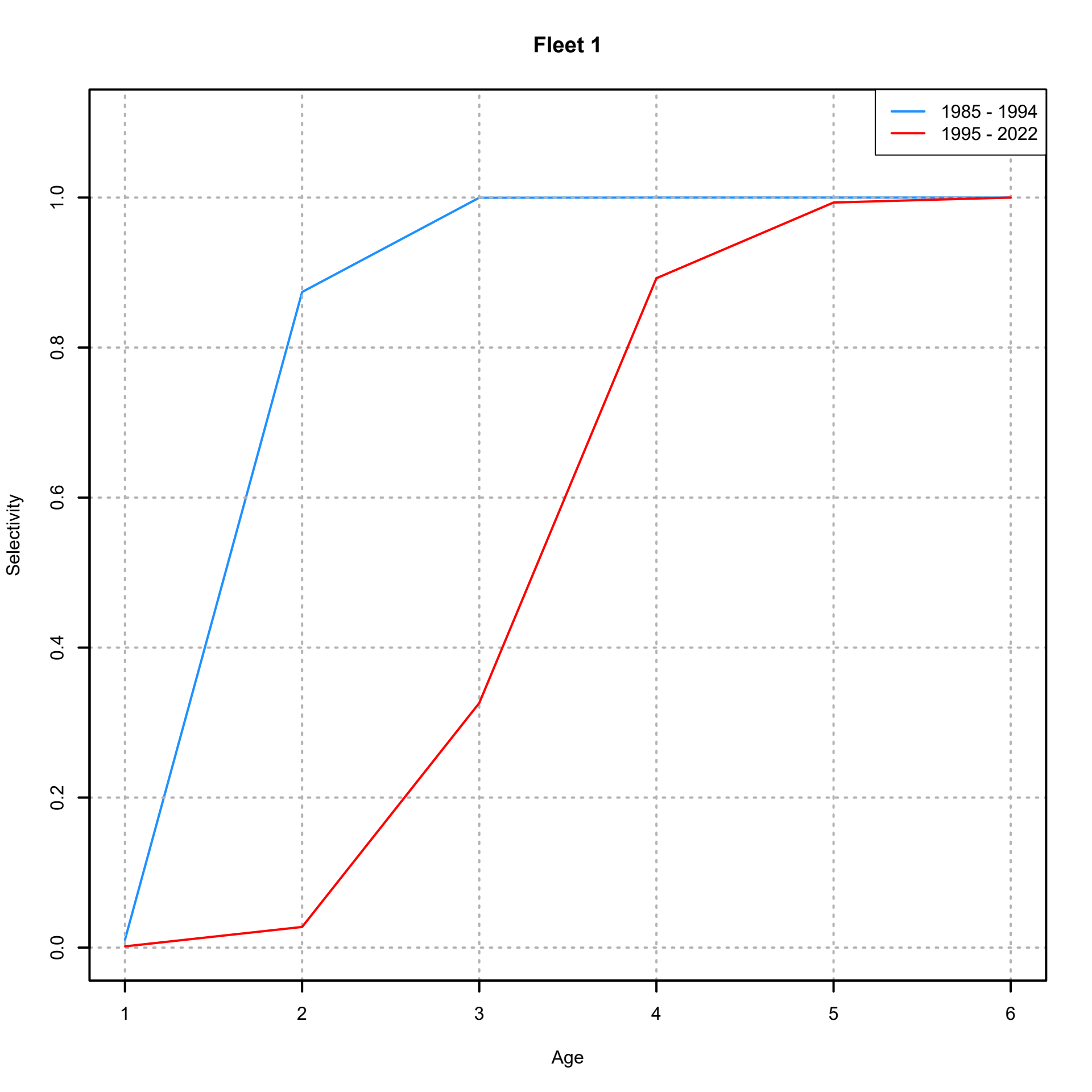
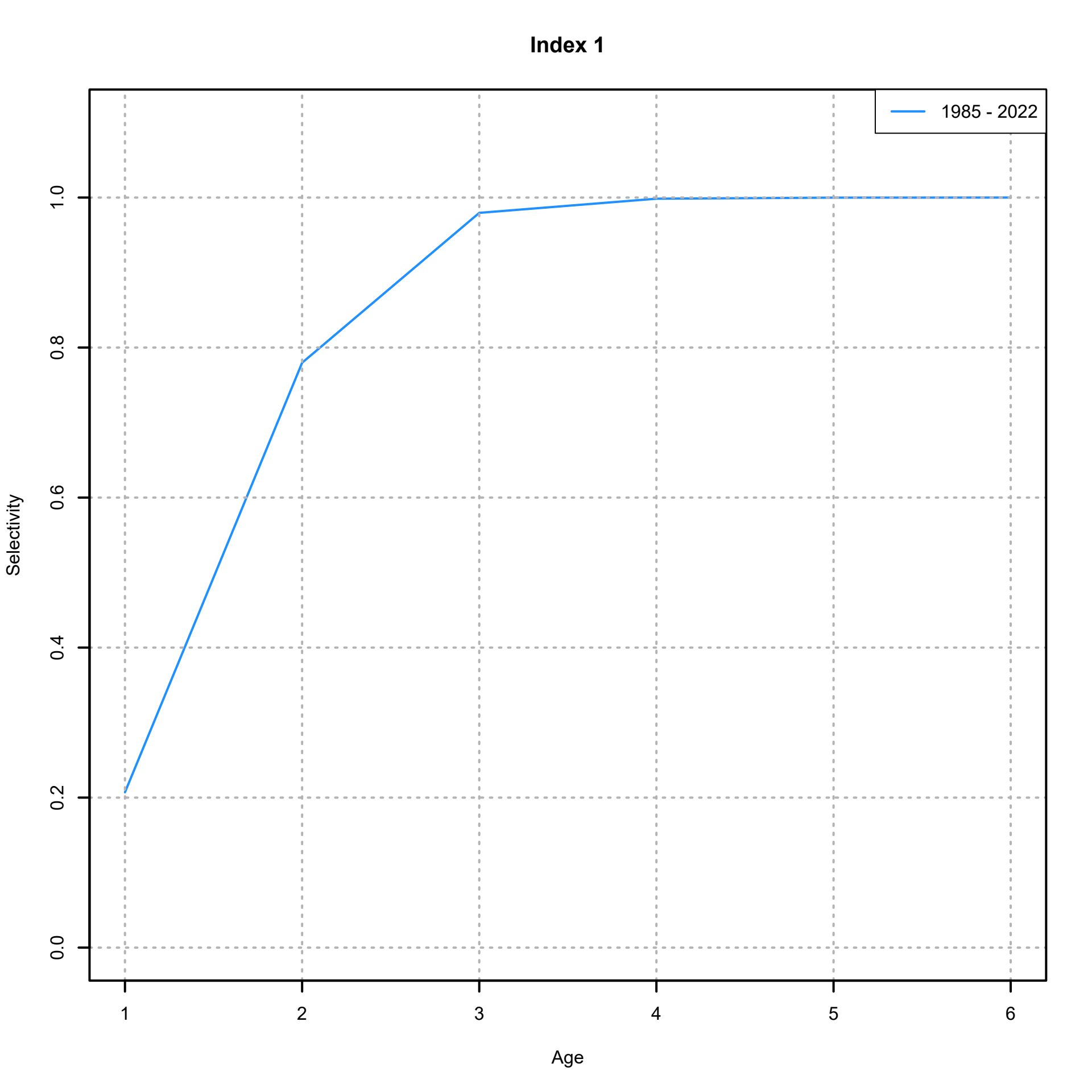
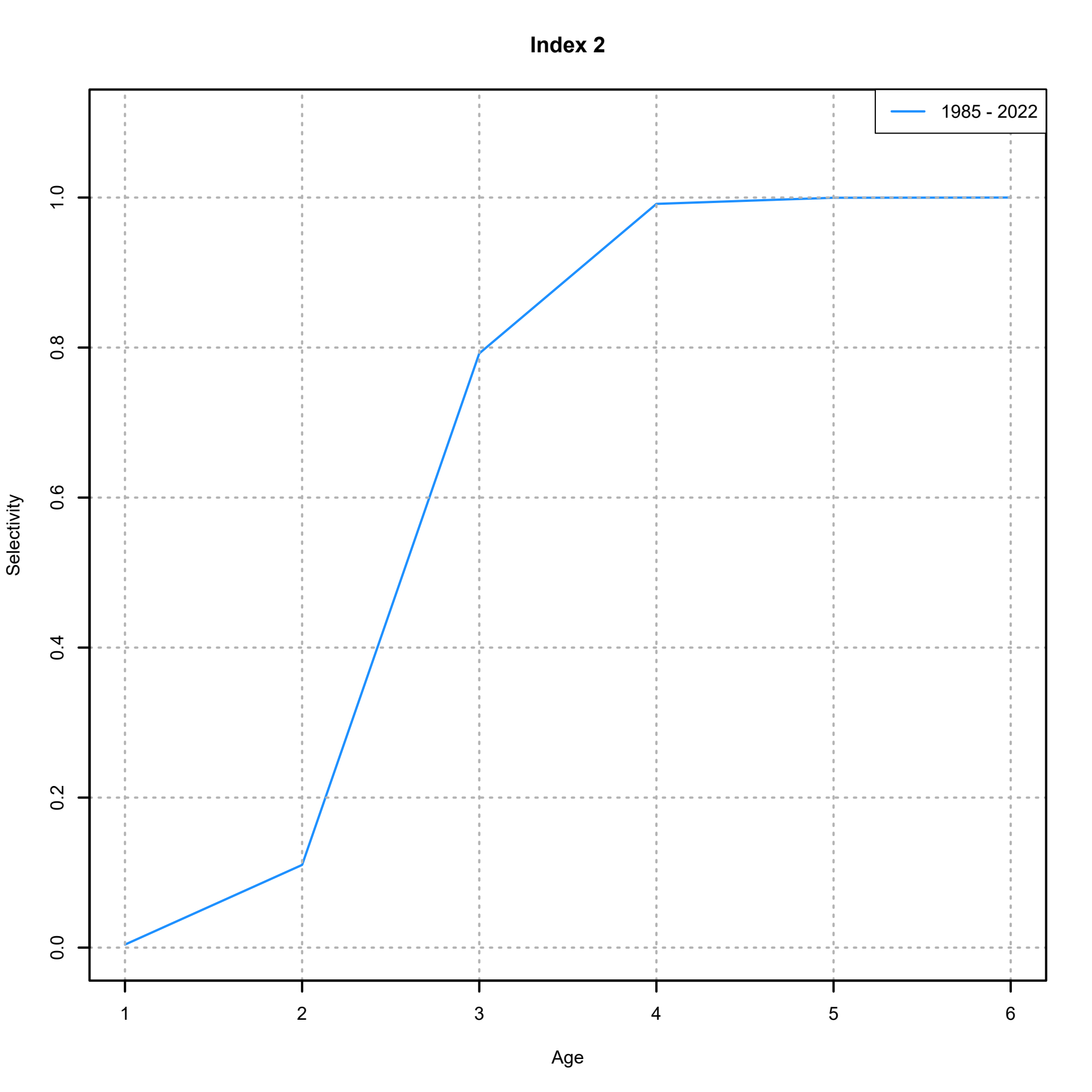
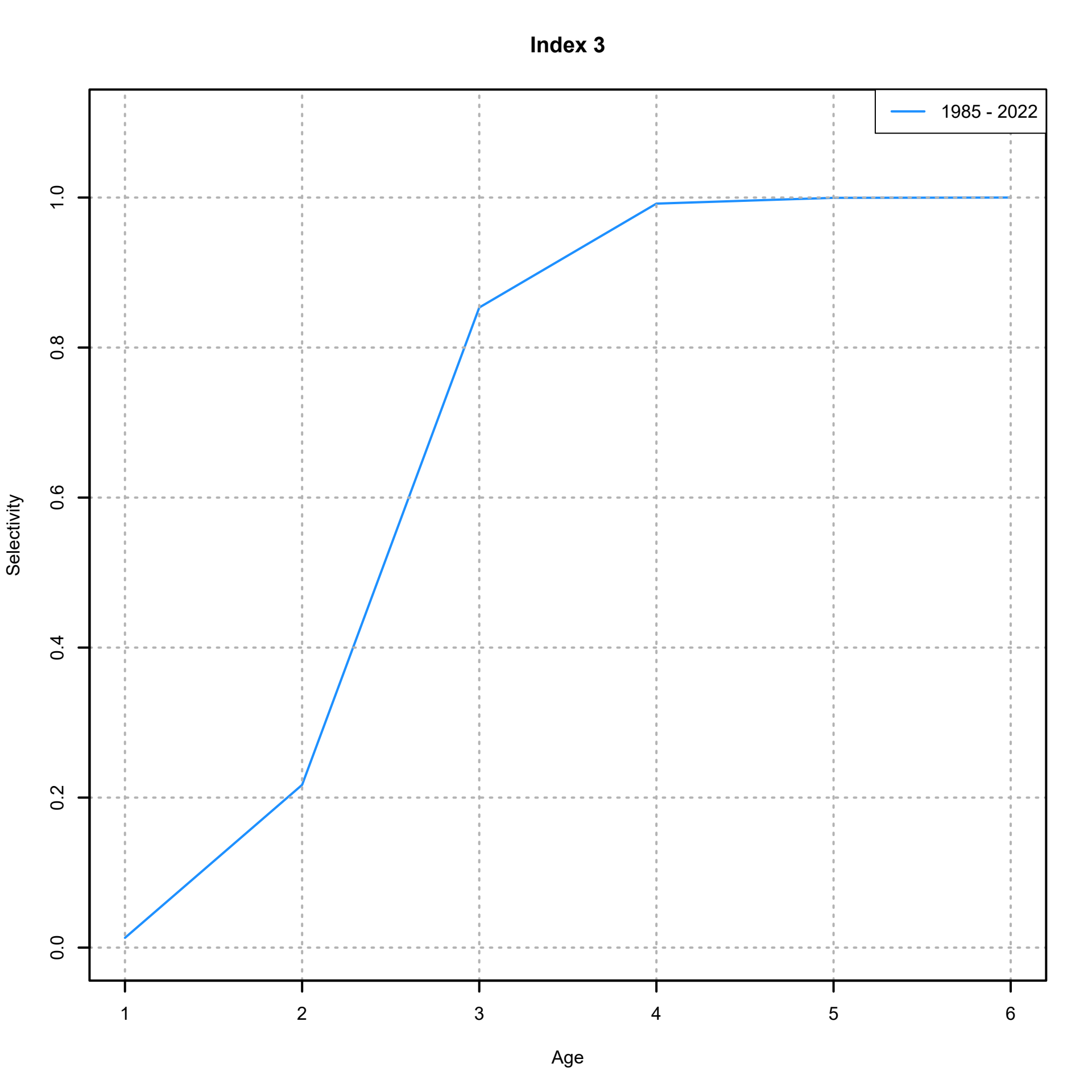
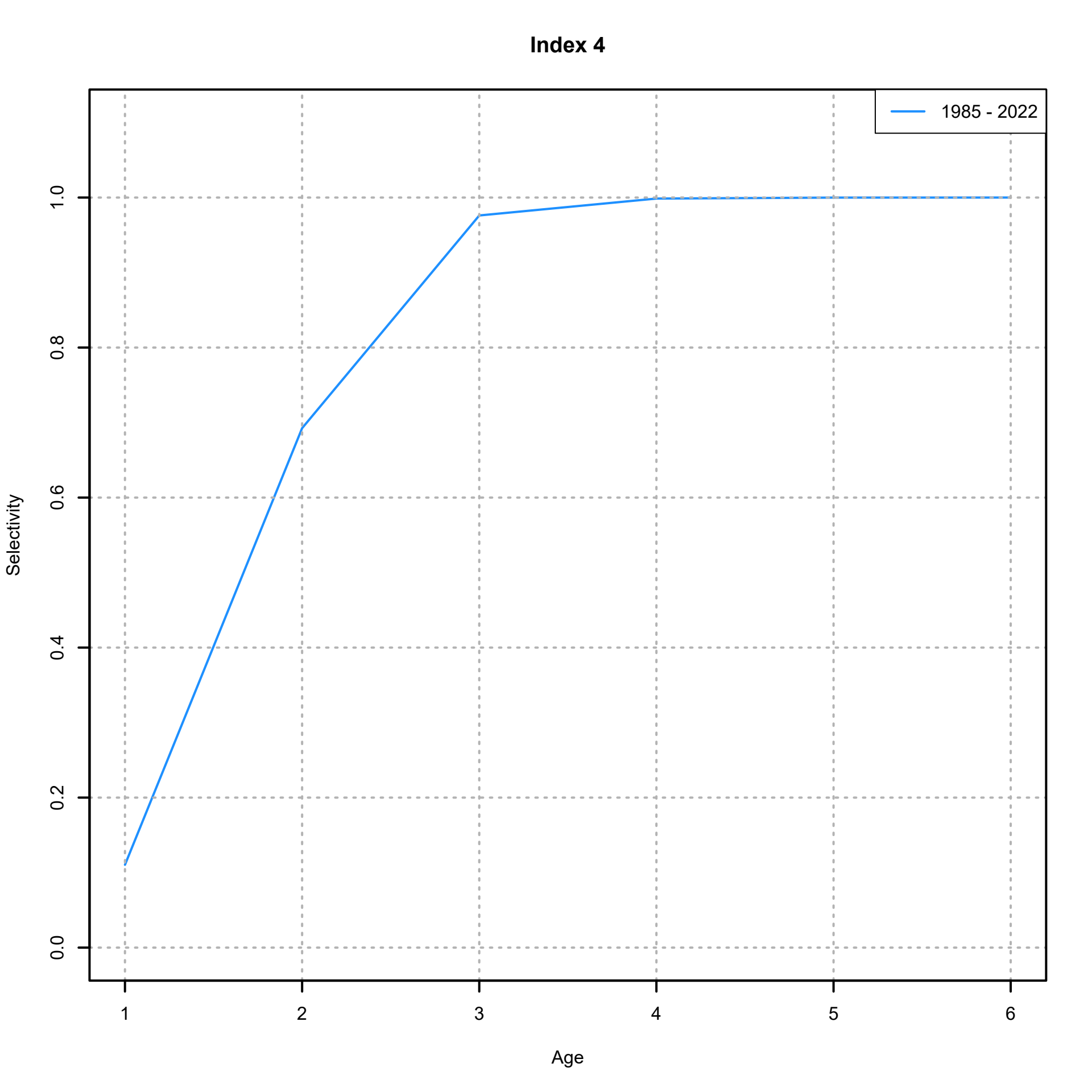
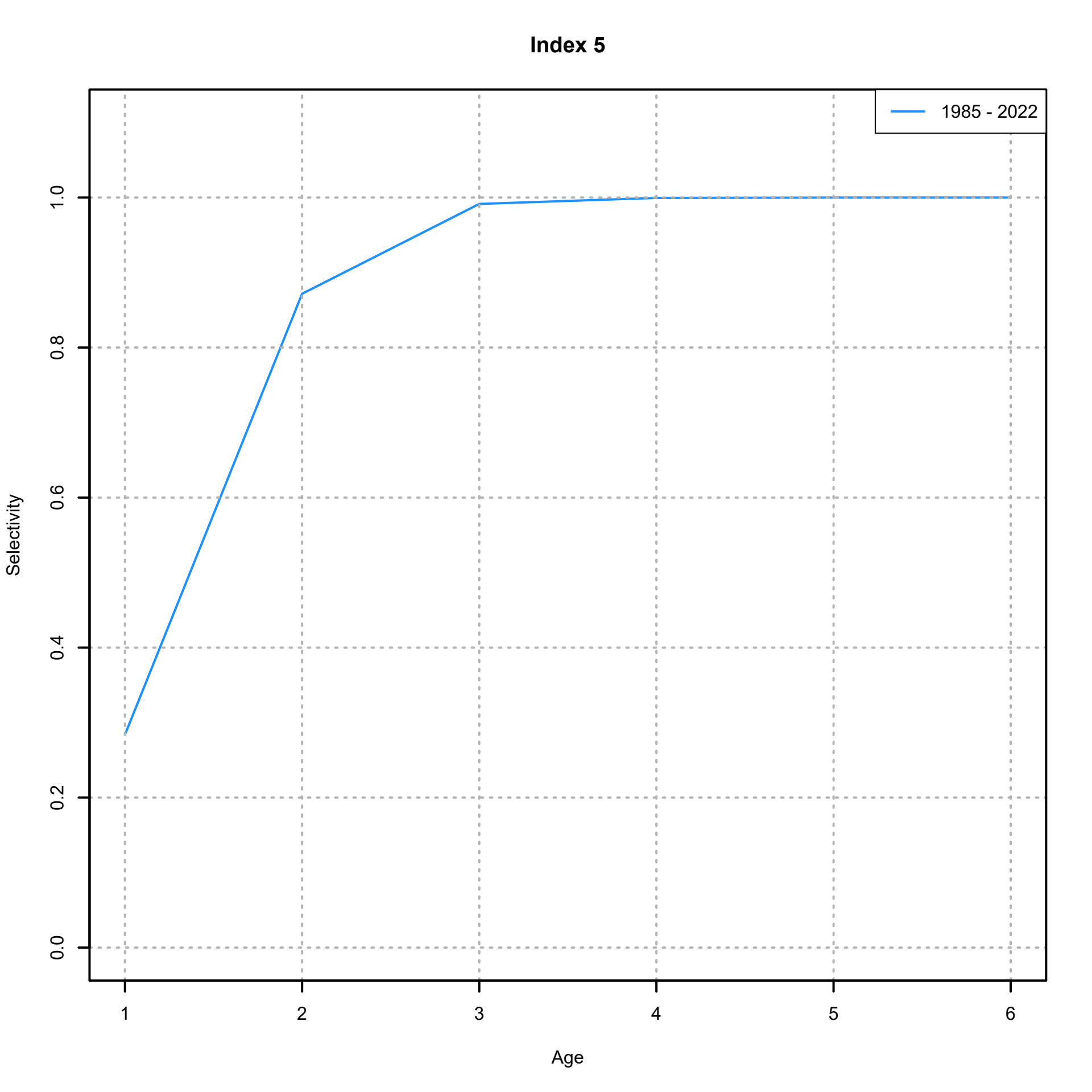

Fleet 1
1985 - 1994
1995 - 2022
Selectivity
0.0
0.2
0.4
0.6
0.8
1.0
1
2
3
4
5
6
Age

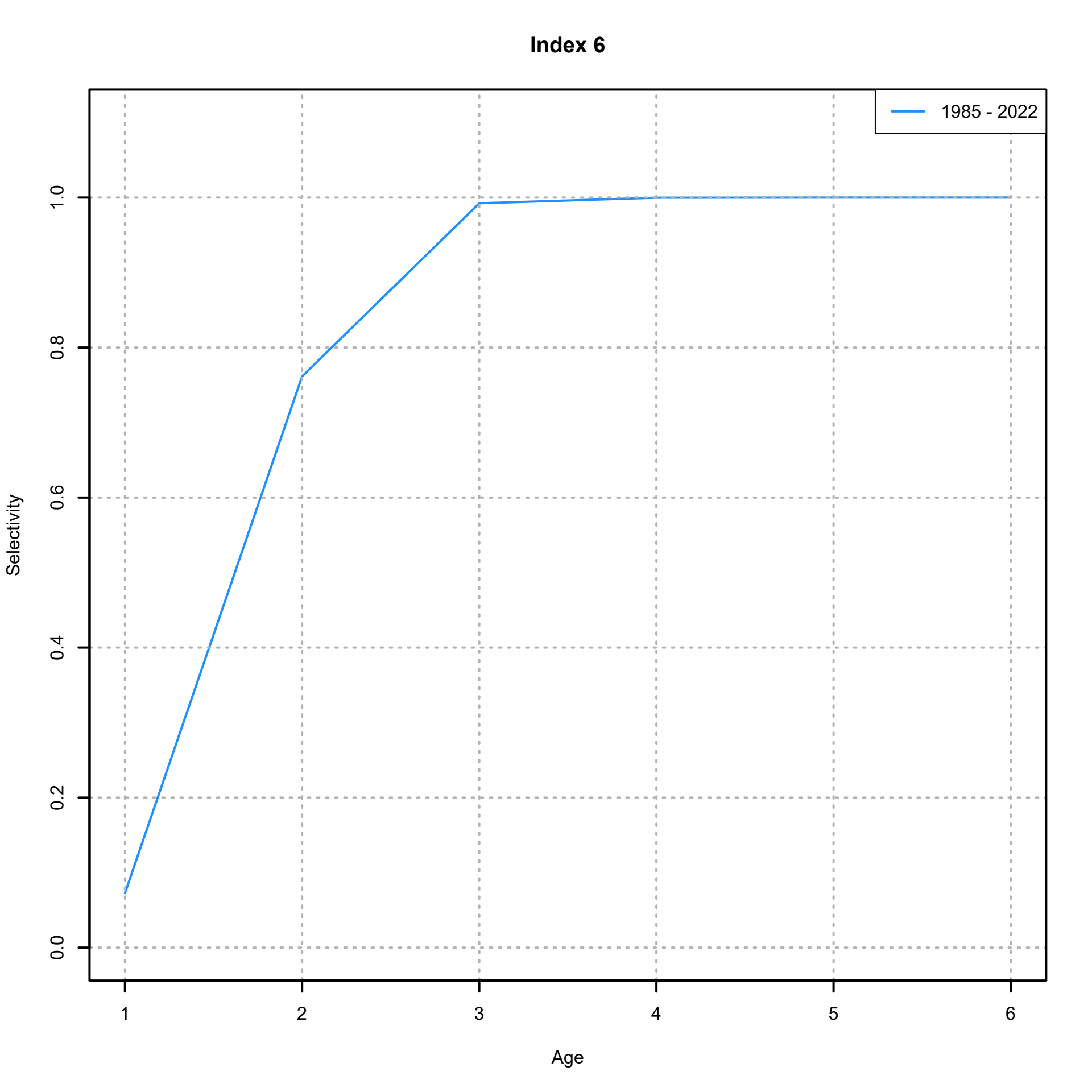

Index 1
1985 - 2022
Selectivity
0.0
0.2
0.4
0.6
0.8
1.0
1
2
3
4
5
6
Age

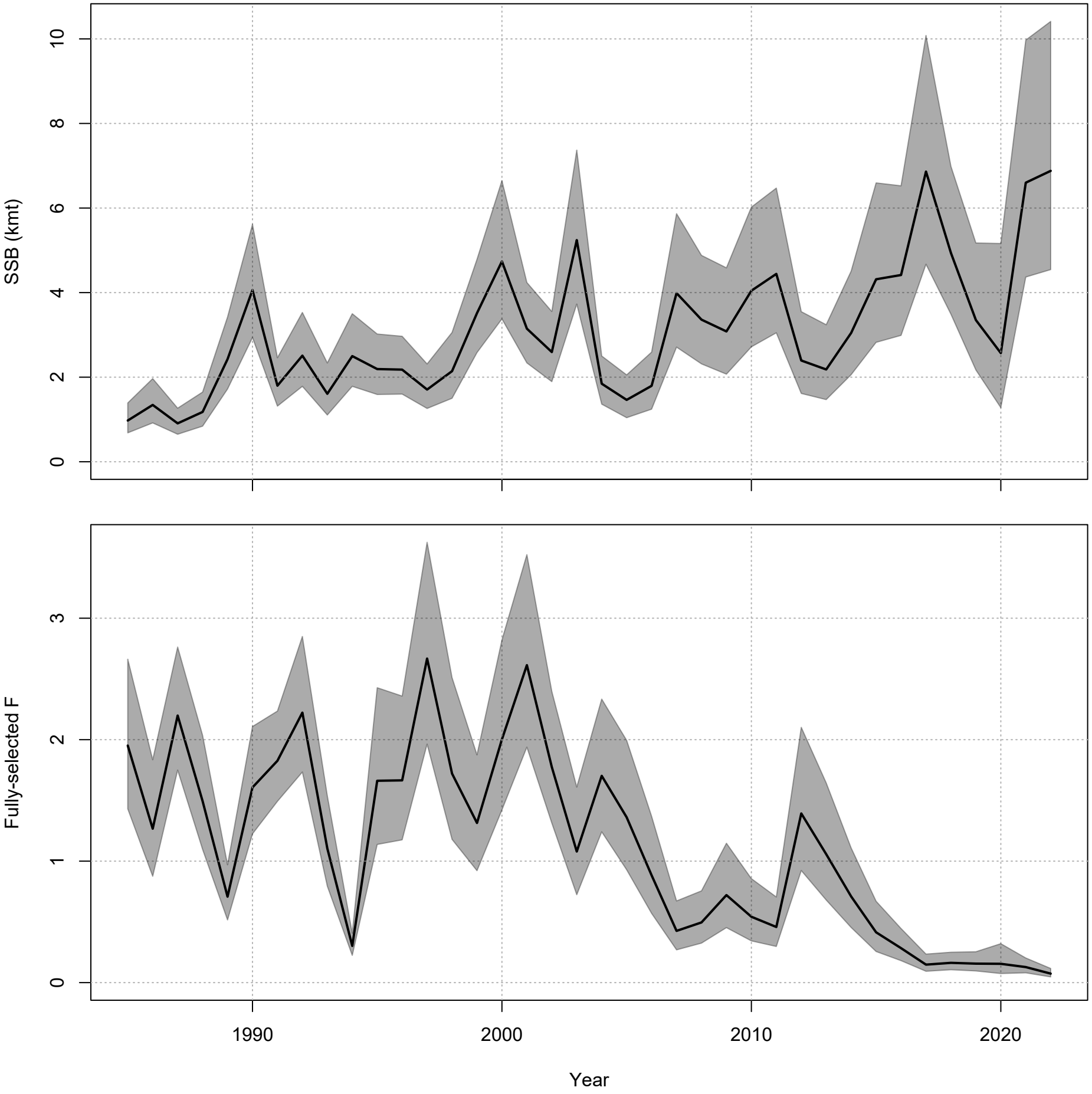

Index 2
1985 - 2022
Selectivity
0.0
0.2
0.4
0.6
0.8
1.0
1
2
3
4
5
6
Age

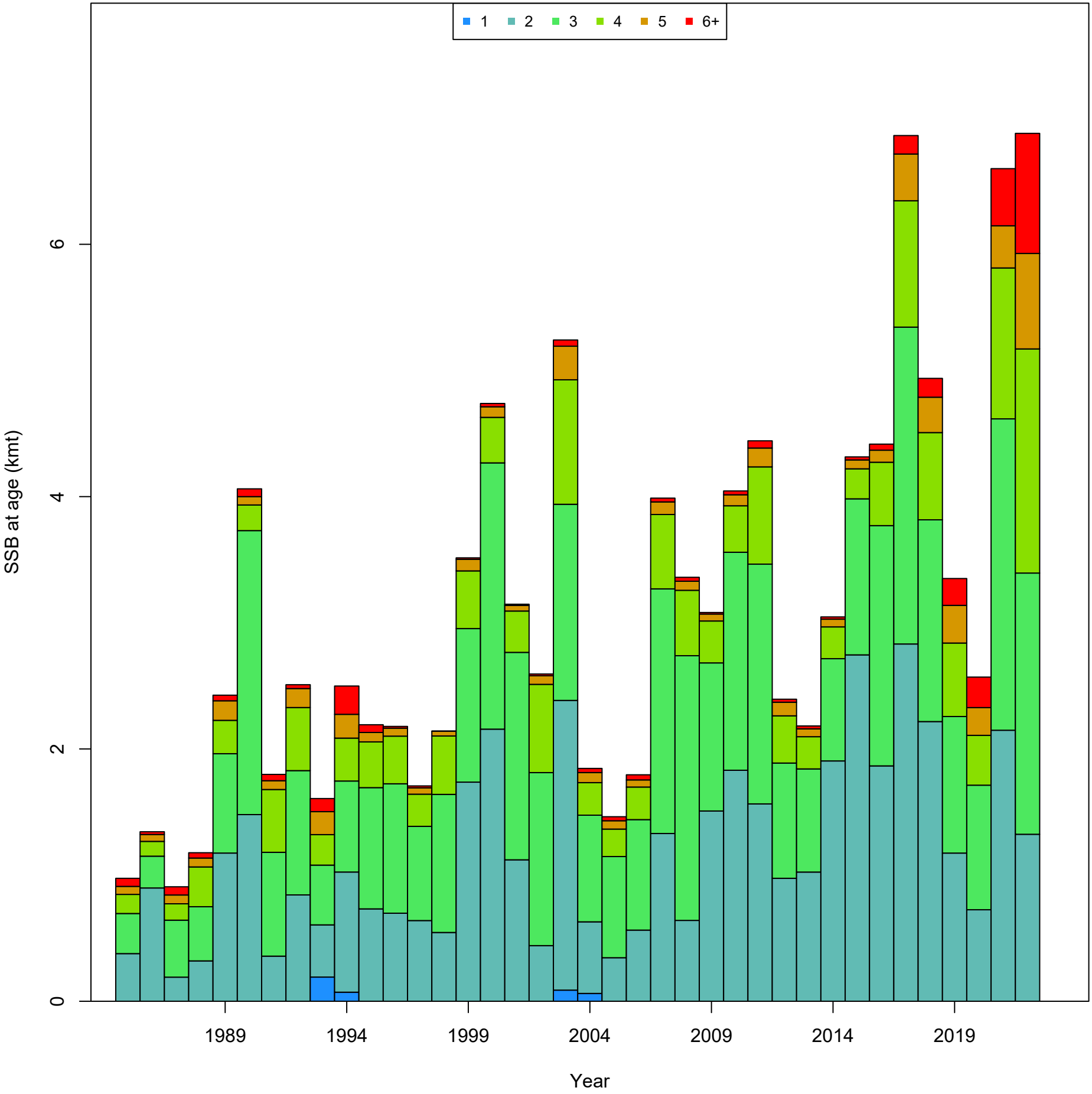

Index 3
1985 - 2022
Selectivity
0.0
0.2
0.4
0.6
0.8
1.0
1
2
3
4
5
6
Age

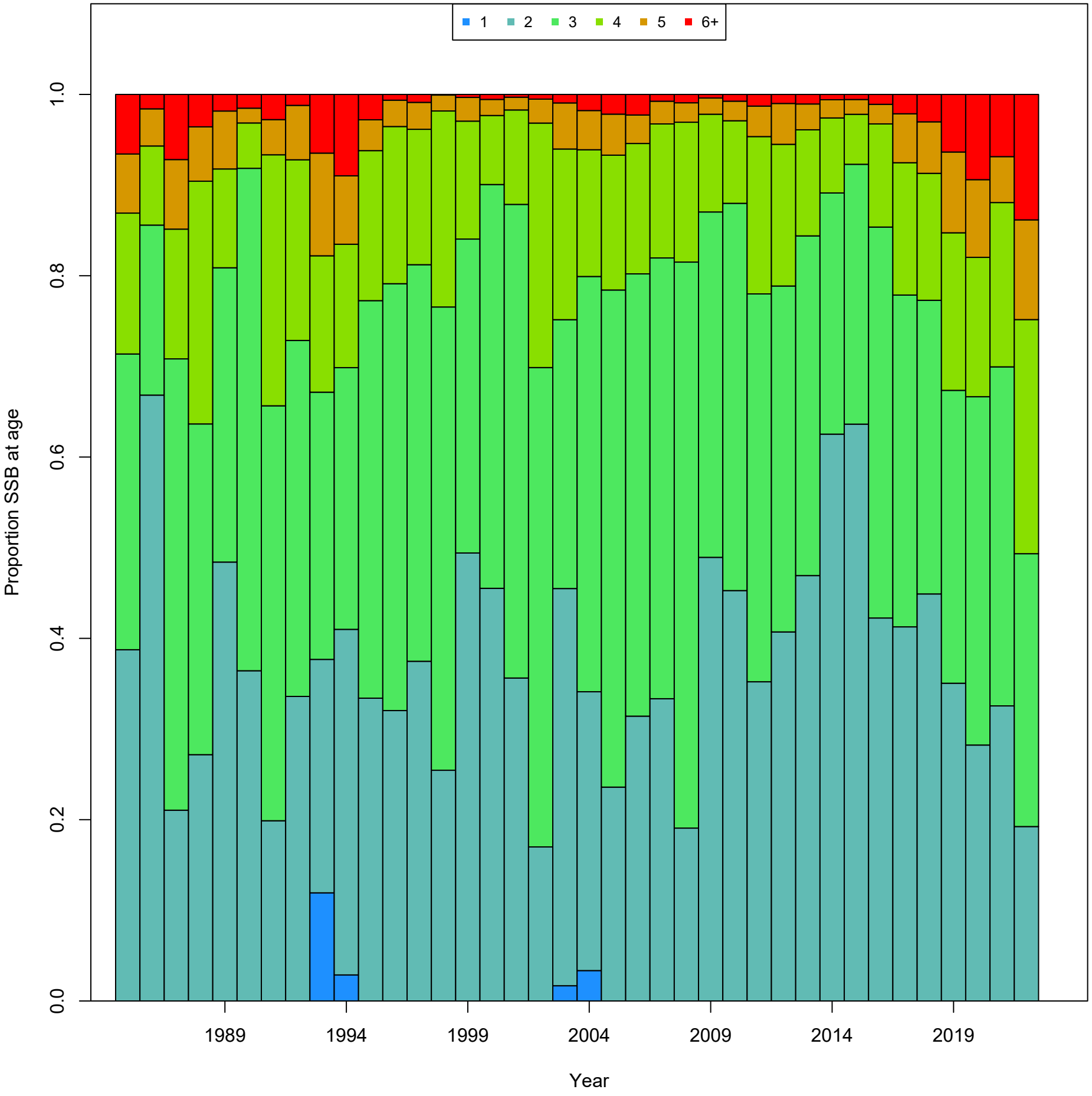

Index 4
1985 - 2022
Selectivity
0.0
0.2
0.4
0.6
0.8
1.0
1
2
3
4
5
6
Age

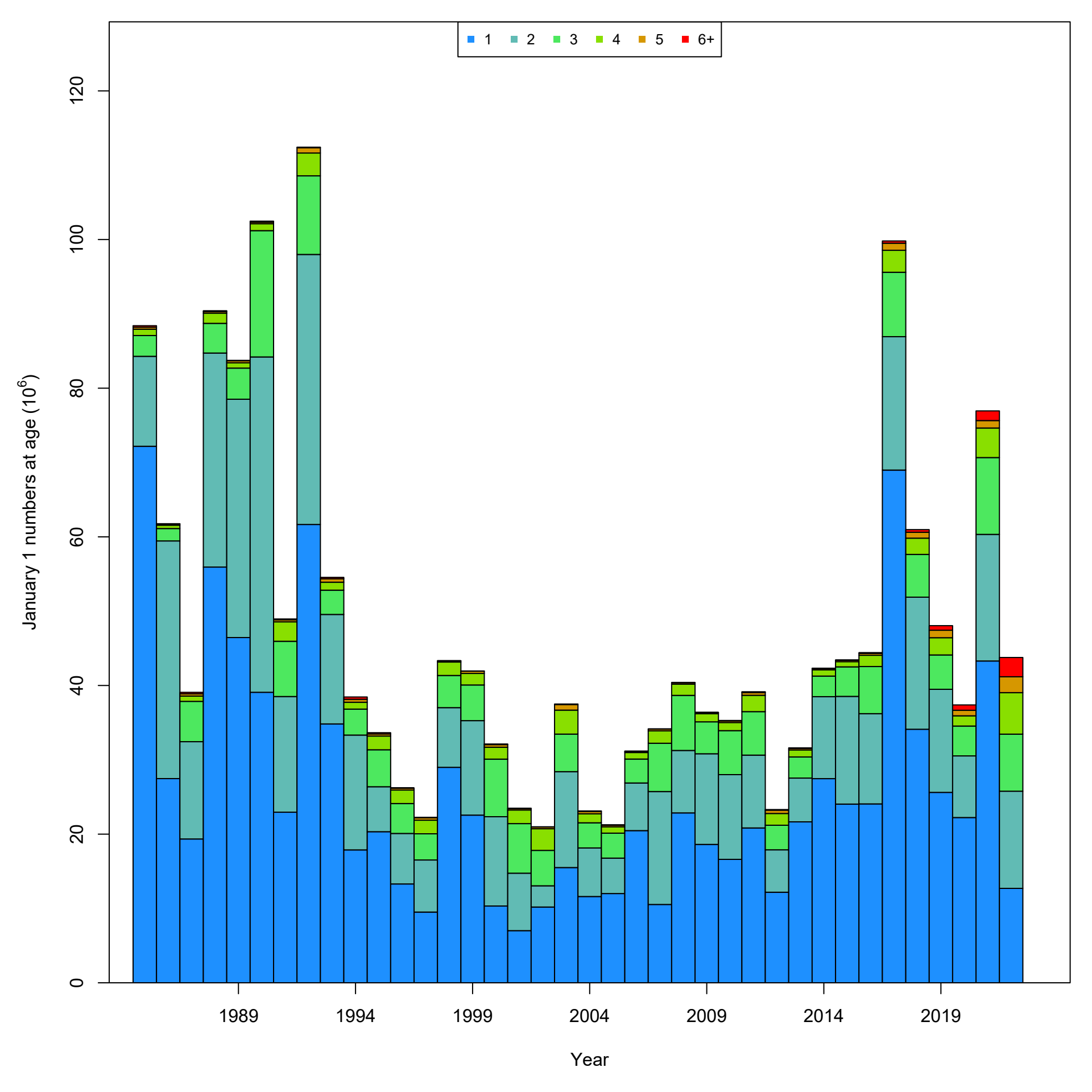

Index 5
1985 - 2022
Selectivity
0.0
0.2
0.4
0.6
0.8
1.0
1
2
3
4
5
6
Age

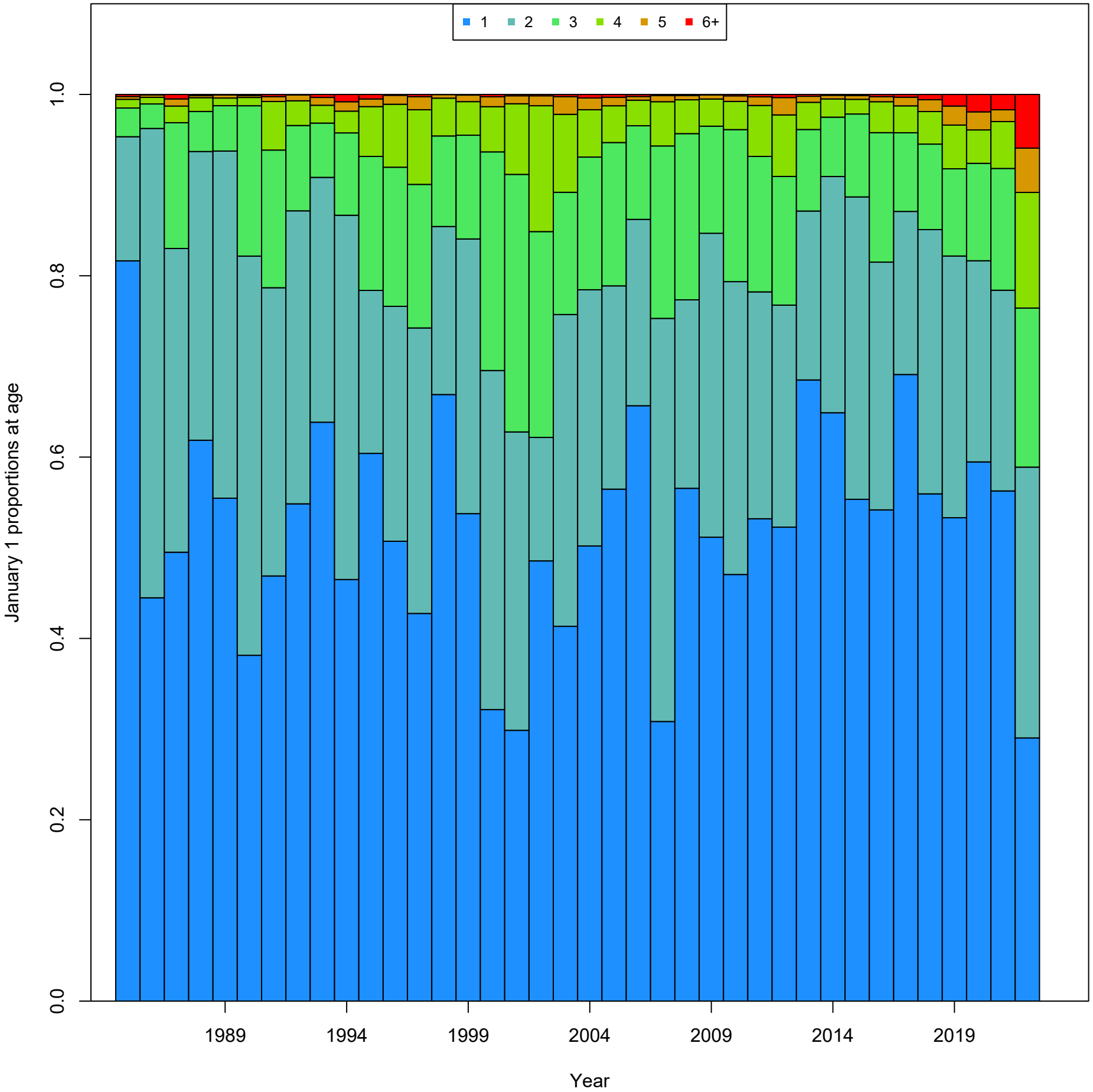

Index 6
1985 - 2022
Selectivity
0.0
0.2
0.4
0.6
0.8
1.0
1
2
3
4
5
6
Age

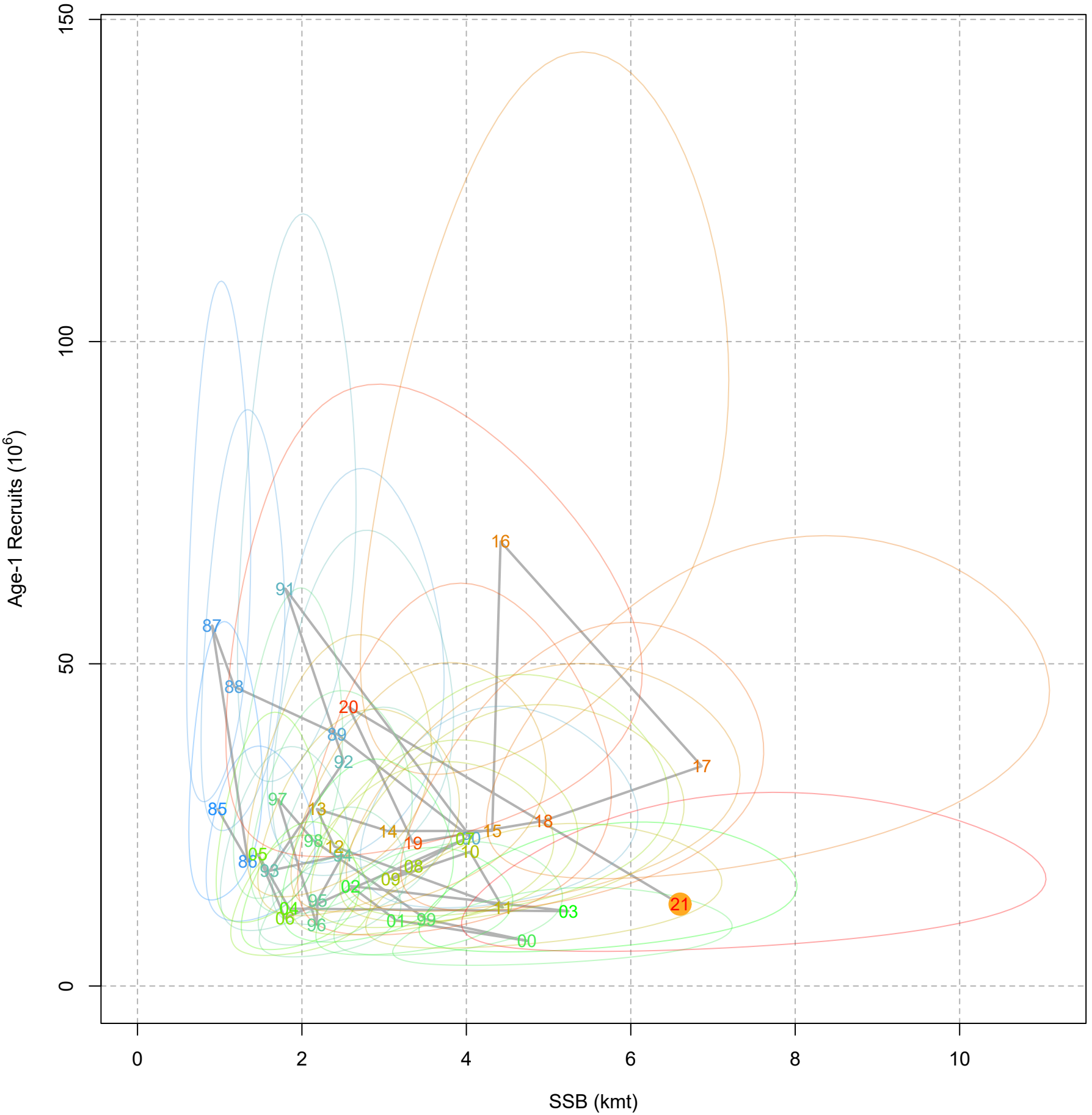

SSB (kmt)
0
2
4
6
8
10
Fully-selected F
0
1
2
3
1990
2000
2010
2020
Year


1
2
3
4
5
6+
SSB at age (kmt)
0
2
4
6
1989
1994
1999
2004
2009
2014
2019
Year

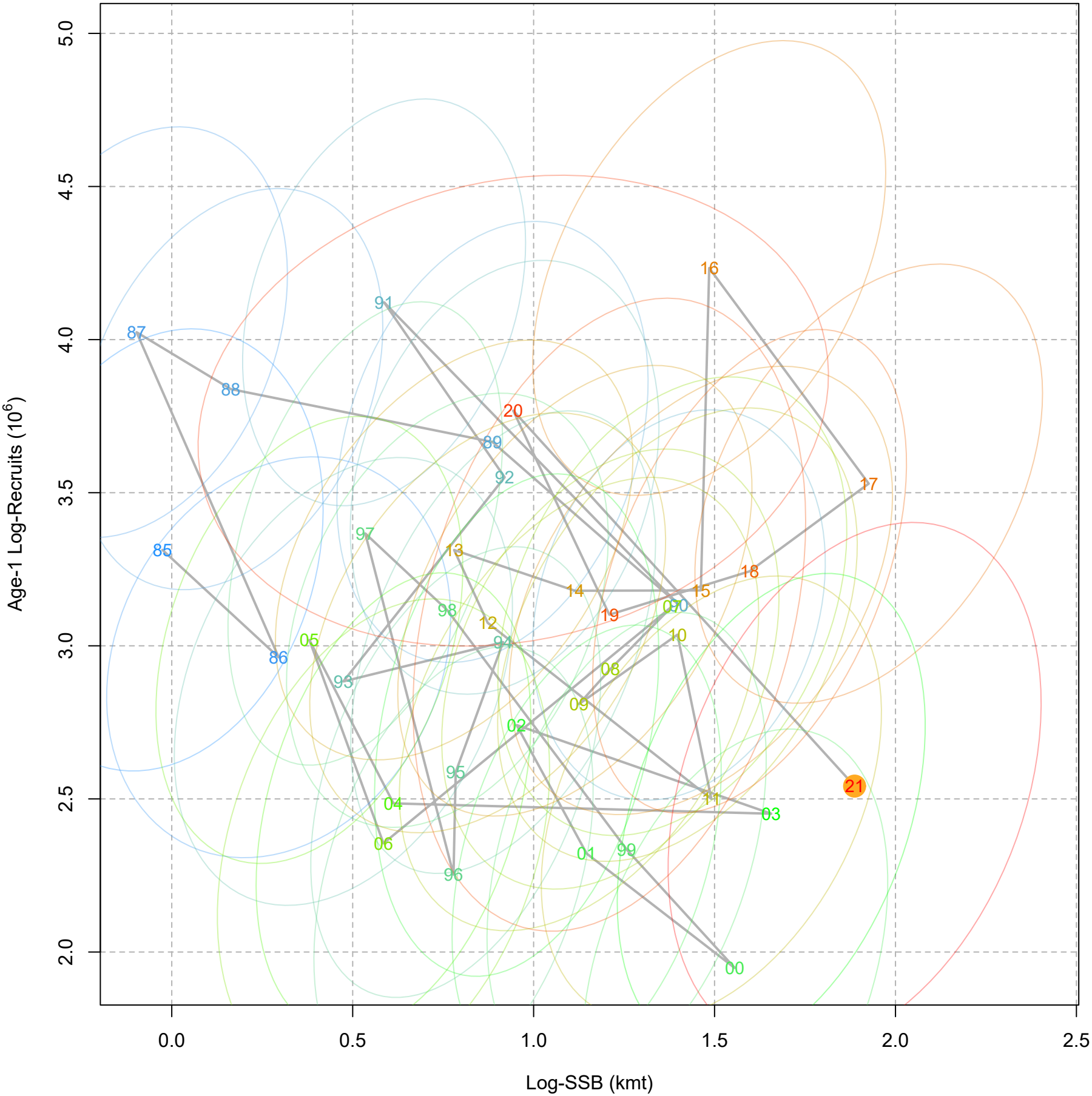

1
2
3
4
5
6+
Proportion SSB at age
0.0
0.2
0.4
0.6
0.8
1.0
1989
1994
1999
2004
2009
2014
2019
Year


1
2
3
4
5
6+
January 1 numbers at age (10^6)
0
20
40
60
80
100
120
1989
1994
1999
2004
2009
2014
2019
Year

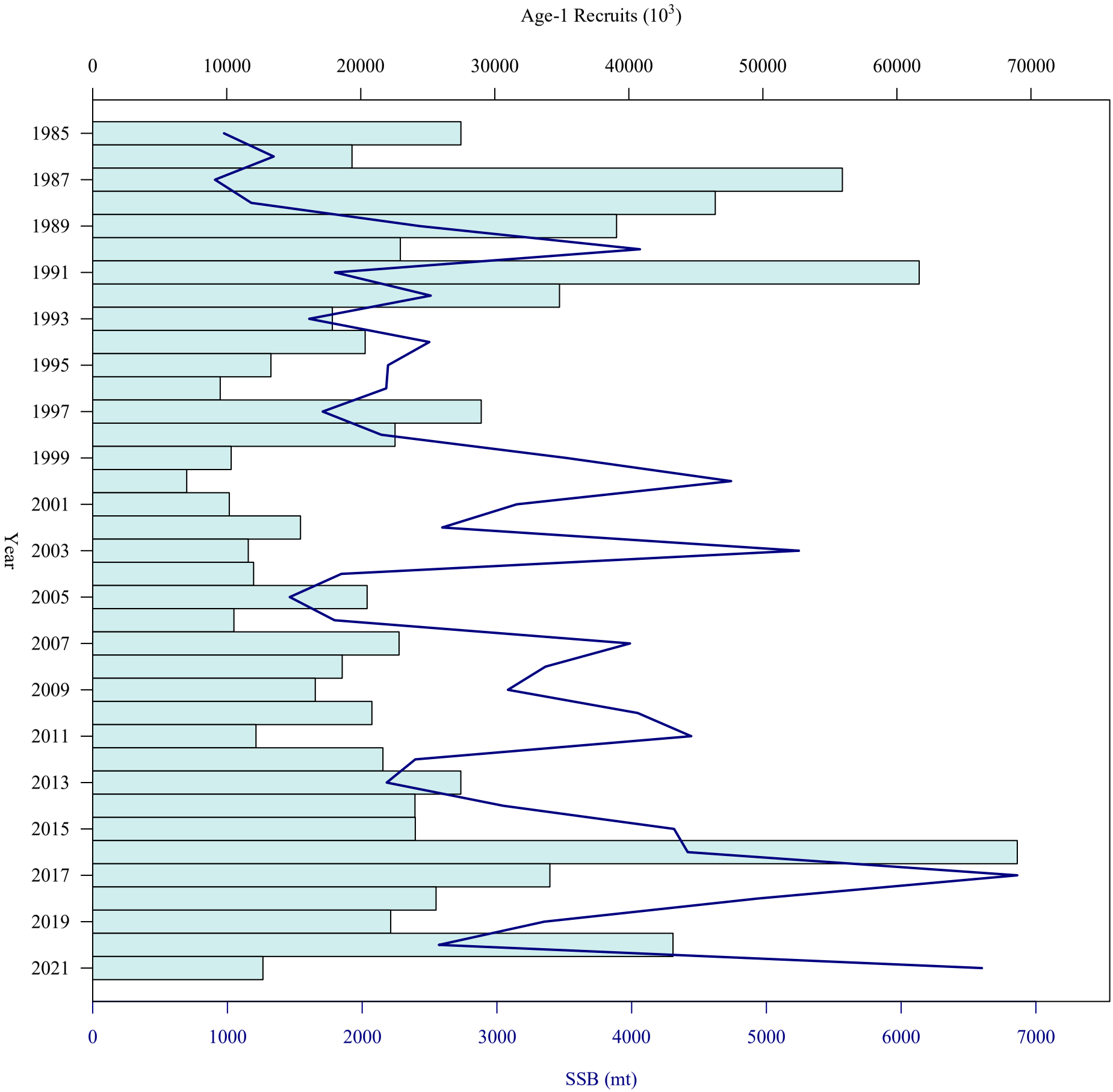

1
2
3
4
5
6+
January 1 proportions at age
0.0
0.2
0.4
0.6
0.8
1.0
1989
1994
1999
2004
2009
2014
2019
Year

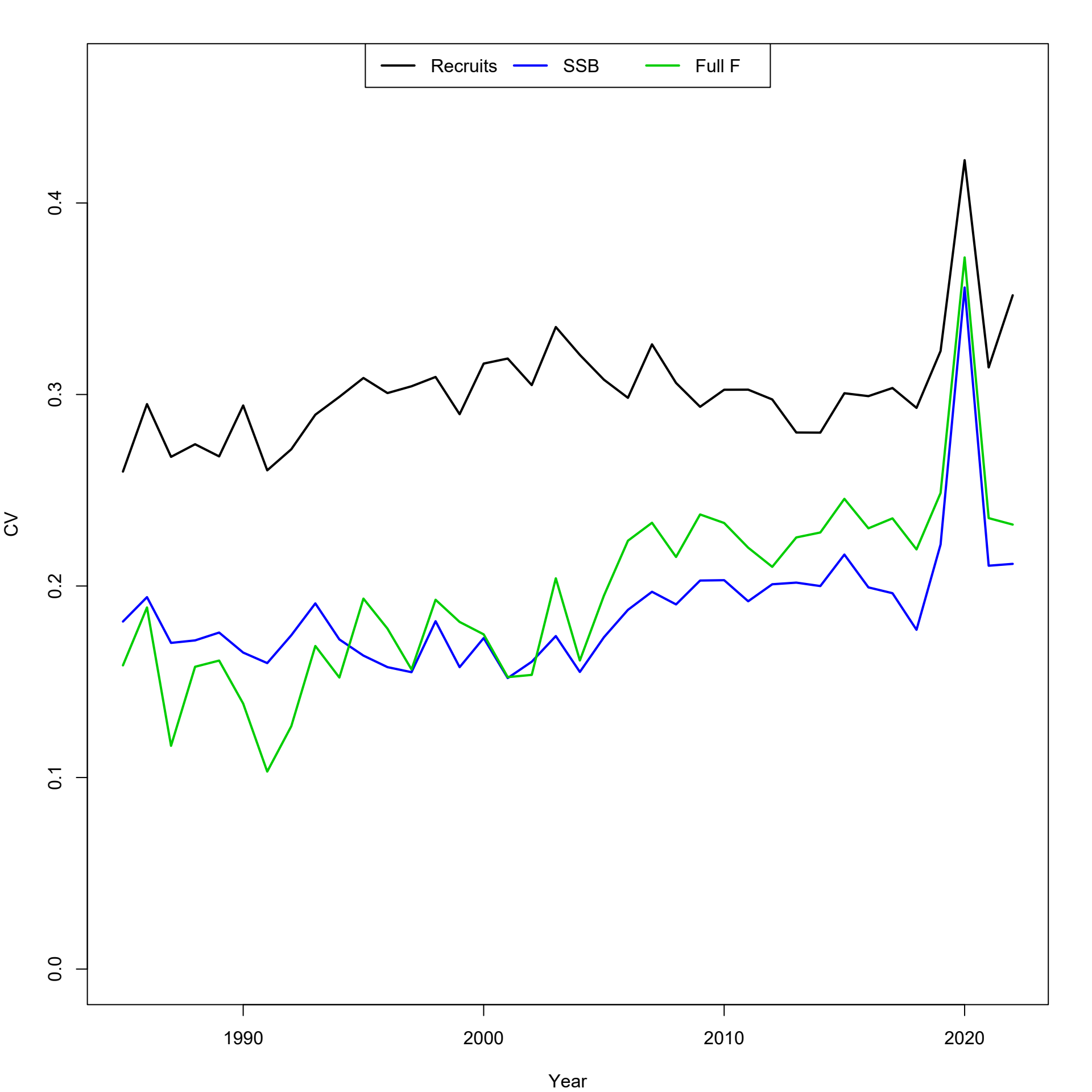


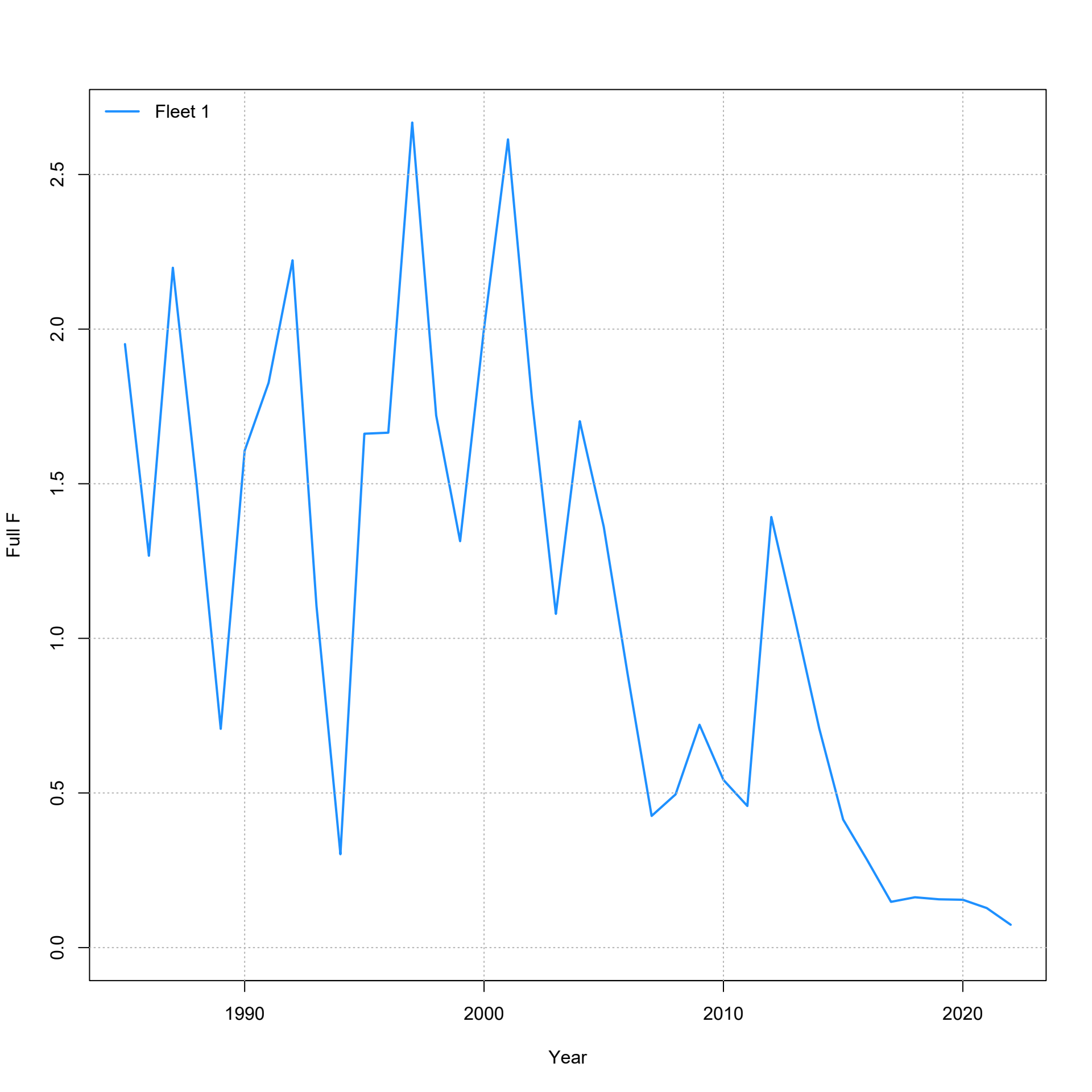
Age-1 Recruits (10^6)
SSB (kmt)
0
50
100
150
0
2
4
6
8
10
16
17
18
19
20
21
13
14
15
87
88
89
91
92
97
85
86
05
93
98
12
04
02
09
08
10
11
03
00
99
01
96
95
06

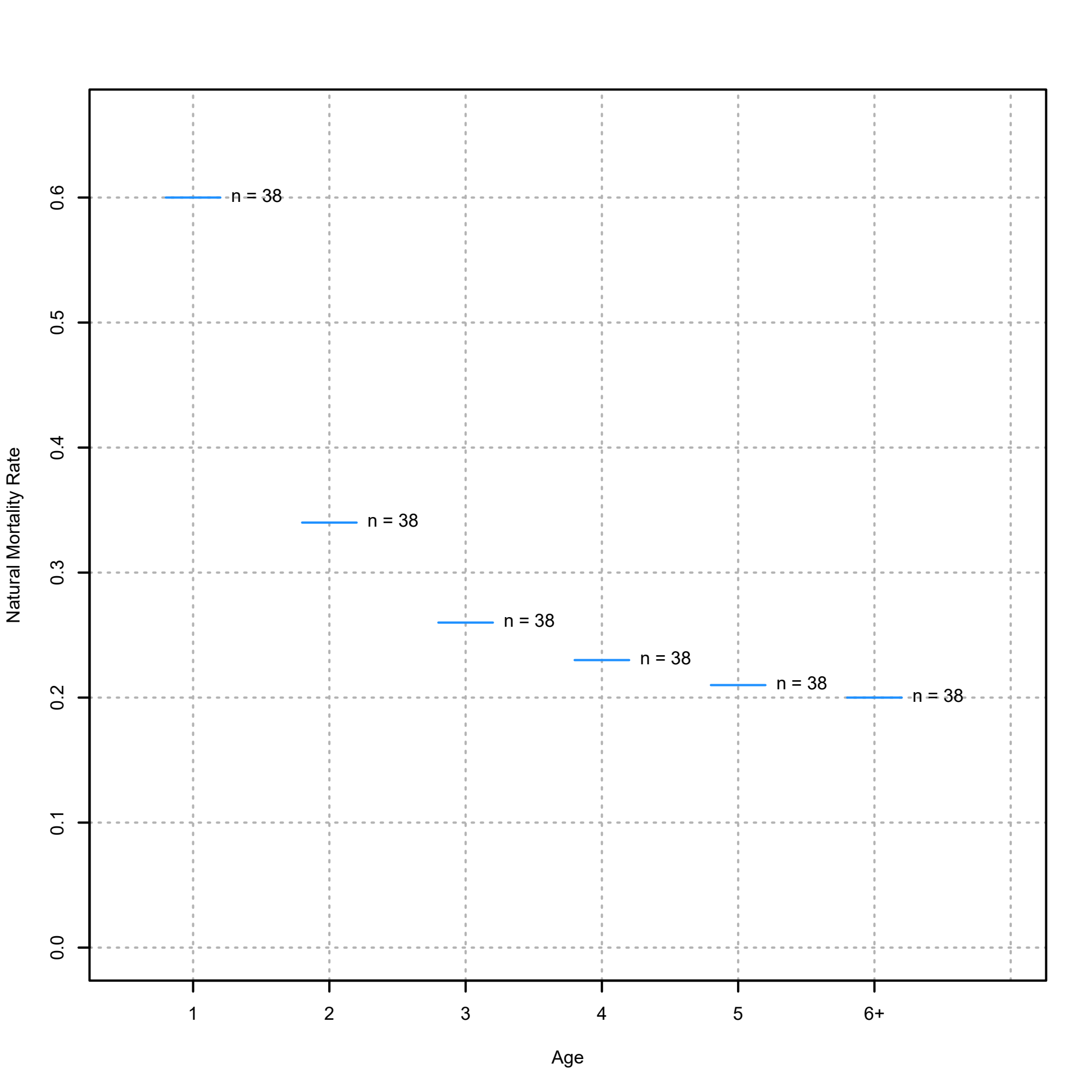


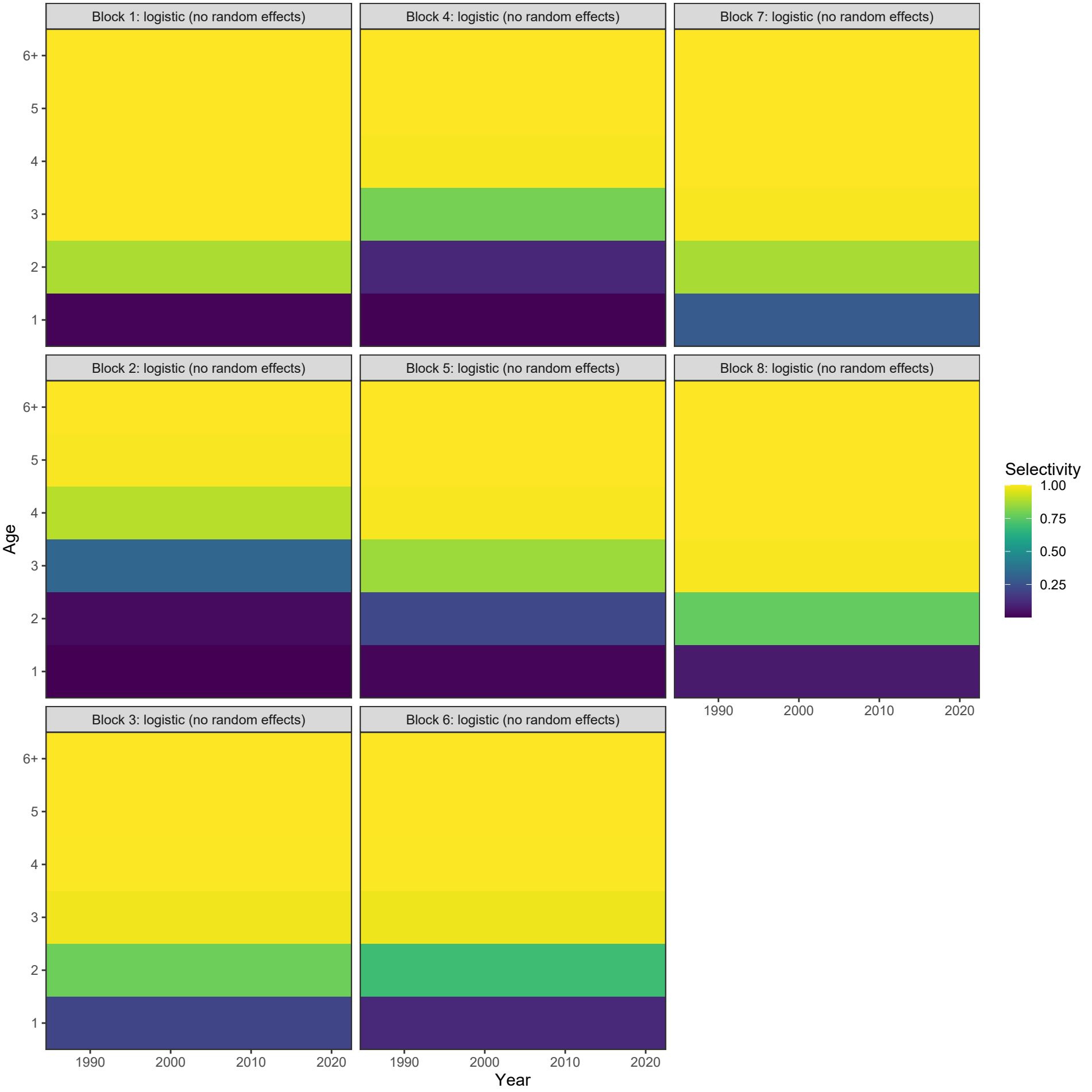
Age-1 Log-Recruits (10^6)
Log-SSB (kmt)
5.0
4.5
4.0
3.5
3.0
2.5
2.0
0.0
0.5
1.0
1.5
2.0
2.5
87
88
85
86
91
89
92
97
98
93
94
95
96
05
04
06
13
12
20
14
19
15
16
17
18
10
08
09
02
11
03
01
99
00
21

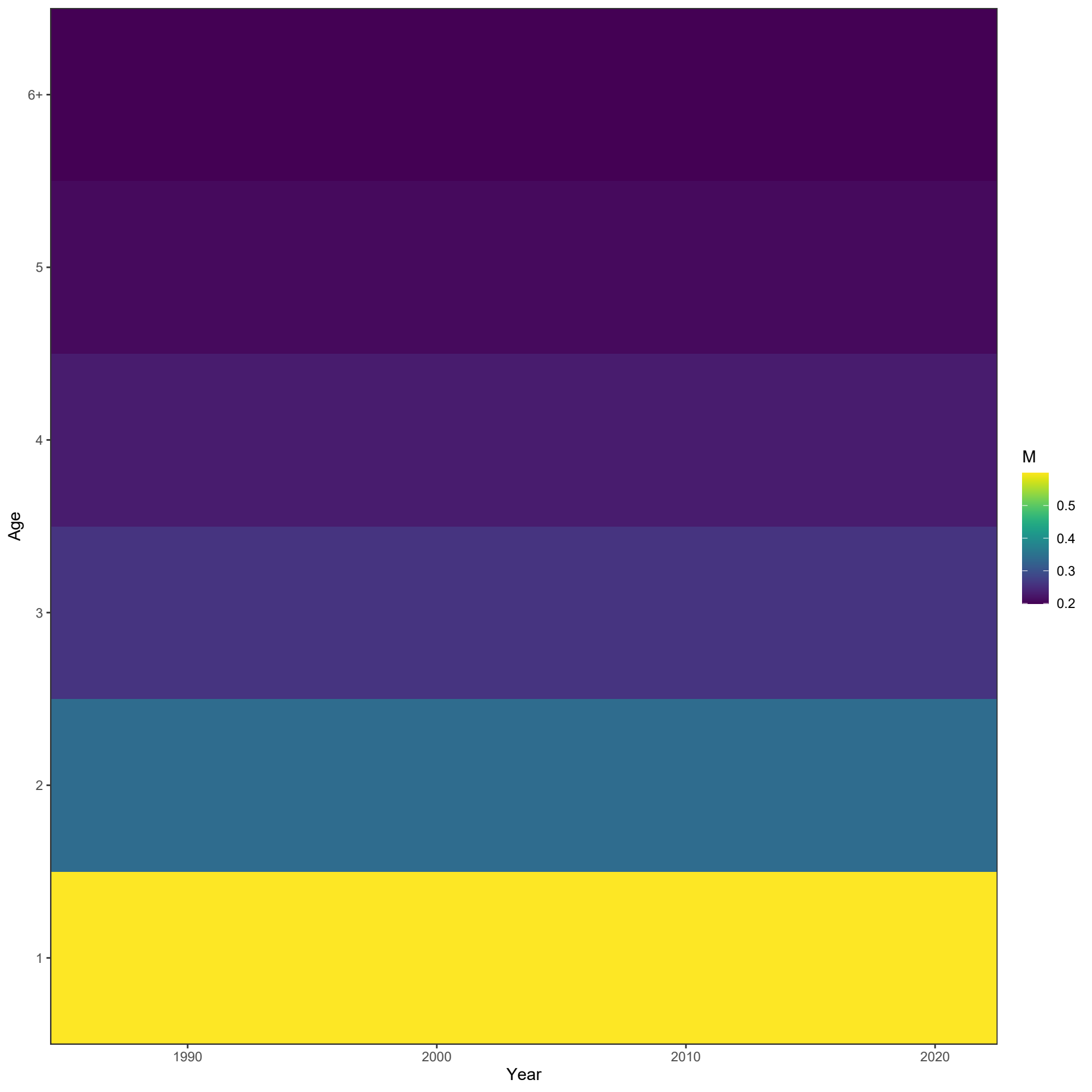

Age-1 Recruits (10^3)
0
10000
20000
30000
40000
50000
60000
70000
1985
1987
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021
Year
0
1000
2000
3000
4000
5000
6000
7000
SSB (mt)

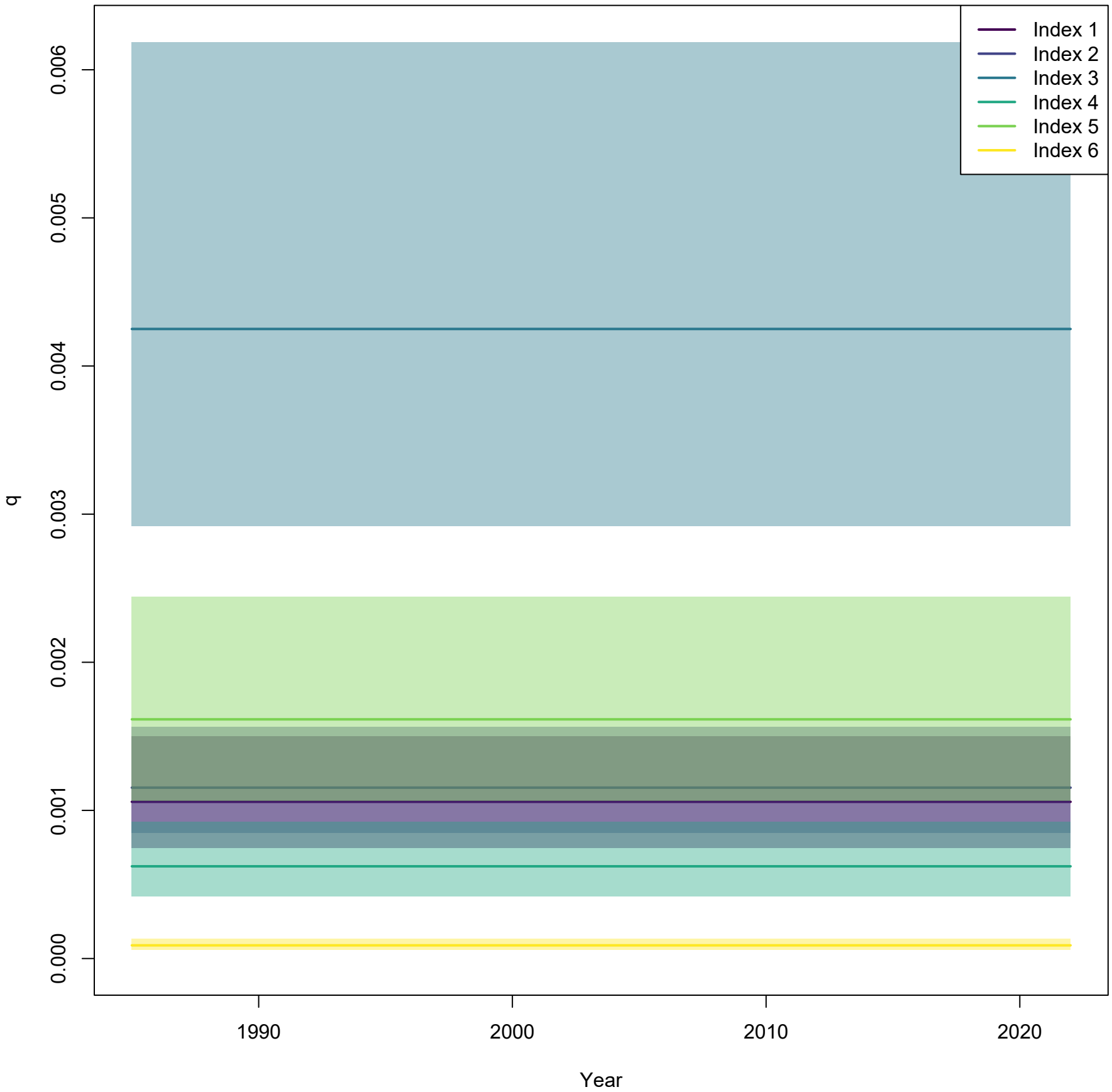

Recruits
SSB
Full F
CV
0.0
0.1
0.2
0.3
0.4
1990
2000
2010
2020
Year


Fleet 1
Full F
0.0
0.5
1.0
1.5
2.0
2.5
1990
2000
2010
2020
Year


Natural Mortality Rate
0.0
0.1
0.2
0.3
0.4
0.5
0.6
n = 38
n = 38
n = 38
n = 38
n = 38
n = 38
1
2
3
4
5
6+
Age


Block 1: logistic (no random effects)
Block 4: logistic (no random effects)
Block 7: logistic (no random effects)
Block 2: logistic (no random effects)
Block 5: logistic (no random effects)
Block 8: logistic (no random effects)
Block 3: logistic (no random effects)
Block 6: logistic (no random effects)
Age
6+
5
4
3
2
1
1990
2000
2010
2020
Year
Selectivity
1.00
0.75
0.50
0.25


6+
5
4
3
2
1
Age
1990
2000
2010
2020
Year
M
0.5
0.4
0.3
0.2


Index 1
Index 2
Index 3
Index 4
Index 5
Index 6
q
0.000
0.001
0.002
0.003
0.004
0.005
0.006
1990
2000
2010
2020
Year