Town: The Department of Environmental Affairs and Tourism

APPENDIX 3

RELEVANT CONTINGENCY PLANS

MCM to provide more information on contingency plans that are currently available

DEAT (2002) Coastal Oilspill Contingency Plan, No. 8 Knysna Zone

SANCCOB (2005) SANCCOB Contingency Plan for the Capture, Transport, Rehabilitation and Release of Oiled Seabirds Following a Major Oil Spill off the South African Coast

APPENDIX 4

LIST OF SPECIES PRESENT IN THE MPA

MCM TO PROVIDE

APPENDIX 5

DEFINITIONS OF TERMS USED IN THE MANAGEMENT PLAN

AIRCRAFT – Any craft capable of self-sustained movement through the atmosphere, excluding hovercraft.

ALPHA FLAG - means the 'diver down flag' used to indicate that diving operations are in progress and other vessels must keep clear (as taken from *MLRA Regulations)*

BIOPROSPECTING – In relation to indigenous resources, means any research on, or development or application of, indigenous biological resources for commercial or industrial exploitation, and includes:

(a) the systematic search, collection or gathering of such resources or making extractions from such resources for purposes or such research, development or application:
(b) the utilisation for purposes of such research or development of any information regarding any traditional uses of indigenous biological resources by indigenous communities; or
(c) research on, or the application, development or modification of, any such traditional uses, for commercial or industrial exploitation (as taken from *National Environmental Management: Biodiversity Act 2004*).

CAGE – Equipment that has been submerged in the water for the purpose of protection from marine animals.

CAGE DIVING – Diving in a cage for the purpose of viewing marine animals.

CHUMMING – Depositing organic material or products into the environment for the purpose of attract marine animals, but not including the baiting of hooks for linefishing.

COASTCARE – An educational programme developed by Marine and Coastal Management to promote voluntary compliance and public awareness.

COMMERCIAL ACTIVITY – An activity conducted for financial gain.

COMMERCIAL BOAT BASED WHALE WATCHING – May only occur with a permit issued under Section 58 of the Regulations in terms of the *Marine Living Resources Act 1998*.

COMMERCIAL FISHING – Fishing for any of the species that have been determined by the Minister in terms of section 14 to be subject to the allowable commercial catch or total applied effort or parts of both. (as taken from the MLRA, 1998).

COMMERCIAL LINE FISHING – Fishing conducted in terms of a linefishing right granted by the Department of Environmental Affairs and Tourism (under Section 21 of the MLRA).

COMMERCIAL PHOTOGRAPHY – The use of still, video or cine camera equipment for the recording of images and these images are used for financial gain.

CONTROLLED ZONE – the zone where only linefishing from shore is permitted (no bait collection).

DEMARCATION BUOY - means a buoy installed to mark the boundaries of the Marine Protected Area and its zones (as taken from *MLRA Regulations*).

DESIGNATED AREA – means an area within a zone or zones set aside for the purposes for special management.

DIVER PROPULSION VEHICLE – A motorised unit that is used to assist or propel divers.

EDUCATION PROGRAMME – An activity that is:

(i) a component of a course conducted by a school or tertiary institution that is recognised by a provincial or national department responsible for education; or

(ii) conducted by an overseas institution that is accredited by the national body responsible for education in the country in which the institution is established and is recognised in South Africa by a provincial or national department responsible for education.

ELECTRO-ACOUSTIC DISCHARGING DEVICE - means any device that emits electrical or sonic pulses intended to stun, paralyse, disorientate, repel or kill any form of marine life (as taken from *MLRA Regulations*).

FISH – The marine living resources of the sea and the seashore, including any aquatic plant or animal whether piscine or not, and any mollusc, crustacean, coral, sponge, holothurian or other echinoderm, reptile and marine mammal and includes their eggs, larvae and all juvenile stages, but does not include sea birds and seals. (MLRA, 1998)

FISH FEEDING – Intentionally providing food to attract fish.

FISHING CHARTER - A commercial operation that provides transport, leads or guides fishers for financial gain.

FISHING COMPETITION – A fishing competition that is open to the public for a fee and/or one in which prizes are offered.

HOVERCRAFT – means a vehicle that travels on a cushion of air (as taken from *MLRA Regulations*).

the Manager – CapeNature (CapeNature).

MARINE LIFE – includes any aquatic plant or animal whether piscine or not, and any mollusc, crustacean, coral, sponge, holothurian, echinoderm, reptile and marine mammal and includes their eggs, larvae and all juvenile stages, and includes sea birds and seals.

the MINISTER - means the Minister of Environmental Affairs and Tourism

MOTORISED WATERSPORTS – The operation of motorised vessels to tow recreational equipment (e.g. paraflying, water skiing).

NETS – Includes beach-seine net, bottom trawl-net, cast-net, drag-net, hoop-net, purse-seine-net, shove-net and set-net.

NON-MOTORISED WATERSPORTS – The operation of vessels that are not motorised (e.g. sea kayaks, surf kites)

ORGANISED EVENT - An organised event, including competitions but excluding fishing competitions.

PERSONAL WATERCRAFT - means a power driven vessel that has a fully enclosed hull and that is designed to be operated by a person standing, crouching or kneeling on it or sitting astride it (as taken from *MLRA Regulations*).

POWERHEAD – means a device by means of which a fish may be taken and may be attached to a spear or speargun and that consists of or contains an explosive charge(as taken from *Government Notice 26433 of MLRA Regulations*).

RECREATIONAL DIVING - An individual or group who undertake scuba diving activities without financial gain.

RECREATIONAL FISHING – means any fishing done for leisure or sport and not for sale, barter, earnings, or gain. (MLRA, 1998).

RECREATIONAL LINE FISHING – Fishing in terms of a recreational fishing permit using a line with less than ten fishing hooks.

RECREATIONAL PHOTOGRAPHY - The use of still, video or cine camera equipment for the recording of images and these images are not used for financial gain.

RESTRICTED ZONES – the Zone where fishing is prohibited.

RISK ASSESSMENT – A process that involves identifying the valued attributes of the marine protected area that are considered to be at risk and determining when an impact is deemed to be significant on these values.

SCIENTIFIC RESEARCH - means research carried out by a recognised institute established for the purposes of research, or research carried on by a recognised institute of higher learning, provided that to undertake such scientific research the recognised institute requires its staff, students or contractors to enter the Marine Protected Area (as taken from *MLRA Regulations*).

SCUBA DIVING - means swimming below the surface of the sea with the aid of compressed or pumped air or other gases (as taken from *MLRA Regulations).*

SCUBA DIVING BUSINESS - means a commercial enterprise which involves transporting, guiding or providing SCUBA gear to SCUBA divers (as taken from *MLRA Regulations).*

SPEARFISHER – means a person who undertakes fishing with the use of a speargun (as taken from *MLRA Regulations*).

SPEARFISHING – Fishing by means of a speargun.

SPEARGUN - means a device by which a spear is projected by mechanical or pneumatic means (as taken from *MLRA Regulations*).

STOWED – secured in such a way that it is not available for immediate use.

SUBSISTENCE FISHER - A natural person who regularly catches fish for personal consumption or for the consumption of his/her dependents, including one who engages from time to time in the local sale or barter of excess catch, but does not include a person who engages on a substantial scale in the sale of fish on a commercial basis (MLRA, 1998).

TOP MAN – A person who remains on a vessel from which divers have alighted. A top man must hold a commercial skipper's licence when operating a SCUBA diving business and must hold at least a sport and recreational Skipper's Licence when conducting recreational diving.

TOURIST - A person who is in the marine protected area for recreation, including, for example, recreational fishing or sight seeing.

TOURIST PROGRAMME – An activity conducted for financial gain that includes the provision of transport, accommodation or services for tourists, advertising or promoting the use of a marine protected area as part of the programme, advertising or promoting the use of a marine protected area as a feature associated with a resort or tourist facility on land adjoining the area and includes traversing the De Hoop Marine Protected Area to conduct tourist programmes outside of the MPA.

TRAVERSING – a vessel entering the MPA for the purpose accessing another area outside of the MPA.

APPENDIX 6

SEABIRD BREEDING SITES

CAPENATURE TO PROVIDE MAP

APPENDIX 7

DE HOOP MPA DIVER CODE OF CONDUCT

This Divers Code of Conduct was based on the Ezemvelo KwaZulu-Natal Wildlife brochure entitled "Sodwana Bay Diver's Guide" prepared by Jone Porter in 1999 and was further refined with CapeNature through the development of the De Hoop MPA Management Plan. Modifications have also been made to be in accordance with current legislation.

Vessels

1. Skippers should familiarise themselves with the local conditions and rules before launching.
2. A top man must be present at all times on the dive vessel. The top man must be a registered skipper.
3. Vessels must fly an Alpha flag if there are divers in the water.
4. Each dive vessel must remain within 30 metres of its surface marker.
5. A person in control of another vessel must not bring a boat closer than 50 metres to a dive vessel displaying an alpha flag.
6. No anchoring may take place within the Marine Protected Area, except in cases of emergency.

Diving

7. Divers must adhere to training standards and guidelines developed by recognised national certifying organisations and should not dive beyond their qualification. To dive in De Hoop MPA, divers must have a minimum of and Advanced diver qualification
8. Dive Master should ensure that divers skills are up to standard –skills test. If you haven't dived in a while your skills may need sharpening. Before heading to the reefs, spend some bottom time familiarising yourself with buoyancy and other techniques again.
9. All Recreational dive groups and SCUBA diving business groups must tow a visible surface buoy.
10. Do not touch the reef areas - this causes breakages.
11. Divers are discouraged from wearing gloves-this prevents holding onto the reef. Holding onto the reef in a current or surge is particularly damaging and gloves can be a major vector of toxins and diseases between species.
12. Reef damage by diver's fins is frequently caused by either kicking the reef or kicking up sand that can "choke" corals and other filter feeders.
13. Underwater photographers should exercise extreme caution when taking close-ups - no hanging on to marine life and no placement of equipment on the substrate.
14. Be careful with buoylines when going into caves.
15. Do not harass fish, especially territorial ones like clownfish which expend a lot of energy trying to fend you off.
16. Do not collect souvenirs (dead or alive). Everybody must have the opportunity to see an untouched environment.
17. Report environmental disturbances or destruction of your dive sites to CapeNature.

18. Never surround an animal/s. There should always be an area for the animal/s to move away from you.
19. Never touch marine animals. Don't hold onto turtles as they can drown easily.
20. Standard permit condition for Recreational SCUBA Divers and SCUBA Dive Business Operators will state that *" The permittee must not conduct fish feeding, chumming or dump any material, or discharge attractants in the MPA".*
21. Do not interfere with scientific equipment or markers.

Diving with Sharks

(the Diving with Sharks Code of Conduct is based on open meetings held at Umkomaas, KwaZulu-Natal on 19 July 2001 and 22 August 2001)

22. Divers should not enter recesses, caves, gullies, caverns, sandy patches or overhangs where sharks are likely to be resting.
23. Dive groups should be lead by a dive master who has undergone a standardised shark-diving awareness course.
24. Avoid descending on top of the sharks.
25. Relax and remain out of the shark's own space or COMFORT ZONE (do not approach closer than 3 metres to a shark).
26. Sharks have right of way.
27. In a current, pass over the top of, or around, a group of resting sharks.
28. Do not block the sharks' exits or wedge the sharks against the reef.
29. Do not TOUCH, CHASE or RIDE sharks.
30. Do not shine bright lights in the shark's eyes. Be aware that a strobe light from cameras can startle a shark. Strobe lights for photography should not be used at a distance of less than 5 metres from the shark. Divers should be considerate to both sharks and fellow divers and not chase off sharks as strobes do seem to affect the shark.
31. The sharks are often inquisitive. Should a shark approach, keep still, maintain buoyancy and breathe slowly, as a sudden exhalation will disturb a naturally inquisitive shark.

APPENDIX 8

INFORMATION REQUIRED FOR SCIENTIFIC RESEARCH APPLICATIONS

Applicants must:

1. Submit qualifications and experience.
2. Submit information on which research/educational institute they are affiliated with.
3. If the scientific research involves the use of vertebrates, provide contact details of appropriate ethics committee. When the scientific research has ethical approval, forward any supporting documents that demonstrate that you have clearance for the proposed scientific research from the Ethics Officer (MPA Permits for Scientific research will not be issued unless ethics approval, where required, has been received).

General Requirements

1. A description of the proposed scientific research including:

- the purpose of the proposed research (including a justification and need for the research);
- details of the proposed procedure/methodology. Include details of the number and types of species to be targeted as part of the research (ie. number and types of species/sampling period and total number and types of species to be collected);
- details of any related activities proposed, particularly within or adjacent to terrestrial protected areas (i.e. national parks or nature reserves);
- the proposed date of commencement of the scientific research including any timetable, the frequency and any seasonal variations;
- details of any transport associated with the proposed activities including vessel capacity, size (length and draft), name, registration number, number and size of engines and holding tank facilities.

2. A description of the location of the proposed scientific research including:

- the exact location in relation to the Marine Protected Area using accurate charts/maps;
- the existing use of the site and its location with relation to navigation channels;
- the existing use of areas adjacent to the location of the proposed research.

3. Information on the likely and/or potential effects on natural resources of the proposed activity, any environmental management arrangements proposed (e.g. rehabilitation of substrate, rubbish collection and disposal) and any water quality or other monitoring proposed to check the effects of the activity.
4. The number of research assistants involved in the research.
5. Methods proposed for reducing conflict with other users of the Marine Protected Area.
6. Details of safety issues and how these will be addressed.
7. Details of any public consultation which may have been conducted in relation to the proposal and the response of community groups, conservation groups and other interested parties (e.g. has there been any support or objections for the current proposal?).
8. Details of any biological samples that are to be sent overseas.
9. Details of any commercial benefits that may result from the proposed scientific research.

Restricted Zone/Sanctuary Zone and Coral/Anemone Collection Requirements

In recognition of the conservation significance of the Restricted Zone/Sanctuary Zone and also corals and anemones, before any consideration is given to destructive scientific research or scientific research involving collection of coral or anemones, the proponent will be required to demonstrate that:

a) there is a need for the proposed scientific research and/or coral/anemone collection;
b) the scientific research and/or coral/anemone cannot reasonably be obtained outside the MPA; and
c) the taking of coral/anemones and the associated research will contribute to the future management of the MPA and the long term conservation of marine resources; and

d) the proposed scientific research and/or coral/anemone collections will not threaten the survival of species occurring within the De Hoop MPA.

Please note that the following approvals may also be required to conduct scientific research within the De Hoop MPA.

- Ethics approval.
- Export Licence.

Scientific Research Permits will not be issued until copies of the above two approvals have been received.

APPENDIX 9

ONGOING SCIENTIFIC RESEARCH AND MONITORING PROJECTS

MCM TO FINALISE THIS LIST

1. **Project**: Oystercatcher Population Monitoring and Breeding Success (Phil Hockey Project?*)

Objective:

To monitor the breeding success of African Black Oystercatchers along the De Hoop MPA, and to ring all fledglings.

Explanation/Justification:

The African Black Oystercatcher breeds only on the coasts of Namibia and South Africa and is classified in the International Red Data Book as Near-Threatened. Due to the perceived growing threat to the species, the Oystercatcher Conservation Programme (OCP) was launched in January 1998. It was established that movement of surplus birds from protected to unprotected areas is too infrequent to buffer ailing populations. He Hoop MPA has one of the longest monitoring sites with regards to Oystercatcher breeding success and is thus a very important control area.

Implementation:

- Obtain rings from Avian Demography Unit (UCT) by end September.
- Continue with nest monitoring for the duration of the breeding season (Oct to March).
- Colour ring and SAFRING ring fledglings.
- Collect prey remains from feeding piles around nests and send to UCT.
- Compile report on breeding success and send to ADU, MCM and CapeNature.
- Send ringing data to SAFRING.

2. **Project**: Surf zone fish monitoring

Objective:

MCM TO PROVIDE DETAILS

Explanation/Justification:

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Implementation:

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3. Project: Whale population surveys (Peter Best project)

Objective:

Section 81 Exemption issued?

Explanation/Justification:

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Implementation:

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4. Project: Fish parasites (Potchefstroom, UCT)

Objective:

Section 81 Exemption issued?

Explanation/Justification:

***

Implementation:

******

Ad hoc data collection on the following:

Data collection	Data provided to
Whales	Dr Peter Best
Seabirds	Avian Demography Unit UCT
Dolphins	Dr Peter Best
Seals	Mike Meyer MCM
Stranded marine mammals	Dr Peter Best
Whale trail visitation	CapeNature
Vessel Activity	MCM

APPENDIX 10

LIST OF REFERENCES

MCM TO PROVIDE A LIST OF REFERENCES OF RELEVANT RESEARCH THAT HAS BEEN CONDUCTED AT DE HOOP MPA

Attwood, C. G (2003) Dynamics of the Fishery for Galjoen, *Dichistius capensis*, with an assessment of monitoring methods. Afr. J. mar. Sci 25: 311-330

Attwood, C. G & Bennett, B. A (1995) Modelling the effect of marine reserves on the recreational shore-fishery of the south-western cape, South Africa, S. Afr. J. mar. Sci 16: 227-240

Attwood, C. G & Cowley, P. D. (2005) Alternate explanations of the dispersal pattern of galjoen, *Dichistius capensis*. African Journal of Marine Science 27(1): 141-156

Best, P. B & Scott, H. A (1993) The distribution, seasonality and trends in abundance of Southern Right whales, *Eubalaena australis* off De Hoop Nature Reserve, South Africa. South African Journal of Marine Science 13: 175-186

Elwen, S. H & Best, P. B (2000a) Environmental factor influencing the distribution of Southern Right Whales (*Eubalaena australis*) on the south coast of South Africa. I: Broad Scale Patterns. Marine Mammal Science 20(3): 567-582

Elwen, S. H & Best, P. B (2000b) Environmental factor influencing the distribution of Southern Right Whales (*Eubalaena australis*) on the south coast of South Africa. II: Within Bay Distributions. Marine Mammal Science 20(3): 583-

Elwen, S. H & Best, P. B (2004) Female Southern Right whales (*Eubalaena australis*) Are there reproductive benefits associated with their coastal distribution off South Africa? Marine Ecology Progress Series 269: 289-295

APPENDIX 11

MCM GENERIC LIST OF MPA MONITORING

1. PHYSICAL OCEANOGRAPHY

(a) sea temperature

(b) beach profile

(c) currents (optional)

(d) turbidity (optional)

2. SPECIES

(a) intertidal species (age and abundance)

(b) fish (age and abundance)

(c) sensitive species (including rare and endangered, CITES listed and RED data listed species)

(d) alien species

3. POLLUTION

(a) oil

(b) heavy metals

(c) *E. coli*

(d) litter (e.g. plastic)

4. HUMAN ACTIVITY

(a) Visitor numbers (gate numbers, vessel numbers and type)

(b) visitor activities

(c) transgressions

APPENDIX 12
PERMIT APPLICATION PROCEDURE

Applications need to be made in writing to the Deputy Director General, marked clearly application for a MPA Permit and forwarded to:

Marine and Coastal Management
Private Bag X2
Roggebaai 8012

The application should clearly state the nature and purpose of the activity, where and when the activity will take place.

The fee will be communicated to the applicant upon application.

The applicant will be contacted as necessary regarding specific details of their application.

APPENDIX 13

EQUIPMENT REQUIRED TO MANAGE DE HOOP MPA

Equipment required to manage De Hoop MPA would consist of:

EQUIPMENT	REQUIRED	CURRENTLY AVAILABLE
Hand-held radios (IRC)	5	5
9 Mgh (Marine)Base Station	1	1
29 Mgh Mobile (hand-held)	3	3
29 Mgh Boat radio	3	3
6 - 8 metre Semi-rigid boat	1	1
12-15 metre boat	1	1
80hp Motors	4	4
6 - 8 metre boat trailer	1	1
15 metre boat trailer	1	1
Compass (boat)	2	1
Safety equipment	2	0
GPS plotter	2	1
4x4 Vehicle	1	1
Winch for 15 metre boat	1	1
Motorcycles	2	2
Binoculars (2 with range finder)	5	5
Cellphone	2	2
Stainless steel knives	5	5
First aid kits (2 trauma kits, 2 patrol kits)	4	4
Video camera with waterproof housing	1	1
Digital still camera with waterproof housing	1	1
SCUBA tanks	6	6
SCUBA kits	3	3
Compressor	1	1
Chest freezer	2	0