

## SEALS AND WALRUS: abundance and trends in population, stocks and units used in NAMMCO monitoring and assessments

Species	Stocks <i>In "blue", units which are a component of above stock.</i> In [xx], units for information not used in assessment.		95% CI (or SE or CV)	Date survey	Trend* (in grey, unknown ; in pink, decreasing)	Date Inter. Assess.*	Removals: DC, direct; DCQ, with quota; BC, By-catch; SC, Scientific; SL, Struck and lost	Annual DC & DCQ (nbr. ind.) <b>2013, 2014, 2015, 2016, 2017</b>	References Abundance Estimate / Assessments
Harp seal	Northwest Atlantic	7,445,000	6,426,000-8,354,000	2012	Stable	2013	DCQ (CA), DC (GL), BC, SL	WGL: <b>80,822; 63,055; 62,076; 55,855, na</b> (CA+GL: <b>169,700; 133,827; 2,237; na; na</b> )	ICES 2014
	White Sea/Barents Sea (East ice)	1,408,000	1,251,680-1,564,320	2017 (model estimate)	Increasing	2016	DCQ (NO)	NO: <b>0; 0; 0; 28; 0</b> (~ 5-10,000 until 2007)	ICES 2016
	Greenland Sea (West Ice)	650,300	471,200-829,300	2017 (model estimate)	Increasing	2016	DCQ (NO), DC (GL)	NO: <b>16,033; 11,986; 2,237; 1,470; 2,000</b> GL: <b>1,280; 940; 865; 1,345; na</b>	ICES 2016
Hooded seal	Greenland Sea (West Ice)	80,460	59,020-101,900	2017 (model estimate)	Decreasing	2013	SC (NO), DC (GL)	NO: <b>22; 24; 11; 18; 17</b> GL: <b>0; 1; 0; 1; na</b>	ICES 2016
	Northwest Atlantic	592,100	404,400-779,800	2005	Increasing	2006	DC (GL), SL, BC	GL: <b>1,520; 1,848; 1,949; 1,514; na</b>	ICES 2006
Ringed seal	[Area 1: NE Canada, Baffin Bay, West Greenland]	~ 1.300,000		Estimate		1996	DC	CA: na GL: <b>55,714; 55,695; 50,060; 40,382; na</b>	
	<i>part of "Baffin Bay"</i>	<i>787,000</i>		<i>1979</i>	<i>single estimate</i>		<i>DC</i>		<i>Finley et al 1983</i>
	[Area 2: South East GL and Greenland Sea]	Unknown					DC	GL: <b>9,216; 8,975; 7,617; 7,626; na</b>	
	<i>"Scoresbysund and Kong Oscars Fjords"</i>	<i>30,000</i>		<i>1984</i>	<i>single estimate</i>	<i>1996</i>	<i>DC</i>		<i>NAMMCO 1996, Born et al 1998.</i>
	[Area 3: Svalbard and Barents sea]	Unknown					DC		
	<i>"Svalbard" (Spitsbergen)</i>	<i>7,585**</i>	<i>6,332-9,085</i>	<i>2002-03</i>	<i>(Prob. decreasing)</i>		<i>DC</i>	<i>NO: 62; 40; 59; 49; 29</i>	<i>Krafft et al 2006, Lydersen &amp; Kovacs in Kovacs 2014</i>
Bearded seal	Canadian waters and West Greenland	Unknown, 100,000s					DC	WGL: <b>903; 1,145; 1,081; 1,081; na</b>	
	<i>"North Water"</i>	<i>6,005</i>	<i>4,070-8,858</i>	<i>2014</i>	<i>Single abund. estimate</i>		<i>DC</i>		<i>Heide Jørgensen et al 2016</i>
	East Greenland	Unknown						EGL: <b>213; 214, 274; 242; na</b>	
	[Svalbard and Barents sea]	Unknown					<i>DC</i>		
	<i>"Svalbard"</i>	<i>Unknown, 1,000s</i>					<i>DC</i>	NO: <b>33; 21; 17; 34; 23</b>	

Walrus	[Baffin Bay]				Increasing	2015	DCQ		NAMMCO 2015
	"Summer Canada"	1,521	571-2,477	2009	Increasing	2015	DCQ	CA: na	NAMMCO 2015
	"Greenland - North Water"	1,279	938 - 1744	2018	Increasing (from 2007)	2018	DCQ	GL: 65; 67; 74; 74; 73	NAMMCO 2018
	[West Greenland-Southeast Baffin Island]	Unknown					DCQ		
	"West Greenland aggregation"	1,408	922-2,150	2012	Increasing (from 2007)	2018	DCQ	GL: 47; 52; 53; 52; 35	NAMMCO 2018
	East Greenland	279 p, a	226-345	2017	Stable/Increasing	2018	DCQ	GL: 8; 8; 4; 9; 3	NAMMCO 2018
	[Svalbard / Franz Joseph Land]	Unknown					Protected		
	"Svalbard"	3,886	3,553-4,262	2012	(Increasing)		Protected 1952		Kovacs et al 2014
Grey Seal	Greenland	New species (from 2009)					Protected 2010		Rosing-Asvid 2010
	Iceland	4,200	3,400-5,000	2012	Decreasing?	2016	DC, BC	IS: 1; 2; 30; 61; 39	NAMMCO 2016
	Faroe Islands	?? ~ 1,000-2,000					DC, BC	FO: ~ 150-250/year until 2013; 102; 140; 111; 117 (Systematic voluntary reporting from 2014 onwards)	NAMMCO 2016
	Norway (total)	8,740	7,320-10,170	2011##	Overall increasing	2011	DCQ, BC	NO:183; 216; 81; 33; 81	Øigård et al 2012, NAMMCO 2016b
	Trøndelag -Nordland	Pup production: 332		2014-15	60% decline in pup production	2016	DCQ, BC	NO: 92; 71; 17; na; na (Trondland: quota = 0 from 2015)	NAMMCO 2016
Harbour seal	Greenland	?? ~ <500					Protected 2010	EGL: 0; 1; 0; 1; na WGL: 10; 19; 3; 3; na	Rosing-Asvid 2010
	Iceland	?? ~ 8,000		2014	Declining	2016	DC, BC	IS: 306; 203; 159; 148; 50	NAMMCO 2017
	[Faroe Islands]	Extirpated ~ 1850							Mikkelsen 2010
	Norway (entire coast)	7,642		2011-15	Stable	2016	DCQ, BC	NO: 511; 409; 297; 362; 338	NAMMCO 2016
	Svalbard	1,812	1,656-4,418	2010	single estimate		DC	NO: 62; 40; 59; na; na	Merkel et al 2013

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**EXPLANATIONS AND REFERENCES**


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\* Stock Status Assessment carried out by an international body. For seals it is NAMMCO or the ICES/NAFO/(NAMMCO) Working Group on harp and hooded seals (WGHARP)

If the trend is given in parenthesis, there has not been an international assessment, but the trend has been published

\*\* Underestimated

# Catch data reporting from 2015 are not finalized

± Canadian catch data for harp and hooded seals are from WGHARP; Greenlandic catch data is from Piniarneq/LULI, Ministry of Fisheries, Hunting and Agriculture; Catch data from Svalbard are from the Governor of Svalbard

## This modelled-based abundance estimate uses the pup production estimated from the 2006-08 surveys.

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