

**Supplementary Table S1.** Overview of the 26 most sensitive vulnerabilities ( $v$ ) for predator-prey interactions estimated by step-wise fitting for model M10 with primary production proxy and herring-capelin mortality forcing.  $v > 2$  indicate top-down and  $v < 2$  indicate bottom-up control.

V no	Predator	Prey	V
1	2. Minke whale	29. Northeast Arctic cod (3+)	1.2
2		36. Haddock (0-2)	>100
3	9. Dolphins	36. Haddock (0-2)	33
4	13. Harp seals	30. Northeast Arctic cod (0-2)	1.0
5		36. Haddock (0-2)	>100
6		43. Other small bentiv. fishes	15.8
7	30. Northeast Arctic cod (3+)	30. Northeast Arctic cod (0-2)	1.6
8		36. Haddock (0-2)	>100
9	31. Coastal cod (2+)	34. Saithe (0-2)	1.1
10		36. Haddock (0-2)	>100
11	33. Saithe (3+)	36. Haddock (0-2)	>100
12	35. Haddock (3+)	46. Long rough dab	1.0
13	38. Large Greenland halibut	30. Northeast Arctic cod (0-2)	1.0
14		36. Haddock (0-2)	1.0
15		43. Other small bentiv. fishes	1.0
16		44. Other large bent. Inv. F. f	1.0
17		46. Long rough dab	1.1
18		48. Large herring	1.0
19	39. Small Greenland halibut	30. Northeast Arctic cod (0-2)	1.0
20		43. Other small bentiv. fishes	1.1
21		46. Long rough dab	1.8
22	45. Thorny skate	30. Northeast Arctic cod (0-2)	1.4
23	46. Long rough dab	30. Northeast Arctic cod (0-2)	1.0
24		36. Haddock (0-2)	13.9
25	59. Large redfish	36. Haddock (0-2)	1.1
26	60. Small redfish	36. Haddock (0-2)	1.0