

## Appendix

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

*Note: Please **DO NOT** embed tables, graphs, figures, photos, or other artwork within the text manuscript, but please send these as separate files. Captions for figures should be included at the end of the text file, however.*

**Title/Name of the area: Agulhas eddy path**

**Presented by** (*names, affiliations, title, contact details*)

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**Abstract** (*in less than 150 words*)

This area occurs approximately 200-250 nm offshore and spans an area of about 2500 km<sup>2</sup>. It represents the area of most frequent occurrence of the pathway of eddies in the Agulhas current that originate in the Mozambique current and are characterised at their origin by higher productivity, with increased densities and zoo-plankton and bird concentrations around the eddy edges. It is a natural area in that it lies between the 2 main shipping lanes, that run up the east coast of southern Africa into the western Indian Ocean, and from the east coast to Australia. Its vulnerability lies in the potential for targeted fishing.

#### **Introduction**

This is a pelagic feature that includes the area of most frequent occurrence of the pathway of eddies in the Agulhas current that originate in the Mozambique current. This area is therefore characterised by higher productivity, with increased densities and zoo-plankton and bird concentrations around the eddy edges (Welmerskirch et al. 2004). The area was indentified by a provincial systematic conservation plan (Harris et al. 2011, Ezemvelo KZN Wildlife 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. It should also state if the area is wholly or partly in an area that is subject to a submission to the Commission on the Limits of the Continental Shelf)*

#### **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)

### 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 candidate EBSA may qualify on the basis of one or more of the criteria, and that the boundaries 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)			
		Don't Know	Low	Some	High
<b>Uniqueness or rarity</b>	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	
Most frequent path of eddies from Mozambican channel					
<b>Special importance for life-history stages of species</b>	Areas that are required for a population to survive and thrive.	x			
Explanation for ranking					
<b>Importance for threatened, endangered or declining species and/or habitats</b>	Area containing habitat for the survival and recovery of endangered, threatened, declining species or area with significant assemblages of such species.	x			
Sperm whales. Frigate bird concentrations?					
<b>Vulnerability, fragility, sensitivity, or slow recovery</b>	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		
Vulnerable to long-lining activities (birds) and shipping (especially disasters)					
<b>Biological productivity</b>	Area containing species, populations or communities with comparatively higher natural biological productivity.				x
Eddies pathway, and SST fronts. Concentrations of plankton and birds.					
<b>Biological diversity</b>	Area contains comparatively higher diversity of ecosystems, habitats, communities, or species, or has higher genetic diversity.				x

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
Expected higher diversity and density of fish, plankton and birds.					
<b>Naturalness</b>	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
Relatively remote and unimpacted. Shipping lanes lie to the north and east of this area (Harris <i>et al.</i> 2011)					

### 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
<i>Add relevant criteria</i>					
<i>Explanation for ranking</i>					

### References

Ezemvelo KZN Wildlife. 2012. Focus areas for additional marine biodiversity protection in KwaZulu-Natal, South Africa. Unpublished Report - Jan 2012. Scientific Services, Ezemvelo KZN Wildlife: Durban. Pp 62.

Harris JM, Livingstone T, Lombard AT, Lagabrielle E, Haupt P, Sink K, Mann B and Scleyer M. 2011 Marine Systematic Conservation Assessment and Plan for KwaZulu-Natal - Spatial priorities for conservation of marine and coastal biodiversity in KwaZulu-Natal. Ezemvelo KZN Wildlife.

Haupt P. 2010. Conservation assessment and plan for fish species along the KwaZulu-Natal coast. MSc Thesis, Nelson Mandela Metropolitan University, South Africa.

Hutchings L, Beckley LE, Griffiths MH, Roberts MJ, Sundby S, van der Lingen C. 2002. Spawning on the edge: spawning grounds and nursery areas around the southern African coastline. *Marine and Freshwater Research* 53: 307-318.

Sink KJ, Attwood CG, Lombard AT, Grantham H, Leslie R, Samaai T, Kerwath S, Majiedt P, Fairweather T, Hutchings L, van der Lingen C, Atkinson LJ, Wilkinson S, Holness S, Wolf T. 2011. Spatial planning to identify focus areas for offshore biodiversity protection in South Africa. Unpublished Report. Cape Town: South African National Biodiversity Institute.

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. Pp 325

Welterskirch H, Le Corre M, Jacuemet S, Potier M, Marsac F. 2004. Foraging strategy of a top predator in tropical waters: great frigatebirds in the Mozambique Channel. *Marine Ecology Progress Series* 275: 297-308.

## **Maps and Figures**

### **Rights and permissions**

*(Indicate if there are any known issues with giving permission to share or publish these data and what any conditions of publication might be; provide contact details for a contact person for this issue)*

#### **7. Agulhas eddy path (Sealan Area 21)**

(Co-ordinates still to be provided by Ezemvelo KZN Wildlife)