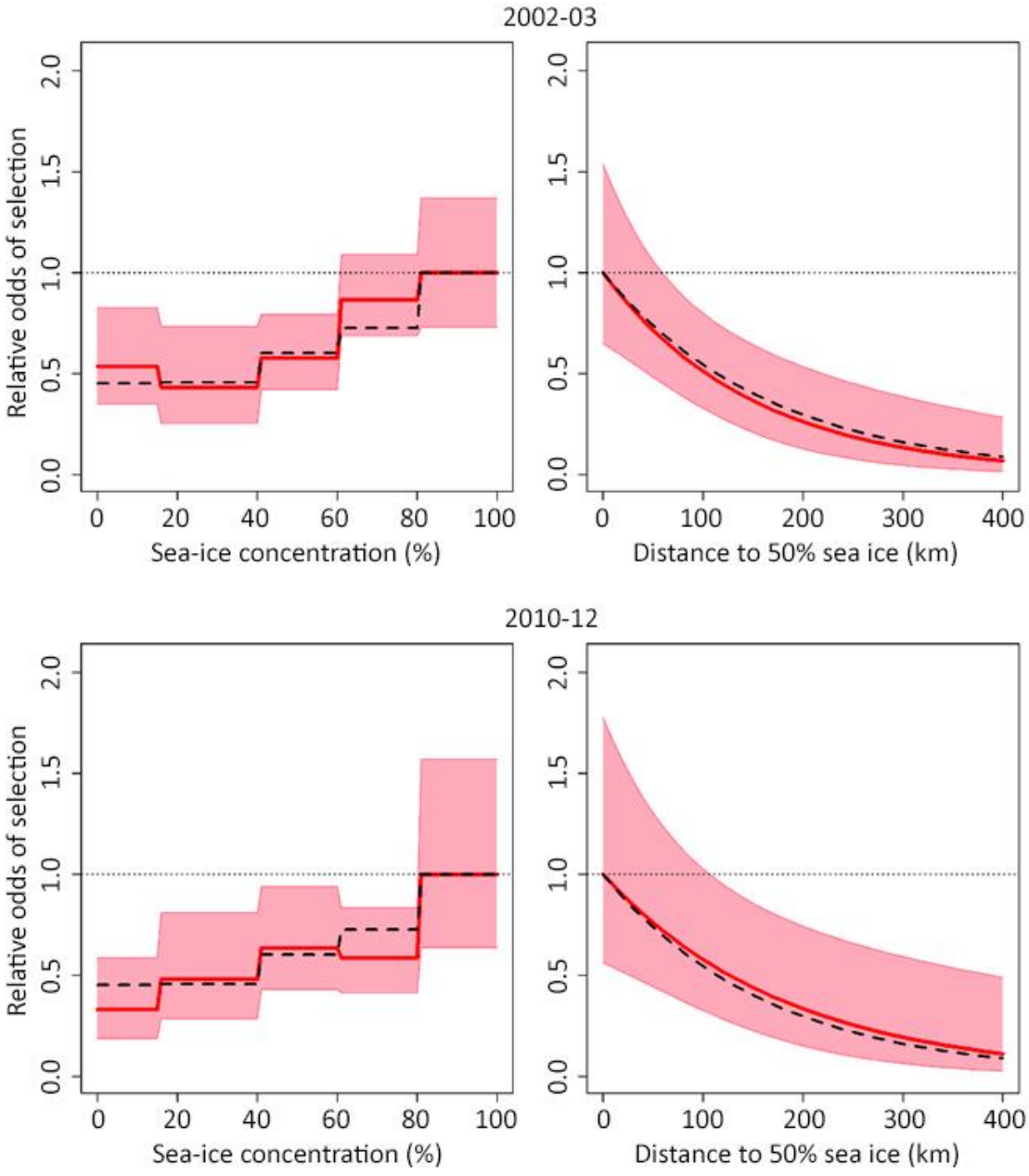
**Supplementary material for:** Lone K., Hamilton C.D., Aars J., Lydersen C. & Kovacs K.M. 2019. Summer habitat selection by ringed seals (*Pusa hispida*) in the drifting sea ice of the northern Barents Sea. *Polar Research 38.* Contact: Karen Lone, Norwegian Polar Institute, Fram Centre, PO Box 6606 Langnes, 9296 Tromsø, Norway. E-mail: karen.lone@gmail.com.

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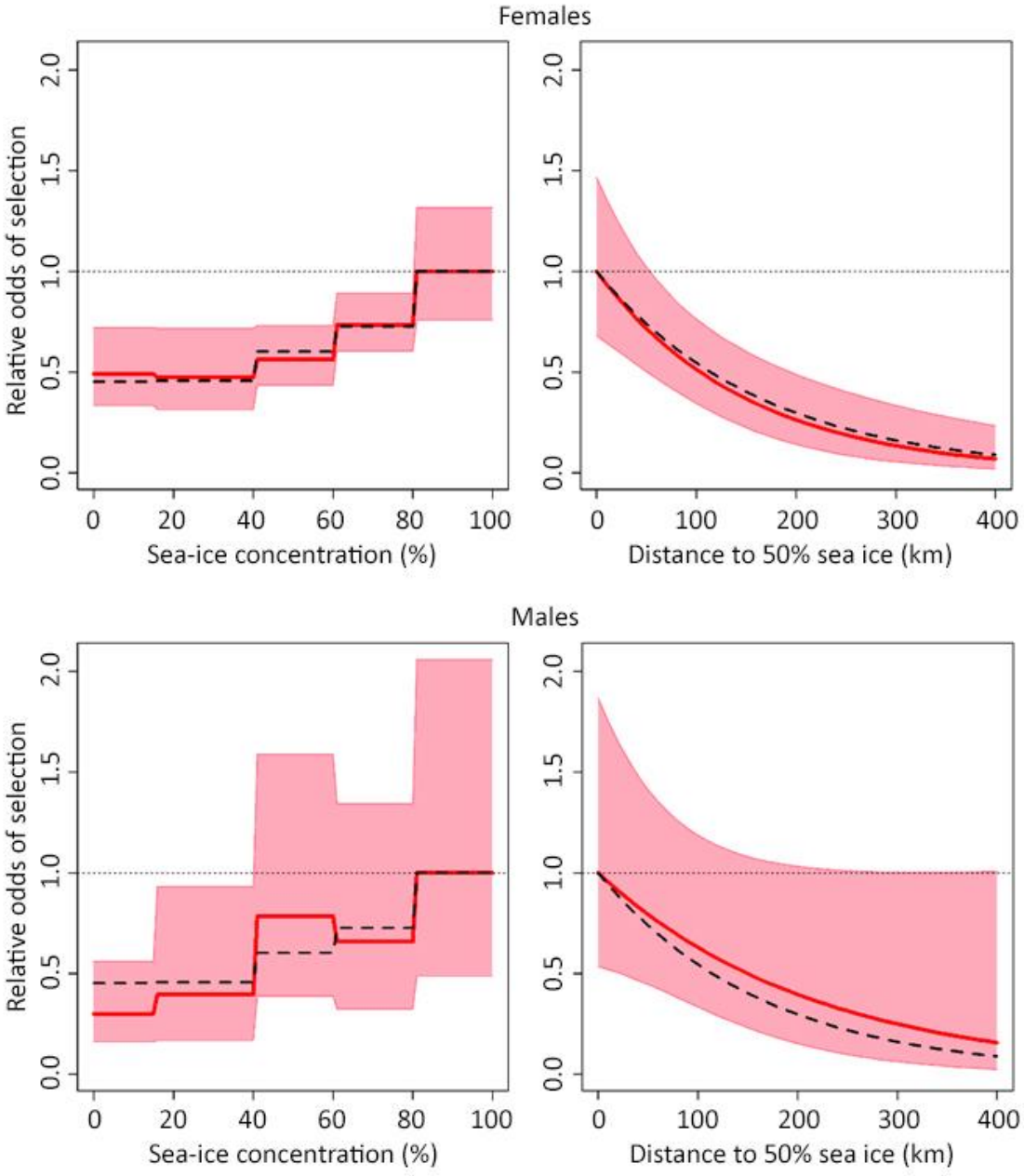


**Supplementary Fig. S1**. Ringed seal offshore foraging habitat selection in terms of relative odds of selecting habitat according to sea-ice concentration (left panels) and distance to the 50% sea-ice concentration threshold (right panels), when the model was fit to four subsets of the data. From top to bottom: data from the first tracking period (2002-03), data from the second tracking period (2010-12), data from 15 females, and data from four males. The dotted lines indicate the effect of the covariate in the model based on the entire data set (also shown in Fig. 1).

**Supplementary Table S1.** AIC values for the ringed seal offshore foraging habitat RSF models with the combinations of predictor variables considered, with degrees of freedom, Akaike information criterion (AIC) and dAIC from the best model.

| Predictor variables | df | AIC | dAIC |
|---|---|---|---|
| ice.concentration + distance.50 | 5 | 5932.0 | 0.0 |
| ice.concentration + distance.75 | 5 | 5932.3 | 0.3 |
| ice.concentration + distance.50 + distance.to.land | 6 | 5933.9 | 1.9 |
| ice.concentration + distance.50 + shelf | 6 | 5934.0 | 2.0 |
| ice.concentration + distance.15 | 5 | 5945.5 | 13.5 |
| ice.concentration | 4 | 5949.1 | 17.1 |

**Supplementary Table S2.** Summary statistics on the relative availability of different sea-ice concentrations in the ringed seal offshore foraging RSFs: minimum, first quartile, median, mean, third quartile and maximum percent of pixels within the daily buffers belonging to that category of sea-ice concentration.

| | Sea-ice concentration | | | | |
|---|---|---|---|---|---|
| | 0-15% | 15-40% | 40-60% | 60-80% | 80-100% |
| Min. | 0 | 0 | 0 | 0 | 0 |
| 1st quartile | 0 | 0 | 0 | 8 | 16 |
| Median | 0 | 1 | 7 | 19 | 56 |
| Mean | 9 | 6 | 10 | 24 | 52 |
| 3rd quartile | 7 | 10 | 16 | 36 | 85 |
| Max. | 100 | 45 | 47 | 93 | 100 |