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

Title/Name of the area: Southern Benguela Shelf Edge – Namibia Border

Presented by
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Abstract (*in less than 150 words)*
The focus area 'Benguela Shelf Edge – Namibia Border' occurs at the western continental margin of South Africa. It consists of shelf/shelf edge habitat with hard and unconsolidated substrates, and includes at least three of 60 offshore benthic habitat types that have been identified for South Africa. According to a recent threat status assessment of coastal and marine habitat in South Africa, these three habitat types are threatened, including one that is Critically Endangered. However, the focus area is one of few areas in South Africa where these threatened habitat types are in relatively natural/pristine condition. Based on analysis of a long term trawl survey data series, the focus area has been identified as a persistent hotspot of demersal fish biodiversity. In summary, it is considered to be highly relevant in terms of the following EBSA criteria: 'Importance for threatened, endangered or declining species and/or habitats', 'biological diversity' and 'naturalness'.

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

The focus area occurs at the outer shelf and shelf edge of the western continental margin of South Africa, near to the Namibian border. It consists of hard and unconsolidated (sand) shelf and shelf edge benthic habitat at depths of approximately 350-1200 m. (Sink et al. 2012). The pelagic environment in the area is characterized by medium productivity, cold to moderate Atlantic temperatures (SST mean=18.3°C) and moderate chlorophyll related to the eastern limit of the Benguela upwelling on the outer shelf (Lagabrielle 2009).

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 occurs near and at the shelf edge of the west coast of South Africa, close to the Namibian border. It is within the Exclusive Economic Zone of South Africa. It is worth noting that mapping of biodiversity features (namely demersal fish species richness) at a regional level supports that high levels of biodiversity which characterize the area extend into the adjacent Namibian waters. A locator map extracted from Majiedt et al. (2013) is provided 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)

The focus area consists of shelf and shelf edge habitat with hard or unconsolidated (sand) substrates (Sink et al. 2012). It includes at least three of the ±60 offshore benthic habitat types that have been identified for South Africa (Sink et al. 2012), namely Southern Benguela Hard Shelf Edge, Southern

Benguela Hard Outer Shelf and Southern Benguela Sandy Shelf Edge. The pelagic environment of the focus area is characterized by medium productivity, cold to moderate temperatures and moderate chlorophyll related to the eastern limit of the Benguela upwelling on the outer shelf (Lagabrielle 2009).

The focus area has been subjected to annual demersal fish trawl surveys conducted by the Department of Agriculture, Forestry and Fisheries of South Africa. Based on spatial modeling of nearly 30 years of distribution and abundance data from these surveys for the area between the Namibian border and Cape Agulhas, Kirkman et al. (2013) identified the focus area as a persistent hotspot of species richness for demersal fish species; that is, as an area where the spatial units (grid cells) were in the top 5% (>= 95% quantile) over the entire study grid in terms of species richness.

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 at a national level of the ±60 offshore benthic habitat types identified for South Africa by assessing the cumulative impacts of various pressures (e.g. extractive resource use, pollution and others) on each habitat type. Of the three types of benthic habitat that are most prominent in the focus area, one (Southern Benguela Hard Shelf Edge) was found to be Critically Endangered, indicating that very little (< 20%) of the total area of this habitat is in good (natural or pristine) condition. The two other habitat types (Southern Benguela Hard Outer Shelf and Southern Benguela Sandy Shelf Edge) were both found to be Vulnerable, implying that while there are sufficient areas of intact biodiversity of this type to meet the biodiversity target, there has been habitat degradation and some loss of ecosystem processes in other areas.

However, the focus area is one of the few areas where the above threatened habitat types are in a good condition, largely because it has been subjected to relatively little extractive resource use (e.g. fishing, mining) pressure, and is relatively remote from sources of pollution. Thus, the focus area was identified by Majiedt et al. (2013) as one of six marine 'primary focus areas' for spatial protection, with the good habitat condition and the relative dearth of anthropogenic pressures as the major drivers of this selection.

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 Neither the benthic nor pelagic habitat types that occur in the focus area are 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 There is no evidence to suggest that the focus area is of special importance for life history stages of any particular species/population, and considering that the habitat types which occur there are not unique to the area, it is considered to be unlikely.					
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 One of the three types of benthic habitat that are most prominent in the focus area, namely Southern Benguela Hard Shelf Edge, has been shown to be Critically Endangered in terms of threat status at a national level (Sink et al. 2012), indicating that very few (< 20%) of remaining area of this habitat is in good (natural or pristine) condition. The two other prominent benthic habitat types in the focus area, Southern Benguela Hard Outer Shelf and Southern Benguela Sandy Shelf Edge, were found to be Vulnerable (Sink et al. 2012) implying that while there are sufficient areas of intact biodiversity of this type to meet the biodiversity target, there has been habitat degradation and some loss of ecosystem processes in other areas.					
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 Hard and unconsolidated shelf edge type habitats are known to be relatively productive, but currently there is no evidence that the high levels of demersal fish diversity that characterize the focus area are also associated by high levels of biological productivity. In terms of the pelagic environment, the focus area is at the eastern limit of the Benguela upwelling region and is characterized by medium productivity and moderate chlorophyll levels (Lagabrielle 2009).					
Biological diversity	Area contains comparatively higher diversity of ecosystems, habitats, communities, or species, or has higher genetic diversity.				x
Explanation for ranking Based on spatial modeling of nearly 30 years of distribution and abundance data from demersal trawl surveys in South African waters, Kirkman et al. (2013) identified the focus area as a persistent					

hotspot of species richness for demersal fish species.					
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 The focus area is one of the few areas where the above threatened habitat types are in a good condition (relatively natural/pristine), largely because it has been subjected to relatively low levels of anthropogenic pressures (Majiedt et al. 2013). The importance of the focus area for the conservation of the threatened habitat types represented there has therefore been emphasized by 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.)

Kirkman SP, Yemane D, Kathena J, Mafwila S, Nsiangango S, Samaai T, Axelsen B, Singh L. 2013. Identifying and characterizing of demersal biodiversity hotspots in the BCLME: Relevance in the light of global changes. ICES Journal of Marine Science. Accepted.

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.

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.

Maps and Figures

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

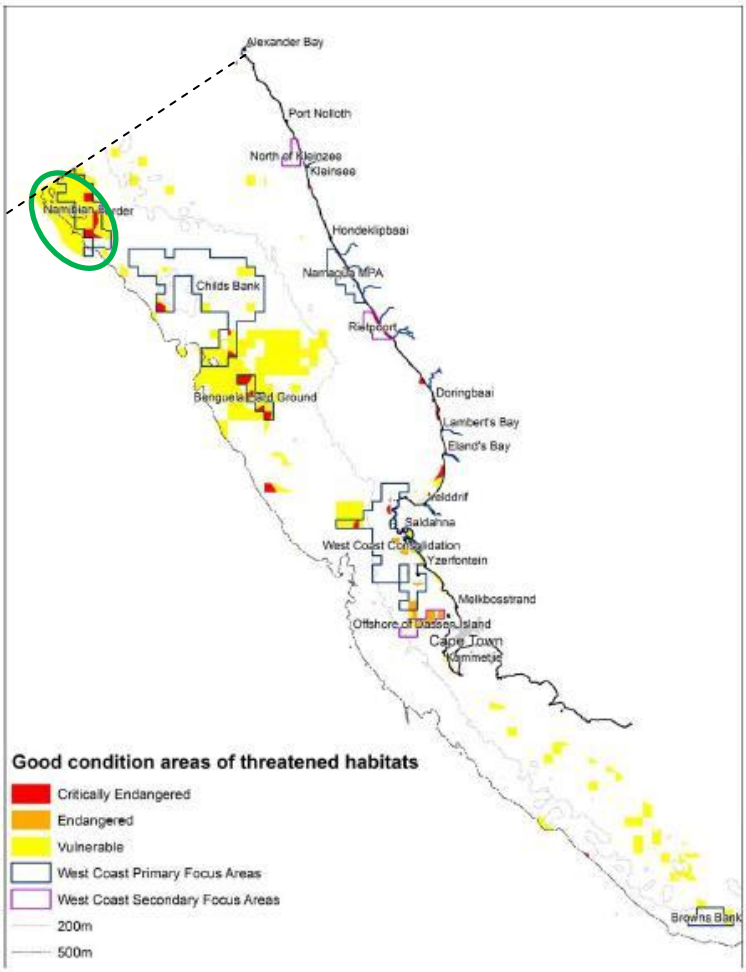

***Figure 14**: Map illustrating the good condition areas of threatened habitat captured in the Larger "Primary Focus Areas" and smaller "Secondary Focus Areas" identified in this project.*

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