Polar bears and other ice-associated sea mammals in the Barents Sea

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## Studies on Norwegian – Russian populations

<table>
<thead>
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<th>Population estimate (Nor – Rus)</th>
<th>Genetic structure (Nor – Rus)</th>
<th>Movement (satellite tracking)</th>
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<tbody>
<tr>
<td>Polar bear</td>
<td>x</td>
<td>Performed</td>
<td>x</td>
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<tr>
<td>Walrus</td>
<td>Svalbard</td>
<td>Performed</td>
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<tr>
<td>Ringed seal</td>
<td>Svalbard Fjords</td>
<td>-</td>
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<tr>
<td>Beluga</td>
<td>-</td>
<td>Ongoing</td>
<td>Svalbard</td>
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Polar Bears
Female polar bear with GPS collar
Polar bear subpopulations

Mauritzen et al. 2002
Polar bear line transect

(August 2004, 220 hrs with helicopter)
Barents sea polar bear subpopulation:

appr 3000 (2200 – 4000) polar bears
Ringed seal
*Phoca hispida*
Ringed seal movement, animals marked in Svalbard

7,600 (95% CI 6,400-9,100)
Spitsbergen’s fjords (moulting period)
Krafft et al. 2006

Freitas K. et al., manuscript
Walrus
Walrus track, male walruses move to Russian Arctic to mate
Number of walruses in Svalbard, August 2006
2,600 (95% CI; 2,300 – 3,000).

Lydersen et al, in press
Beluga with satellite tag ready to get seaborn
Beluga, some months of tracks with very local movement
Some conclusion:

- Polar bear Barents Sea: regular movement Svalbard, Franz Josef Land, Ice edge, and overlap with Kara Sea area.
- Ringed Seal: Seals from Svalbard move over to Franz Josef Land and ice edge
- Walrus: males ”only” in Svalbard, mate with females at Franz Josef Land
- Beluga: Relative high structure?

What does genetics tell?
(Nor – Rus)

- Polar bears: LOW structure (also to other areas)
- Ringed seals: -
- Walrus: LOW structure
- Beluga: study ongoing