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ARCTIC REGIONAL WORKSHOP TO FACILITATE
THE DESCRIPTION OF ECOLOGICALLY OR
BIOLOGICALLY SIGNIFICANT MARINE AREAS
Helsinki, 3-7 March 2014

COMPILATION OF SUBMISSIONS OF SCIENTIFIC INFORMATION TO DESCRIBE AREAS MEETING THE SCIENTIFIC CRITERIA FOR EBSAs IN THE ARCTIC REGION

Note by the Executive Secretary

1. The Executive Secretary is circulating herewith a compilation of scientific information in support of the Arctic Regional Workshop to Facilitate the Description of Ecologically or Biologically Significant Marine Areas, being convened by the Executive Secretary to the Convention on Biological Diversity from 3 to 7 March 2014, with the financial support of the Government of Finland.

2. This compilation consists of a list of submissions made by workshop participants from Parties and organizations in response to notification SCBD/SAM/DC/JL/JG/82923 (2013-106), dated 21 November 2013. The original submissions are available at http://www.cbd.int/doc/?meeting=EBSAWS-2014-01.

3. These submissions are being circulated in the form and language in which they were received by the Secretariat of the Convention on Biological Diversity.

Table 1. Scientific Information submitted in support of the workshop objectives using the EBSA template

Party/ Org. of submitter	Author(s)/Contributor	Contents of EBSA submission	Short description of submission
Norway	Cecilie H. von Quillfeldt Norwegian Polar Institute cecilie.quillfeldt@npolar.no Jan Helge Fosså Institute of Marine Research, Norway jan.helge.fossaa@imr.no	Norway EBSA Template 1 - Arctic Ice habitat	The permanently ice covered waters of the high Arctic provide a range of globally unique habitats associated with the variety of ice conditions. In the northern hemisphere multi-year sea ice only exists in the Arctic and although the projections of changing ice conditions due to climate change project a considerable loss of sea ice, in particular multiyear ice, the Eurasian Central Arctic high seas are likely to at least keep the ice longer than many other regions in the Arctic basin. Ice is a crucial habitat and source of particular food web dynamics, the loss of which will affect also a number of mammalian and avian predatory species. The particularly pronounced physical changes of Arctic ice conditions as already observed and expected for the coming decades, will require careful ecological monitoring. Eventually measures will be needed to maintain or restore, to the extent possible the resilience of the Arctic populations to changing environmental conditions.
Russian Federation	Vassily Spiridonov Senior Scientist P.P. Shirshov Institute for Oceanology Ministry of Natural Resources and Environment Moscow Russian Federation vspiridonov@ocean.ru, valbertych@mail.ru Maria Gavrilo Research Director National Park Russian Arctic Ministry of Natural Resources and Environment Moscow Russian Federation	Russia EBSA Template 1 - Great Siberian Polynya and the the water of New Siberian Islands	The system of polynyas in the Laptev Sea and specific conditions of the waters of New Siberian Islands form ecologically and biologically significant area with medium level of uniqueness, high level of importance for life history stages of key or iconic species, medium level of importance for endangered or threatened species, medium (at the scale of the Arctic) levels of biological productivity and diversity and high vulnerability.

Party/ Org. of submitter	Author(s)/Contributor	Contents of EBSA submission	Short description of submission
	m_gavrilo@mail.ru		
	Maria Gavrilo Research Director National Park Russian Arctic Ministry of Natural Resources and Environment Moscow Russian Federation m_gavrilo@mail.ru	Russia EBSA Template 2 - North-East Kara-Barents Sea	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).
	Vassily Spiridonov Senior Scientist P.P. Shirshov Institute for Oceanology Ministry of Natural Resources and Environment Moscow Russian Federation vspiridonov@ocean.ru, valbertych@mail.ru	Russia EBSA Template 3 - Onega Bay and White Sea Polynya	The Onega Bay and White Sea polynya EBSA data presented here are based on synthesizing , extending and updating the assessment done by the IUCN/NRDC and AMSA workshop reports (Speer and Laughlin, 2011; Skjoldal et al., 2012). This EBSA is characterizied by medium uniqueness, high level of importance for life history stages of key or iconic species, medium level of importance for endangered or threatened species, and high levels of biological productivity and diversity and high vulnerability.

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	Vassily Spiridonov Senior Scientist P.P. Shirshov Institute for Oceanology Ministry of Natural Resources and Environment Moscow Russian Federation vspiridonov@ocean.ru, valbertych@mail.ru	Russia EBSA Template 4 - Kandalaksha Bay of the White Sea	The area supports diverse and productive benthic communities including kelp, provides important nursery habitat for several species of pelagic fishes, and supports Atlantic salmon as well as seabird colonies with diverse species composition. The area is important for breeding Common eiders, and provides staging, molting and wintering grounds for three eider species including Steller's eider, which is considered globally vulnerable by IUCN. The White Sea/Barents Sea coast also supports local populations of White Sea beluga whales and provides pupping and molting areas for the entire East Ice harp seal population" (Speer and Laughlin, 2011). The report on identifying Arctic marine areas of heightened ecological significance (AMSA) also revealed the White Sea as an important area (Skjoldal et al., 2012). As the White Sea and the Barents Sea coast is a really big and complex area that includes parts which meet EBSA criteria in different ways we provide here a separate description and recent information for the included areas which correspond to "elementary" EBSA mapped and listed in Annexes 1 and 2 to the IUCN/NRDC Workshop report. One of such areas is Kanfalaksha Bay, the deepest bay of the White Sea and the Ramsar wetland site.
	Vassily Spiridonov Senior Scientist P.P. Shirshov Institute for Oceanology Ministry of Natural Resources and Environment Moscow Russian Federation vspiridonov@ocean.ru, valbertych@mail.ru	Russia EBSA Template 5: Murman coast and Varanger fjord	The Murman coast and Varanger fjord EBSA in the Barents Sea data presented here are based on synthesizing , extending and updating the assessment done by the WWF Barents Ecoregion Biodiversity Assessment (Larsen et al., 2003), IUCN/NRDC and AMSA workshop reports (Speer and Laughlin, 2011; Skjoldal et al., 2012). This EBSA is characterizied by medium uniqueness, high level of importance for life history stages of key or iconic species, high level of importance for endangered or threatened species, high level of biological productivity, high level of diversity, high vulnerability and medium level of naturalness.

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	Vassily Spiridonov Senior Scientist P.P. Shirshov Institute for Oceanology Ministry of Natural Resources and Environment Moscow Russian Federation E-mail: vspiridonov@ocean.ru, valbertych@mail.ru	Russia EBSA Template 6: Northern part of the White Sea	The Northern part of the White Sea EBSA data presented here are based on synthesizing , extending and updating the assessment done by the IUCN/NRDC and AMSA workshop reports (Speer and Laughlin, 2011; Skjoldal et al., 2012). This EBSA is characterizied by medium uniqueness, high level of importance for life history stages of key or iconic species, medium level of importance for endangered or threatened species, medium level of biological productivity, high level of diversity and high vulnerability and nturalness.
Inuit Circumpolar Council (ICC)	Parnuna Egede Advisor Inuit Circumpolar Council--Greenland Greenland Denmark parnuna@inuit.org	ICC EBSA Template - North Water Polynya	The North Water polynya is one of the largest polynyas in the Northern Hemisphere, it is also one of the most biologically productive regions north of the Arctic Circle. The Pikialarsorsuaq/North Water Polynya Cooperation Workshop in Nuuk, Greenland September 2013, with participation of hunters' and science community representatives. Hunters have observed changes in sea ice, snow conditions, and distribution and behaviour of the marine mammals. In addition, new species or subspecies have been observed around the North Water during recent years. The mixing of different water masses (originating from the Atlantic and the Pacific) and their transformation along the journey in Arctic conditions are contributing to the area's extraordinary high biological productivity. The high biological productivity is also highly dependent on the formation of an ice bridge in Kane Basin, which is a major determinant for the opening of the polynya and for the local oceanography that sustain the productivity
International Council for the Exploration of the Sea (ICES)	Mark Tasker Head of Marine Advice Joint Nature Conservation Committee International Council for the Exploration of the Sea Scotland United Kingdom of Great Britain and	ICES EBSA Template 1 – Arctic Sea Ice Habitat	The permanently ice covered waters of the high Arctic provide a range of globally unique habitats associated with the variety of ice conditions. In the northern hemisphere multi-year sea ice only exists in the Arctic and although the projections of changing ice conditions due to climate change project a considerable loss of sea ice, in particular multiyear ice, the Eurasian Central Arctic high seas are likely to at least keep the ice longer than many other regions in the Arctic basin. Ice is a crucial habitat and

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	Northern Ireland mark.tasker@jncc.gov.uk http://www.ices.dk/indexfla.asp		source of particular food web dynamics, the loss of which will affect also a number of mammalian and avian predatory species. The particularly pronounced physical changes of Arctic ice conditions as already observed and expected for the coming decades, will require careful ecological monitoring. Eventually measures will be needed to maintain or restore, to the extent possible the resilience of the Arctic populations to changing environmental conditions
Marine Mammal Council	Stanislav Belikov All-Russian Research Institute for Nature Protection, Head of Laboratory. E-mail: sbelik40@mail.ru	MMC Submission: EBSA Template 1: South-East Barents Sea (the Pechora Sea)	South-east fringe of the Barents Sea, called the Pechora Sea, has specific oceanology factors like structure and functioning of pelagic and benthic communities, presence of the federal and regional red listed species or of high ecosystem significance. Among marine mammals these are Atlantic walrus, beluga whale, ringed seal, bearded seal, and polar bear. At the same time the largest Barents offshore hydrocarbon deposits are known to be in the Pechora Sea. Its exploration is of high potential threat to communities and living organisms. This means we need to obtain new data on biota and develop a set of measures to mitigate anthropogenic impact on ecosystems.
		MMC Submission: EBSA Template 2: International waters of the Arctic Ocean	Continuous warming of the climate in the Arctic also affects the central part of the Arctic Ocean, situated outside of the economic zones of the neighboring Arctic states. During the last two decades, area and thickness of the ice cover has been continuously declining. Area close to the pole is becoming accessible for the commercial fishing, which is not governed by any international agreement. Under such development some highly vulnerable ecosystems, species and communities of marine organisms in the central part of the Arctic Ocean are becoming very vulnerable. This has the most critical impact for polar bears whose life history is tightly connected with the ice cover. In light of the declining ice cover, central part of the Arctic Ocean will become the only refuge for the species. There is a strong need for limitation of human industrial activities and intensification of research work.
National Resources Defence	Michael Jasny Natural Resources Defense Council Marine Mammal Protection Project	NRDC Submission: EBSA Template	The region within the Canadian Archipelago, extending from Baffin Bay and Davis Strait to the North Water (encompassing the North Water Polynya), and then West around Devon Island and Somerset Island,

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Council	Director Tel.: mjasny@nrdc.org	1: Canadian Archipelago including Baffin Bay	including Jones Sound, Lancaster Sound and bordering Ellesmere Island and Prince of Whales Island, should be set aside as a protected area for both ice-dependent and ice-associated species inhabiting the area such as the Narwhals (Monodon monoceros), Polar bears (Ursus maritumus), and Belugas (Delphinapterus leucus). The Canadian Archipelago overall has showed slower rates of sea ice loss relative to other regions within the Arctic with areas such as Baffin Bay and Davis Strait even experiencing increasing sea ice trends (Laidre et al. 2005b). Because of the low adaptive qualities of the above mentioned mammals as well as the importance as wintering and summering grounds, this region is invaluable for the future survival of the Narwhal, Beluga, and Polar Bear.
OSPAR Commission	Ms. Emily Corcoran OSPAR Commission for the Protection of the Marine Environment of the North-East Atlantic 219 Huntingdon Road Cambridge CB3 ODL United Kingdom of Great Britain and Northern Ireland E-Mail: emily.corcoran@ospar.com	OSPAR Submission: EBSA Template 1: The Arctic Front - Greenland/Norwegian Seas	The area reflects the meridional, interannual and seasonal variability of the Arctic front with adjacent Atlantic waters to the east (warm side) and Arctic waters up to the marginal ice zone to the west. The frontal processes are the power machine for the ecosystem, generating seasonally a huge biomass production on all trophic levels, but best visualized by the large schools of feeding pelagic fish.
		OSPAR Submission: EBSA Template 2: The Arctic Ice habitat - multiyear ice, seasonal ice and-marginal ice zone	The permanently ice covered waters of the high Arctic provide a range of globally unique habitats associated with the variety of ice conditions. In the northern hemisphere multi-year sea ice only exists in the Arctic and although the projections of changing ice conditions due to climate change project a considerable loss of sea ice, in particular multiyear ice, the Eurasian Central Arctic high seas are likely to at least keep the ice longer than many other regions in the Arctic basin. Ice is a crucial habitat and source of particular food web dynamics, the loss of which will affect also a number of mammalian and avian predatory species. The particularly pronounced physical changes of Arctic ice conditions as already observed and expected for the coming decades, will require careful ecological monitoring. Eventually measures will be needed to maintain or restore, to the extent possible the resilience of the Arctic populations to changing environmental conditions.

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		OSPAR Submission: EBSA Template 3: Charlie-Gibbs Fracture Zone	Fracture zones are common topographic features of the global oceans that arise through plate tectonics. The *Charlie- Gibbs Fracture Zone* is an unusual left lateral strike-slip *double* transform fault in the North Atlantic Ocean along which the rift valley of the Mid-Atlantic Ridge is offset by 350 km near 52º30′N. It opens the deepest connection between the northwest and northeast Atlantic (maximum depth of approximately 4500 m) and is approximately 2000 km in length extending from about 25°W to 45°W. It is the most prominent interruption of the MAR between the Azores and Iceland and the *only* fracture zone between Europe and North America that has an offset of this size. Two named seamounts are associated with the transform faults: Minia and Hecate. The CGFZ is considered a unique geomorphological feature in the North Atlantic under the EBSA criteria; further, it captures the Earth's geological history, including significant on-going geological processes.

Table 2. Other scientific information submitted in support of the workshop objectives

Party/ org. of submitter	Author(s)/Contributor	Title/Contents of submission
Denmark	Mr. Tom Christensen Advisor Arctic Research Centre Danish Centre of Energy and Environment National Environmental Research Institute Denmark Afdeling for Arktisk Miljø Danmarks Miljøundersøgelser Frederiksborgvej 399 4000 Roskilde Roskilde 399 4000 Denmark Tel.: 00454630 1951 E-Mail: toch@dmu.dk Mr. Thomas Juul-Pedersen Research Scientist and Programme Manager Greenland Climate Research Center PO Box 570 Nuuk, Greenland 3900 Denmark E-Mail: ThPe@Natur.gl	List of references
Arctic Monitoring and Assessment Programme	Ms. Janet Pawlak Deputy Executive Secretary Arctic Monitoring and Assessment Programme Gaustadalleen 21, N Oslo, Norway E-Mail: jpawlak@dahm.dk Web: www.amap.no	Identifi cation of Arctic marine areas of heightened ecological and cultural signifi cance: Arctic Marine Shipping Assessment (AMSA) IIc
BirdLife International	BirdLife International Wellbrook Court, Girton Road,	Marine Important Bird Areas: priority sites for the conservation of biodiversity

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	Cambridge CB3 0NA, UK. Email: birdlife@birdlife.org Web: www.birdlife.org	Seabird Data for Describing Marine Conservation Areas
National Resources Defence Council	Janet Clarke Science Applications International Corporation and Cetacean Mapping Working Group members.	Known Biologically Important Areas for Cetaceans Chukchi Sea and Alaskan Beaufort Sea
Whale and Dolphin Conservation (WDC)	Randall R.Reeves, PeterJ.Ewins, SelinaAgbayani, MadsPeterHeide-Jørgensen, Kit M.Kovacs, ChristianLydersen, RobertSuydam, WendyElliott, GertPolet, YvettevanDijk, RosanneBlijleven	Distribution maps
		Distribution ofendemiccetaceansinrelationtohydrocarbon developmentandcommercialshippinginawarmingArctic

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