

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

Title/Name of the area: Browns Bank

Presented by

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Abstract (in less than 150 words)

Browns Bank includes benthic and pelagic habitats of the outer shelf and shelf edge along the western continental margin of South Africa. The area includes a unique gravel habitat, reef-building cold-water corals and untrawled hard grounds. It is an important fish spawning area for demersal and pelagic species. The spawning area is linked to nursery grounds on the inshore area of the west coast and the Agulhas Bank and has better retention than areas further north. The Agulhas and Southern Benguela ecoregions meet at the southeastern boundary of this area and sporadic shelf edge upwelling enhances the productivity along the outer margin. The area is important for threatened habitats and species; with two Important Bird Areas overlapping substantially with Brown's Bank, (Cory's Shearwater and Atlantic Yellow-nosed Albatross). This area was identified as a priority area through two systematic biodiversity plans, meeting targets for habitat representation, vulnerable marine ecosystems and hake spawning.

Introduction

This area is along the outer shelf and shelf edge of the western continental margin of South Africa. It includes benthic and pelagic habitats with unconsolidated sand and gravel habitats and a pelagic habitat type that is characterised by elevated productivity and frequent fronts (Lutjeharms et al. 2000, Lagabrielle 2009) due to shelf edge upwelling. The area ranges from approximately 150 m – 800 m and the Agulhas and Southern Benguela ecoregions (Sink et al. 2012) meet at the south eastern edge of this area. e productivity along the outer margin (Lagabrielle et al. 2009). This area includes the western Agulhas Bank spawning ground as described by Hutchings et al. 2002 and is part of a critical area for retention of spawning products (Hutchings et al. 2002). This area was identified as a priority area through a national plan to identify focus areas for offshore protection (Sink et al. 2011) and by a systematic biodiversity plan for the west coast (Majiedt et al. 2013).

Location

This area is off the southwest coast of South Africa and is completely within national jurisdiction. A map is available in Sink et al. 2011.

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 Browns Bank area includes benthic and pelagic habitats with unconsolidated sand and gravel habitats and a pelagic habitat type that is characterised by elevated productivity and frequent fronts (Lutjeharms et al. 2000, Lagabrielle 2009) due to shelf edge upwelling. Biological communities include benthic macrofaunal communities characterized by high abundances of brittle stars and many

species of polychaetes (Karenzi, unpublished data)) and hard ground habitats that are poorly known (Sink et al. 2012b). Cold water corals have been collected within the area. Browns Bank is part of the western Agulhas Bank spawning ground as described by Hutchings et al. 2002. This area has been included in annual demersal fish trawl surveys conducted by the Department of Agriculture, Forestry and Fisheries.

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?)

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
<i>Explanation for ranking</i> This area was identified by two systematic plans because it is the only area where targets for Southern Benguela Gravel Outer Shelf (which is Critically Endangered) can be met (Majiedt et al. 2013, Sink et al. 2011). It should be noted that this habitat type has a limited extent with an estimated total area of less than 450 km ² .					
Special importance for life-history stages of species	Areas that are required for a population to survive and thrive.				X
<i>Explanation for ranking</i> This area is part of the western Agulhas Bank spawning ground as described by Hutchings et al. (2002). The gadoid Cape hakes <i>Merluccius capensis</i> and <i>M. paradoxus</i> , the gempylid <i>Thyrssites atun</i> (snoek) and the clupeid <i>Etremeus whiteheadii</i> (round herring) move to the western Agulhas Bank and southern west coast to spawn, generally in late winter and early spring when offshore Ekman losses are at a minimum and the eggs and larvae drift northwards and inshore to the west coast nursery grounds. This apex area of the Agulhas Bank is recognised as a critical area for retention of spawning products as eddies in this area help re-circulate water inshore and link important nursery areas with this spawning habitat on the shelf edge. Strong jet currents on the west coast oblige adult hake to shift southwards to spawn, to ensure that juveniles enter the west coast nursery grounds downstream (Hutchings et al. 2002). This shelf edge area also constitutes foraging area for offshore seabirds (Birdlife data see references below). Limited tracking datasets have shown that the shelf edge is heavily used by a diversity of pelagic seabirds. In particular, the Brown’s Bank site is a proposed marine IBA for two species of seabirds; Cory’s Shearwater <i>Calonectis diomedea</i> and Atlantic Yellow-nosed Albatross <i>Thalassarch chlororhynchos</i> (BirdLife International 2013). Additional seabird tracking datasets may result in this site being an IBA for additional species in future.					
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

<p><i>Explanation for ranking</i></p> <p>The Atlantic Yellow-nosed Albatross is globally Endangered, and Brown's Bank is a proposed marine IBA site for this species, indicating that it holds a significant proportion of the global population of this species during some periods of each year for which data are available. This area also contains the only patch of Southern Benguela Outer Shelf Gravel, a habitat type that is considered Critically Endangered (Sink et al. 2012a,b). The pelagic habitat within this area is considered Vulnerable and is the most threatened of South Africa's 16 pelagic habitat types (Sink et al. 2012a).</p>					
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	
<p><i>Explanation for ranking</i></p> <p>This area has hard ground habitats on the outer shelf and shelf edge that are considered sensitive to demersal trawling and mining (Sink et al. 2011, 2012a, 2012bb). Recently, fisheries observers collected two species of cold water corals (Capricorn fisheries monitoring unpublished information) within this area. The specimens are in the invertebrate collection at iZiko, the South African Museum in Cape Town.</p>					
Biological productivity	Area containing species, populations or communities with comparatively higher natural biological productivity.			X	
<p><i>Explanation for ranking</i></p>					
Biological diversity	Area contains comparatively higher diversity of ecosystems, habitats, communities, or species, or has higher genetic diversity.		X		
<p><i>Explanation for ranking</i></p> <p>The National habitat map indicates a moderate number of ecosystem (Sink et al. 2012 a).</p>					
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	
<p><i>Explanation for ranking</i></p> <p>There are three areas of untrawled hard grounds on the shelf edge within this area (Wlikinson 2009). The outer shelf gravel habitat is in poor condition and there is no remaining area of this habitat type left in good or fair condition (Sink et al. 2012a,b).</p>					

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	Medium	High
<i>Add relevant criteria</i>					
<p><i>Explanation for ranking</i></p>					

References

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Maps and Figures

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