Appendix

Template for Submission of Scientific Information

to Describe Ecologically or Biologically Significant Marine Areas

Title/Name of the area: Natal Bight

Presented by

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Abstract (*in less than 150 words)*

The Natal Bight is important for numerous ecological processes including terrestrial-marine connectivity, larval retention, recruitment and provision of nursery and foraging areas. The area supports rare habitat types and also some species known from few localities. Cool productive water is advected onto the shelf through Agulhas driven upwelling cells and continental runoff from the large Thukela River is important for the maintenance of mud and other unconsolidated sediment habitats. The turbid, nutrient rich conditions are important for life history phases (breeding, nursery and feeding) for crustaceans, demersal fish, migratory fish, turtles and sharks, some of which are threatened. Potential vulnerable marine ecosystems and species include submarine canyons, cold water corals and slow growing sparids. Endangered habitat types occur in this area with remaining portions of such habitats in good condition found within this area.

Introduction

The Natal Bight is important for numerous ecological processes including terrestrial-marine connectivity, larval retention, recruitment and provision of nursery and foraging areas. The area supports rare habitat types and also some species known from few localities. Cool productive water is advected onto the shelf through Agulhas driven upwelling cells and continental runoff from the large Thukela River is important for the maintenance of mud and other unconsolidated sediment habitats. The turbid, nutrient rich conditions are important for life history phases (breeding, nursery and feeding) for crustaceans, demersal fish, migratory fish, turtles and sharks. Some of these species are threatened (turtles, scalloped hammerhead) or overexploited (sparids and sciaenids) and the deep reef and paleo-shoreline habitats are considered important for the recovery of overexploited deep reef fish species. Other potential vulnerable marine ecosystems and species include submarine canyons and cold water corals. Endangered habitat types occur in this area with remaining portions of such habitats in good condition found within this area. The Tugela Banks area has been identified as a priority area by two different systematic biodiversity plans, a national plan to identify focus areas for offshore protection (Sink et al. 2011) and a fine-scale provincial plan for the province of KwaZulu-Natal (Harris et al. 2011).

Location: The Natal Bight area is off the east coast of South Africa and includes the Tugela Banks and the Natal Bight nursery area (approximately 29°S to 30°S and 31°E to 33°E) extending offshore to include the shelf edge and upper bathyal zone.

Note: This includes both the Tugela Banks focus area (Sink et al. 2011) and includes areas 3 and 6 from Sheffield Beach to Richards Bay offshore to 1800m (Harris et al. 2011).

Feature description of the proposed area

See Sink et al. 2011

Feature condition and future outlook of the proposed area

The National Biodiversity Assessment 2011 (Sink et al. 2012) indicated declining condition overall in this area (based on pressure data and an ecosystem-pressure matrix) with condition ranging from fair to poor across this broad area. Key pressures include the crustacean trawl fishery, a linefishery targeting sparids and scienids and emerging mining and petroleum applications. There is also a new submarine cable in the area. Research has been undertaken (but not published) by the Oceanographic Research Institute in Durban. There is planned research in the area through the African Coelacanth Ecosystem Program Phase III. This will be led by Dr Jean Harris (one of the presenters of this candidate EBSA).

Assessment of the area against CBD EBSA Criteria

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)			
		Don't Know	**Low**	**Some**	**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**	
Endemic and rare species Spotted legskate - *Anacanthobatis marmoratus*, Porcupine stingray - *Urogymnus asperrimus*. Bearded Goby - *Taenioides jacksoni* also endemic. (Haupt 2010, Livingston et al. 2012 Rare gravel and mud habitat types, as well as submarine canyon (Natal) of limited extent (Sink *et al*. 2012)					
Special importance for life-history stages of species	Areas that are required for a population to survive and thrive.				**x**
Migration corridor for Geelbek - *Atractoscion aequidens*, White stumpnose - *Rhabdosargus holubi*, Shad- *Pomatomus saltatrix*, Dusky kob - *Argynosomus japonicas* (VU), Garrick - *Lichia amia*. Spawning and migration route for sardine - *Sardinops sagax*. Nursery area: Scalloped hammerhead - *Sphyrna lewini* (EN), Slinger - *Chrysoblephus puniceus*, Black musselcracker - *Cymatoceps nasutus.* Spawning area for Bull shark - *Carcharhinus leucas* and Sand tiger shark - *Carcharias taurus*, Black musselcracker- *Cymatoceps nasutus*, King mackerel -*Scomber japonicus*.					

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)			
		Don't Know	**Low**	**Some**	**High**
Feeding area: Leatherback turtle - *Dermochelys coriacea* (Haupt 2010, Harris et al. 2011, Vogt 2011, Sink *et al.* 2011, Ezemvelo KZN Wildlife 2012)					
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**
IUCN listed species: **CR**: Seventy-four- *Polysteganus undulosus,* Leatherback turtle – *Dermochelys coriacea* **EN**: Scalloped hammerhead -*Sphyrna lewini*, Great Hammerhead - *S. Mokarran,* Dageraad-*Chrysoblephus christiceps*, Red stumpnose - *Chrysoblephus gibbiceps* **VU**: Fapnose houndshark – Scylliogaleus quecketti, porcupine stingray-*Urogymnus asperrimus,* , Dusky kob - *Argynosomus japonicas* Bearded Goby - *Taenioides jacksoni* **Endemic sparids of conservation concern**: *Polysteganus coeruleopunctatus* **Threatened habitat types:** **EN**: Natal muddy shelf, Natal inshore reef **VU**: Natal Shelf Reef, Natal sandy shelf, Natal canyon, Pelagic habitat Cb3. (Haupt 2010, Sink *et al.* 2011)					
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**
Submarine canyons, cold-water corals, shelf edge and deep reefs. (Sink et al. 2011, 2012)					
Biological productivity	Area containing species, populations or communities with comparatively higher natural biological productivity.				**x**
Indian ocean water with high but variable chlorophyll associated with very frequent SST and chlorophyll fronts (Lagabrielle 2009). This habitat (pelagic habitat Cb3) represents cool productive water that has been advected onto the shelf in this sheer zone through Agulhas current driven upwelling cells (Lutjeharms *et al.* 2000, Lutjeharms *et al.* 2000).					
Biological diversity	Area contains comparatively higher diversity of ecosystems, habitats, communities, or species, or has higher genetic diversity.		**x**		
Fairly high habitat heterogeneity as indicated by selection through two systematic conservation plans (Ezemvelo KZN Wildlife 2012, Sink *et al.* 2011).					
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*		
Portions of reef, mud and gravel habitats in good condition (Sink *et al.* 2012).					

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	Some	High
Add relevant criteria					
This area helps meet bycatch management targets for the crustacean trawl fishery. Bycatch of Scalloped hammerhead sharks *Sphyrna lewini* (EN) of concern in this area (Sink et al. 2011, 2012)					

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Maps and Figures

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