



Seabirds in open sea

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Adult gannet. (© Eirik Grønningsæter)

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Seabird surveys in 2008

In 2008, we joined the Institute of Marine Research's regular ecosystem surveys in the Norwegian and Barents Seas in spring/summer and autumn (Figure 1). Seabird observations in the Norwegian Sea were conducted from the research vessel G.O. Sars with a total transect length of 2173 km from 13 to 30 May. Seabird observations in the Barents Sea were made as a part of the Ecosystem Barents Sea Survey from 20 August to 1 October when we joined the research vessels G.O. Sars, Johan Hjort and Jan Mayen. During this survey, we covered a total transect length of 6552 km. The average densities of different seabird species observed in similar cruises in 2007 and 2008 are summarized in Table 1.

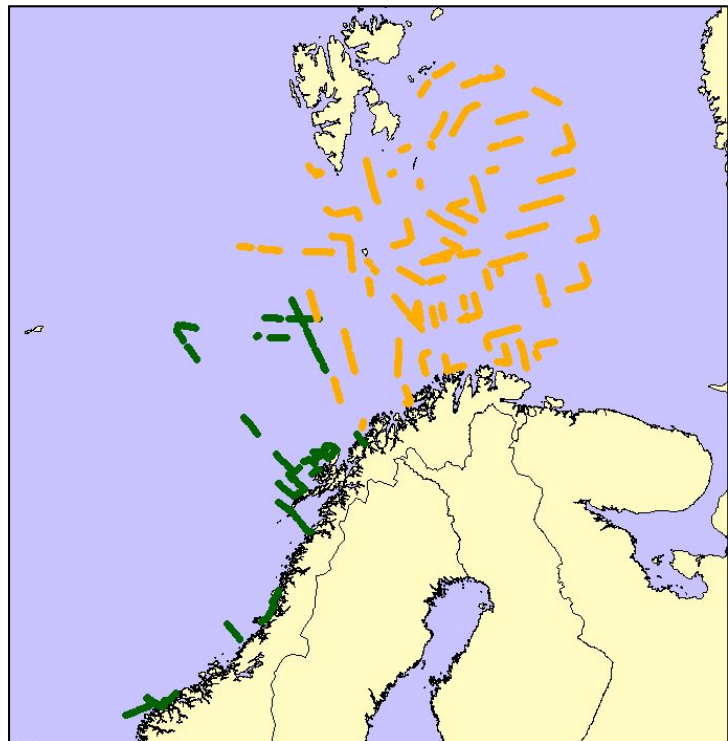


Figure 1
Seabird transects in the Norwegian and Barents Seas 2008.

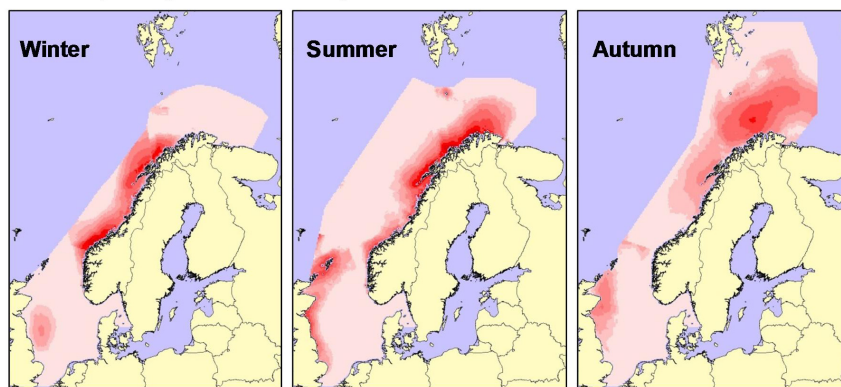
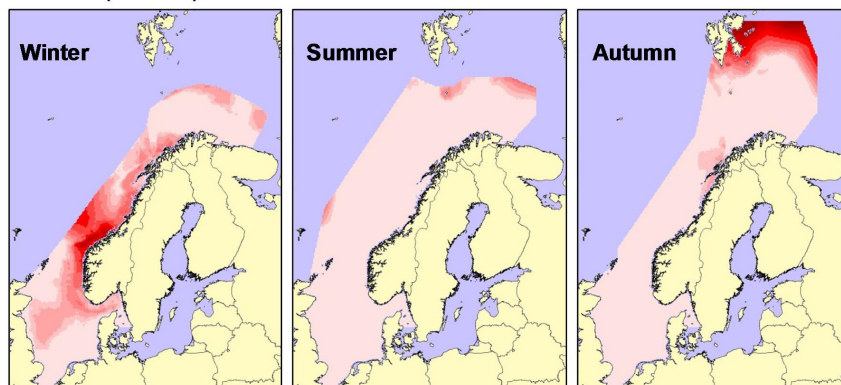
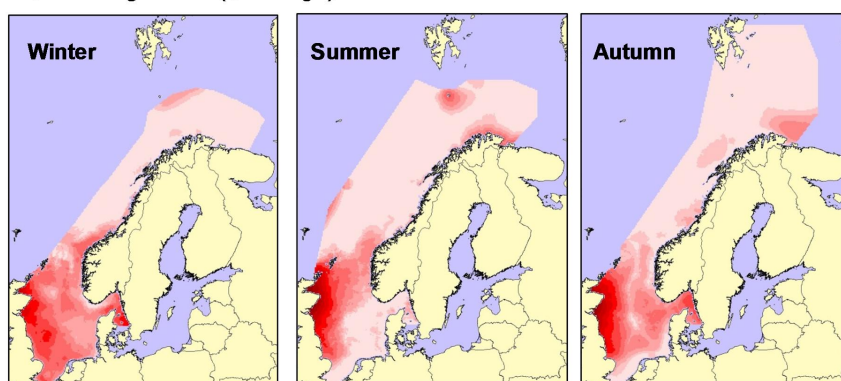
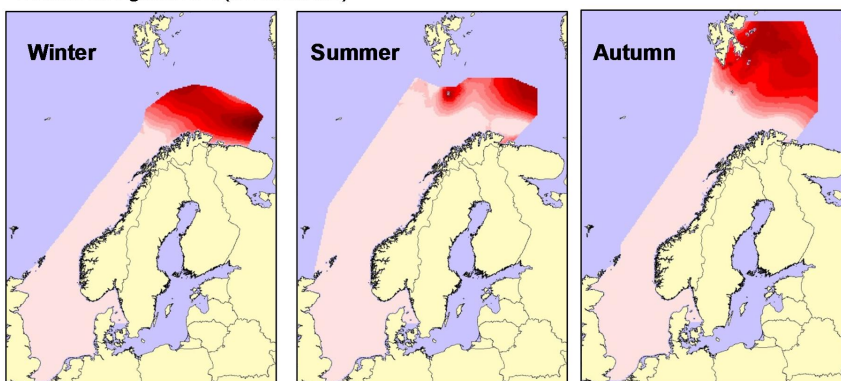
 Spring and summer cruises (May)
 Autumn cruises (August – October)

Table 1 Densities of seabirds (individuals/km²) observed from ecosystem surveys conducted in the Norwegian Sea (spring/summer) and in the Barents Sea (autumn) in 2007 and 2008.

Common name	Scientific name	Spring/summer		Autumn	
		2007	2008	2007	2008
Fulmar	<i>Fulmarus glacialis</i>	402.43	83.94	25.02	297.20
Sooty shearwater	<i>Puffinus griseus</i>	0	0	0.011	0.005
Shag	<i>Phalacrocorax aristotelis</i>	0.003	0.000	0.001	0
Common eider	<i>Somateria mollissima</i>	0.026	0.016	0.001	0.009
Long-tailed duck	<i>Clangula hyemalis</i>	0.007	0.000	0	0
Pomarine skua	<i>Stercorarius pomarinus</i>	0.061	0.006	0.358	0.231
Arctic skua	<i>Stercorarius parasiticus</i>	0.008	0.039	0.044	0.042
Long-tailed skua	<i>Stercorarius longicaudus</i>	0.013	0.059	0.005	0.005
Great skua	<i>Stercorarius skua</i>	0.030	0.004	0.007	0.005
Lesser black-backed gull	<i>Larus fuscus</i>	10.39	0.68	0	0
Herring gull	<i>Larus argentatus</i>	9.69	13.61	1.78	6.36
Iceland gull	<i>Larus glaucoides</i>	0.185	0.063	0	0
Glaucous gull	<i>Larus hyperboreus</i>	19.47	1.16	1.02	5.23
Great Black-backed gull	<i>Larus marinus</i>	11.31	4.83	0.474	1.41
Kittiwake	<i>Rissa tridactyla</i>	60.39	23.94	14.64	54.08
Arctic tern	<i>Sterna paradisaea</i>	0.001	0.141	0.027	0.022
Common guillemot	<i>Uria aalge</i>	0.017	0.110	0.095	0.142
Brünnich's guillemot	<i>Uria lomvia</i>	0.039	0.012	1.77	1.51
Guillemot sp.	<i>Uria sp.</i>	0.099	0.010	0.040	0.160
Little auk	<i>Alle alle</i>	0.068	0	0.243	0.045
Black guillemot	<i>Cephus grylle</i>	0.004	0	>0	0
Razorbill	<i>Alca torda</i>	0.002	0.020	0.003	0.021
Puffin	<i>Fratercula arctica</i>	0.364	0.265	0.665	0.875

Distribution maps

Based on all available data, we have made new models of the spatial distribution of the 13 most common pelagic seabird species in Norwegian waters in three seasons. The dataset comprise more than 500,000 km of transects from 1980 to present. The data were analysed separately for the North Sea, Norwegian Sea and Barents Sea. Datasets and documentation are available on www.seapop.no. Distributions of the four auk species are shown in (Figure 2), while the distributions of the two most common pelagic surface feeding seabirds; fulmar and kittiwake are shown in Figure 3.

Atlantic puffin (*Fratercula arctica*)Little auk (*Alle alle*)Common guillemot (*Uria aalge*)Brünnich's guillemot (*Uria lomvia*)Number of birds per 10x10 km² cell

0-10	100-158	1000-1580
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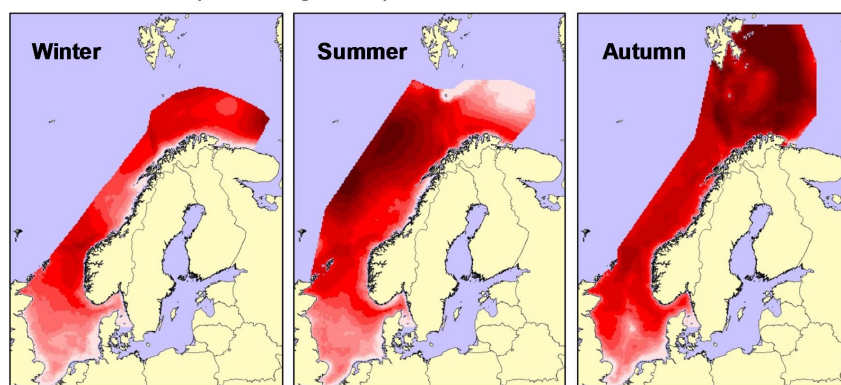
Figure 2

The spatial distribution of auks in Norwegian waters in three different seasons; winter (1 Nov – 31 March), summer (1 April – 31 July) and autumn (1 August – 31 October).

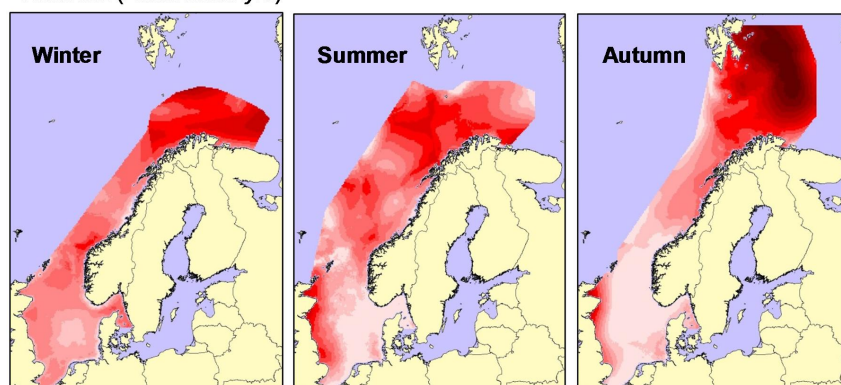
Kittiwake in feather moult.
(© Eirik Grønningsæter)



Northern fulmar (*Fulmarus glacialis*)



Kittiwake (*Rissa tridactyla*)



Number of birds per 10x10 km² cell
 0-10 100-158 1000-1580

Figure 3

The spatial distribution of fulmar and kittiwake in Norwegian waters in three different seasons; winter (1 November – 31 March), summer (1 April – 31 July) and autumn (1 August – 31 October).

Cover photo: Dark-phased fulmar. (© Eirik Grønningsæter)

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SEAPOP (SEAbird POPulations) is a long-term monitoring and mapping programme for Norwegian seabirds that was established in 2005 and implemented on the full national scale in Norway, Svalbard and adjacent sea areas in 2008. The programme is financed by the Ministry of the Environment, the Ministry of Petroleum and Energy and the Norwegian Oil Industry Association, and aims to provide and maintain the most important base-line knowledge of seabird distribution, demography and ecology needed for an improved management of these marine environments. More info about *SEAPOP* is found on the programme's web site www.seapop.no, including an up-to-date list of associated publications from which all reports can be freely downloaded as pdf documents.

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