

Table 1. Abundance of killer whales in 1987.  $n/L$  - encounter rate, no. of sightings  $\text{nm}^{-1}$ ;  $E(s)$  - expected cluster size;  $esw$  - effective strip half-width (m);  $f(0)$  - probability density of the detection function at distance 0;  $D$  - density, no.  $\text{nm}^{-2}$ ;  $N_s$  - abundance, uncorrected for perception bias.

Block	$n$	$n/L$	CV	$E(s)$	CV	$esw$	$f(0)$	CV	$D$	$N_s$	CV	LCL	UCL
1	0												
2	0												
7	0												
8	3	3.17E-03	0.53	13.7	0.23	884	1.13E-03	0.61	5.464E-02	2,263	0.80	494	10,353
9	2	3.33E-03	1.08	11.0	0.82	468	2.13E-03	0.66	7.249E-02	2,552	1.11	334	19,492
17	3	1.37E-03	0.75	9.0	0.42	468	2.13E-03	0.54	2.429E-02	728	0.97	138	3,856
26	2	1.22E-02	0.62	2.0	0.50	723	1.38E-03	0.73	2.264E-02	135	0.64	23	782
27	1	1.38E-03	1.09	15.0	0.00	1,588	6.30E-04	0.73	1.205E-02	487	1.10	60	3,951
36	2	2.25E-03	0.94	6.0	0.83	1,588	6.30E-04	0.44	7.856E-03	324	0.96	49	2,140
37	0												
38	0												
47	0												
88	2	1.77E-03	1.02	2.5	0.20	1,588	6.30E-04	0.44	2.577E-03	102	1.03	15	677
93	1	1.27E-03	0.94	4.0	0.00	1,588	6.30E-04	0.66	2.968E-03	57	0.95	9	375
94	0												
95	1	1.64E-03	0.94	4.0	0.00	1,588	6.30E-04	0.00	3.835E-03	268	0.95	43	1,685
F2	0												
F3	0												
F6	0												
F7	2	4.23E-03	0.54	7.5	0.07	1,588	6.30E-04	0.44	1.851E-02	360	0.57	108	1,192
F8	1	2.86E-03	0.98	20.0	0.00	468	2.13E-03	0.44	1.131E-01	1,623	1.01	200	13,143
F9	0												
<b>TOTAL</b>	<b>20</b>					<b>884</b>	<b>1.13E-03</b>	<b>0.16</b>	<b>1.325E-02</b>	<b>8,899</b>	<b>0.46</b>	<b>3,621</b>	<b>21,870</b>

Table 2. Abundance of killer whales in 1989.  $n/L$  - encounter rate, no. of sightings  $\text{nm}^{-1}$ ;  $E(s)$  - expected cluster size;  $esw$  - effective strip half-width (m);  $f(0)$  - probability density of the detection function at distance 0;  $D$  - density, no.  $\text{nm}^{-2}$ ;  $N_s$  - abundance, uncorrected for perception bias.

Block	n	$n/L$	CV	$E(S)$	CV	$esw$	$f(0)$	CV	$D$	$N_s$	CV	LCL	UCL
1	0												
17	1	8.81E-04	1.00	9.00	0.00	1,588	6.30E-04	0.00	4.62E-03	881	1.01	123	6,332
26	0												
36	1	1.47E-03	1.01	15.00	0.00	468	2.13E-03	0.00	4.35E-02	1,795	1.03	249	12,918
40	1	2.08E-03	1.05	12.00	0.00	1,588	6.30E-04	0.00	1.45E-02	1,546	1.06	104	22,903
50	0												
60	5	5.13E-03	0.71	4.20	0.47	1,588	6.30E-04	0.28	1.26E-02	1,649	0.74	335	8,127
65	1	1.14E-03	0.97	12.00	0.00	1,588	6.30E-04	0.44	8.00E-03	559	0.98	85	3,669
70	0												
88	5	6.20E-03	1.05	12.00	0.60	1,588	6.30E-04	0.28	4.33E-02	1,952	1.06	292	13,059
93	0												
94	2	2.90E-03	0.95	3.50	0.71	1,588	6.30E-04	0.44	5.92E-03	276	0.97	46	1,667
F3	0												
F6	0												
F7	4	8.91E-03	0.28	2.19	0.28	723	1.38E-03	0.52	8.54E-02	1,658	0.47	603	4,559
<b>TOTAL</b>	<b>20</b>								<b>1.18E-02</b>	<b>10,316</b>	<b>0.37</b>	<b>4,960</b>	<b>21,456</b>

Table 3. Abundance of killer whales in 1995.  $n/L$  - encounter rate, no. of sightings  $\text{nm}^{-1}$ ;  $E(s)$  - expected cluster size;  $esw$  - effective strip half-width (m);  $f(0)$  - probability density of the detection function at distance 0;  $D$  - density, no.  $\text{nm}^{-2}$ ;  $N_s$  - abundance, uncorrected for perception bias.

Block	n	$n/L$	CV	$E(S)$	CV	$esw$	$f(0)$	CV	$D$	$N_s$	CV	LCL	UCL
3	0												
4	0												
7	1	2.11E-03	1.01	9.0	0.00	1,588	6.30E-04	0.00	1.11E-02	752	1.02	75	7,547
8	0												
9	0												
2F	0												
5F	0												
5P	0												
6F	0												
6P	0												
8F	2	7.36E-03	0.82	3.0	0.67	468	2.13E-03	0.66	4.37E-02	920	0.85	160	5,280
9X	2	2.24E-03	0.57	10.5	0.05	468	2.13E-03	0.66	4.65E-02	3,064	0.63	888	10,570
EA	0												
EB	0												
<b>TOTAL</b>	<b>5</b>					<b>884</b>	<b>1.13E-03</b>	<b>0.16</b>	<b>6.68E-03</b>	<b>4,736</b>	<b>0.48</b>	<b>1,842</b>	<b>12,176</b>

Table 4. Abundance of killer whales in 2001, estimated using combined sightings from both platforms.  $n/L$  - encounter rate, no. of sightings  $\text{nm}^{-1}$ ;  $E(s)$  - expected cluster size;  $esw$  - effective strip half-width (m);  $f(0)$  - probability density of the detection function at distance 0;  $D$  - density, no.  $\text{nm}^{-2}$ ;  $N_s$  - abundance, uncorrected for perception bias.

Block	n	$n/L$	CV	$E(S)$	CV	$esw$	$f(0)$	CV	$D$	$N_s$	CV	LCL	UCL
AIR	4	1.03E-02	0.92	10.3	0.52	1,468	6.81E-04	0.38	7.53E-02	6,175	0.93	1,078	35,370
FAR	9	3.77E-03	0.65	4.9	0.22	2,089	4.79E-04	0.22	7.30E-03	1,192	0.69	311	4,576
J	20	1.37E-02	0.56	7.8	0.19	1,654	6.05E-04	0.17	4.91E-02	7,200	0.52	2,430	21,328
N	0												
NW	1	2.14E-03	0.97	5.0	0.00	2,543	3.93E-04	0.00	3.90E-03	105	0.99	16	717
SW	1	1.03E-03	1.08	2.0	0.00	2,543	3.93E-04	0.00	7.50E-04	149	1.11	20	1,093
W	3	1.62E-03	0.75	2.3	0.14	1,540	6.49E-04	0.44	2.14E-03	322	0.79	74	1,406
<b>TOTAL</b>	<b>38</b>					<b>1,738</b>	<b>5.75E-04</b>	<b>0.12</b>	<b>1.89E-02</b>	<b>15,142</b>	<b>0.47</b>	<b>6,003</b>	<b>38,190</b>

Table 5. Abundance of killer whales in 2001, estimated using sightings from the primary platform corrected for perception bias.  $n/L$  - encounter rate, no. of sightings  $\text{nm}^{-1}$ ;  $E(s)$  - expected cluster size;  $esw$  - effective strip half-width (m);  $f(0)$  - probability density of the detection function at distance 0;  $D$  - density, no.  $\text{nm}^{-2}$ ;  $N_s$  - abundance, uncorrected for perception bias;  $p(0)$  - estimated probability of detection at distance 0;  $N_c$  - abundance corrected for perception bias.

Block	n	$n/L$	CV	$E(S)$	CV	$esw$	$f(0)$	CV	$D$	$N_s$	CV	LCL	UCL	$p(0)$	CV	$N_c$	CV	LCL	UCL
AIR	4	9.73E-03	0.94	11.0	0.55				8.39E-02	6,878	1.05	1,084	43,643			6,886	1.05	1,085	43,709
FAR	7	2.86E-03	0.66	4.9	0.26				1.09E-02	1,779	0.82	403	7,858			1,786	0.82	404	7,896
J	16	1.03E-02	0.69	8.6	0.21				6.90E-02	10,120	0.72	2,649	38,667			10,141	0.72	2,650	38,807
N	0					1,181	8.47E-04	0.47						0.99	0.01				
NW	1	2.04E-03	0.97	5.0	0.00				8.01E-03	217	1.08	31	1,512			218	1.08	31	1,520
SW	1	9.64E-04	1.08	2.0	0.00				1.51E-03	299	1.18	40	2,257			302	1.18	40	2,279
W	4	2.14E-03	0.80	4.0	0.26				6.71E-03	1,008	0.97	189	5,383			1,012	0.97	189	5,410
<b>TOTAL</b>	<b>33</b>								<b>2.54E-02</b>	<b>20,301</b>	<b>0.63</b>	<b>6,312</b>	<b>65,286</b>			<b>20,345</b>	<b>0.63</b>	<b>6,317</b>	<b>65,523</b>

Table 6. Abundance of killer whales in 2007, estimated using combined sightings from both platforms and from the Extension survey (EXT).  $n/L$  - encounter rate, no. of sightings  $\text{nm}^{-1}$ ;  $E(s)$  - expected cluster size;  $esw$  - effective strip half-width (m);  $f(0)$  - probability density of the detection function at distance 0;  $D$  - density, no.  $\text{nm}^{-2}$ ;  $N_s$  - abundance, uncorrected for perception bias.

Block	n	$n/L$	CV	$E(S)$	CV	$esw$	$f(0)$	CV	$D$	$N_s$	CV	LCL	UCL
FE	5	5.46E-03	0.54	3.4	0.20	382	2.62E-03	0.47	3.717E-02	2,300	0.62	692	7,645
FS	0	0.00E+00	0.00	1.0	0.00	0	0.00E+00	0.00	0.000E+00	0	0.00	0	0
FX	0	0.00E+00	0.00	1.0	0.00	0	0.00E+00	0.00	0.000E+00	0	0.00	0	0
IC	4	1.16E-02	0.79	5.3	0.25	660	1.52E-03	0.31	8.555E-02	5,114	0.91	882	29,649
IN	0	0.00E+00	0.00	1.0	0.00	0	0.00E+00	0.00	0.000E+00	0	0.00	0	0
NW	1	7.13E-03	1.23	4.0	0.00	489	2.05E-03	0.00	5.402E-02	931	1.26	49	17,715
RN	1	5.78E-04	0.98	6.0	0.00	489	2.05E-03	0.00	6.576E-03	815	1.02	139	4,794
RS	3	3.59E-03	0.44	3.7	0.24	660	1.52E-03	0.36	1.849E-02	1,693	0.48	621	4,612
SC	0	0.00E+00	0.00	1.0	0.00	0	0.00E+00	0.00	0.000E+00	0	0.00	0	0
XSW	2	6.44E-03	0.63	5.5	0.09	316	3.16E-03	0.71	1.004E-01	5,793	0.73	1,425	23,552
XNE	15	5.11E-03	0.30	7.0	0.36	383	2.61E-03	0.26	1.064E-01	40,814	0.66	12,432	133,991
<b>TOTAL N</b>	<b>14</b>					<b>423</b>	<b>2.36E-03</b>	<b>0.18</b>	<b>1.370E-02</b>	<b>10,853</b>	<b>0.49</b>	<b>4,051</b>	<b>29,077</b>
<b>TOTAL EXT</b>	<b>17</b>					<b>423</b>	<b>2.36E-03</b>	<b>0.18</b>	<b>1.012E-01</b>	<b>46,607</b>	<b>0.60</b>	<b>15,457</b>	<b>140,532</b>
<b>TOTAL</b>	<b>31</b>					<b>423</b>	<b>2.36E-03</b>	<b>0.18</b>	<b>5.492E-02</b>	<b>57,460</b>	<b>0.50</b>	<b>22,385</b>	<b>147,494</b>

Table 7. Abundance of killer whales in 2015, estimated using sightings from both platforms corrected for perception bias. Yellow shaded strata and total are post-stratified for addition to Norwegian estimates from the Northeast Atlantic.  $n/L$  - encounter rate, no. of sightings  $\text{nm}^{-1}$ ;  $E(s)$  - expected cluster size;  $esw$  - effective strip half-width (m);  $f(0)$  - probability density of the detection function at distance 0;  $D$  - density, no.  $\text{nm}^{-2}$ ;  $N_s$  - abundance, uncorrected for perception bias;  $p(0)$  - estimated probability of detection at distance 0;  $N_c$  - abundance corrected for perception bias.

Block	n	$n/L$	CV	$E(S)$	CV	$esw$	$f(0)$	CV	$D$	$N_s$	CV	LCL	UCL	$p(0)$	CV	$N_c$	CV	LCL	UCL		
FC	16	1.73E-02	0.63	7.1	0.16	801	1.25E-03	0.21	1.43E-01	11,169	0.69	2,182	57,178			23,346	0.76	4,683	116,373		
FC_P	2	3.09E-03	0.54	6.0	0.17	801	1.25E-03	0.61	2.14E-02	571	0.55	157	2,080			1,193	0.62	323	4,401		
FW	1	6.98E-04	1.01	8.0	0.00	801	1.25E-03	0.21	6.45E-03	1,142	1.03	164	7,943			2,387	1.08	340	16,776		
IE	5	8.25E-03	0.62	3.3	0.53	2,252	4.44E-04	0.20	1.08E-02	1,172	0.67	322	4,258			2,449	0.74	628	9,554		
IE_P	3	9.64E-03	1.01	2.0	0.29	1,130	8.85E-04	0.26	7.92E-03	529	1.04	79	3,542			1,105	1.08	132	7,538		
IG	0													0.48	0.30						
IP	0																				
IQ	0																				
IR	6	5.06E-03	1.02	3.2	0.36	2,252	4.44E-04	0.19	1.04E-02	1,128	1.06	187	6,804					2,359	1.10	378	14,722
IW	0																				
SW	0																				
X	3	8.41E-03	0.85	11.1	0.53	2,252	4.44E-04	0.26	0.00E+00	0	0.00	0	0			0	0.00	0	0		
<b>TOTAL</b>	<b>31</b>					<b>1,130</b>	<b>8.85E-04</b>	<b>0.16</b>	<b>1.80E-02</b>	<b>14,611</b>	<b>0.55</b>	<b>4,045</b>	<b>52,773</b>			<b>30,540</b>	<b>0.63</b>	<b>8,319</b>	<b>112,120</b>		
<b>TOTAL_P</b>	<b>31</b>					<b>1,130</b>	<b>8.85E-04</b>	<b>0.16</b>	<b>4.68E-04</b>	<b>3,370</b>	<b>0.54</b>	<b>1,197</b>	<b>9,490</b>			<b>7,044</b>	<b>0.62</b>	<b>2,240</b>	<b>22,155</b>		