

SUBPOPULATION	SUBPOPULATION SIZE			CHANGE IN SUB-POPULATION SIZE	SUBPOPULATION TREND	SEA ICE METRICS 1979-2018		HUMAN-CAUSED REMOVALS: 2013/14-2017/18		COMMENTS, VULNERABILITIES AND CONCERNS
	Estimate and uncertainty (95% CI)	Method and type of evidence	Year and citation	Long term (ca 3 polar bear generations)	Short term (ca 1 polar bear generation)	Change in date of spring ice retreat/fall ice advance (days per decade)	Change in summer sea ice area (% change per decade)	5-year mean		
								Quota (bears per year)	Actual (% of total population)	
Arctic Basin	Unknown			DD	DD	-9.8/14.3	-7.4	N/A		
Baffin Bay	2826 (2059-3593)	Genetic C-R (estimated)	2012-13 (SWG 2016)	DD	DD	-6.1/3.9	-18.9	137.8	135.8 (4.8%)	Due to evidence that sampling design and environmental conditions likely resulted in an underestimate of abundance in the 1990s, the estimates of abundance for the 1990s and 2010s are not directly comparable and trend cannot be determined. Satellite telemetry analyses comparing movements of adult females in 1990s to 2000s indicate reduced seasonal ranges, increased isolation, 30+ days more on land on Baffin Island in summer, reduced body condition, reduced cub recruitment with early sea ice breakup, and increased swimming.
Barents Sea	2644 (1899-3592)	DIST (estimated)	2004 (Aars et al. 2009)	DD	Likely stable (2004 to 2015)	-16.0/25.2	-19.6	N/A		There has been no legal hunting of polar bears in Russia since 1957 and in Norway since 1973. Recent habitat decline has led to late sea ice formation in autumn around some important denning habitat, in such years few females den in these areas. Den distribution may have shifted from E Svalbard to Franz Josef Land in most years. In 2015, the Norwegian part was surveyed. It was indicated that number of local bears in Svalbard was similar to in 2004, and that more bears were up in the pack ice. Possibly, bears could have shifted westward from Russian to Norwegian area in the pack, thus an increase is not conclusive over the last generation. No evidence of large scale reduction in body condition.
Chukchi Sea	2937 (1552-5944)	Physical C-R with EXT (est./projected)	2016 (Regehr et al. 2018)	DD	Likely stable (2008 to 2016)	-6.3/6.8	-25.9	58 (changed to 85 in July 2018)	U.S.: 15.4 (0.5%) + Russia: ca. 32 (1.1%)	Estimate of subpopulation trend from Regehr et al. (2018b). Indices of good body condition and recruitment during springtime research, although autumn observations suggest declining cub survival. Longer ice-free periods are increasing land use. Subsistence harvest is legal and monitored in US. Harvest remains illegal and un-monitored in Russia.
Davis Strait	2158 (1833-2542)	Physical C-R (estimated)	2007 (Peacock et al. 2013)	DD	Likely stable (2007 to 2016)	-5.6/6.7	-19.2	QC + 75.8 (NU + GL)	84.4 (3.9%)	Low recruitment rates may reflect negative effects of greater densities or worsening ice conditions; ongoing population assessment.
East Greenland	Unknown			DD	DD	-7.0/8.4	-7.9	N/A		Reduction in sea ice habitat quality has led to changes in habitat use based on telemetry analyses.
Foxe Basin	2585 (2096-3189)	C-R + DIST (estimated)	2009/10 (Stapleton et al. 2016)	Stable (1994 to 2010)	Stable (1994 to 2010)	-4.5/4.6	-14.1	QC + 117.2 (NU)	103.8 (4.0%)	There are no estimates of vital rates. Harvest appears to be sustainable.
Gulf of Boothia	1592 (870-2314)	Physical C-R (estimated)	2000 (Taylor et al. 2009)	Likely stable (2000 to 2017)	Likely stable (2000 to 2017)	-8.0/6.6	-13.6	72.4	61.8 (3.9%)	Ongoing population assessment.
Kane Basin	357 (221-493)	Genetic C-R (estimated)	2013-14 (SWG 2016)	DD	Likely increased (1997 to 2014)	-6.9/4.6	-9.8	11.0	8.0 (2.2%)	More bears were documented in the eastern regions of the KB subpopulation area during 2012 – 2014 than during 1990s surveys which may reflect differences in spatial distribution of bears, possibly influenced by reduced hunting pressure by Greenland in eastern KB, but also some differences in sampling protocols between decades. Some caution should be taken in the interpretation of population growth. An additional estimate of abundance based on a springtime 2014 aerial survey in KB was 206 bears (95% lognormal CI: 83 - 510).
Kara Sea	Unknown			DD	DD	-9.7/8.9	-22.7	N/A		There has been no legal hunting in the Kara Sea area since 1957. Amount of poaching unknown.
Lancaster Sound	2541 (1759-3323)	Physical C-R (estimated)	1995-97 (Taylor et al. 2008)	DD	DD	-5.6/3.8	-7.5	84.8	80.8 (3.2%)	Demographic data are >15 years old. Selective hunting for males in the harvest decreased due to the US import ban and listing under the US ESA. Increase in shipping activities.
Laptev Sea	Unknown			DD	DD	-6.7/7.2	-17.5	N/A		There has been no hunting in the Laptev Sea since 1957. In 2018, a federal sanctuary (zakaznik) on the archipelago of the Novosibirsk Islands was created by a decree of the Government of the Russian Federation.
M'Clintock Channel	284 (166-402)	Physical C-R (estimated)	2000 (Taylor et al. 2006)	Very likely increased (2000 to 2016)	Very likely increased (2000 to 2016)	-4.2/4.7	-9.0	8.8	7.8 (2.7%)	New reassessment of subpopulation began in 2014; potential for shipping activities. Population is currently managed for recovery with harvest below sustainable rates.
Norwegian Bay	203 (115-291)	Physical C-R (estimated)	1997 Taylor et al. 2008)	DD	DD	-1.8/3.9	-1.7	4.0	2.0 (1.0%)	Initial PVA simulations resulted in population decline after 10 years, however vital rates from 2 populations were pooled for the analyses. Projections of decline were also high because of small sample size. Current data are >15 years old; small population.
Northern Beaufort Sea	980 (825-1135)	Physical C-R (estimated)	2006 (Stirling et al. 2011)	Likely decreased (2006 to 2018)	Likely decreased (2013 to 2018)	-7.2/2.6	-6.5	134.4	62.4 (3.3%)	Potential and actual removals merged for NB and SB due to unresolved boundary make population trends difficult to assess. Concerns include declining body condition, periods of low survival, and growing reliance of part of population on land during summer. Breakup becoming earlier and freeze-up later, resulting in longer period of open water and unavailability of prime fast ice feeding habitat in spring. Fact that recorded harvest level is less than half the total allowed quota is likely at least partly the result of population decline.
Southern Beaufort Sea	907 (548-1270)	Physical C-R (estimated)	2010 (Bromaghin et al. 2015)	Likely decreased (1967 to 2010)	Likely decreased (2001 to 2010)	-9.7/8.6	-25.3			Potential and actual removals merged for NB and SB due to unresolved boundary. Concerns include declining body condition, periods of low survival, growing reliance on land during summer, and increased potential for human-polar bear conflict arising from increased industrial development of Alaska's coastal plain.
Southern Hudson Bay	780 (590-1029)	C-R + DIST (estimated)	2016 (Obbard et al. 2018)	Very likely decreased (1986 to 2016)	Likely decreased (2012 to 2016)	-1.9/3.1	-8.5	51.6	36.4 (4.7%)	Increased time ashore due to changes in breakup and freeze-up; declining body condition; declining survival rates, especially of cubs-of-the-year. 2016 abundance estimate was 17% lower than 2011/2012 estimate. Similar rate of change in abundance in neighbouring Western Hudson Bay subpopulation.
Viscount Melville Sound	161 (93-229)	Physical C-R (estimated)	1992 (Taylor et al. 2002)	DD	DD	-5.5/7.1	-5.4	7.0	3.6 (2.2%)	Low densities of ringed seals and polar bears were observed during capture-recapture programs (2012-2014). Field program to estimate abundance completed 2014, final report not yet available.
Western Hudson Bay	842 (562-1121)	C-R + DIST (estimated)	2016 (Dyck et al. 2017)	Very likely decreased (1995 to 2016)	Likely decreased (2011 to 2016)	-5.9/3.2	-21.8	31.6	29.6 (3.5%)	Concerns include harvest, increased time onshore due to changing dates of breakup and freeze-up, declines in body condition, and lower productivity. Earlier declines in size of subpopulation linked to reduced survival due to timing of sea ice breakup. 2016 abundance estimate was 18.3% lower than 2011 estimate; similar rate of change in abundance over same time period in adjacent Southern Hudson Bay subpopulation.
© IUCN/PBSG Sept 2019	C-R = capture-recapture, DIST = distance sampling, EXT = density extrapolation			DD = Data deficient						See http://pbsg.npolar.no/status for references