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

Title/Name of the area: North-East Kara-Barents Sea

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Abstract (*in less than 150 words)*

Introduction

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

The IUCN/NRDC Workshop to Identify Areas of Ecological and Biological Significance or Vulnerability in the Arctic Marine Environment (Speer and Laughlin, 2011) identified a super-EBSA named "High Arctic Islands and Shelf" as meeting nearly all CBD criteria. It is noted that, "This area includes a mix of large and small islands that together are the northern-most archipelago in the Russian and Norwegian Arctic. The region harbors abundant and diverse coastal benthic communities, and supports colonies of high Arctic seabirds, ice-associated marine mammals and polar bears. Atlantic water masses along the continental shelf break in the northern part of the area are associated with summer ice edge habitat supporting abundant and diverse zooplankton and polar cod (*Boreogadus saida*). It is a key area for the endangered Spitsbergen stock of bowhead whale, the northern stock of the East-Atlantic meta-population of Atlantic walrus (*Odobaenus rosmarus rosmarus*), and most of the world's breeding population of the threatened Ivory gull (the region provides post-breeding staging grounds for ivory gulls from all North-East Atlantic populations)." (Speers and Laughlin, 2011). The report on identifying Arctic marine areas of heightened ecological significance (AMSA IIb) also revealed the marine areas around Franz-Josef Land archipelago, polynyas west and east off Severnaya Zemlya archipelago as areas of heightened ecological significance which meet the IMO ecological criteria for PSSAs (Skjoldal et al., 2012). As the mentioned above super-EBSA is quite a big and non-uniform area that includes different sub-areas which meet EBSA criteria in different ways, here we give descriptions and updated information for the part of the area located off Russian islands including areas corresponding to several "elementary" EBSAs mapped and listed in Annexes 1 and 2 to the IUCN/NRDC Workshop report.

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.)
This area covers EBSAs 19, 20, 25, 31 illustrated in Annex 1.1 in Speers and Laughlin (2011) but is broader and more resembles corresponding part of the super-EBSA 12 (page 13). This covers territorial waters off high-Arctic Russian archipelagos of Franz-Josef Land and Severnaya Zemlya, adjacent internal sea and Russian EEZ.

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)

Topography includes archipelagos shelf and adjacent shelf break. This high-Arctic ecosystem enhanced with Atlantic water masses going along the continental shelf break. The area is characterised by higher abundances of zooplankton as compare to adjacent waters (Kosobokova 2012). Prominent feature is marginal ice zone (MIZ) associated with this area, including recurrent flaw polynyas (off Franz Josef Land, west and east off Severnaya Zemlya) and ice edge of drifting ice which seasonal distribution shifting from south of the area in winter to the north where it coincides in summer with shelf break, i.e. providing physical drivers for enhanced biological productivity (Eimer et al., 2013).
The area is abundant in seabird colonies of high Arctic type (Dovkies, Thick-billed murres, Kittiwakes), ice-associated marine mammals and polar bears. It is the principal area for endangered Spitsbergen stock of Bowhead whale (IUCN EN) with the highest known densities (Gavrilo, unpublished data), northern stock of the East-Atlantic meta-population of Atlantic walrus *Odobaenus rosmarus rosmarus,* most of the world breeding population of the threatened ivory gull (IUCN NT) (Gavrilo, 2011), postbreeding staging grounds for the ivory gulls from all North-East Atlantic populations (Gilg et al. 2010).
The coastal marine ecosystem of Franz-Josef Land is very rich and diverse, with benthic communities showing signes of pristine marine ecosystem (recent studies, 2013, National Geographic Pristine Seas expedition, under preparation).

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?)

This is dynamic area with evidence of current changes under conditions of global climate change. The most prominent changing feature is ice conditions and distribution, with summer ice edge shifted north for a great extent over the past decade. This affected distribution patterns and foraging condition of many ice-associated species, first of all polar bears, ice-forms of seals, and ivory gulls. Recent changes maybe in favoure of some species such as bowhead whales and Atlantic walrus, but further investigations are required.
The EBSA is partly covered by federal specially protected areas (National Paprk Russian Arctic, State Refuge Franz-Josef Land, State Refuge Severozemelsky), so monitoring and basic research are ongoing and planned for the future.

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			**X**	

	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.				
Explanation for ranking There is endemic species of coastal fish *Gymnelus taeniatus* described from Franz-Josef Land (Chernova, .					
Special importance for life-history stages of species	Areas that are required for a population to survive and thrive.				**X**
Explanation for ranking Core area of highest known abundances and year-round presence of endangered Spitsbergen stock of bowhead whales (IUCN, EN), core area supporting up to 75% world breeding population of the threatened ivory gull, core stop-over foraging area for postbreeding migrating ivory gull from entire NE Atlantic breeding grounds. Core area for reproduction of northern stock of NE Atlantic metapopulation of Atlantic walrus. Area of highest summer abundances of Barents-Kara Sea population of Red listed polar bear					
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 Core area for survival and recovery of endangered Spitsbergen stock of bowhead whales (IUCN, EN), core area supporting up to 75% world population of the threatened ivory gull. Core denning area for Barents-Kara Sea population of Red listed polar bear					
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 Significant portions (in Western Russian Arctic) of ice-associated species of mammals and seabirds, ice habitats (flaw polynyas, ice edge) sensitive to global warming.					
Biological productivity	Area containing species, populations or communities with comparatively higher natural biological productivity.				X
Explanation for ranking Shelf break zone associated with MIZ in summer provides conditions for enhanced biological productivity, very productive inshore benthic communities of Franz-Josef Land shelf area					
Biological diversity	Area contains comparatively higher diversity of ecosystems, habitats,	X			X

	communities, or species, or has higher genetic diversity.				
Explanation for ranking					
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 This is highly untouched area with absence of commercial fishing, low ship traffic, absence of current petroleum development. Benthic community structure shows signed of pristine marine ecosystem.					

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**
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.)

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Maps and Figures

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