EBSA - Additional figures

Seabird Foraging Zone in the Southern Labrador Sea

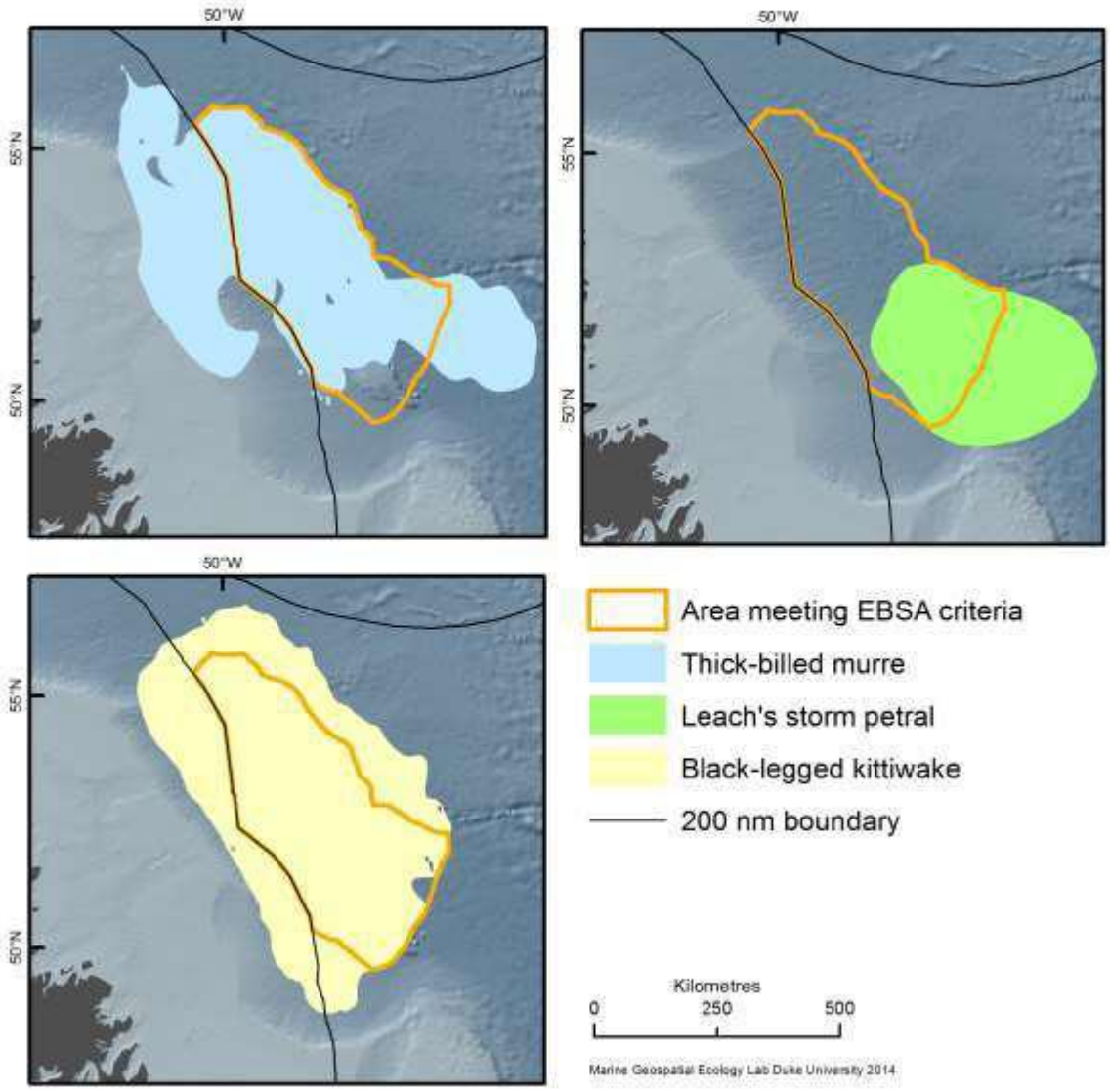

Figure 1. Boundary of the described area overlaid on the primary individual data layers used to define its extent . Black-legged kittiwake data represent a proposed marine Important Bird Area, based on data from14 colonies in the North-East Atlantic (Fredericksen et al. 2012), accessed and analyzed by BirdLife International. Thick-billed murre data are winter hotspots for three eastern Canadian Arctic colonies combined (see figure 5, Coats, Digges and Minarets; McFarlane Tranquilla et al. 2013) and were analyzed and assessed by BirdLife International. Foraging areas of each's storm-pet rel from Baccalieu Island, Newfoundland (figure 7) are represented by a 50% kernel density contour (A. Hedd, unpublished data).

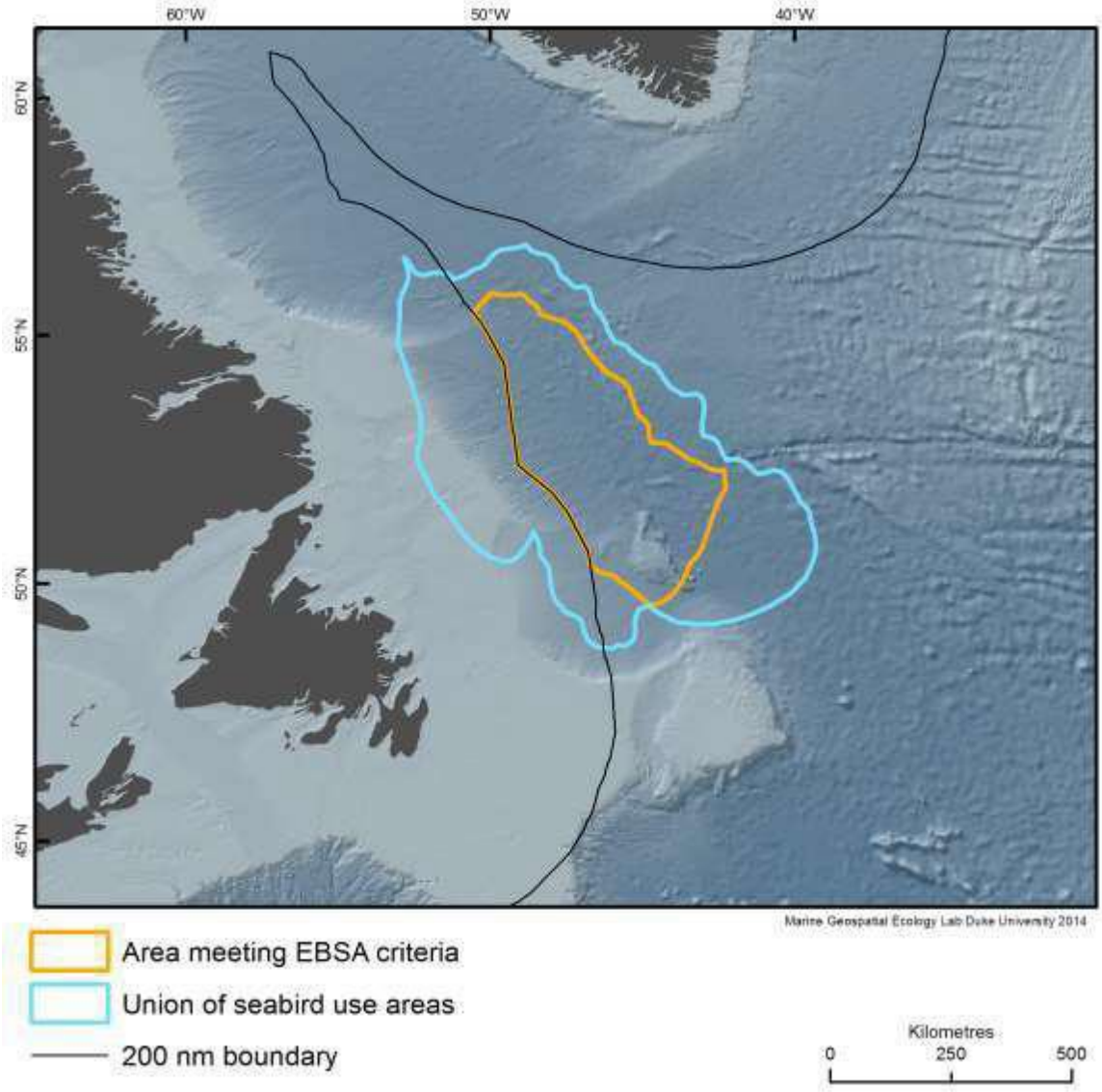

Figure 2. Area meeting the EBSA criteria (yellow) depicted against the wider area used collectively by three species (blue): The area in blue encompasses the union of foraging and over-wintering areas of black-legged kit t iwakes, thick-billed murres and each's storm-petrels; the area in yellow represents the intersect ion of habitat for black-legged kittiwakes and one of the other tracked species in waters beyond national jurisdiction.

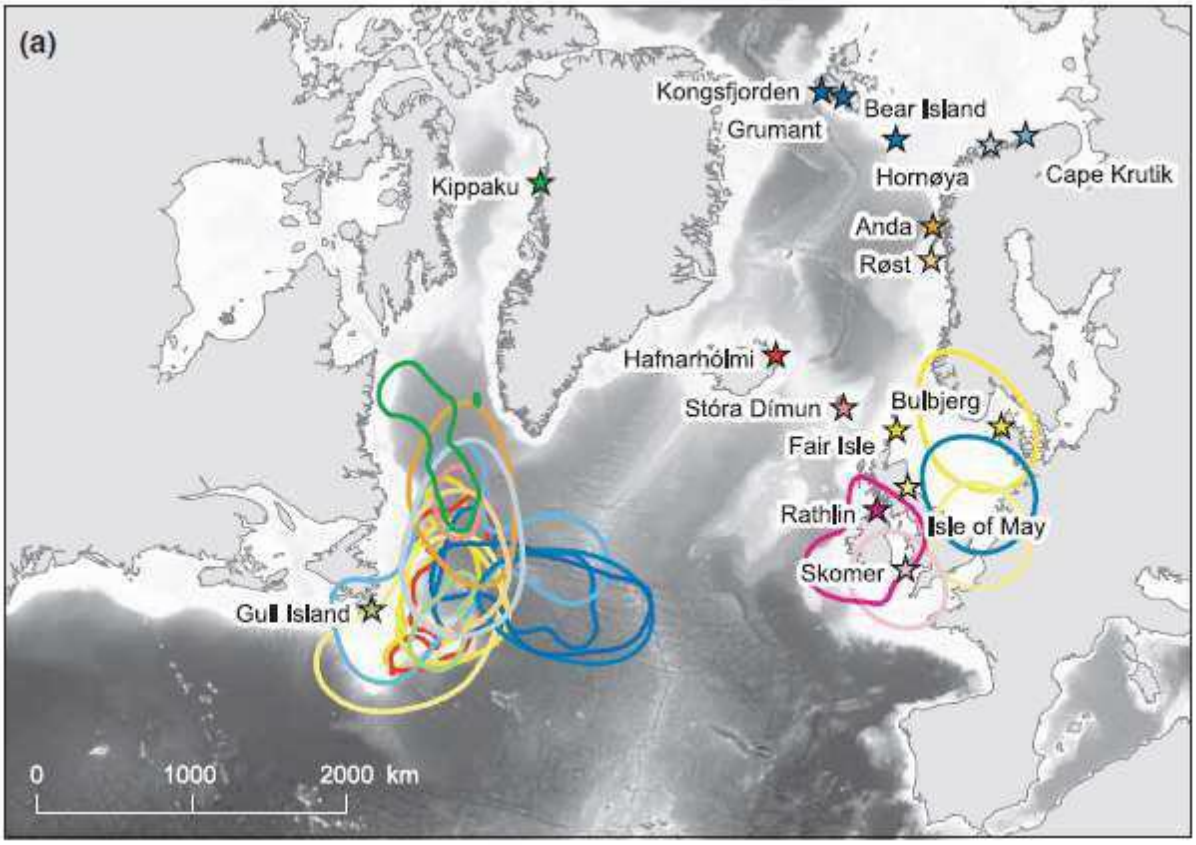

Figure 3. Areas used by black-legged kittiwakes wintering in the North Atlantic. Shown are 50% density kernels for December 2009, with kernel colour matching that of the star used to indicate the colony tagging location.

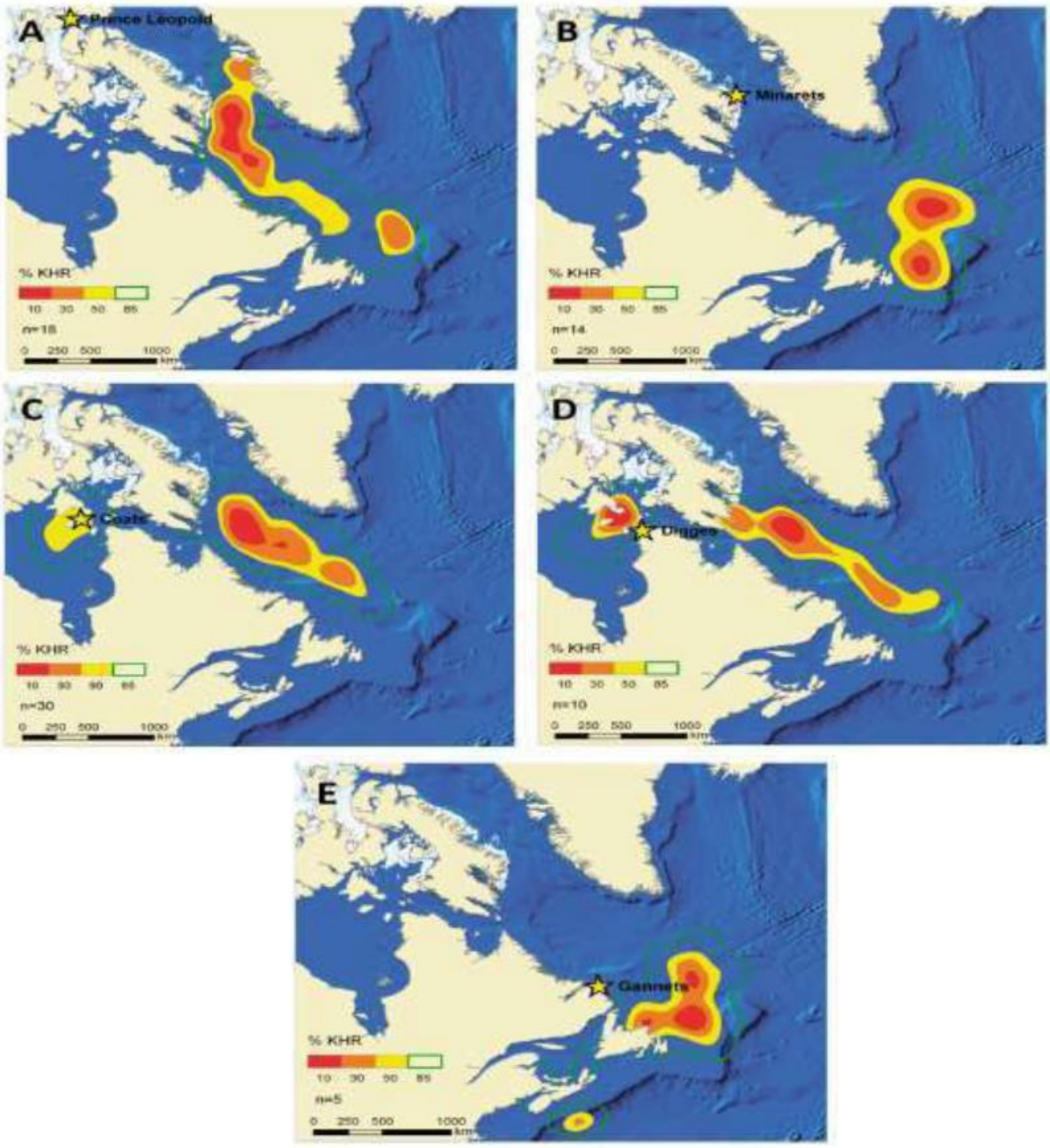

Figure 4. Winter distribution (November-February) of thick-billed murres from five colonies in eastern Canada (McFarlane Tranquilla et al. 2013), using kernel density contours (KHR).

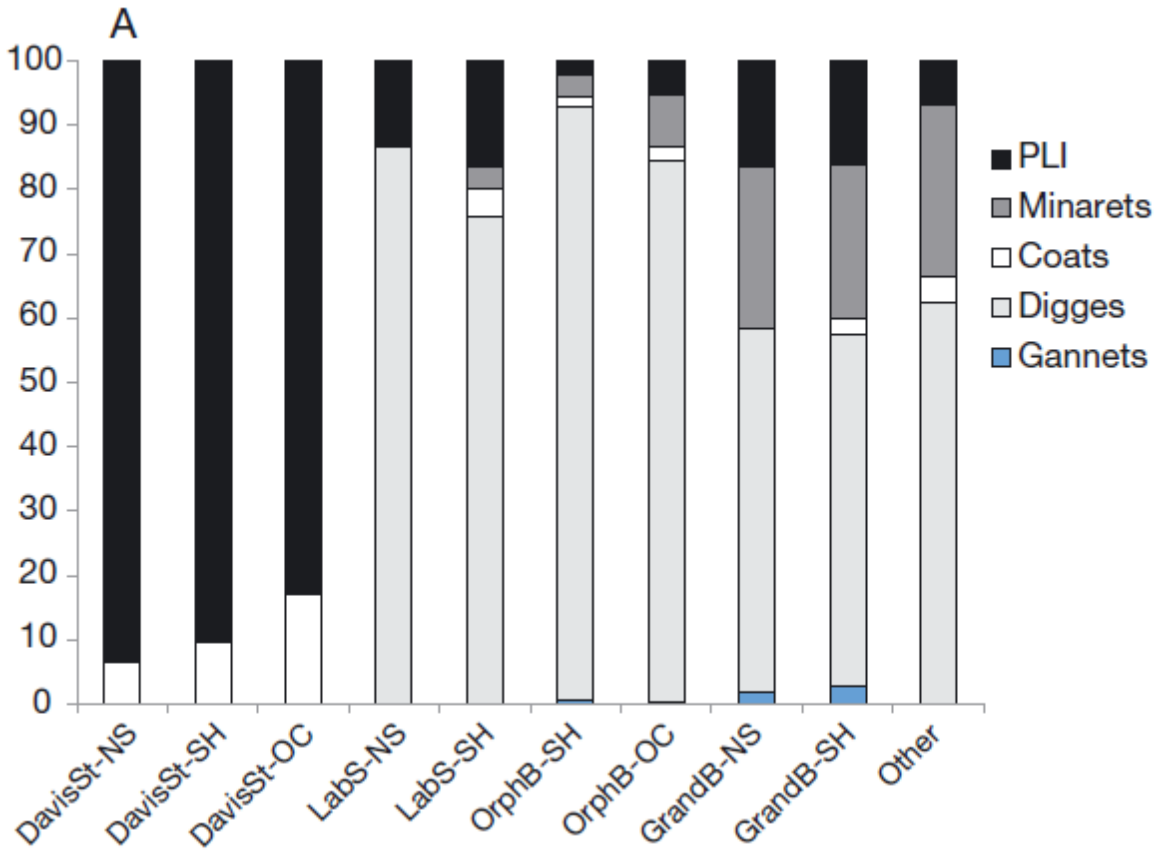

Figure 5. Composit ion (%) by subregions (NS=nearshore, SH=shelf, OC=oceanic, LabS=Labrador Sea, OrphB=Orphan Basin, GrandB=Grand Banks) of different populations of thick-billed murre, based on proportional use of subregions scaled to population size. Labrador Sea and Orphan Basin are the areas relevant to the described area (McFarlane Tranquilla et al. 2013).

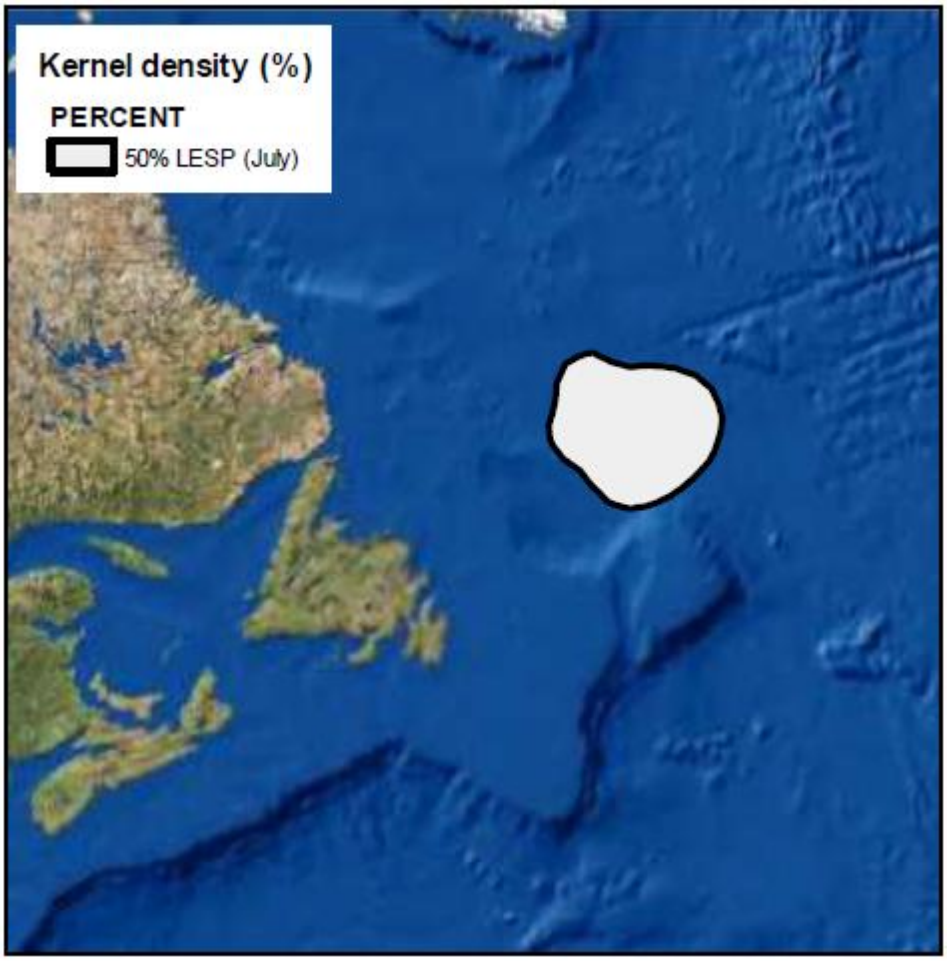

Figure 6. Areas used by each's storm-petrel foraging from Baccalieu Island, Newfoundland during the incubation period, July 2013. Data were collected using geolocators. The 50% kernel density contour is shown.

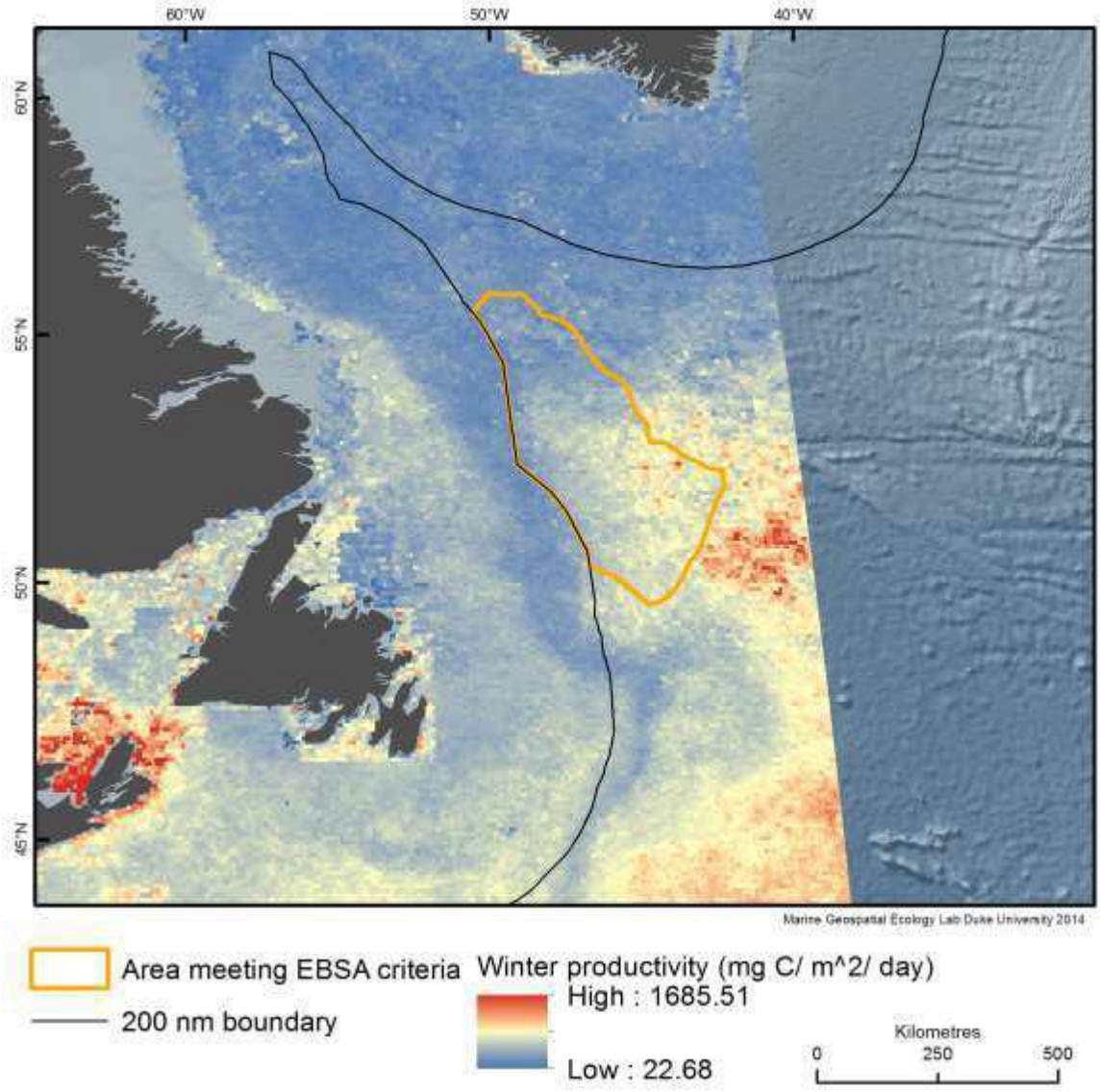

Figure 7. The described area is overlaid on winter primary productivity, depicting relatively higher product ivity in the south-east corner and in relation to adjoining areas of the shelf-edge.

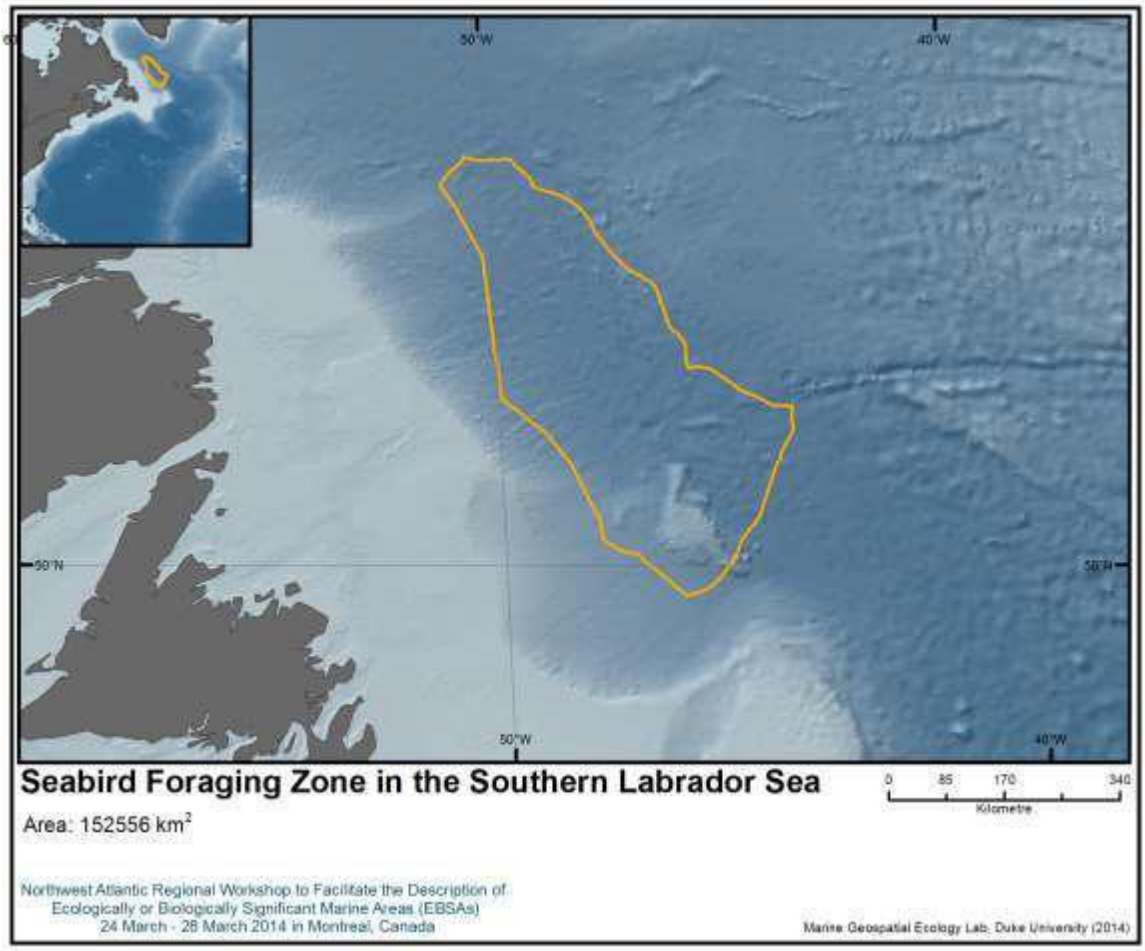

Figure 8. Area meet ing the EBSA criteria. The area represents the intersection of core foraging and over-wintering zones for three seabird species (of which 20 colonies are represented) that congregate in the area.

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Seabird t racking data has been generously provided by Laura McFarlane Tranquilla, Bill Montevecchi, Tony Gaston, April Hedd, Morten Frederiksen, Tycho Anker-Nilssen, Rob Barret t, Bergur Olsen, Maria Bogdanova, Børge Moe, Thierry Boulinier, Francis Daunt , Deryk Shaw, Geir Helge Systad, David Grémillet , Hallvard St røm, Harald Steen, Jacob Gonzalez-Solis, Svein-Håkon Lorentsen, Lorraine Chivers, Mark Mallory, Mark Newell, Olivier Chastel, Signe Christensen-Dalsgaard, Thorkell Lindberg Thórarinsson, Tony Gaston, and Yuri Krasnov.