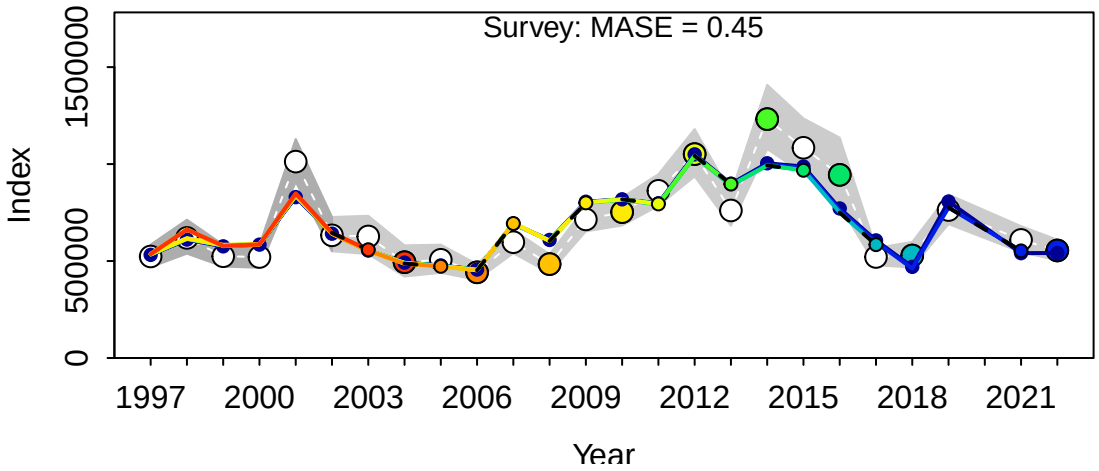
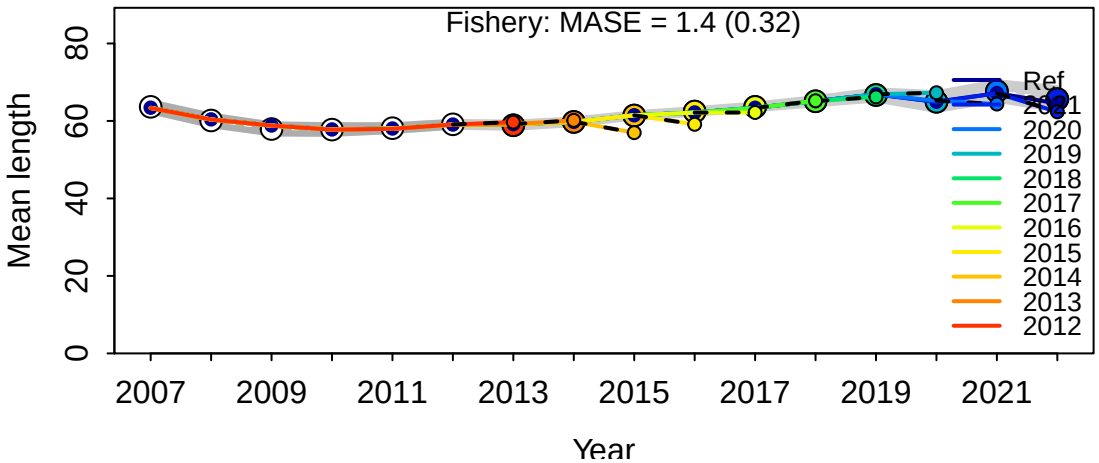
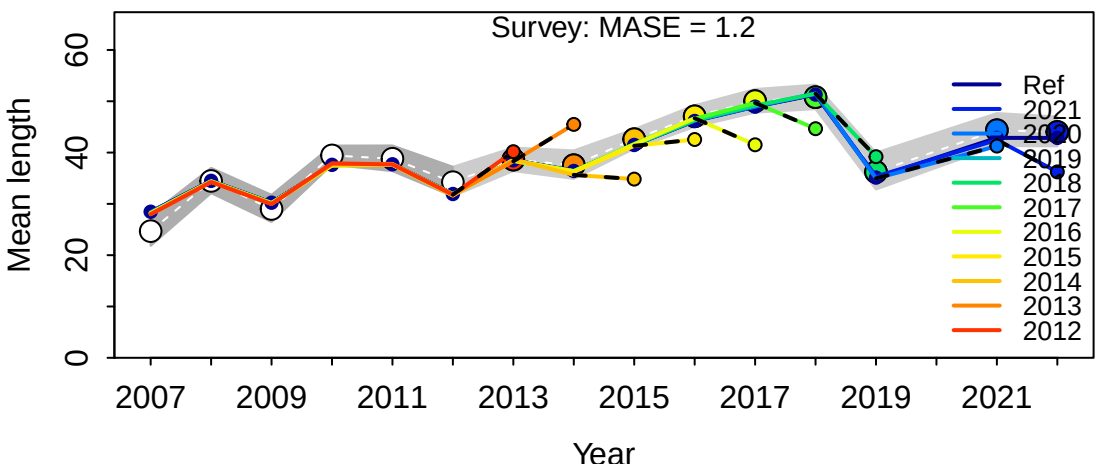
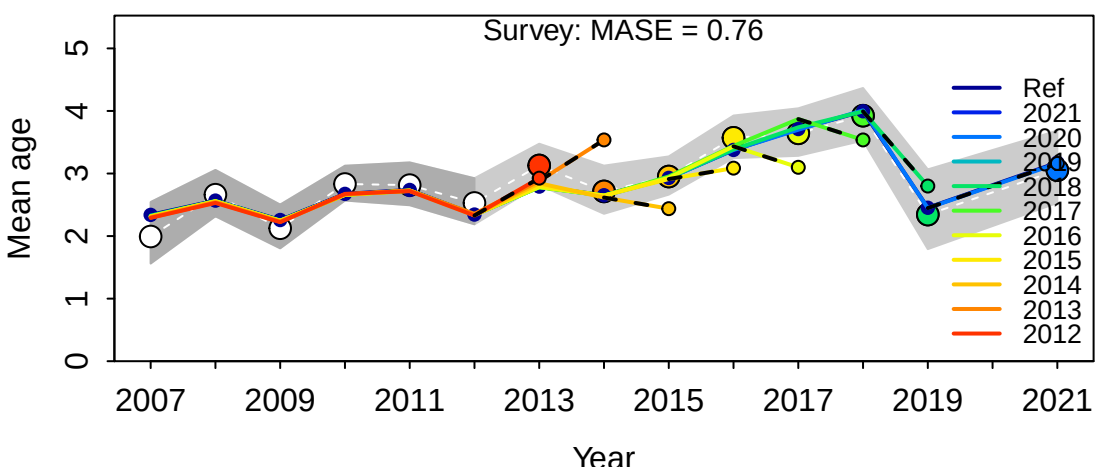
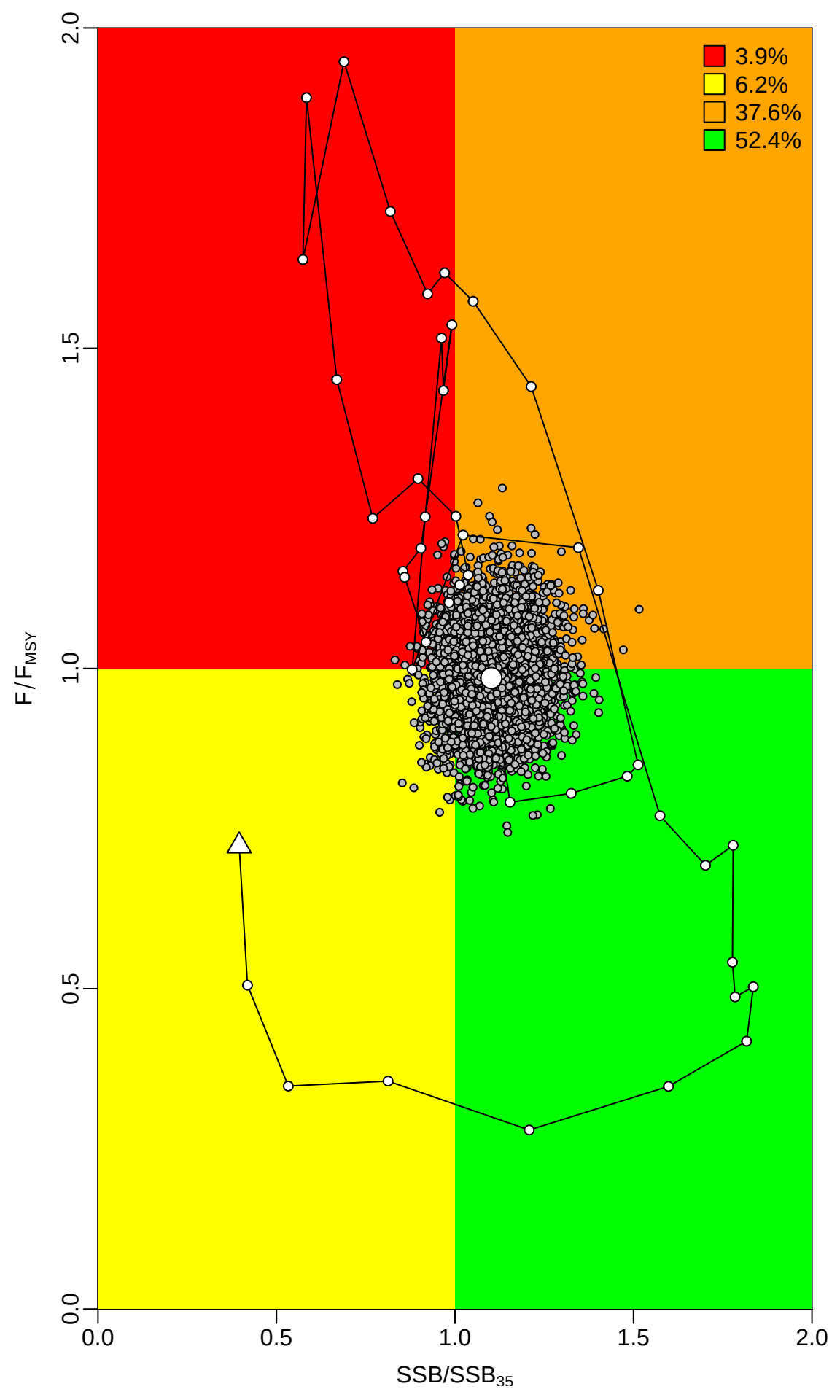
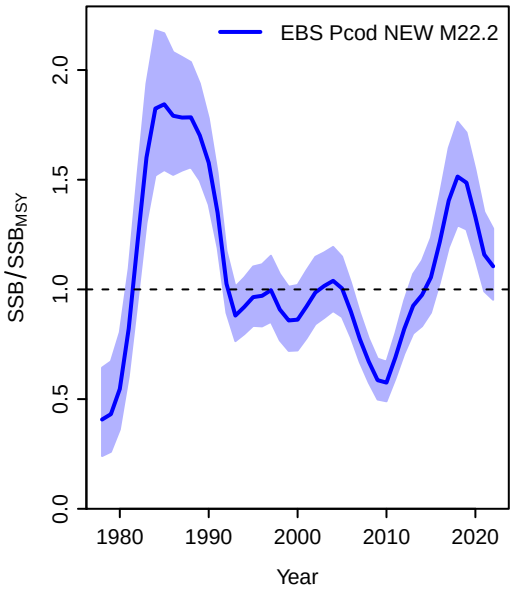

Survey: MASE = 0.45
Index
0
500000
1500000
1997
2000
2003
2006
2009
2012
2015
2018
2021
Year

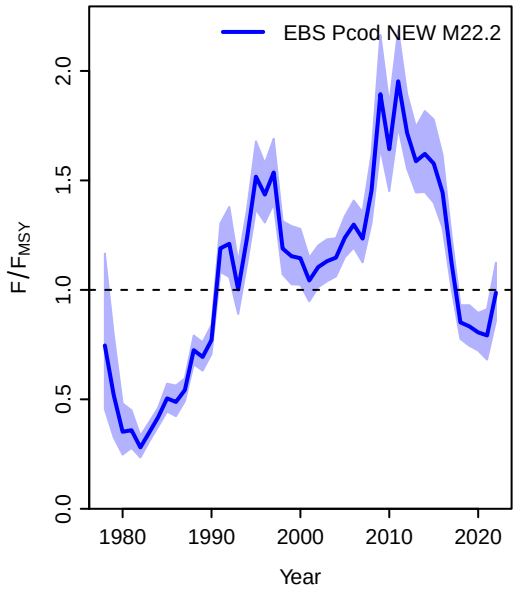

Fishery: MASE = 1.4 (0.32)
Mean length
0
20
40
60
80
2007
2009
2011
2013
2015
2017
2019
2021
Year
Ref
2021
2020
2019
2018
2017
2016
2015
2014
2013
2012

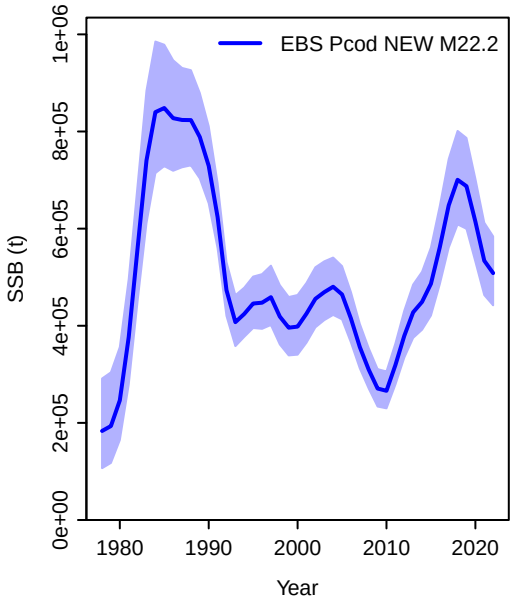

Survey: MASE = 1.2
Mean length
0
20
40
60
2007
2009
2011
2013
2015
2017
2019
2021
Year
Ref
2021
2020
2019
2018
2017
2016
2015
2014
2013
2012

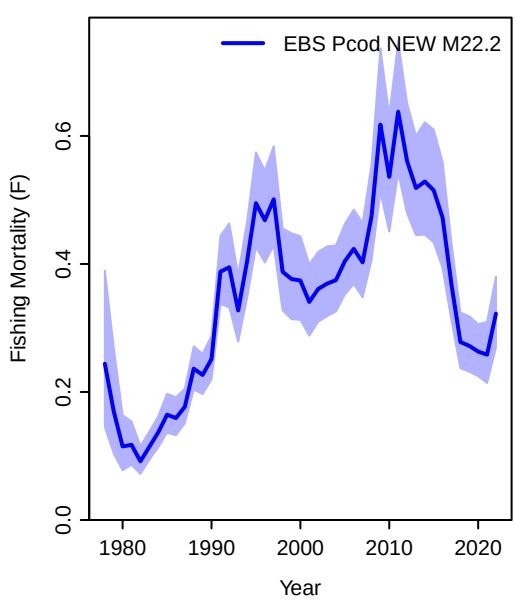

Survey: MASE = 0.76
Mean age
0
1
2
3
4
5
2007
2009
2011
2013
2015
2017
2019
2021
Year
Ref
2021
2020
2019
2018
2017
2016
2015
2014
2013
2012

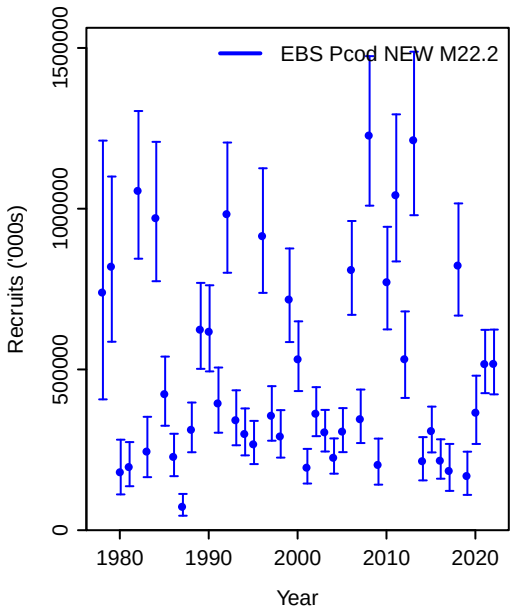

3.9%
6.2%
37.6%
52.4%
2.0
1.5
1.0
0.5
0.0
F/F_MSY
0.0
0.5
1.0
1.5
2.0
SSB/SSB_35

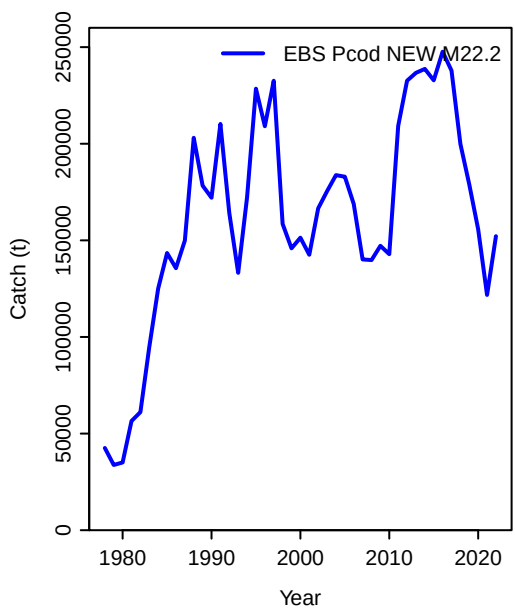

EBS Pcod NEW M22.2
SSB/SSB$_{MSY}$
0.0
0.5
1.0
1.5
2.0
1980
1990
2000
2010
2020
Year

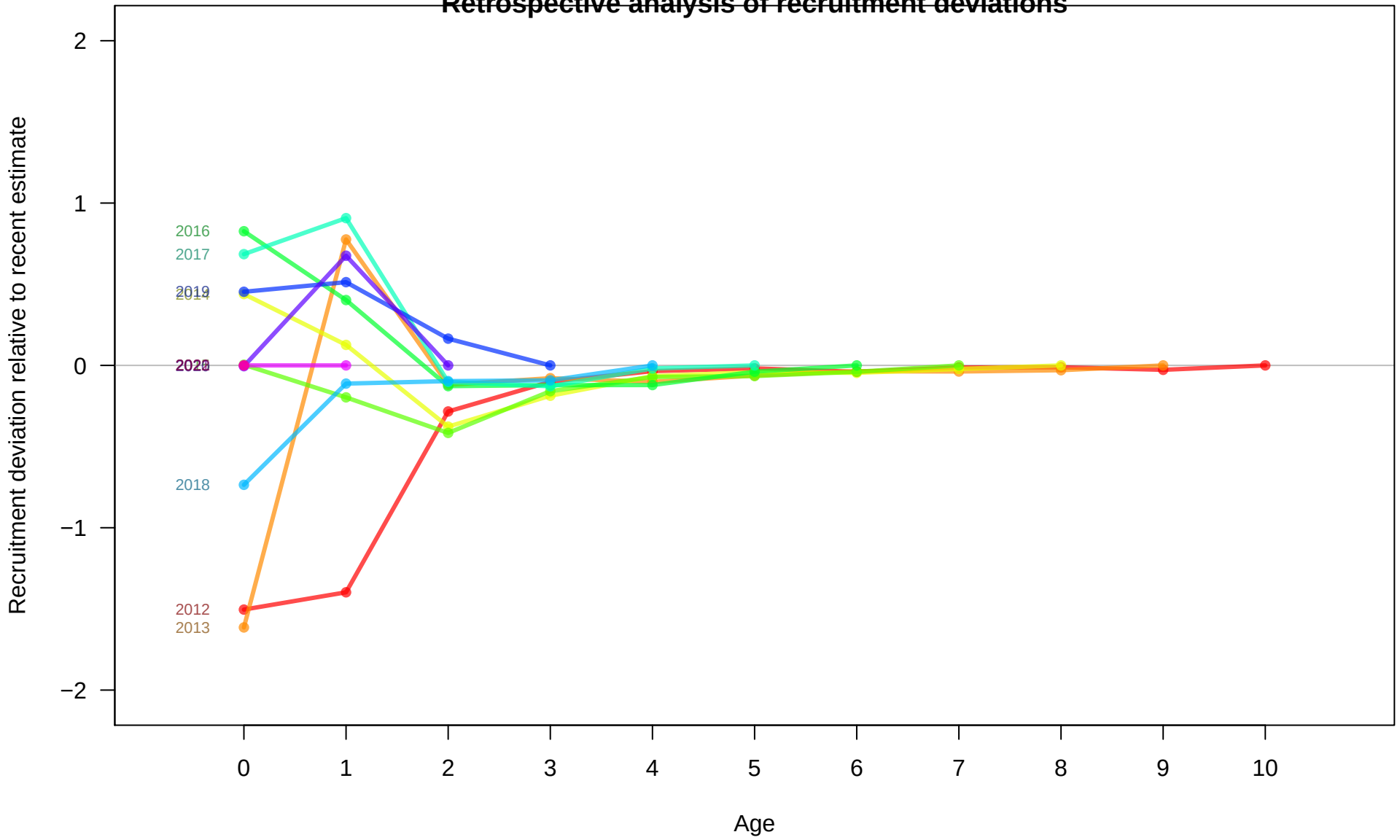

EBS Pcod NEW M22.2
F/F$_{MSY}$
0.0
0.5
1.0
1.5
2.0
1980
1990
2000
2010
2020
Year

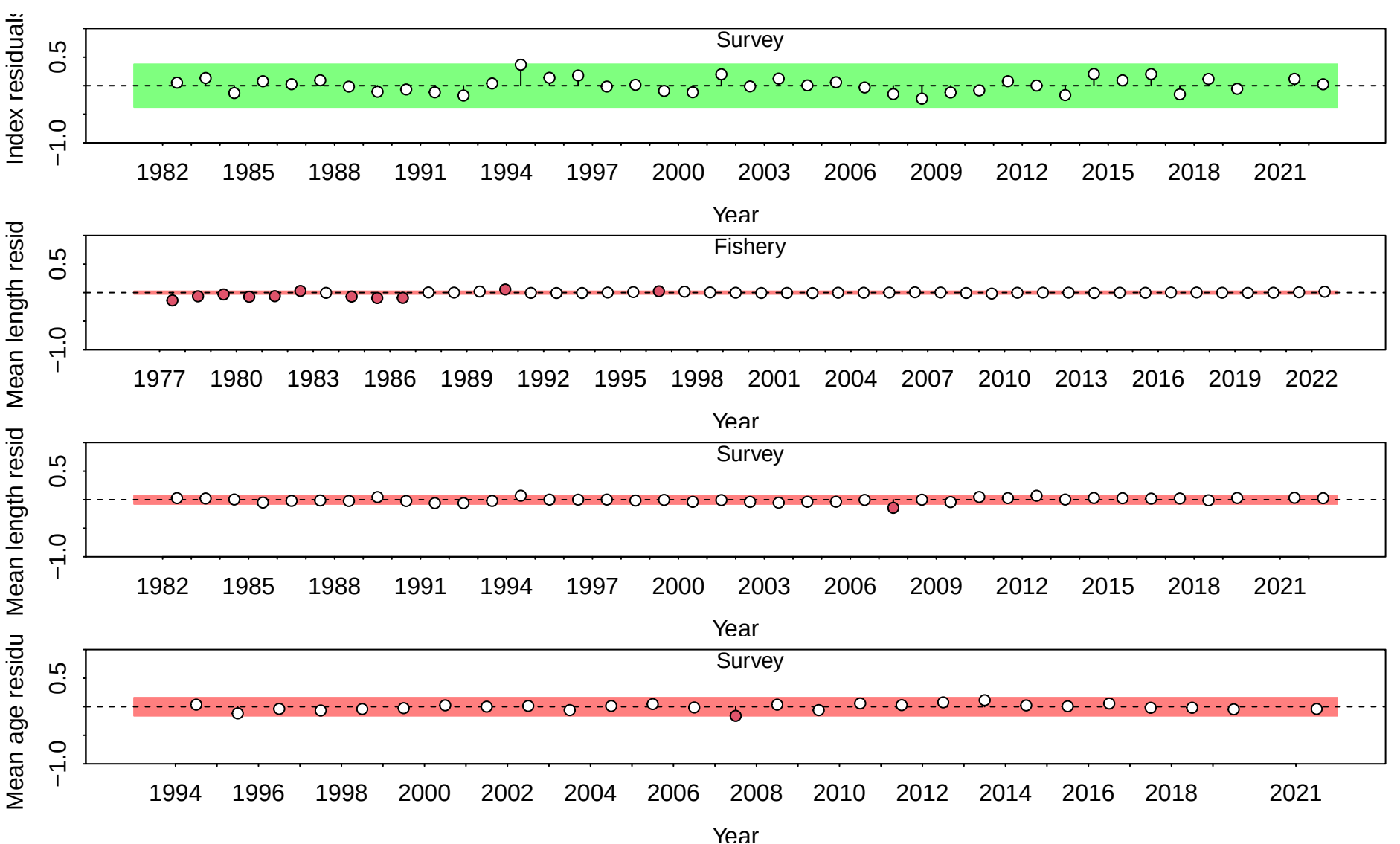

EBS Pcod NEW M22.2
SSB (t)
0e+00
2e+05
4e+05
6e+05
8e+05
1e+06
1980
1990
2000
2010
2020
Year

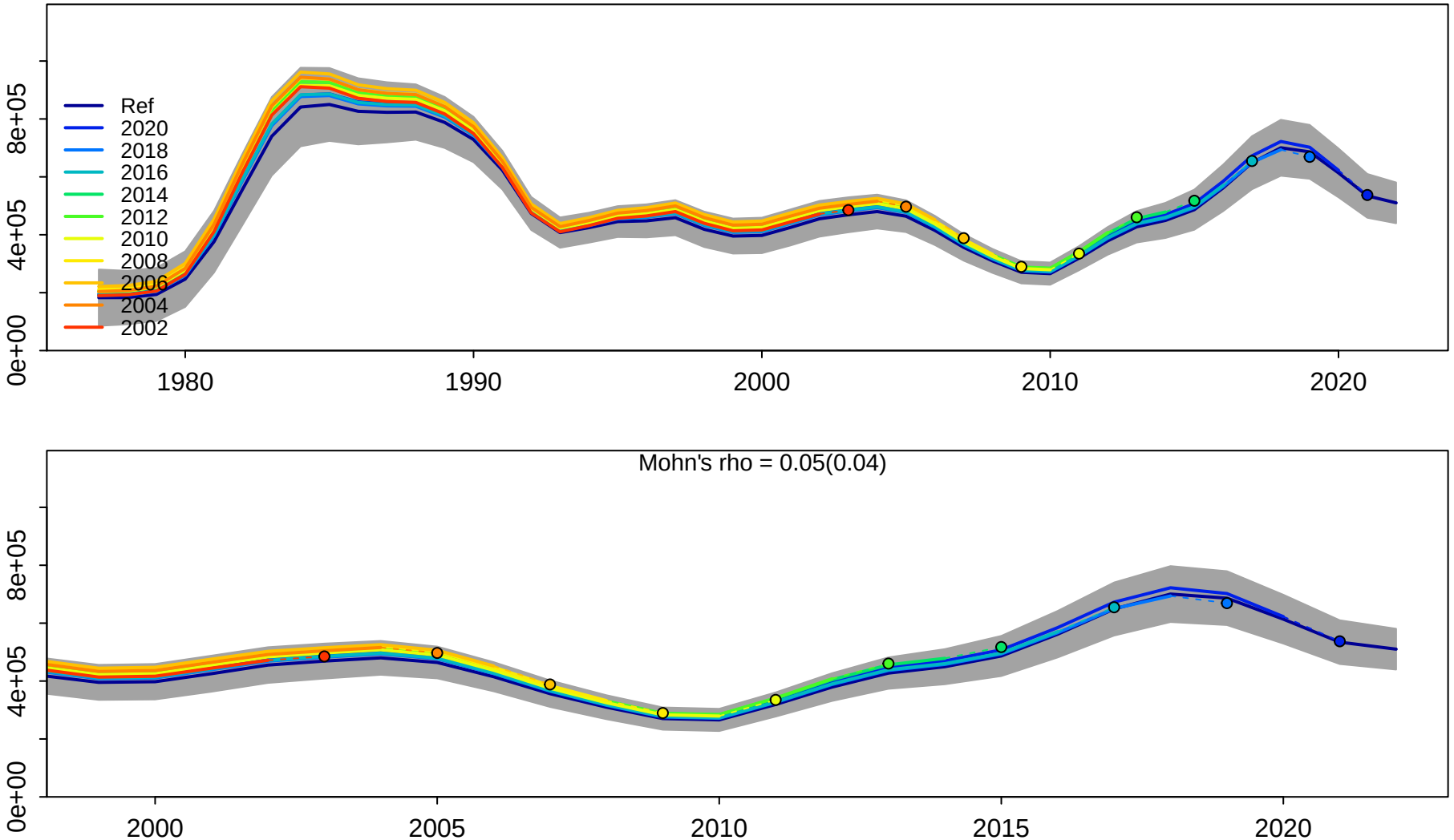

EBS Pcod NEW M22.2
Fishing Mortality (F)
0.0
0.2
0.4
0.6
1980
1990
2000
2010
2020
Year

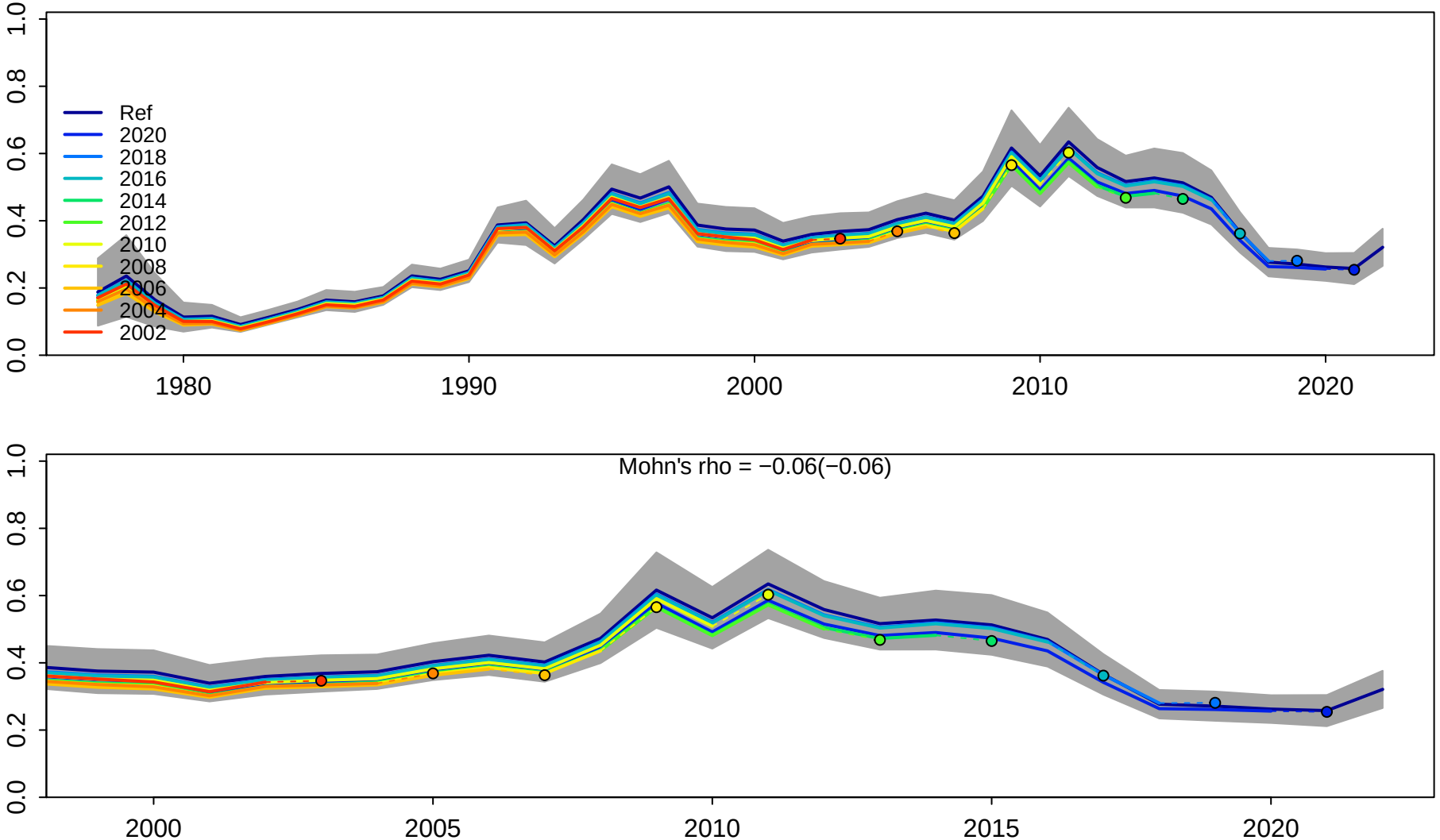

EBS Pcod NEW M22.2
Recruits ('000s)
0
500000
1000000
1500000
1980
1990
2000
2010
2020
Year

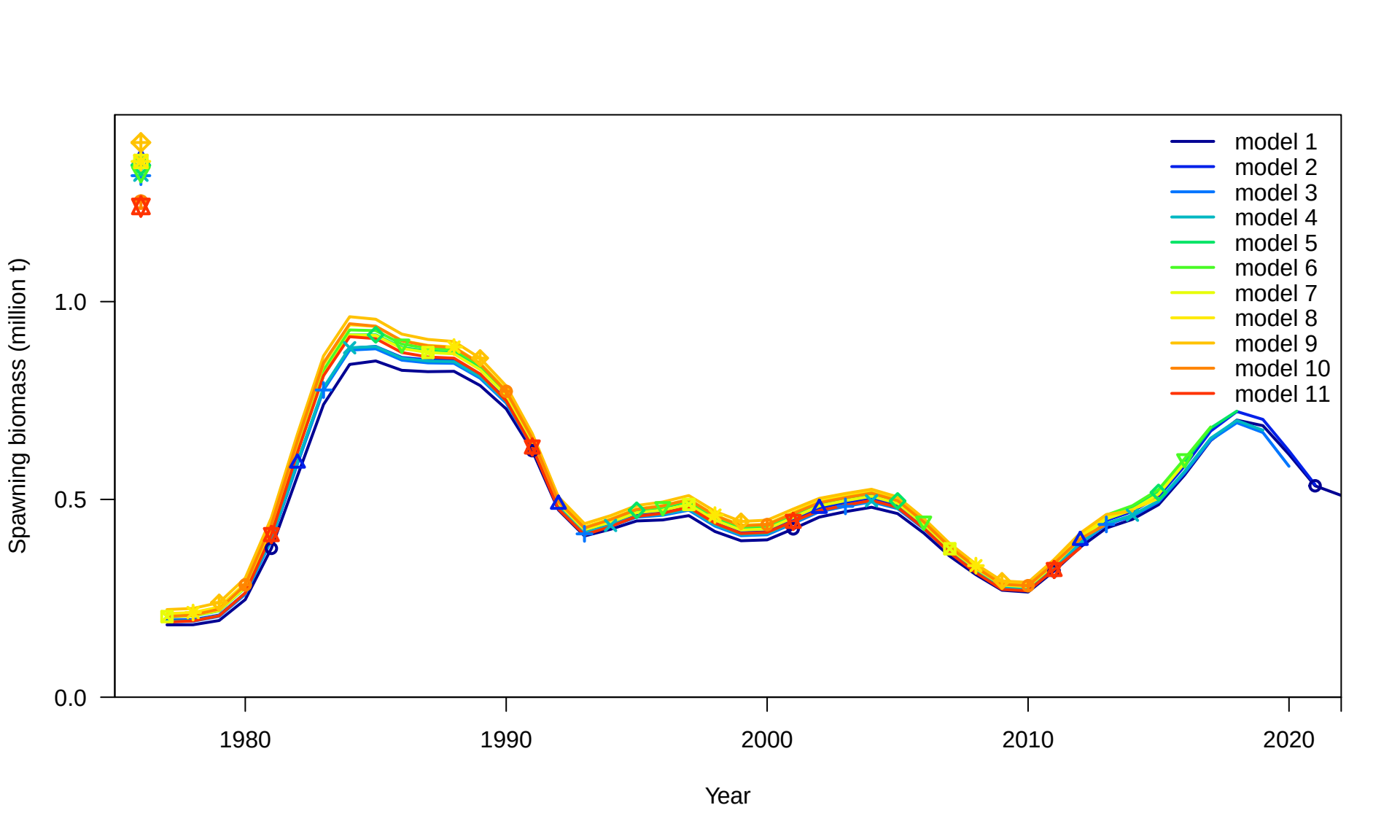

EBS Pcod NEW M22.2
Catch (t)
0
50000
100000
150000
200000
250000
1980
1990
2000
2010
2020
Year

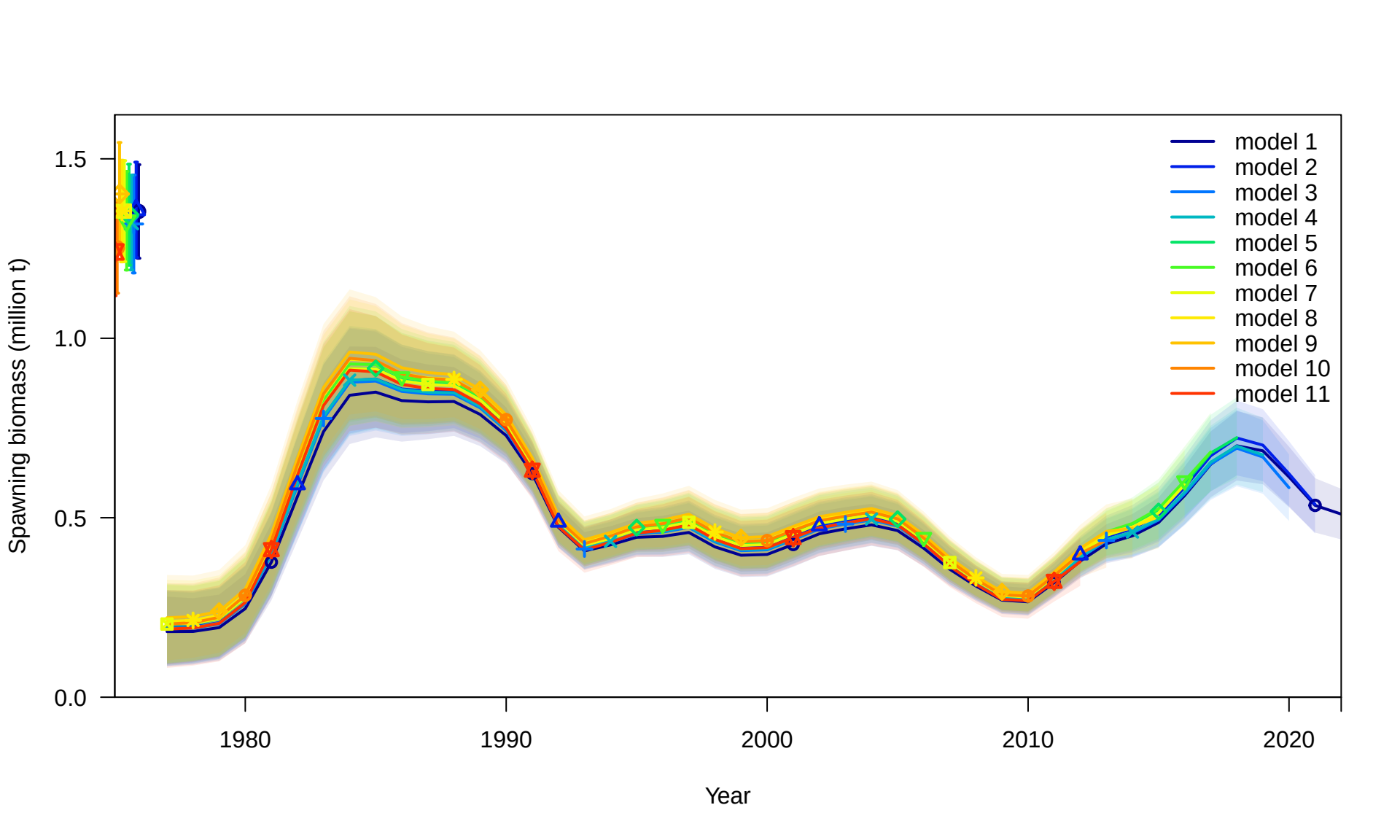

Retrospective analysis of recruitment deviations
Recruitment deviation relative to recent estimate
2
1
0
−1
−2
2016
2017
2019
2014
2020
2018
2012
2013
0
1
2
3
4
5
6
7
8
9
10
Age

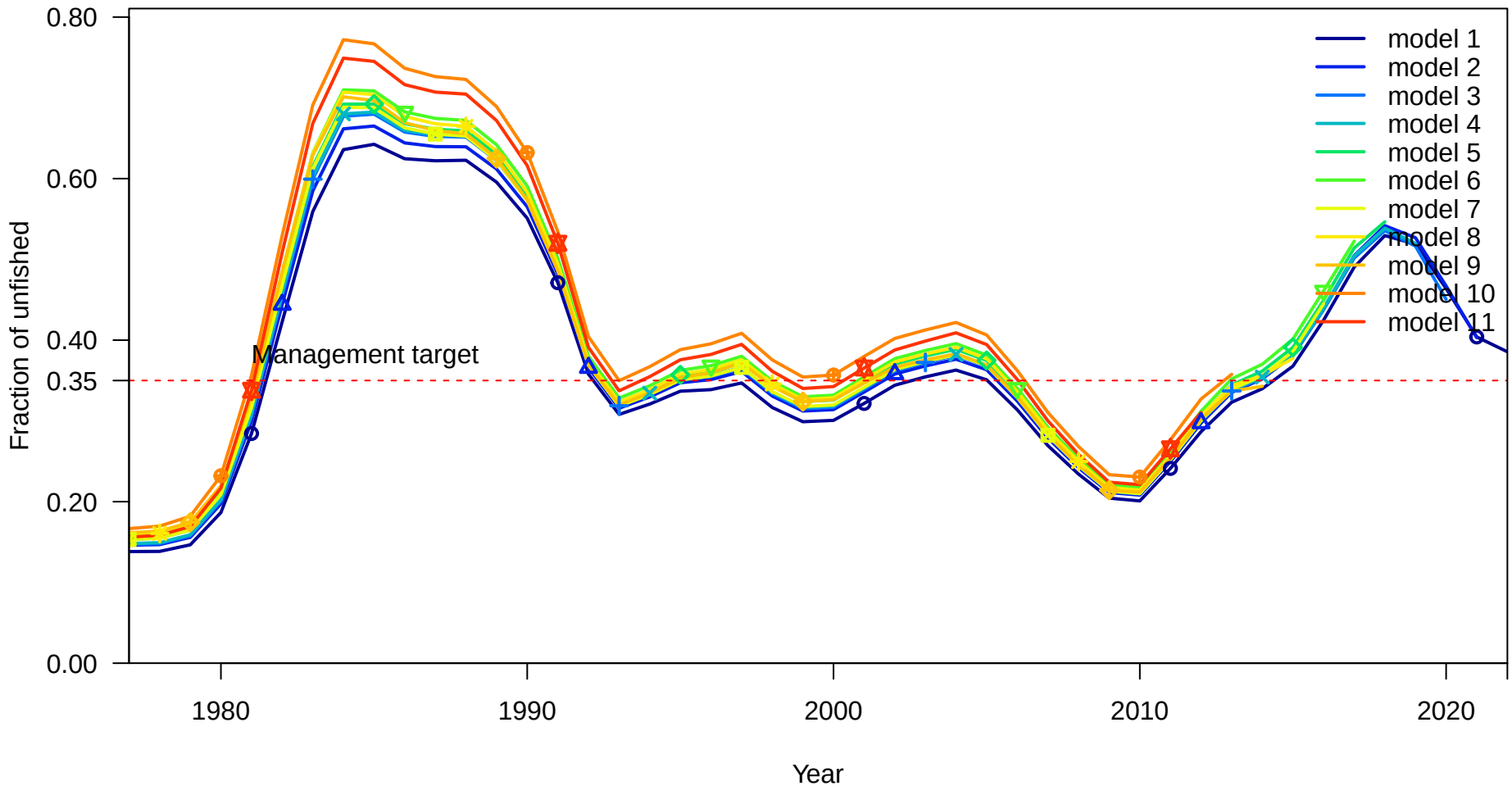

Index residuals
Survey
0.5
−1.0
1982 1985 1988 1991 1994 1997 2000 2003 2006 2009 2012 2015 2018 2021
Year
Mean length resid
Fishery
0.5
−1.0
1977 1980 1983 1986 1989 1992 1995 1998 2001 2004 2007 2010 2013 2016 2019 2022
Year
Mean length resid
Survey
0.5
−1.0
1982 1985 1988 1991 1994 1997 2000 2003 2006 2009 2012 2015 2018 2021
Year
Mean age residu
Survey
0.5
−1.0
1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014 2016 2018 2021
Year

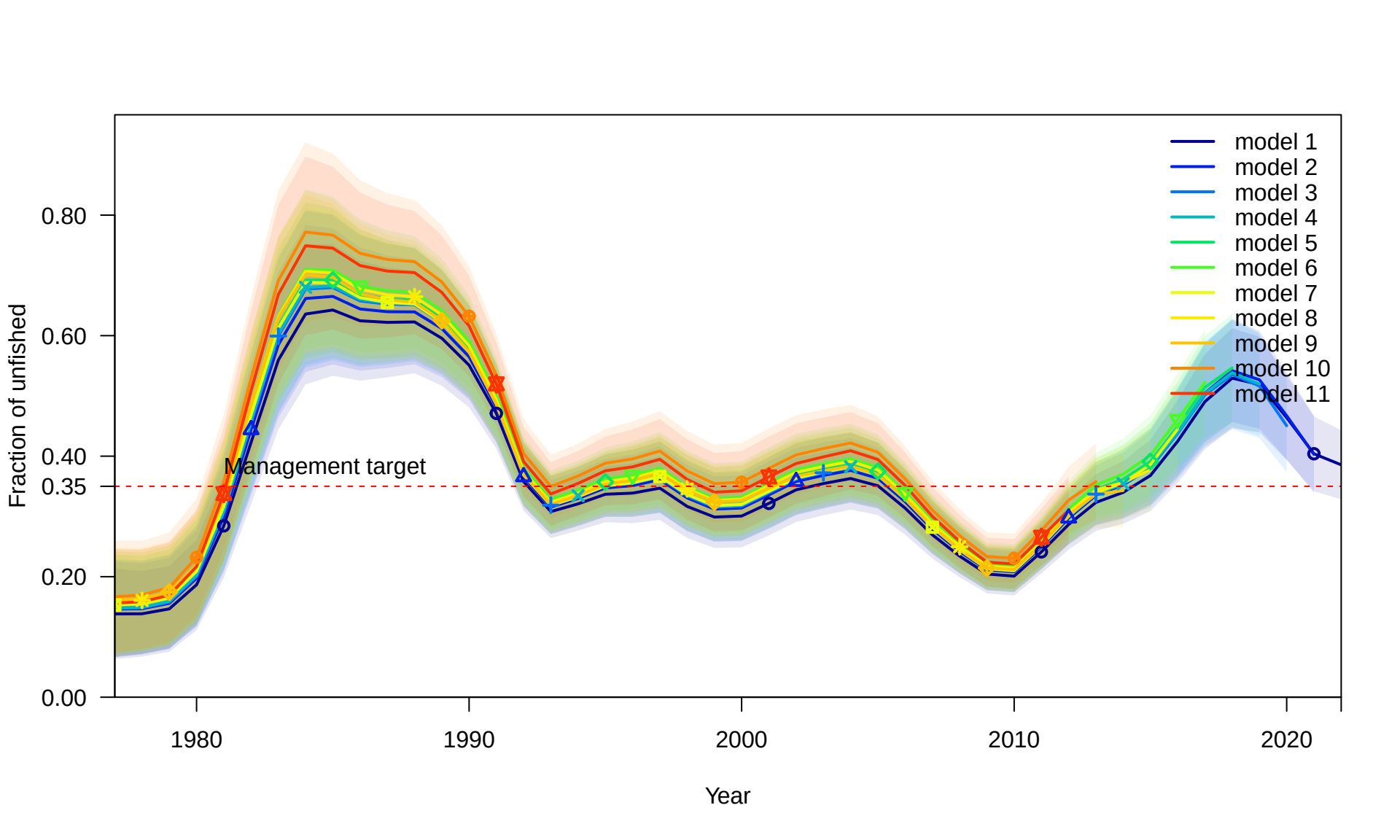

Ref
2020
2018
2016
2014
2012
2010
2008
2006
2004
2002
0e+00
4e+05
8e+05
1980
1990
2000
2010
2020
Mohn's rho = 0.05(0.04)
0e+00
4e+05
8e+05
2000
2005
2010
2015
2020

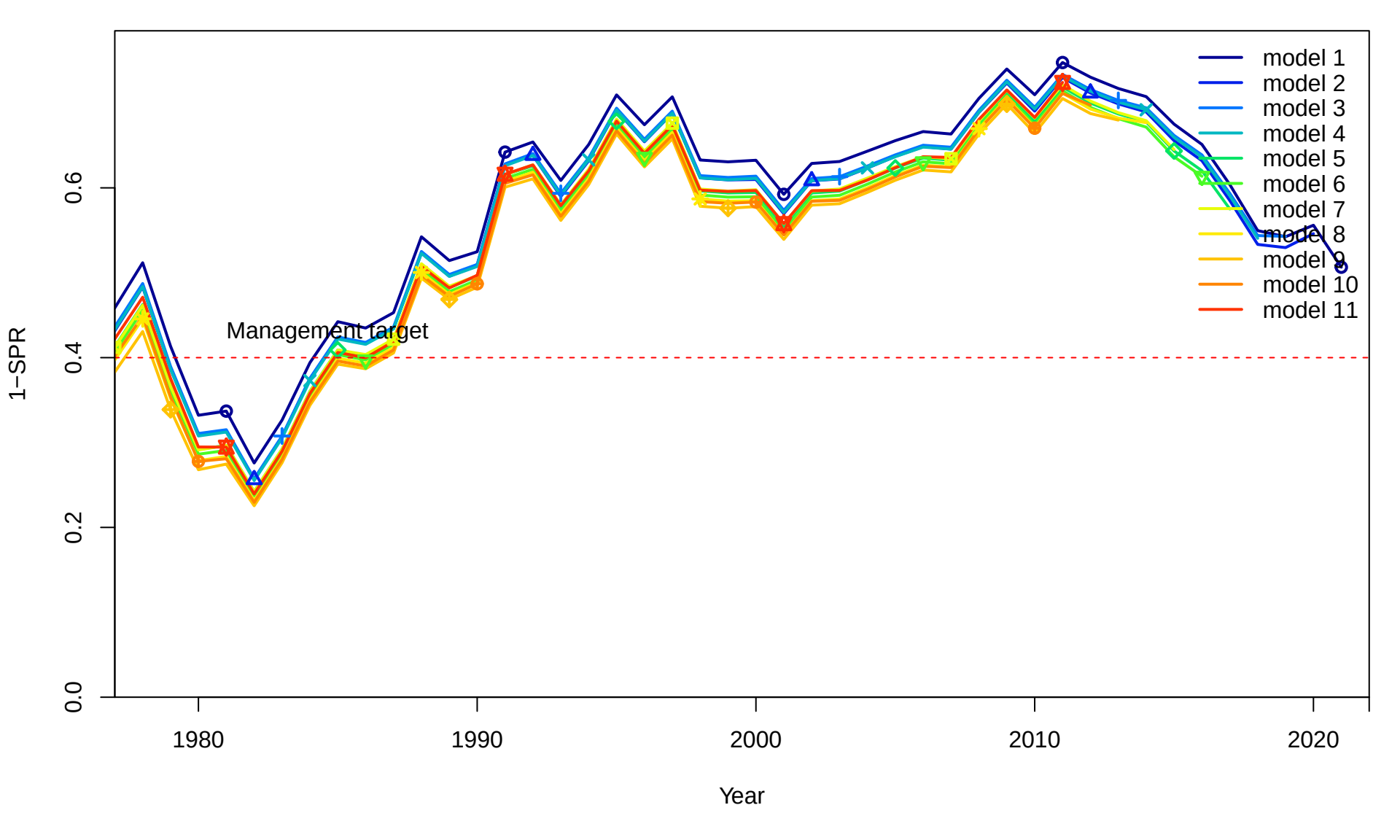

Ref
2020
2018
2016
2014
2012
2010
2008
2006
2004
2002
0.0
0.2
0.4
0.6
0.8
1.0
1980
1990
2000
2010
2020
Mohn's rho = −0.06(−0.06)
0.0
0.2
0.4
0.6
0.8
1.0
2000
2005
2010
2015
2020

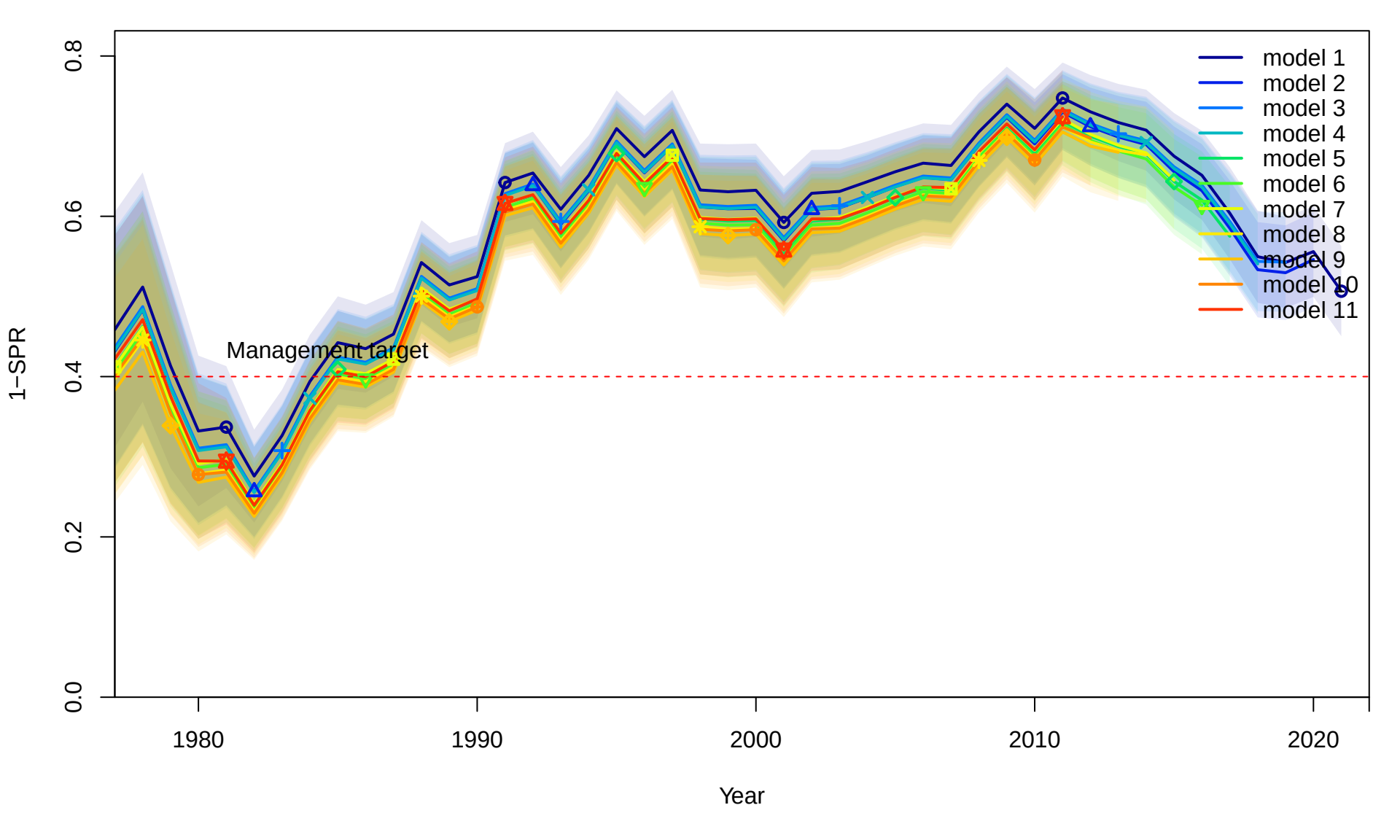

model 1
model 2
model 3
model 4
model 5
model 6
model 7
model 8
model 9
model 10
model 11
Spawning biomass (million t)
0.0
0.5
1.0
1980
1990
2000
2010
2020
Year

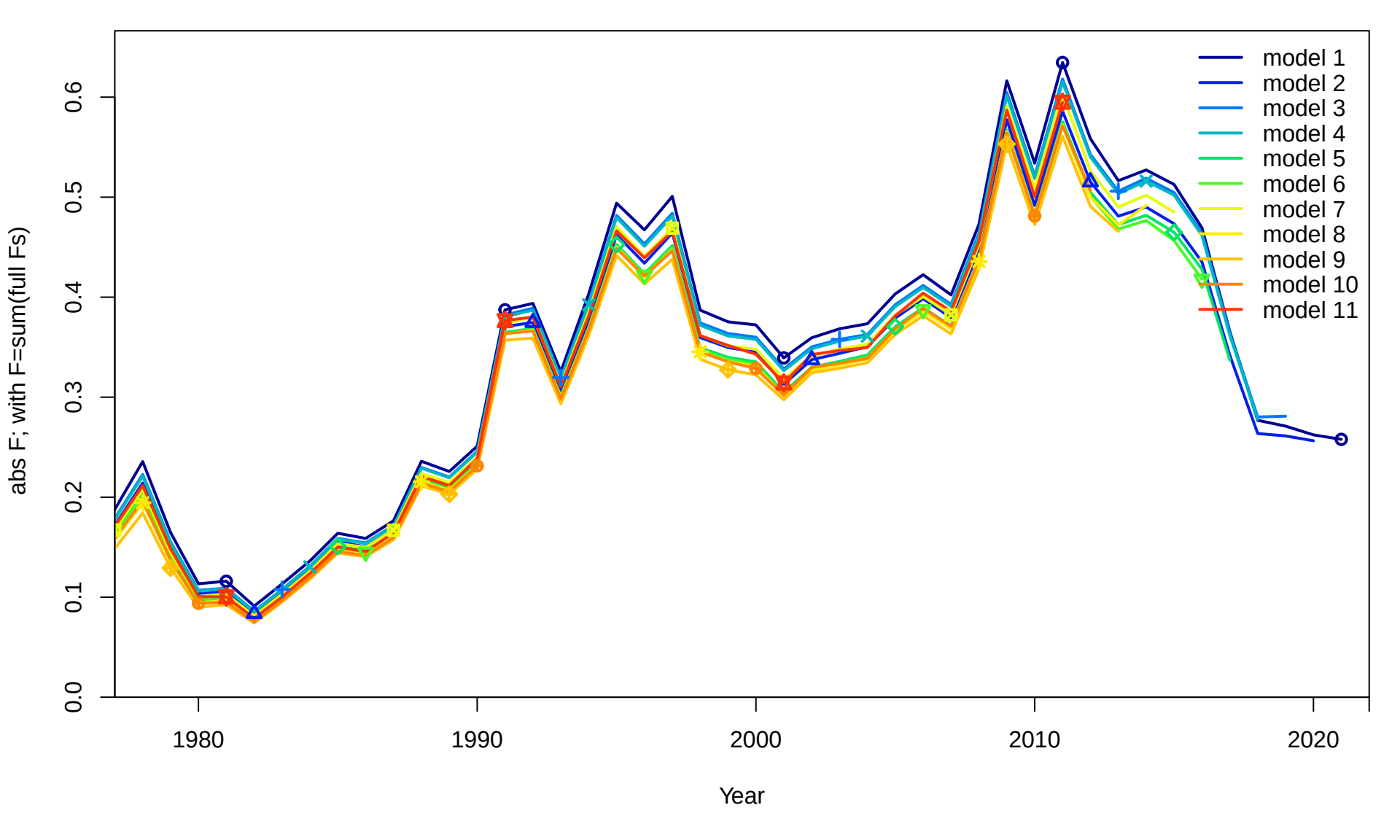

Spawning biomass (million t)
0.0
0.5
1.0
1.5
1980
1990
2000
2010
2020
Year
model 1
model 2
model 3
model 4
model 5
model 6
model 7
model 8
model 9
model 10
model 11

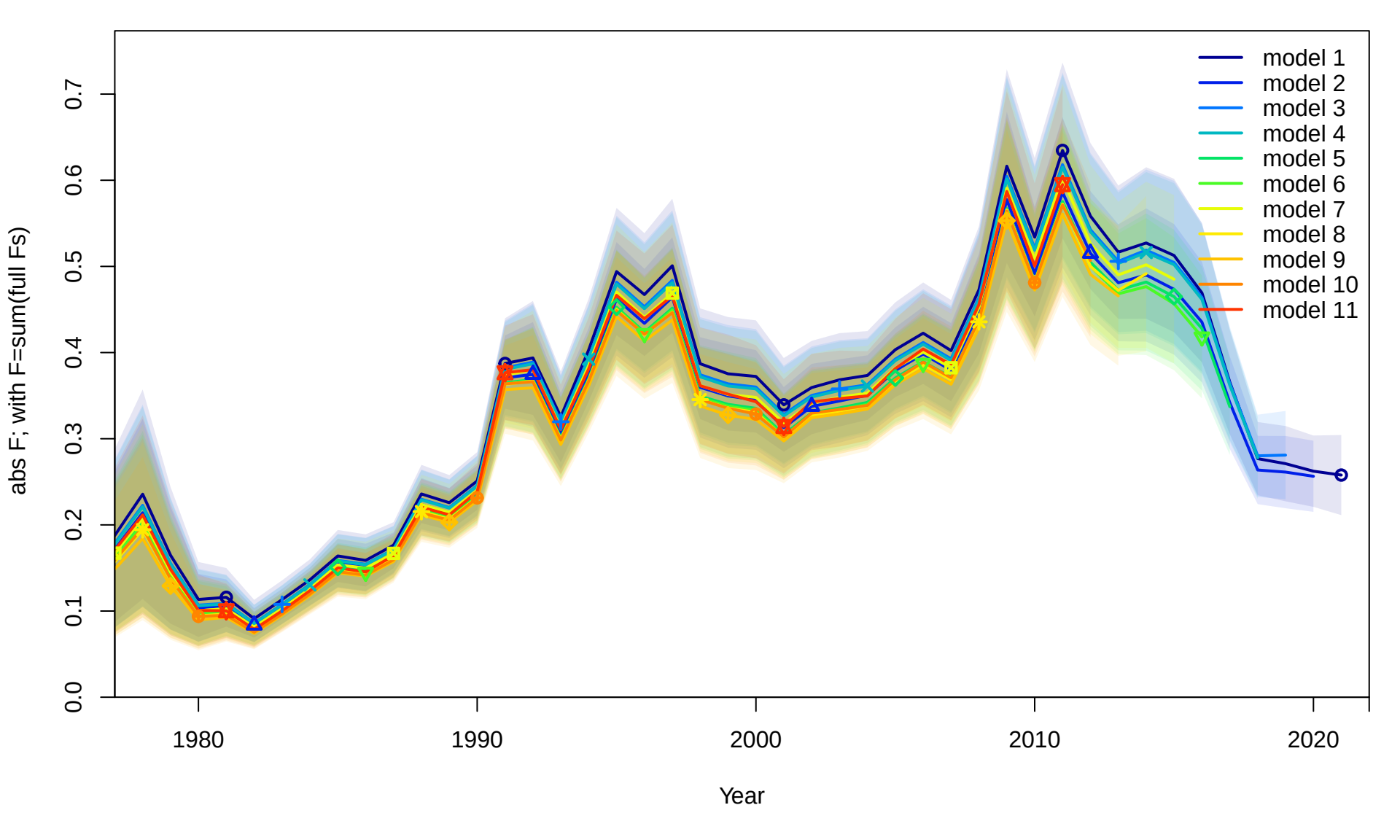

0.80
0.60
0.40
0.35
0.20
0.00
Fraction of unfished
Management target
1980
1990
2000
2010
2020
Year
model 1
model 2
model 3
model 4
model 5
model 6
model 7
model 8
model 9
model 10
model 11

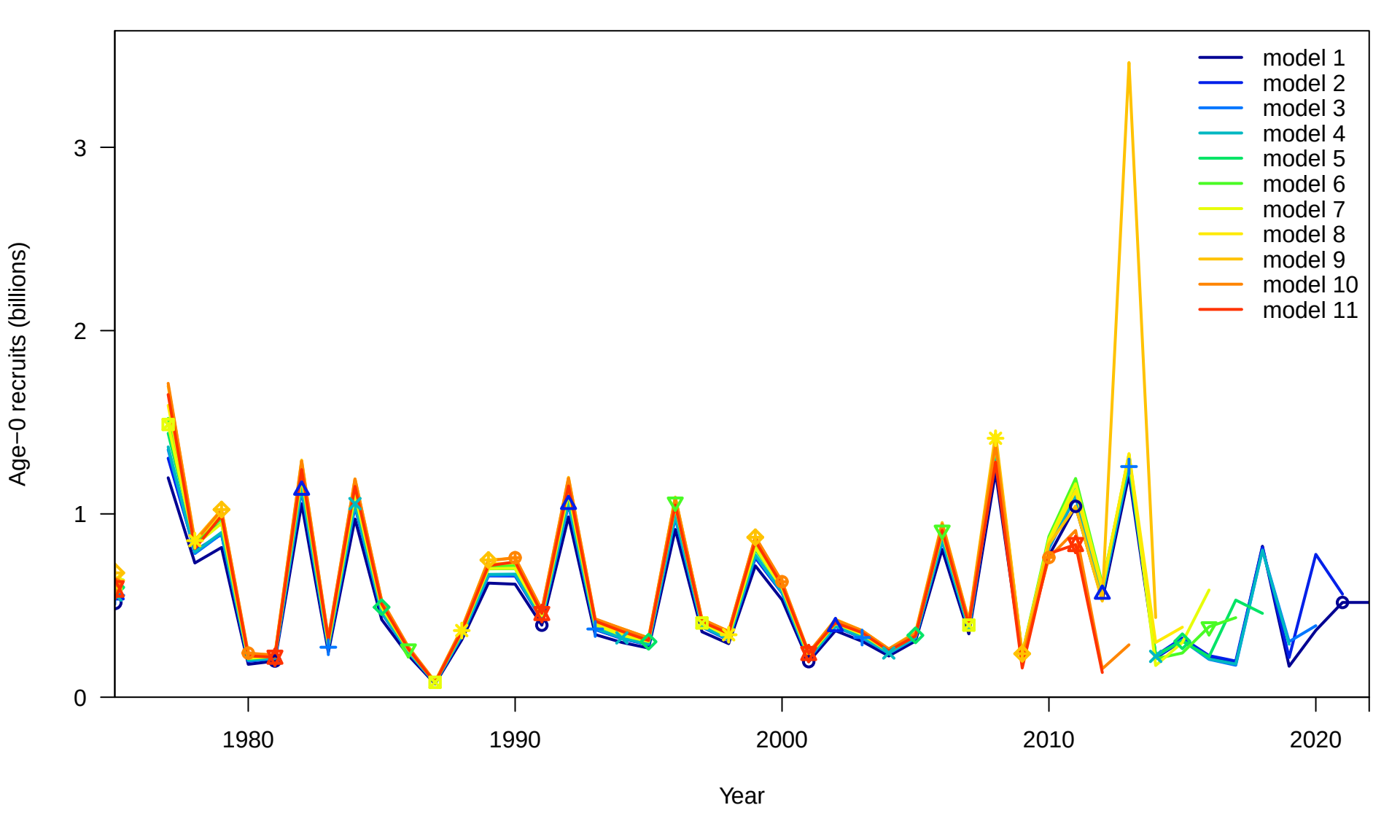

model 1
model 2
model 3
model 4
model 5
model 6
model 7
model 8
model 9
model 10
model 11
Management target
Fraction of unfished
0.00
0.20
0.35
0.40
0.60
0.80
1980
1990
2000
2010
2020
Year

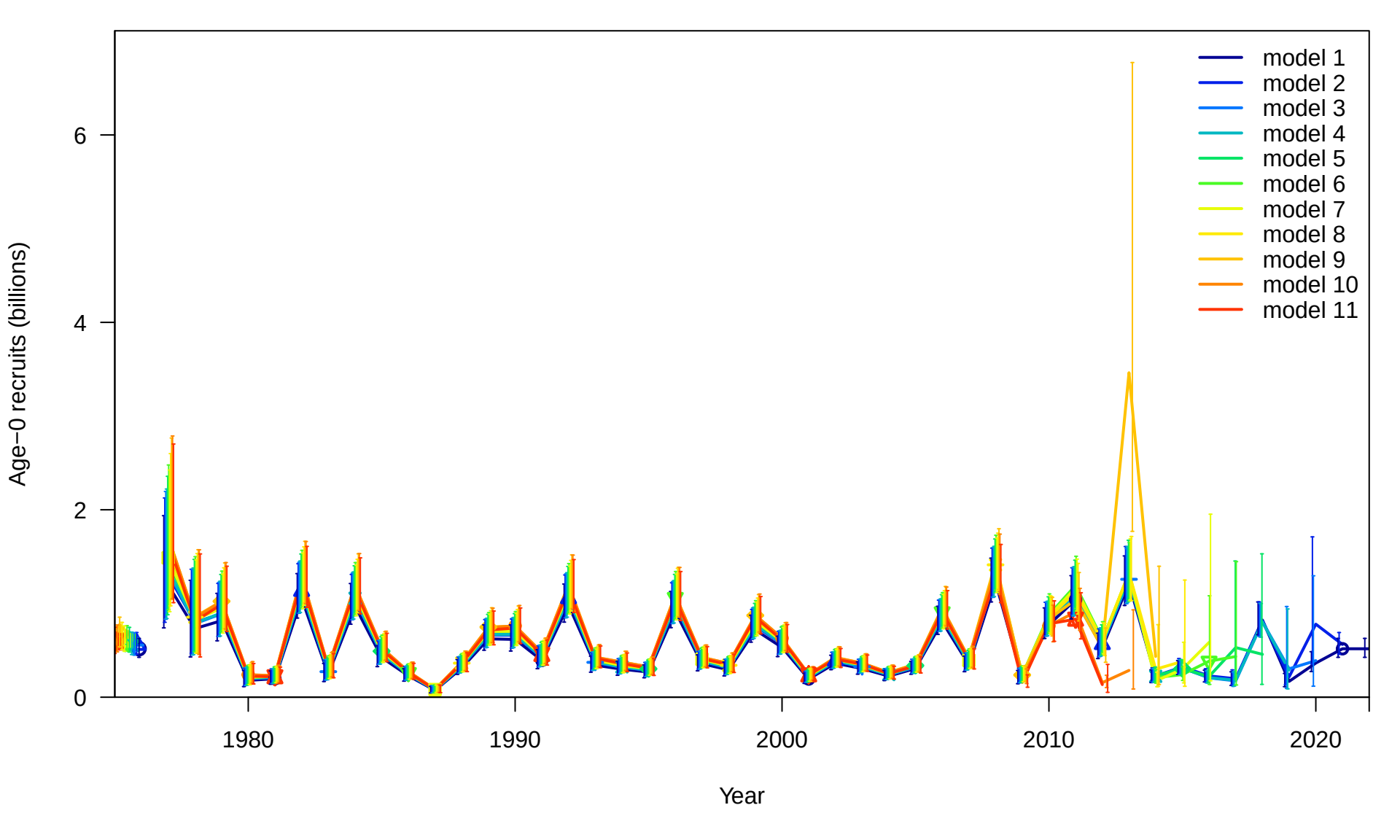

model 1
model 2
model 3
model 4
model 5
model 6
model 7
model 8
model 9
model 10
model 11
Management target
1−SPR
0.0
0.2
0.4
0.6
1980
1990
2000
2010
2020
Year

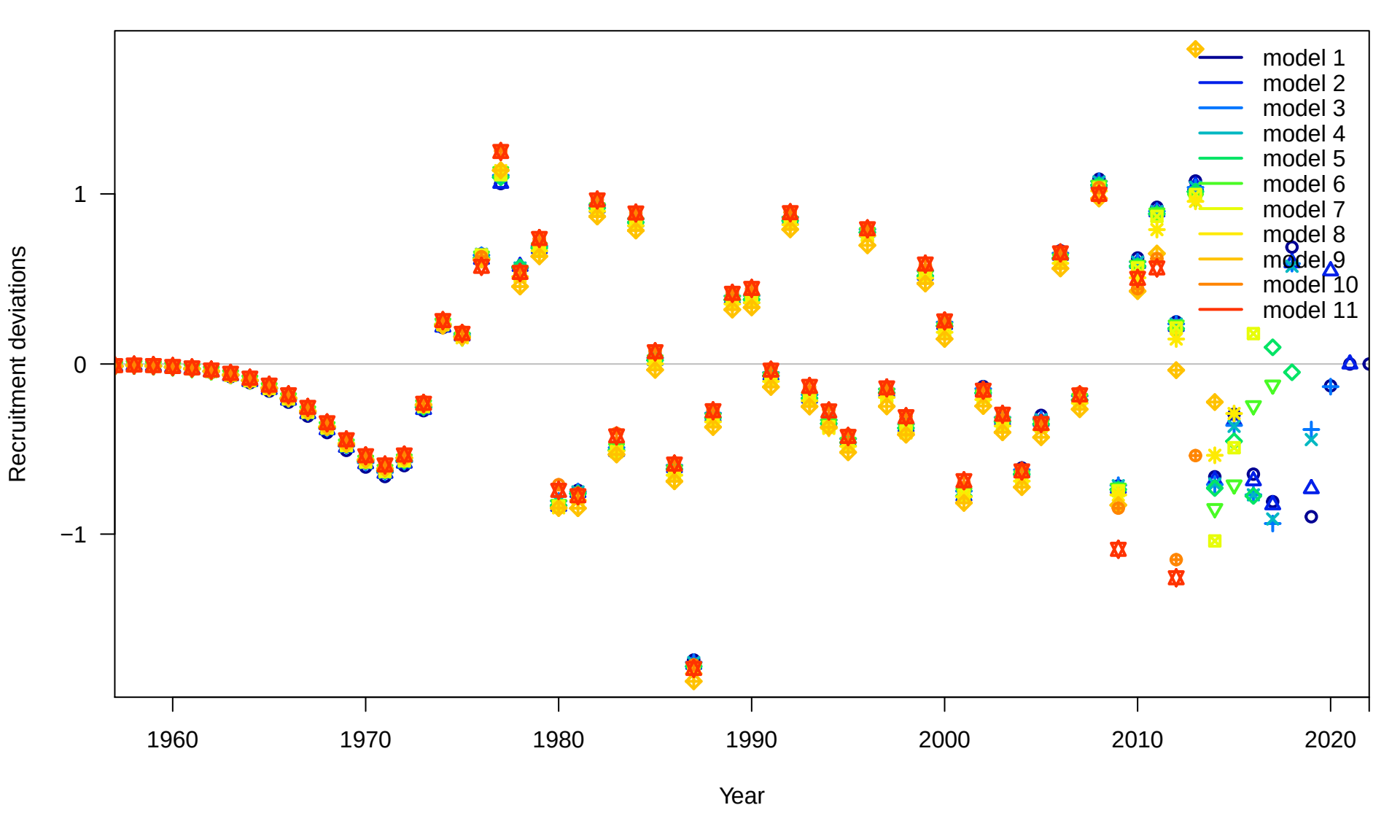

model 1
model 2
model 3
model 4
model 5
model 6
model 7
model 8
model 9
model 10
model 11
Management target
1−SPR
0.0
0.2
0.4
0.6
0.8
1980
1990
2000
2010
2020
Year

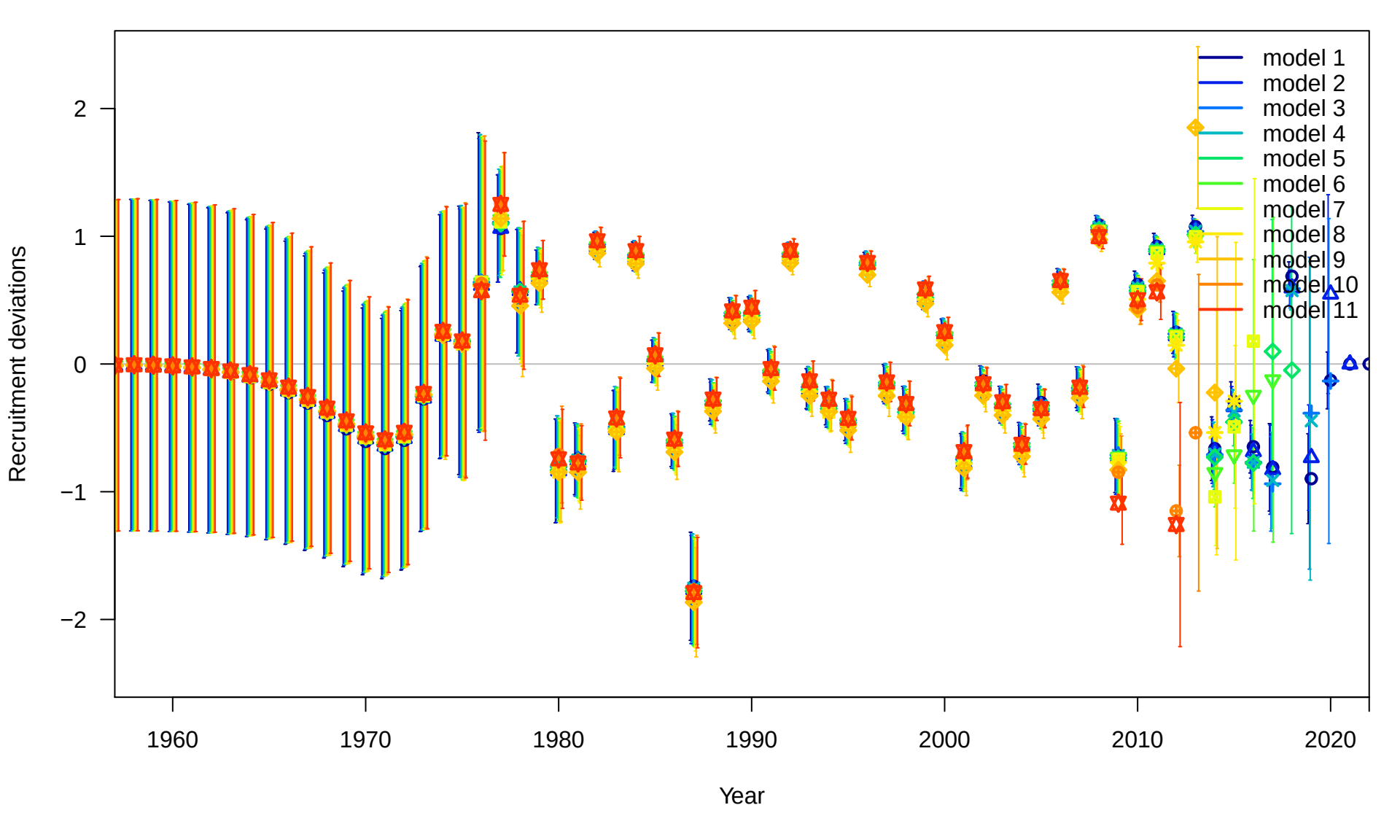

model 1
model 2
model 3
model 4
model 5
model 6
model 7
model 8
model 9
model 10
model 11
abs F; with F=sum(full Fs)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
1980
1990
2000
2010
2020
Year

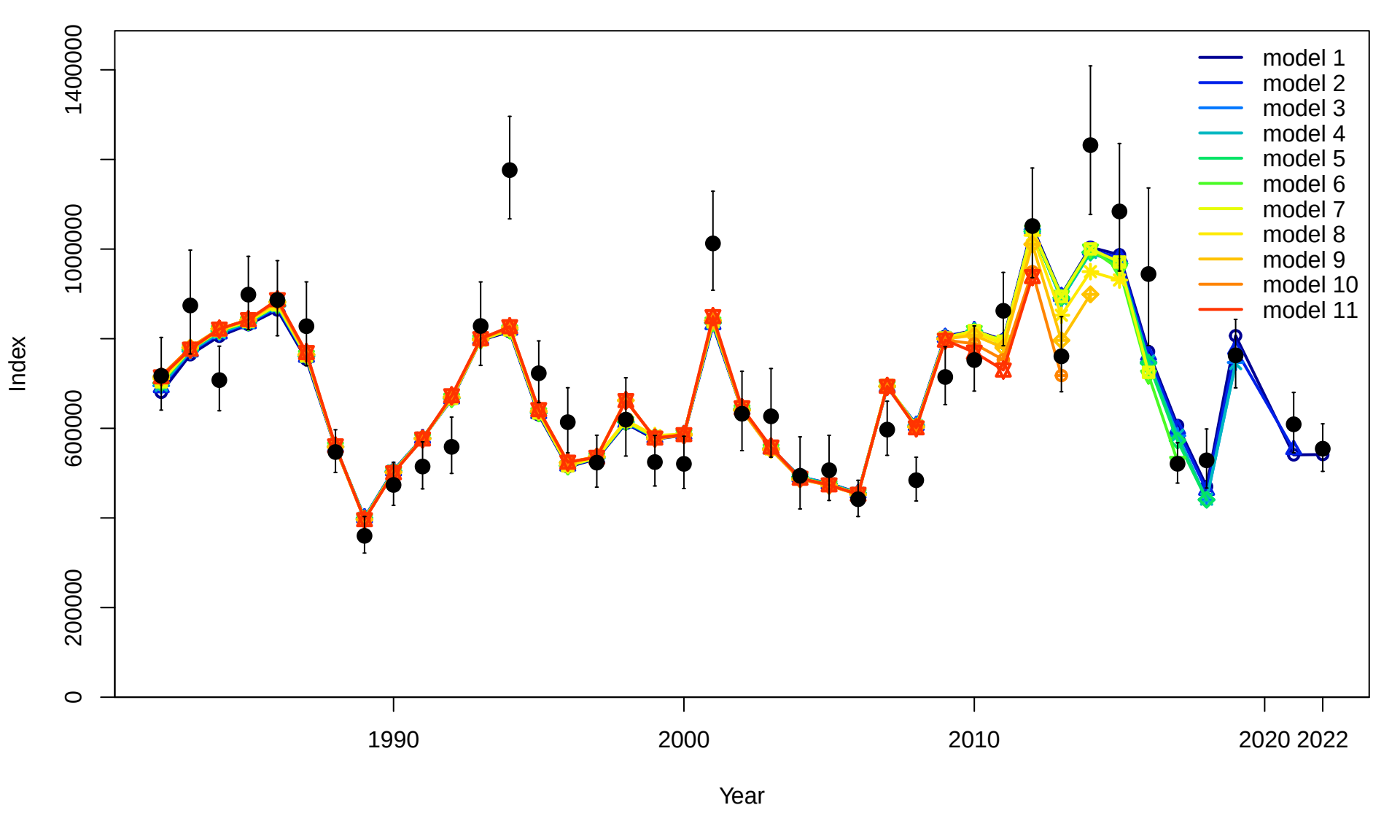

model 1
model 2
model 3
model 4
model 5
model 6
model 7
model 8
model 9
model 10
model 11
abs F; with F=sum(full Fs)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
1980
1990
2000
2010
2020
Year

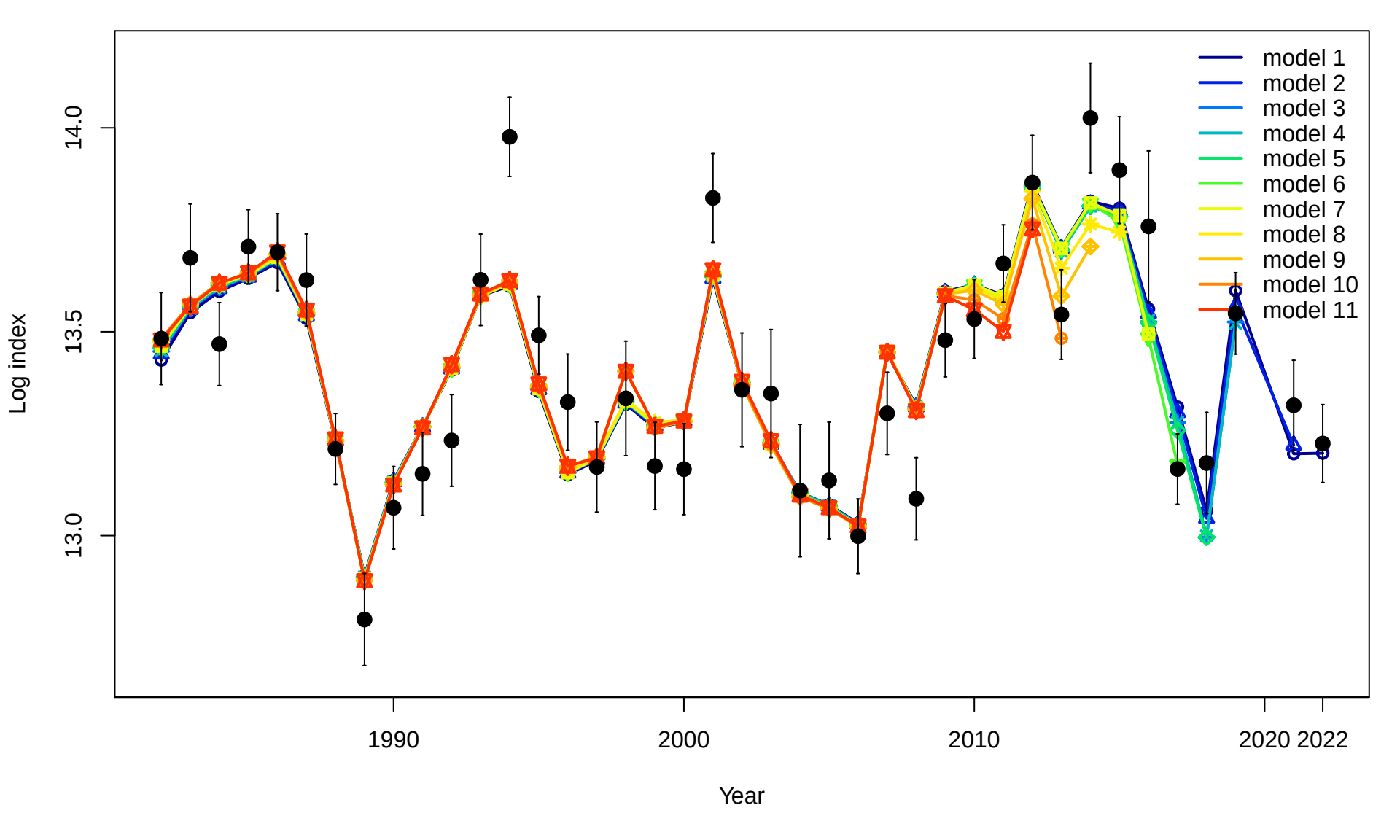

model 1
model 2
model 3
model 4
model 5
model 6
model 7
model 8
model 9
model 10
model 11
Age−0 recruits (billions)
0
1
2
3
1980
1990
2000
2010
2020
Year

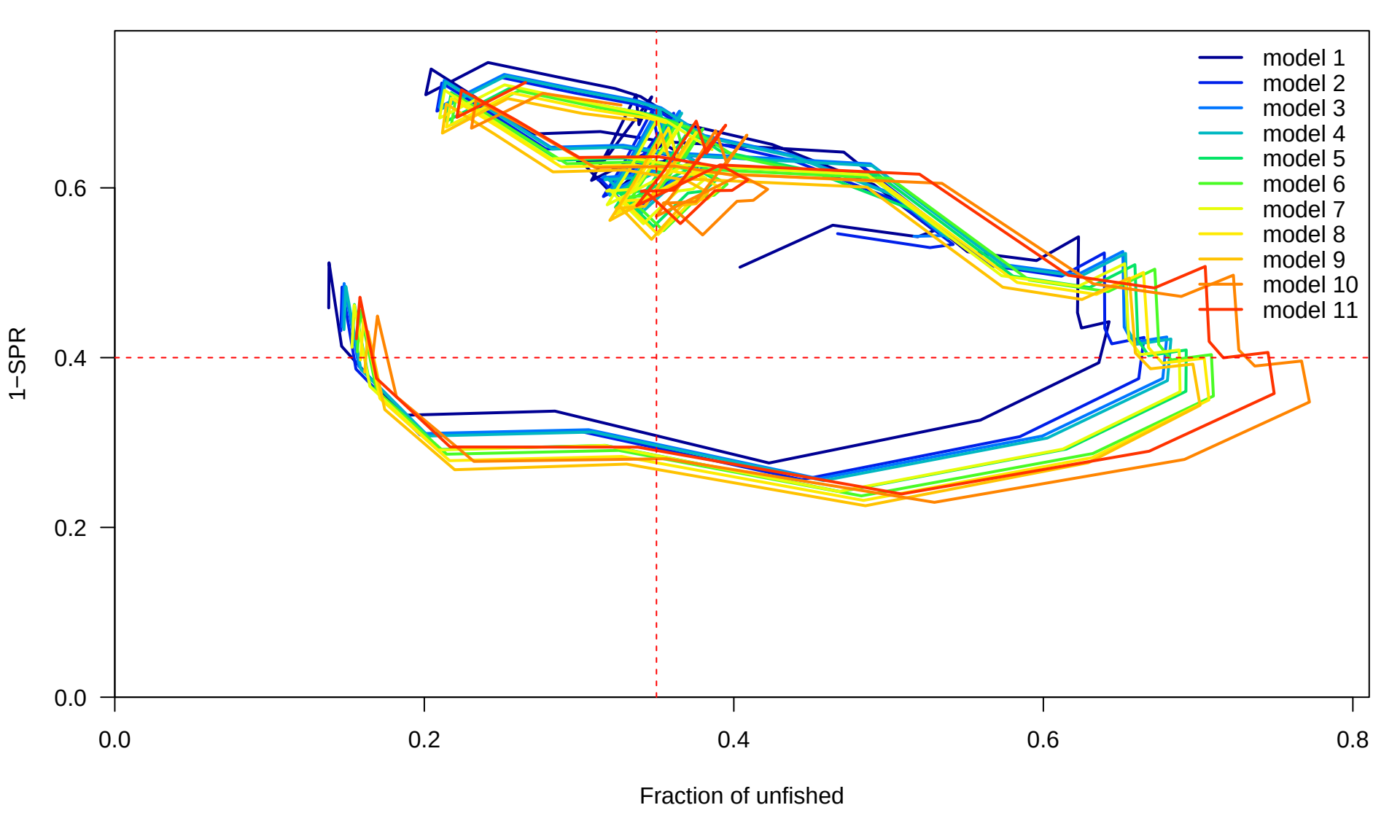

model 1
model 2
model 3
model 4
model 5
model 6
model 7
model 8
model 9
model 10
model 11
Age−0 recruits (billions)
0
2
4
6
1980
1990
2000
2010
2020
Year

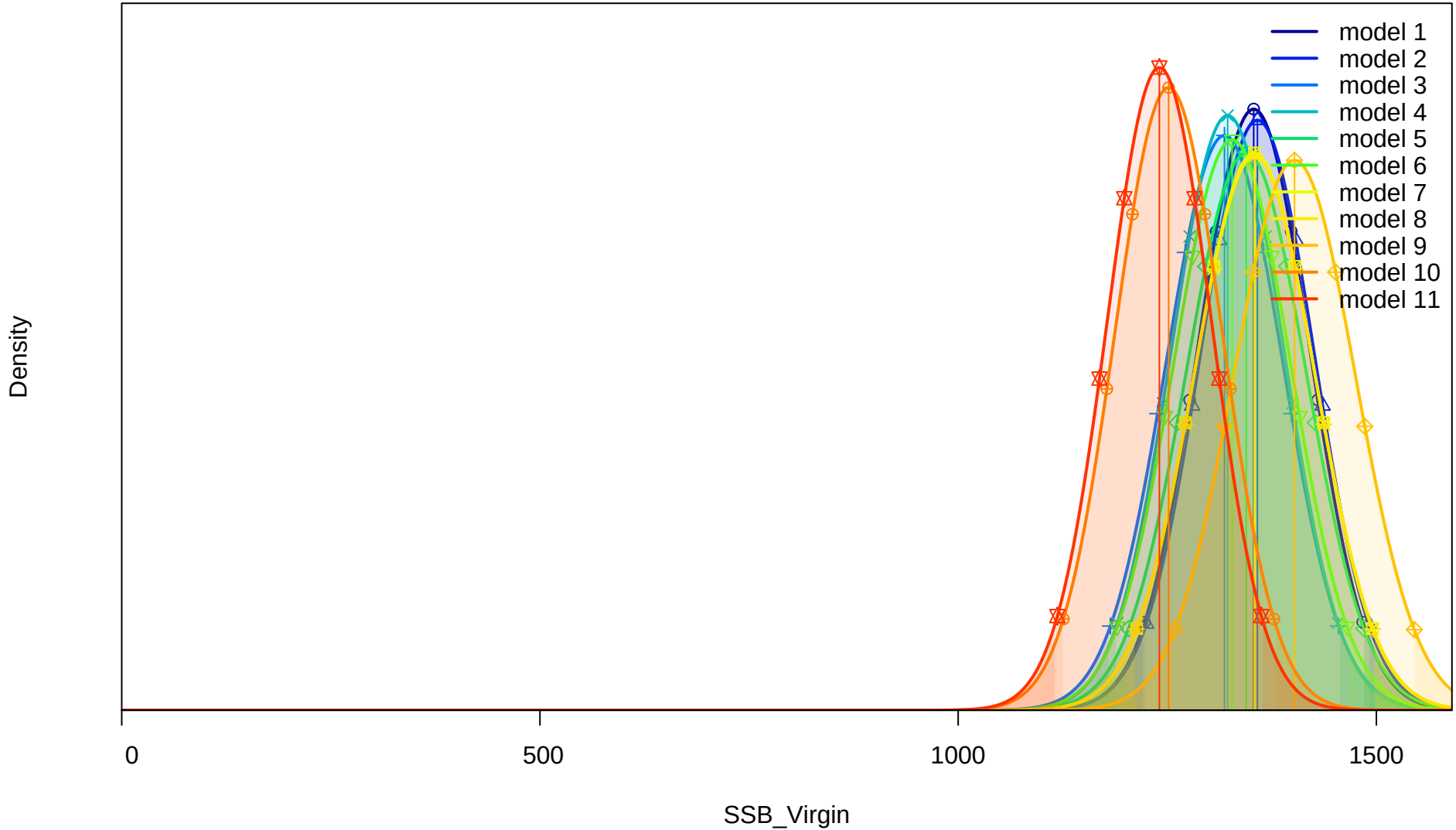

model 1
model 2
model 3
model 4
model 5
model 6
model 7
model 8
model 9
model 10
model 11
Recruitment deviations
1
0
−1
1960
1970
1980
1990
2000
2010
2020
Year

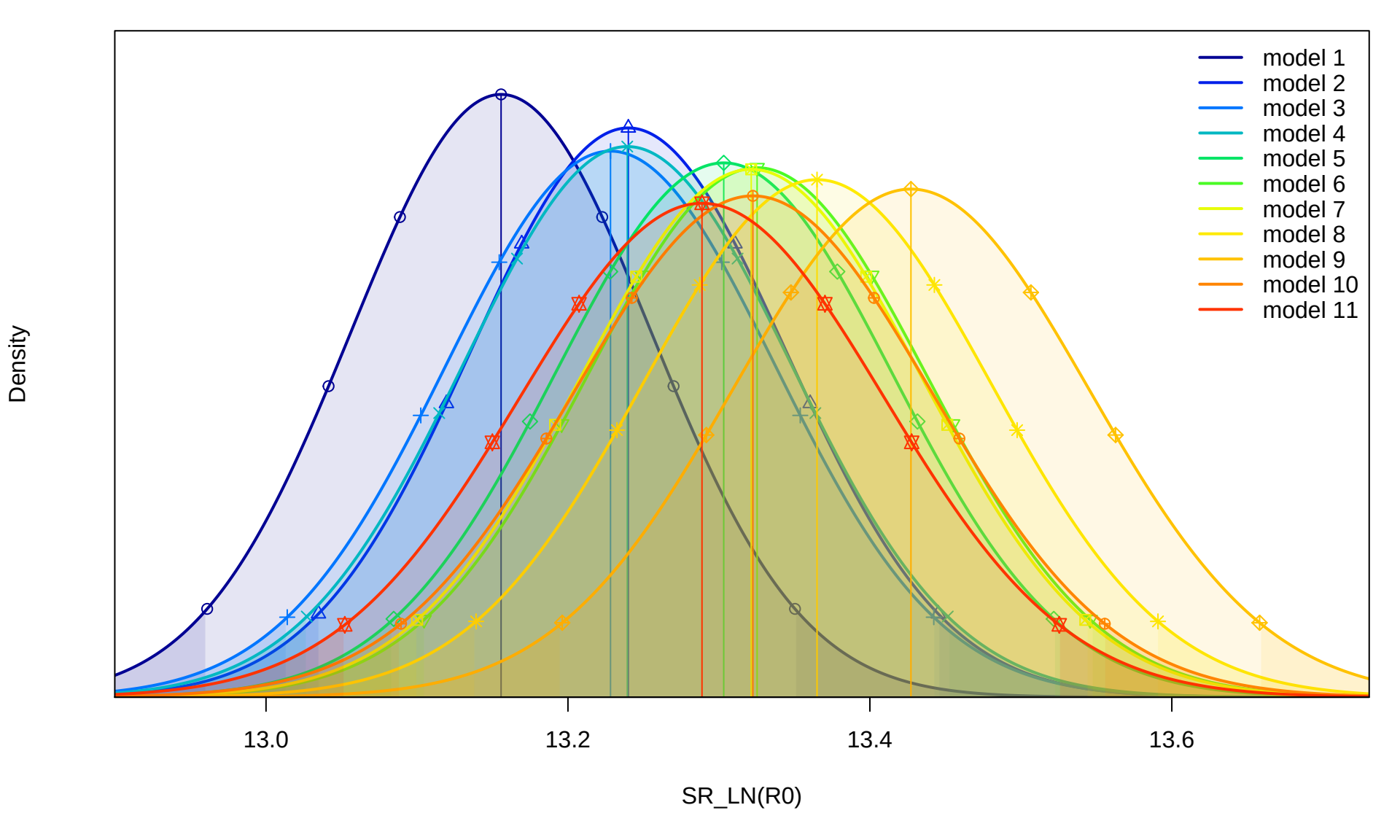

model 1
model 2
model 3
model 4
model 5
model 6
model 7
model 8
model 9
model 10
model 11
Recruitment deviations
2
1
0
−1
−2
1960
1970
1980
1990
2000
2010
2020
Year

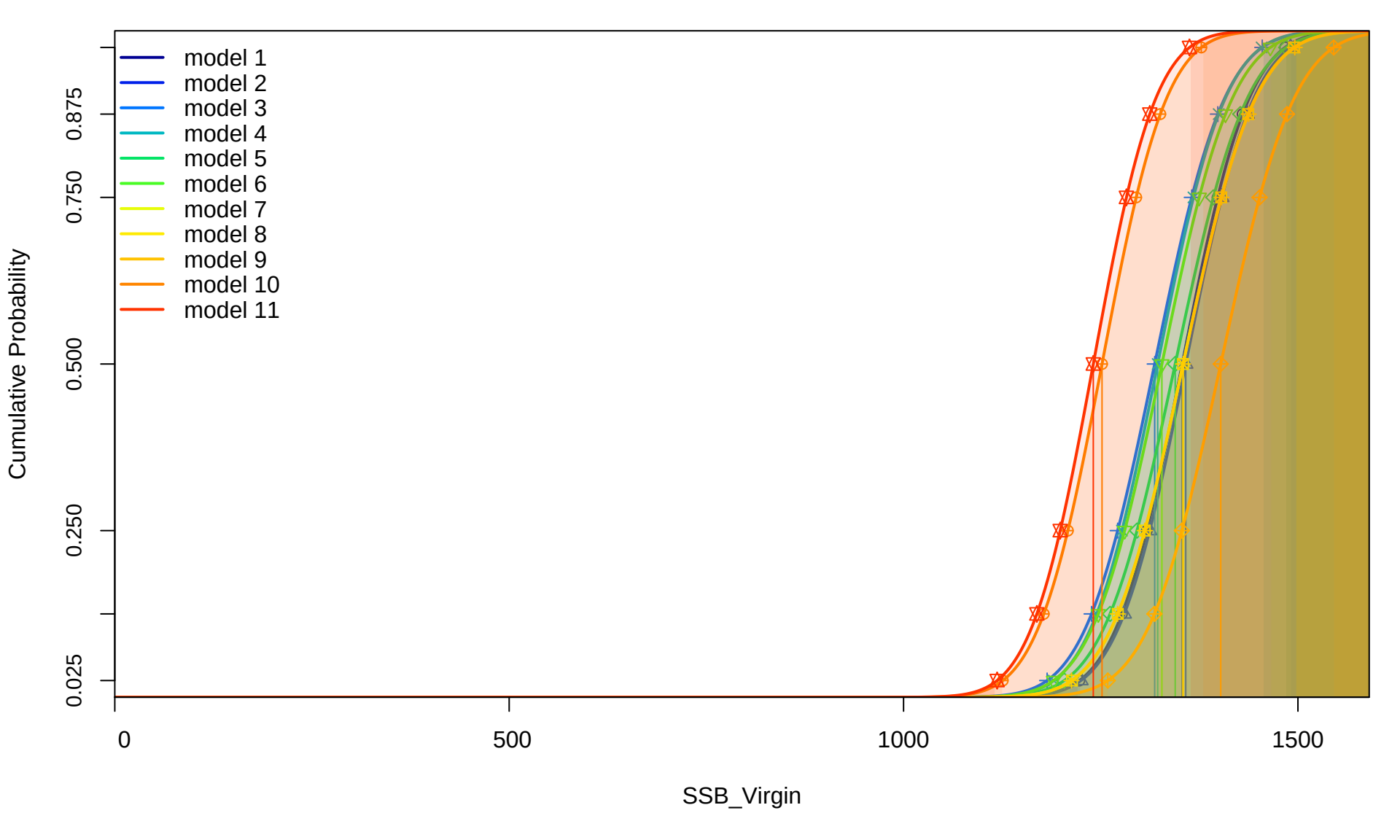

Index
0
200000
600000
1000000
1400000
1990
2000
2010
2020 2022
Year
model 1
model 2
model 3
model 4
model 5
model 6
model 7
model 8
model 9
model 10
model 11

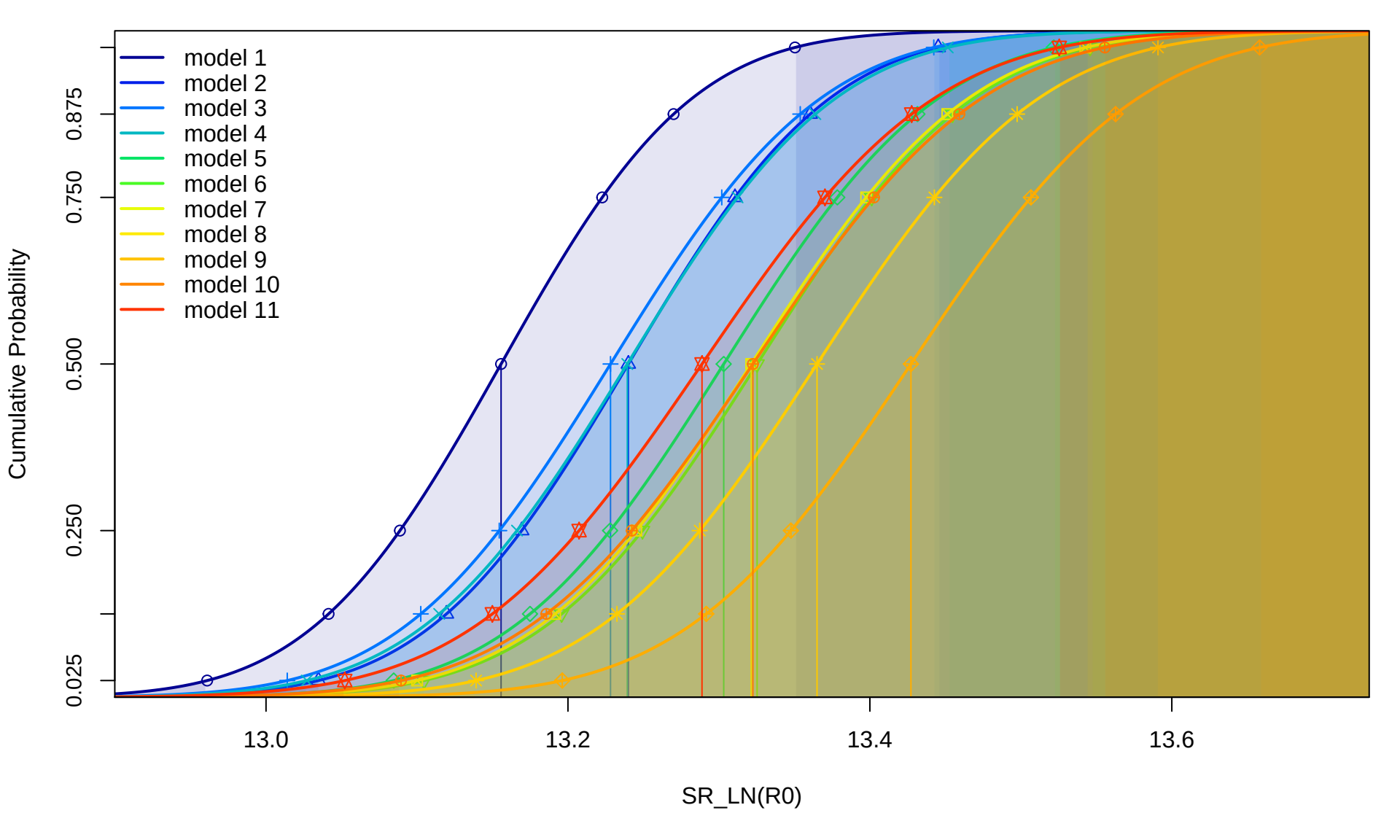

model 1
model 2
model 3
model 4
model 5
model 6
model 7
model 8
model 9
model 10
model 11
Log index
14.0
13.5
13.0
1990
2000
2010
2020 2022
Year


model 1
model 2
model 3
model 4
model 5
model 6
model 7
model 8
model 9
model 10
model 11
1−SPR
0.0
0.2
0.4
0.6
0.0
0.2
0.4
0.6
0.8
Fraction of unfished


model 1
model 2
model 3
model 4
model 5
model 6
model 7
model 8
model 9
model 10
model 11
Density
0
500
1000
1500
SSB_Virgin


model 1
model 2
model 3
model 4
model 5
model 6
model 7
model 8
model 9
model 10
model 11
Density
13.0
13.2
13.4
13.6
SR_LN(R0)


model 1
model 2
model 3
model 4
model 5
model 6
model 7
model 8
model 9
model 10
model 11
Cumulative Probability
0.025
0.250
0.500
0.750
0.875
0
500
1000
1500
SSB_Virgin


model 1
model 2
model 3
model 4
model 5
model 6
model 7
model 8
model 9
model 10
model 11
Cumulative Probability
0.025
0.250
0.500
0.750
0.875
13.0
13.2
13.4
13.6
SR_LN(R0)