Template for Submission of Scientific Information to Describe Areas meeting Scientific Criteria for Ecologically or Biologically Significant Marine Areas

Title/Name of the area: Namaqua Coastal Area

Presented by
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Abstract (*in less than 150 words)*
The focus area is on the west coast of South Africa, in the Northern Province. Approximately 16 different Namaqua coastal, inshore and inner shelf type habitats are represented there. A large proportion of the focus area is characterized by habitat that is in relatively good (natural/pristine) condition, due to the dearth of anthropogenic pressures relative to other coastal areas in the Northern Province. Therefore the importance of the area for the conservation of the several threatened habitat types represented there (including four that have been classified as Critically Endangered), has been emphasized. The focus area is also considered to be of importance for the conservation of estuarine areas and of coastal fish species. In summary, the focus area is considered to be highly relevant in terms of the following EBSA criteria: 'Importance for threatened, endangered or declining species and/or habitats' and 'naturalness'.

Introduction
(To include: feature type(s) presented, geographic description, depth range, oceanography, general information data reported, availability of models)

The focus area is from the estuary of the Spoeg River to the estuary of the Sout River in the Northern Cape province of South Africa (Atlantic Coast), and from the high water mark to 120 m depth. It consists of Namaqua coastal, inshore and inner shelf type habitat, including ±16 different habitat types according based on recent habitat classifications (Harris et al. 2010, Sink et al. 2012). The associated pelagic environment is characterized by upwelling giving rise to very cold waters with very high productivity/chlorophyll levels (Lagabrielle 2009). Altogether, the focus area includes three functional estuaries according to van Niekerk and Turpie (2012).

Location
(Indicate the geographic location of the area/feature. This should include a location map. It should state if the area is within or outside national jurisdiction, or straddling both.)

The focus area is within the national jurisdiction of South Africa, occurring on the west coast, in the Northern Province. It is bounded to the north and south by the Spoeg and the Sout river estuaries, respectively. A locator map extracted from Majiedt et al. (2013) is given below.

Feature description of the proposed area
(This should include information about the characteristics of the feature to be proposed, e.g. in terms of physical description (water column feature, benthic feature, or both), biological communities, role in ecosystem function, and then refer to the data/information that is available to support the proposal and whether models are available in the absence of data. This needs to be supported where possible with maps, models, reference to analysis, or the level of research in the area)

About 16 of the >50 coastal/inshore habitat types identified for South Africa (Harrison et al. 2010, Sink et al. 2012) occur in the focus area. These include Namaqua coastal, inshore and inner shelf type habitat (Harris et al. 2010, Sink et al. 2012). There are also three functional estuaries in the focus area (van Niekerk and Turpie 2011). The associated pelagic environment is characterized by very high

productivity, high chlorophyll and very cold water (SST mean = 15.2°C), caused by upwelling (Lagabrielle 2009).

Currently the focus area is unprotected, although the terrestrial habitat adjacent to the part of the focus area that occurs between two of the river estuaries (the Groen and the Spoeg), is within the Namaqua National Park and is therefore protected.

Apart from habitat classification (Harris et al. 2010) and assessments of habitat status (e.g. Sink et al. 2012, van Niekerk and Turpie 2012), fish distribution data are available and have been used previously to assess priority coastal areas for protection in South Africa, including for the west coast where the focus area is situated (Turpie et al. 2000).

Feature condition and future outlook of the proposed area
(Description of the current condition of the area – is this static, declining, improving, what are the particular vulnerabilities? Any planned research/programmes/investigations?)

Sink et al. (2012) estimated the threat status of the ±54 coastal and inshore habitat types identified for South Africa by assessing the (weighted) cumulative impacts of various pressures (e.g. extractive resource use, pollution, development and others) on each habitat type. Of the ±16 habitat types represented in the focus area, 7 were shown to be threatened. These included four that are Critically Endangered (Namaqua Inshore Hard Grounds, Namaqua Inshore Reef, Namaqua Sandy Inshore, Namaqua Sheltered Rocky Coast), implying that very little (<= 20%) of the total area of these habitat types is in natural/pristine condition, and it is expected that important components of biodiversity pattern have been lost and that ecological processes have been heavily modified. A further one was classified as Endangered (Namaqua Mixed Shore) and two others as Vulnerable (Namaqua Muddy Inshore and Namaqua Very Exposed Rocky Coast).

Apart from the diversity of habitat types (including Critically Endangered and other threatened habitat types) that are represented in the focus area, Sink et al. (2012) determined that part of the coastal extent of the focus area (that between the Brak and Sout rivers) is the only stretch of coastal habitat in the Northern Cape province of South Africa that is in good (natural/pristine) condition. This is because very little mining (the most prominent anthropogenic pressure on this coastline) or other pressures have affected this section. Moreover, other habitat in the focus area (particularly that between the Spoeg and Groen rivers) was assessed to be mainly in fair condition, with little industry present in the area except for some boat-based mining for which SCUBA is used (Majiedt et al. 2013). Of the three functional estuaries in the focus area, two, (the Groen and the Spoeg) have been identified as national priorities for estuarine protection (van Niekerk and Turpie 2012).

The lack of marine protected areas in South Africa's Northern Cape province has been highlighted as an issue of concern (Sink et al. 2012, Majiedt et al. 2013). Considering this and the following characteristics of the focus area: (i) the diversity of habitat types represented there (including several threatened habitat types), (ii) the relative lack of human industry and consequently the good condition of much of the habitat in the area, (iii) the connectivity between part of the focus area and an established terrestrial national park, and (iv) the priority for national estuarine conservation of two of the river mouths in the area, most of the extent of the focus area has been identified as priority marine/coastal habitat for spatial protection (Sink et al. 2012, Majiedt et al. 2013). Furthermore, a complementarity analysis based on fish distribution data and presented in a well known paper by Turpie et al. (2000), indicated that the coast within the focus area is a priority area for fish conservation, irrespective of whether all South African coastal shelf fish species were considered in the analysis, or only those species endemic to southern Africa.

Assessment of the area against CBD EBSA Criteria

(Discuss the area in relation to each of the CBD criteria and relate the best available science. Note that a proposed area for EBSA description may qualify on the basis of one or more of the criteria, and that the polygons of the EBSA need not be defined with exact precision. And modeling may be used to estimate the presence of EBSA attributes. Please note where there are significant information gaps)

CBD EBSA Criteria (Annex I to decision IX/20)	**Description** (Annex I to decision IX/20)	**Ranking of criterion relevance** (please mark one column with an X)			
		No information	**Low**	**Medium**	**High**
Uniqueness or rarity	Area contains either (i) unique ("the only one of its kind"), rare (occurs only in few locations) or endemic species, populations or communities, and/or (ii) unique, rare or distinct, habitats or ecosystems; and/or (iii) unique or unusual geomorphological or oceanographic features.		x		
Explanation for ranking None of the coastal/inshore/inner shelf or pelagic habitat types represented in the focus area is unique to this area.					
Special importance for life-history stages of species	Areas that are required for a population to survive and thrive.			x	
Explanation for ranking The focus area includes three functional estuaries – estuaries are known to provide an important nursery function for coastal fish species (van Niekerk and Turpie 2000), many of which are in an over-exploited state (Mann 2000).					
Importance for threatened, endangered or declining species and/or habitats	Area containing habitat for the survival and recovery of endangered, threatened, declining species or area with significant assemblages of such species.				x
Explanation for ranking Seven of the ±16 habitat types represented in the focus area, have been shown to be threatened in terms of conservation status at a national level (Sink et al. 2012). These include four that are Critically Endangered (Namaqua Inshore Hard Grounds, Namaqua Inshore Reef, Namaqua Sandy Inshore, Namaqua Sheltered Rocky Coast), implying that very little (<= 20%) of the total area of these habitat types is in natural/pristine condition, and it is expected that important components of biodiversity pattern have been lost and that ecological processes have been heavily modified. A further habitat type that occurs within the focus area was classified as Endangered (Namaqua Mixed Shore) and two others as Vulnerable (Namaqua Muddy Inshore and Namaqua Very Exposed Rocky Coast). Considering (among other reasons) the diversity of threatened habitat types represented in the focus area and the relatively good condition of much of this habitat, the importance of the focus area for the conservation of the threatened habitat types represented there has been emphasized by Majiedt					

et al. (2013). The importance of the area for estuarine conservation has also been emphasized, given the presence of three functional estuaries and the fact that the conservation status of ±80% of South Africa's estuarine area is classified as threatened (van Niekerk and Turpie 2012).

Furthermore, populations of many coastal fish species in South Africa are under severe conservation threat, mainly due to overexploitation (Mann 2000). Using an iterative reserve selection procedure, Turpie et al. (2000) showed that the coastline coincident with the focus area is a key area for the protection of coastal shelf fish species in South Africa.

Vulnerability, fragility, sensitivity, or slow recovery	Areas that contain a relatively high proportion of sensitive habitats, biotopes or species that are functionally fragile (highly susceptible to degradation or depletion by human activity or by natural events) or with slow recovery.	x			
Explanation for ranking					
Biological productivity	Area containing species, populations or communities with comparatively higher natural biological productivity.			x	
Explanation for ranking The pelagic environment associated with the focus area is characterized by very cold water, high chlorophyll concentrations and high biological productivity, due to wind-induced upwelling (Lagabrielle 2009).					
Biological diversity	Area contains comparatively higher diversity of ecosystems, habitats, communities, or species, or has higher genetic diversity.			x	
Explanation for ranking The west coast of South Africa where the focus area is situated is generally associated with high levels of biological productivity associated with wind-induced upwelling systems, but relatively low biodiversity levels. However, diverse habitat types (±16) are represented within the focus area, therefore the biodiversity of the area is likely to also be well represented there.					
Naturalness	Area with a comparatively higher degree of naturalness as a result of the lack of or low level of human-induced disturbance or degradation.				x
Explanation for ranking Considering (among other reasons) the relative lack of anthropogenic pressures and consequently the good condition of much of the habitat in the focus area, its importance for the conservation of the several threatened habitat types represented there, has been emphasized (Majiedt et al. 2013).					

Sharing experiences and information applying other criteria (Optional)

Other Criteria	**Description**	**Ranking of criterion relevance** (please mark one column with an X)			
		Don't Know	**Low**	**Mediu m**	**High**
Add relevant criteria					
Explanation for ranking					

References

(e.g. relevant documents and publications, including URL where available; relevant data sets, including where these are located; information pertaining to relevant audio/visual material, video, models, etc.)

Harris L, Nel R, Campbell E. 2010. National beach classification and mapping. Unpublished Report. Cape Town: South African National Biodiversity Institution

Lagabrielle E. 2009. Preliminary report: National Pelagic Bioregionalisation of South Africa. Cape Town: South African National Biodiversity Institute

Majiedt P, Holness S, Sink K, Oosthuizen A, Chadwick P. 2013. Systematic Marine Biodiversity Plan for the West Coast of South Africa. South African National Biodiversity Institute, Cape Town

Mann BQ. 2000. *Status Reports for Key Linefish Species*. Durban: Oceanographic Research Institute Special Publication

Sink K, Holness S, Harris L, Majiedt P, Atkinson L, Robinson T, Kirkman S, Hutchings L, Leslie R, Lamberth S, Kerwath S, von der Heyden S, Lombard A, Attwood C, Branch G, Fairweather T, Taljaard S, Weerts S, Cowley P, Awad A, Halpern B, Grantham H, Wolf T. 2012. National Biodiversity Assessment 2011: Technical Report. Volume 4: Marine and Coastal Component. South African National Biodiversity Institute, Pretoria

Turpie JK, Beckley LE, Katua SM. 2000. Biogeography and the selection of priority areas for conservation of South African coastal fishes. Biological Conservation, 92: 59–72

Van Niekerk L. and Turpie JK (eds). 2012. South African National Biodiversity Assessment 2011: Technical Report. Volume 3: Estuary Component. CSIR Report Number CSIR/NRE/ECOS/ER/2011/0045/B. Council for Scientific and Industrial Research, Stellenbosch

Maps and Figures

The map below is taken from Majiedt et al (2013), and shows the general location of the focus area (encircled).

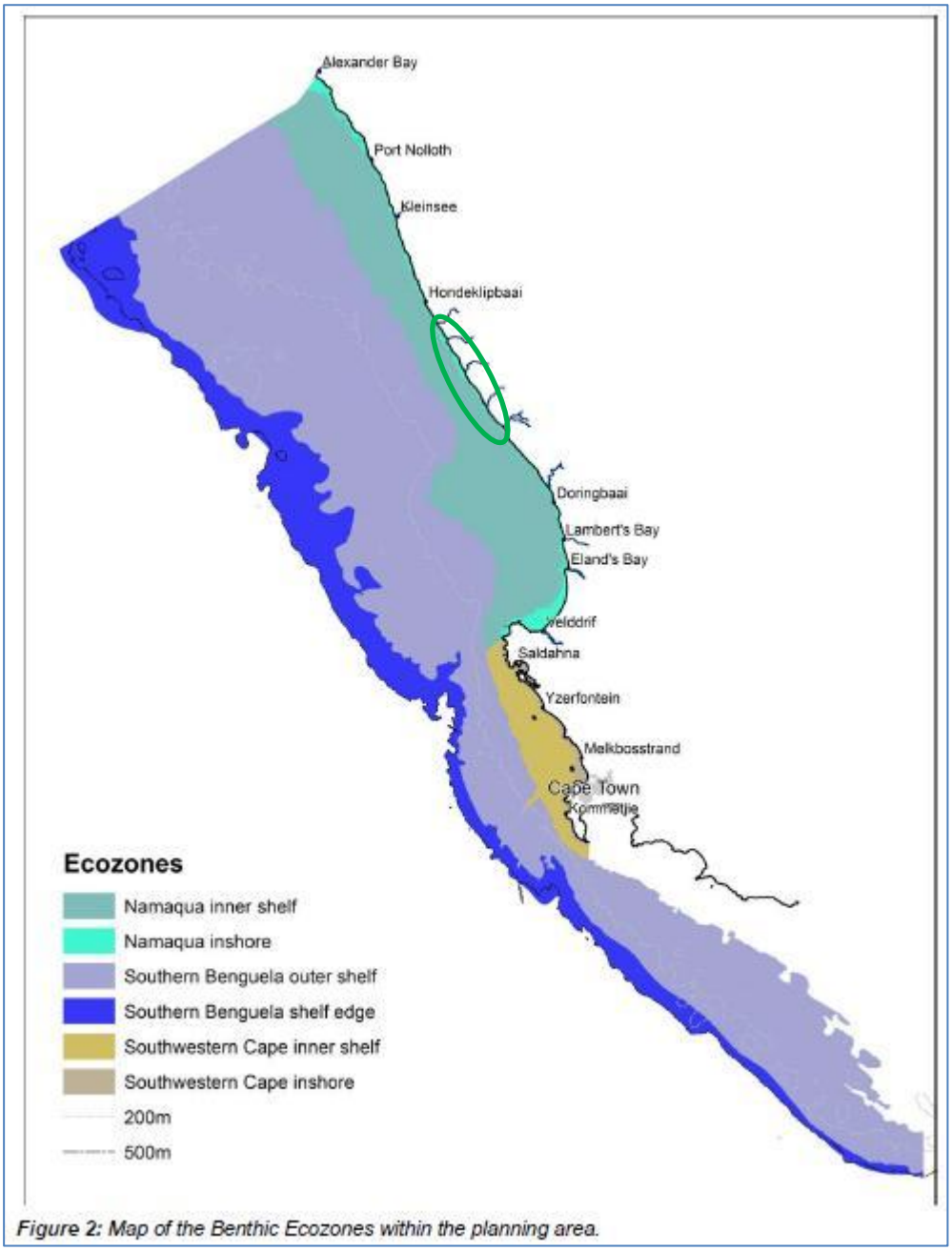

Figure 2: Map of the Benthic Ecozones within the planning area.

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