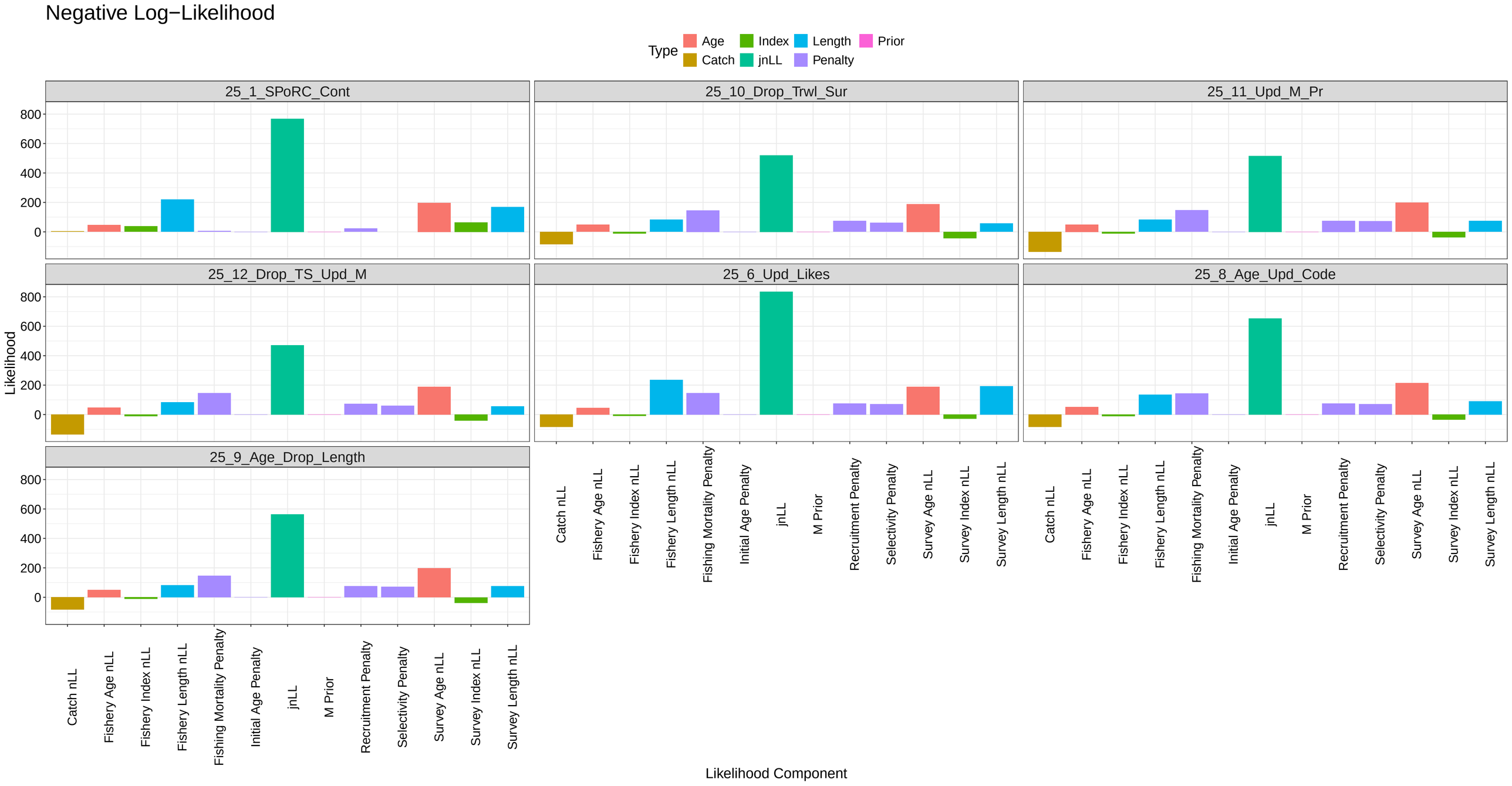
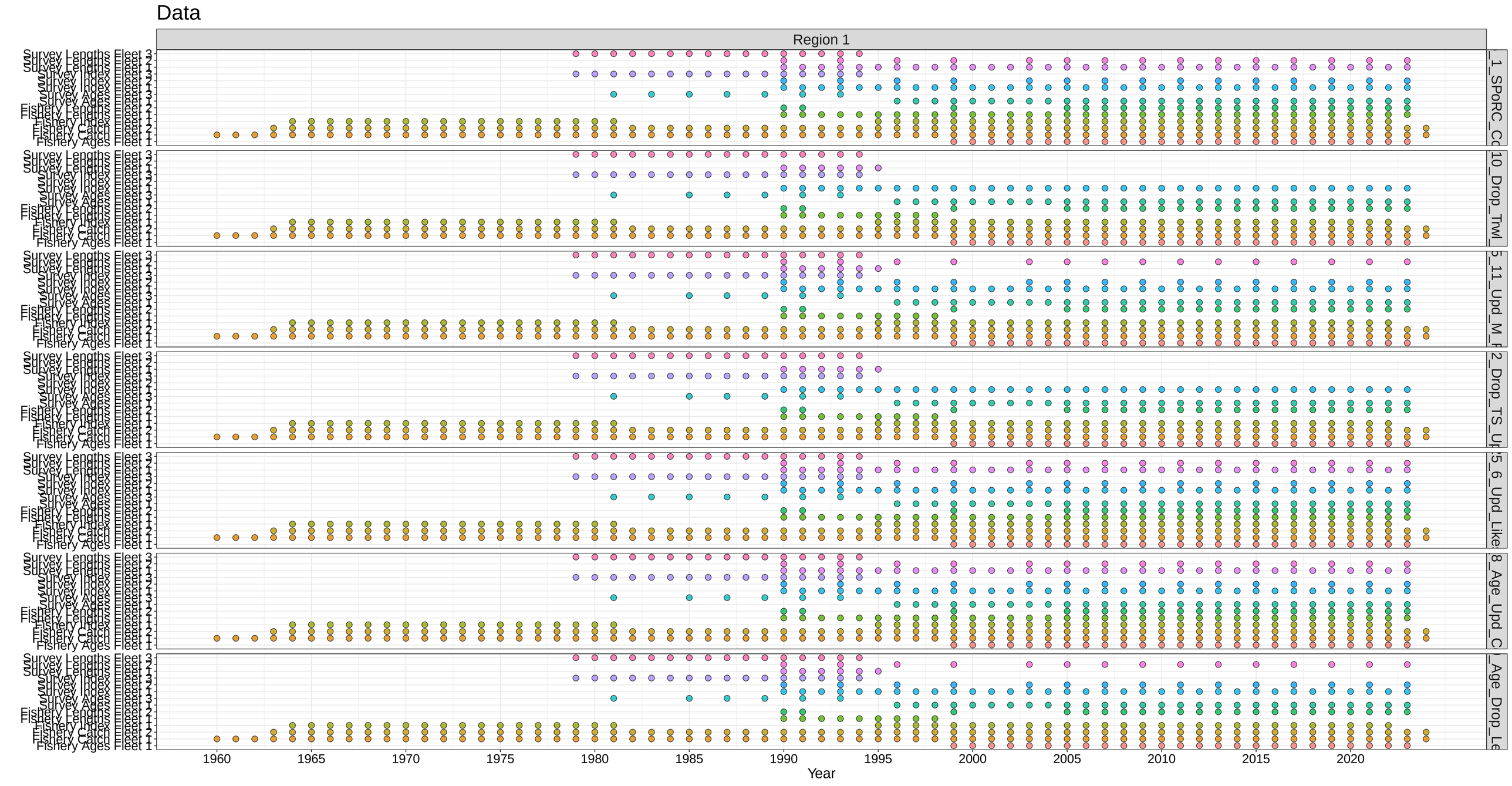
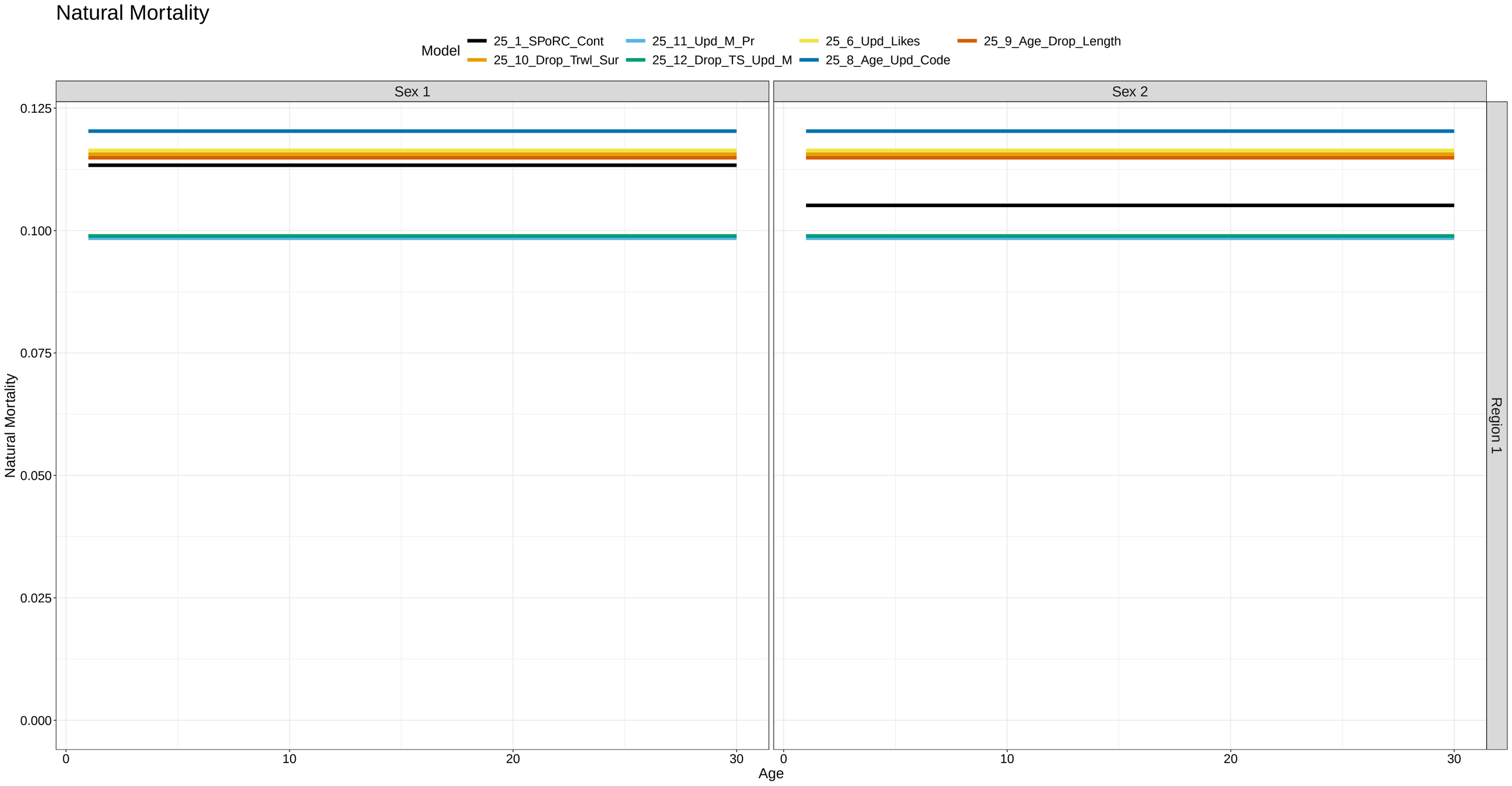
	Model	Region	Terminal_SSB	Terminal_F	Catch_Advice	B_Ref_Pt	F_Ref_Pt	B_over_B_Ref	F_over_F_Ref
1	25_1_SPoRC_Cont	1	189.0804	0.04037044	49.68588	121.0229	0.08593	1.56235	0.46979
2	25_6_Upd_Likes	1	200.9191	0.03842778	52.95886	128.0622	0.08665	1.56892	0.44350
3	25_8_Age_Upd_Code	1	221.2632	0.03979598	53.31742	126.1573	0.09078	1.75387	0.43839
4	25_9_Age_Drop_Length	1	219.7952	0.04162539	50.00421	125.1969	0.09062	1.75560	0.45932
5	25_10_Drop_Trwl_Sur	1	241.1688	0.03880675	53.56695	129.4799	0.09093	1.86260	0.42678
6	25_11_Upd_M_Pr	1	178.3803	0.05147170	37.28203	123.4346	0.08281	1.44514	0.62155
7	25_12_Drop_TS_Upd_M	1	194.0907	0.04842486	39.55329	126.6058	0.08308	1.53303	0.58289

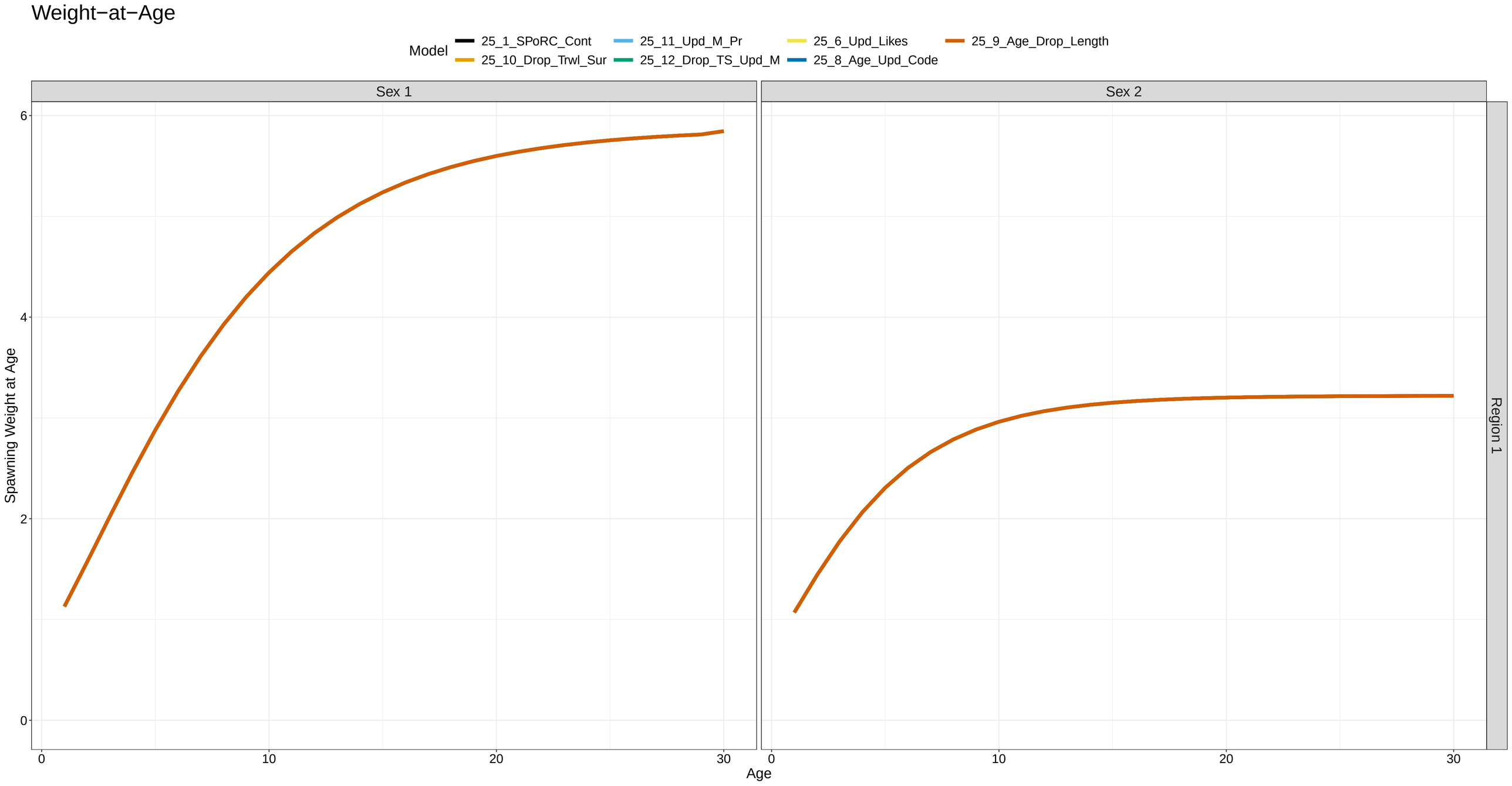
	Model	jnLL	M Prior	Recruitment Penalty	Catch nLL	Fishing Mortality Penalty	Survey Index nLL	Fishery Index nLL	Initial Age Penalty	Survey Age nLL	Fishery Age nLL	Survey Length nLL	Fishery Length nLL	Selectivity Penalty
1	25_1_SPoRC_Cont	768.8210	0.7838709	23.11463	3.688151	6.088752	64.49362	37.72432	0.1631310	197.0703	46.62799	169.03957	220.02667	NA
2	25_6_Upd_Likes	835.7924	−0.2354034	76.09974	−83.779841	146.315255	−29.36051	−10.47291	0.3208338	189.2229	46.83455	192.90260	235.42033	72.52476
3	25_8_Age_Upd_Code	653.9155	0.3244425	75.84462	−84.337557	145.365332	−36.25234	−12.70699	0.1736375	215.7966	51.61723	90.02423	135.82932	72.23689
4	25_9_Age_Drop_Length	563.6117	−0.4228482	75.25805	−84.405651	145.615963	−37.66538	−11.53491	0.1953826	197.1234	49.75360	75.57116	82.03714	72.08573
5	25_10_Drop_Trwl_Sur	520.1376	−0.3317710	74.71358	−84.485935	145.654711	−43.49581	−10.91950	0.1927378	188.4512	48.43536	57.46386	82.53831	61.92076
6	25_11_Upd_M_Pr	515.6982	−0.3081874	75.25098	−136.167056	146.946437	−36.65904	−11.54096	0.2849454	198.4586	49.73668	74.45816	83.22979	72.00785
7	25_12_Drop_TS_Upd_M	471.8339	−0.2370536	74.67764	−136.218750	146.995480	−42.64644	−10.95465	0.2847093	189.5774	48.50805	56.40044	83.61324	61.83381


Negative Log−Likelihood
Type
Age
Index
Length
Prior
Catch
jnLL
Penalty
25_1_SPoRC_Cont
25_10_Drop_Trwl_Sur
25_11_Upd_M_Pr
25_12_Drop_TS_Upd_M
25_6_Upd_Likes
25_8_Age_Upd_Code
25_9_Age_Drop_Length
Likelihood
800
600
400
200
0
Catch nLL
Fishery Age nLL
Fishery Index nLL
Fishery Length nLL
Fishing Mortality Penalty
Initial Age Penalty
jnLL
M Prior
Recruitment Penalty
Selectivity Penalty
Survey Age nLL
Survey Index nLL
Survey Length nLL
Likelihood Component

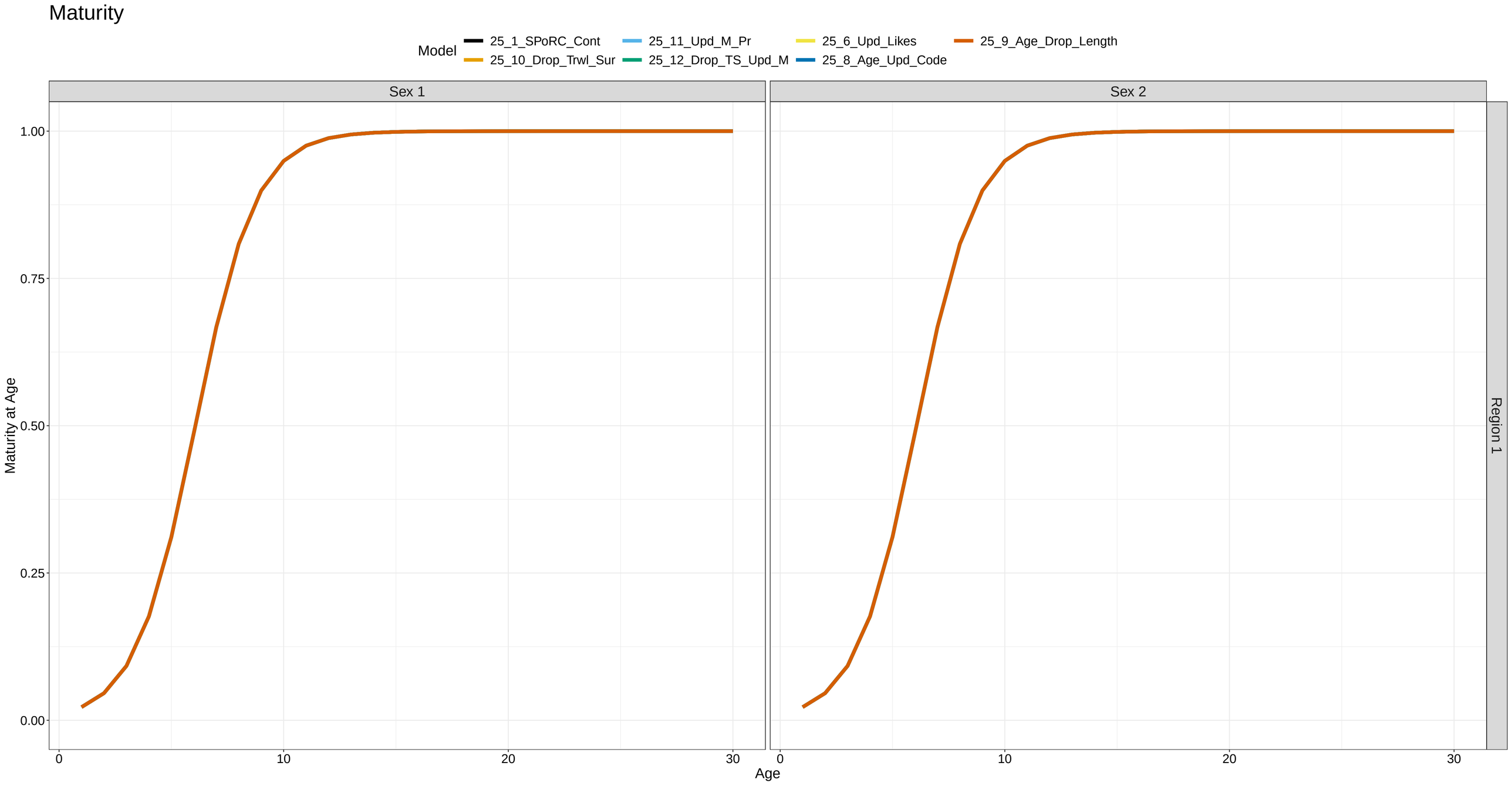

Data
Region 1
Survey Lengths Fleet 3
Survey Lengths Fleet 2
Survey Lengths Fleet 1
Survey Index Fleet 3
Survey Index Fleet 2
Survey Index Fleet 1
Survey Ages Fleet 3
Survey Ages Fleet 2
Survey Ages Fleet 1
Fishery Lengths Fleet 2
Fishery Lengths Fleet 1
Fishery Index Fleet 1
Fishery Catch Fleet 2
Fishery Catch Fleet 1
Fishery Ages Fleet 1
1_SPoRC_Co
10_Drop_Trwl
5_11_Upd_M_F
2_Drop_TS_Up
5_6_Upd_Like
8_Age_Upd_C
_Age_Drop_Le
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
2015
2020
Year

Natural Mortality

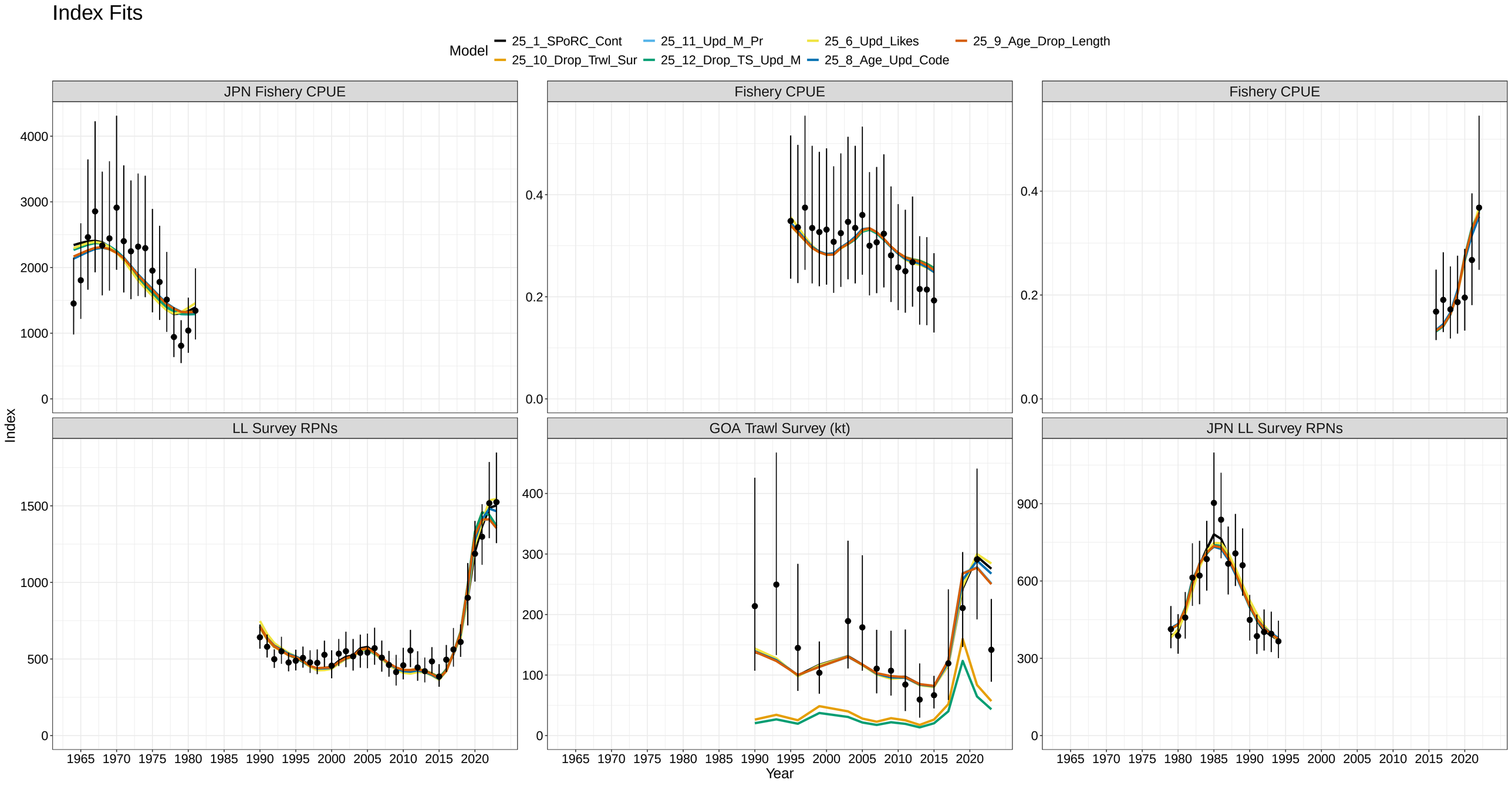



Weight−at−Age
Model
25_1_SPoRC_Cont
25_10_Drop_Trwl_Sur
25_11_Upd_M_Pr
25_12_Drop_TS_Upd_M
25_6_Upd_Likes
25_8_Age_Upd_Code
25_9_Age_Drop_Length
Sex 1
Sex 2
Region 1
Spawning Weight at Age
Age
0
2
4
6
0
10
20
30

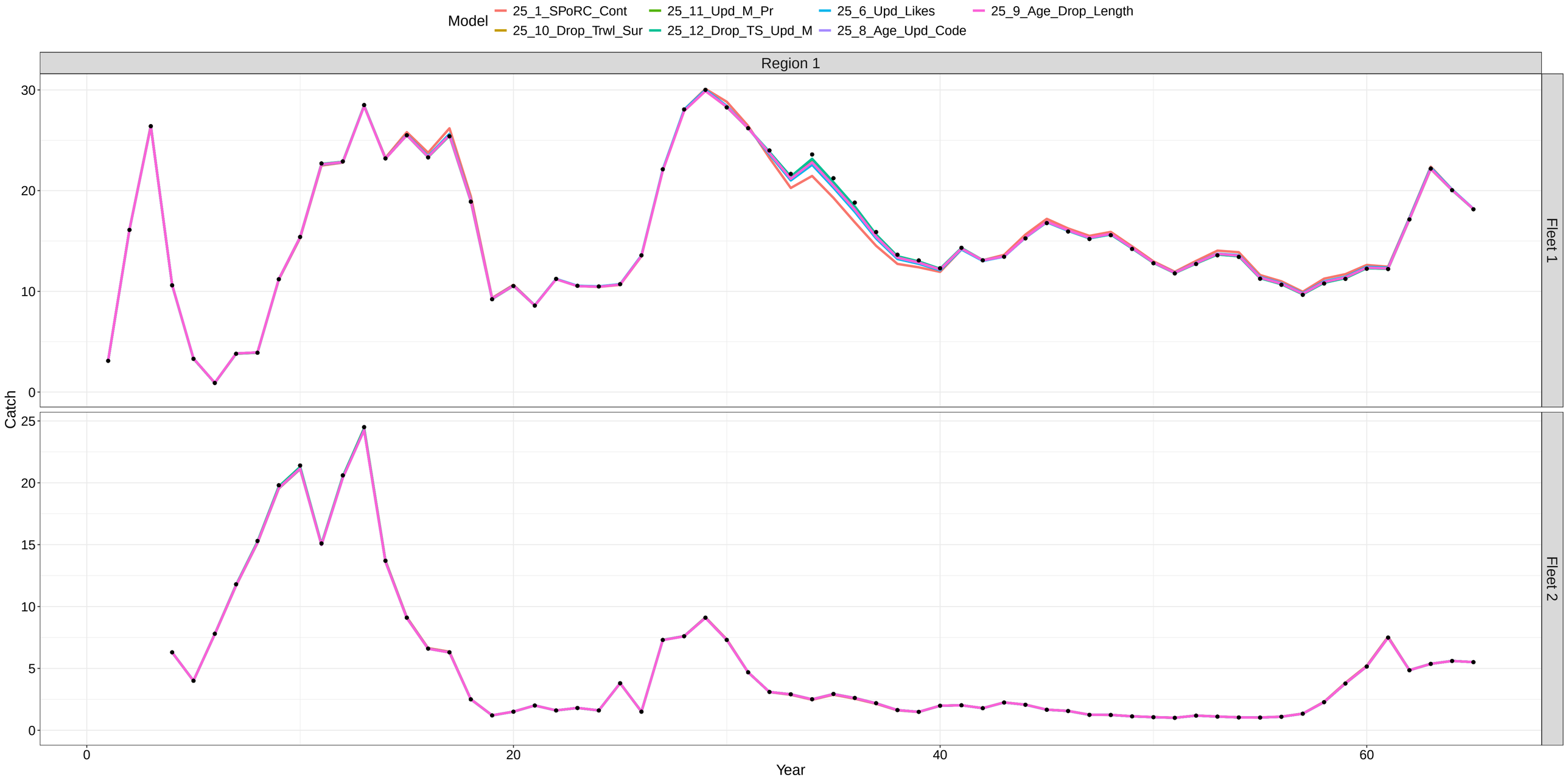
Maturity

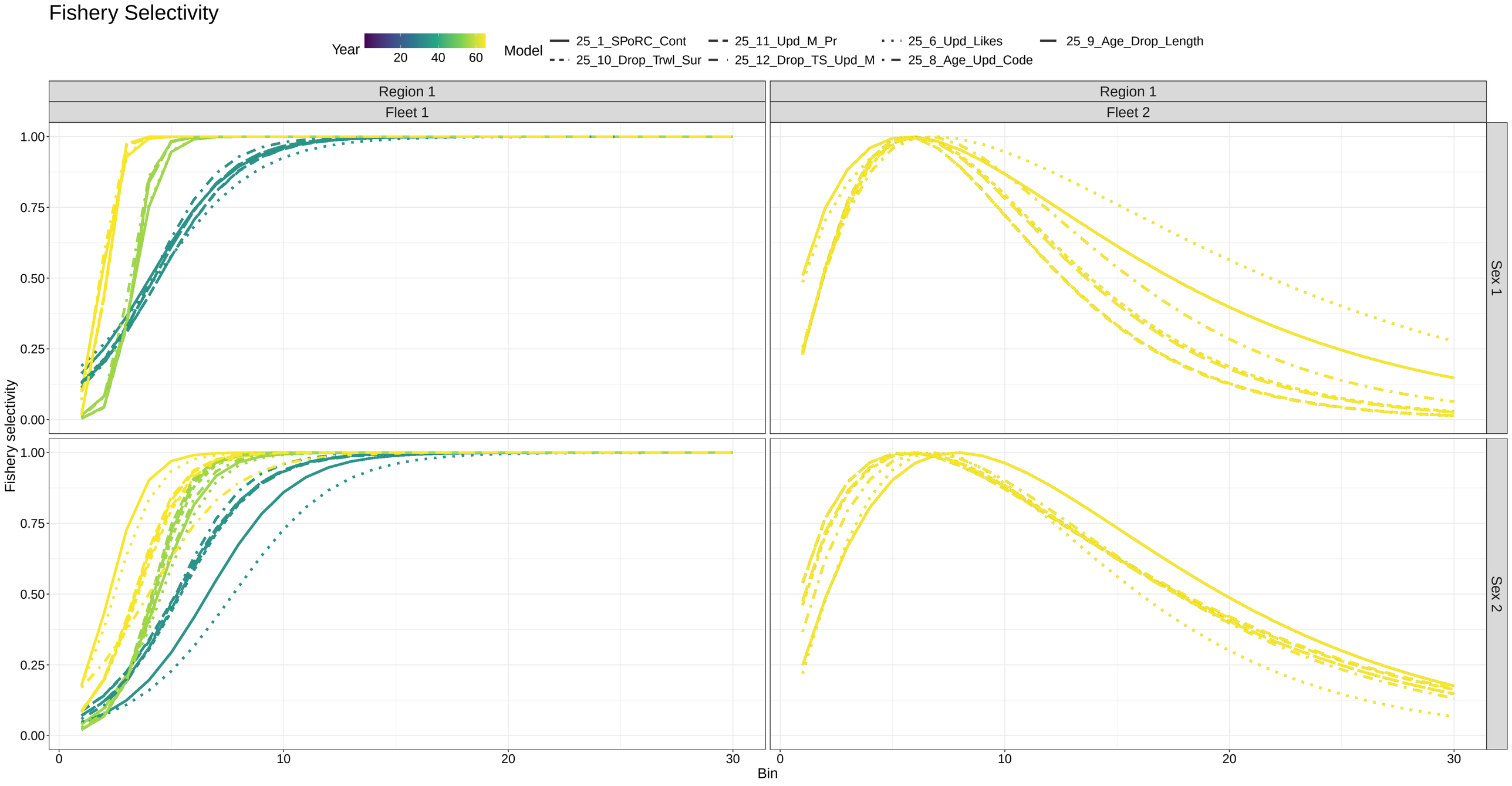

Model
25_1_SPoRC_Cont
25_10_Drop_Trwl_Sur
25_11_Upd_M_Pr
25_12_Drop_TS_Upd_M
25_6_Upd_Likes
25_8_Age_Upd_Code
25_9_Age_Drop_Length
Sex 1
Sex 2
Region 1
Maturity at Age
1.00
0.75
0.50
0.25
0.00
0
10
20
30
Age

Index Fits

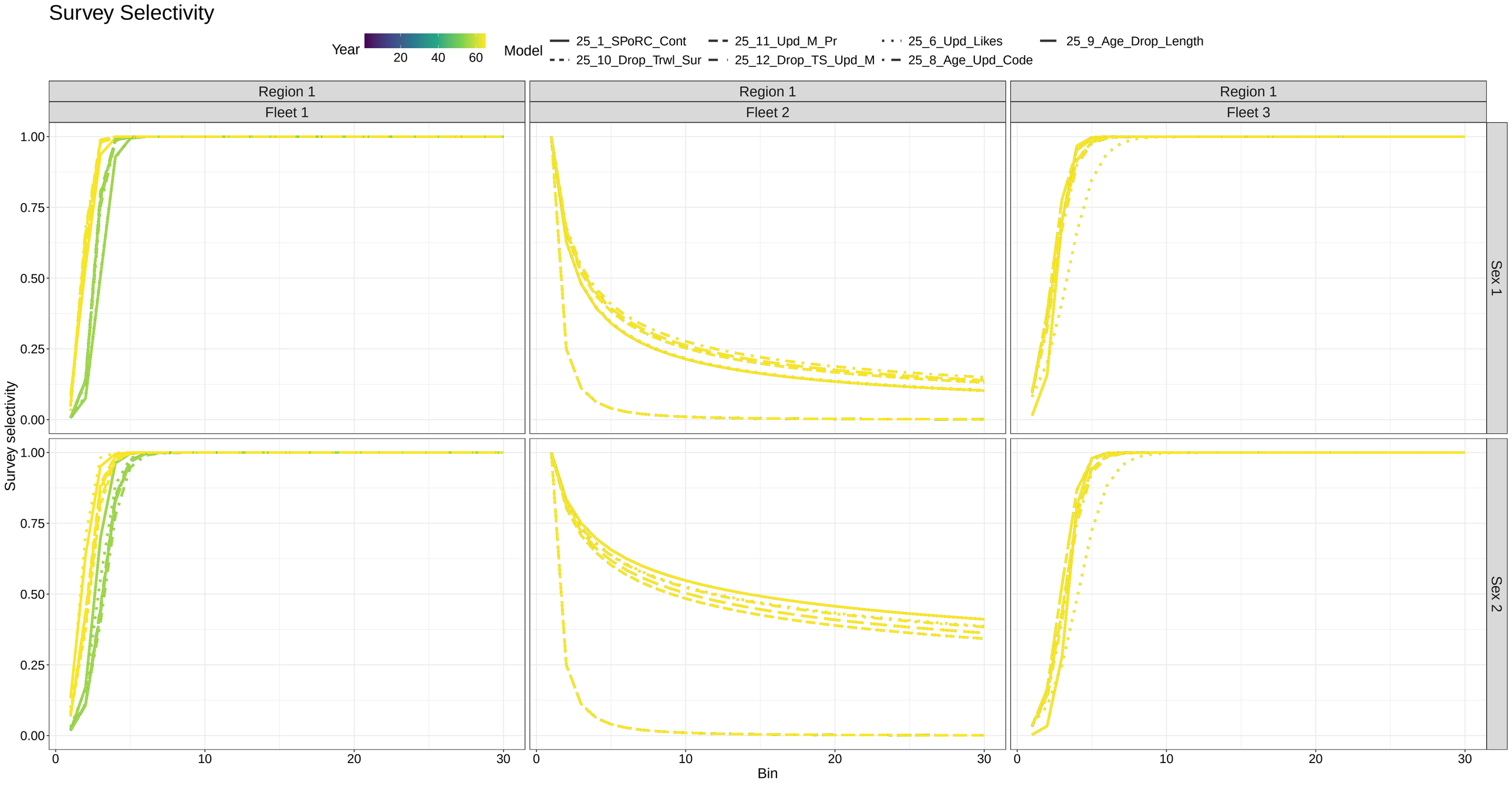

Model
25_1_SPoRC_Cont
25_10_Drop_Trwl_Sur
25_11_Upd_M_Pr
25_12_Drop_TS_Upd_M
25_6_Upd_Likes
25_8_Age_Upd_Code
25_9_Age_Drop_Length
JPN Fishery CPUE
Fishery CPUE
Fishery CPUE
LL Survey RPNs
GOA Trawl Survey (kt)
JPN LL Survey RPNs
Index
Year

Catch

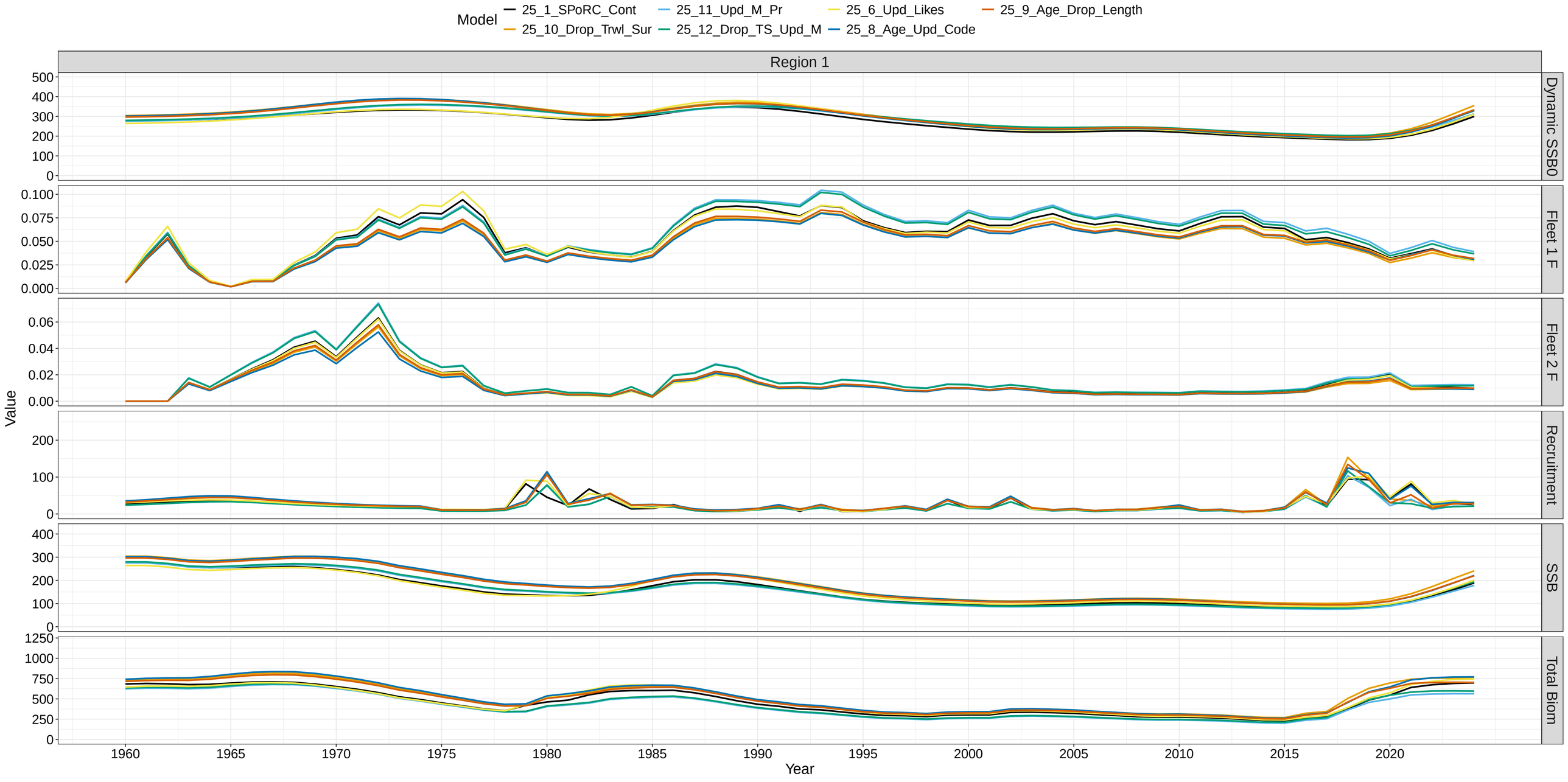

Model
25_1_SPoRC_Cont
25_10_Drop_Trwl_Sur
25_11_Upd_M_Pr
25_12_Drop_TS_Upd_M
25_6_Upd_Likes
25_8_Age_Upd_Code
25_9_Age_Drop_Length
Region 1
Fleet 1
Fleet 2
Catch
Year
0
10
20
30
0
5
10
15
20
25
0
20
40
60


Fishery Selectivity
Year
20
40
60
Model
25_1_SPoRC_Cont
25_10_Drop_Trwl_Sur
25_11_Upd_M_Pr
25_12_Drop_TS_Upd_M
25_6_Upd_Likes
25_8_Age_Upd_Code
25_9_Age_Drop_Length
Region 1
Fleet 1
Region 1
Fleet 2
Sex 1
Sex 2
Fishery selectivity
1.00
0.75
0.50
0.25
0.00
0
10
20
30
Bin

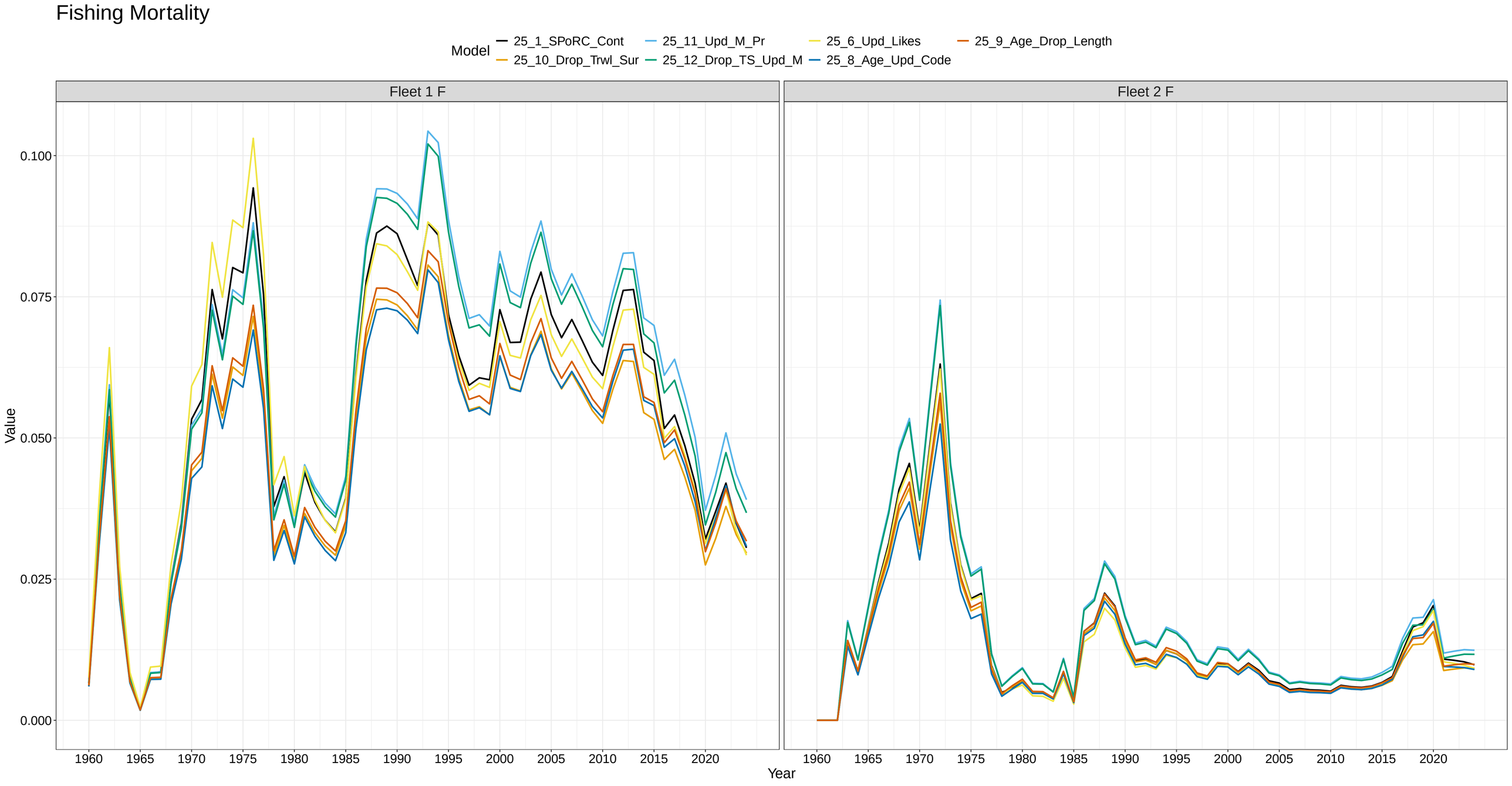
Survey Selectivity

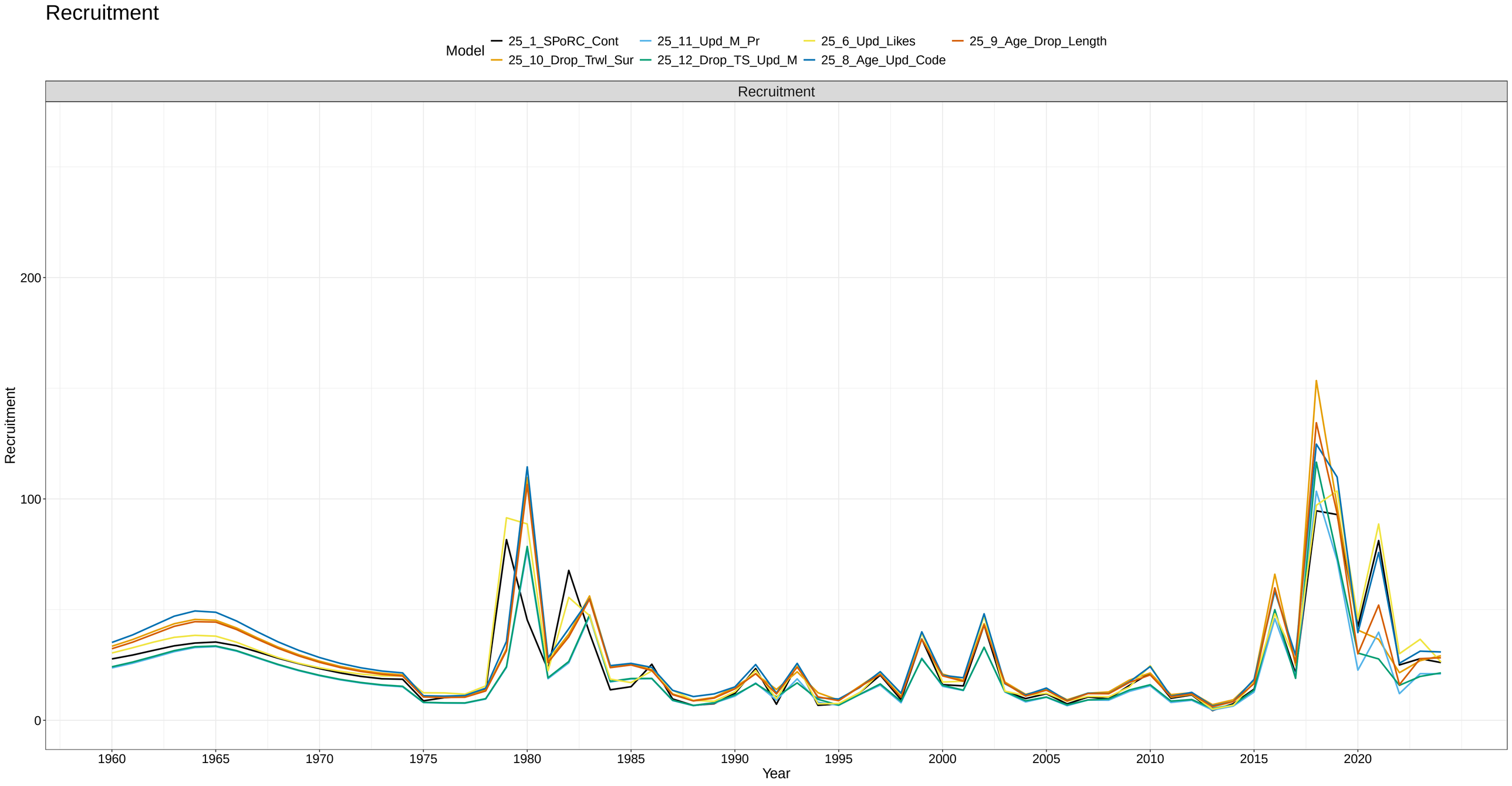


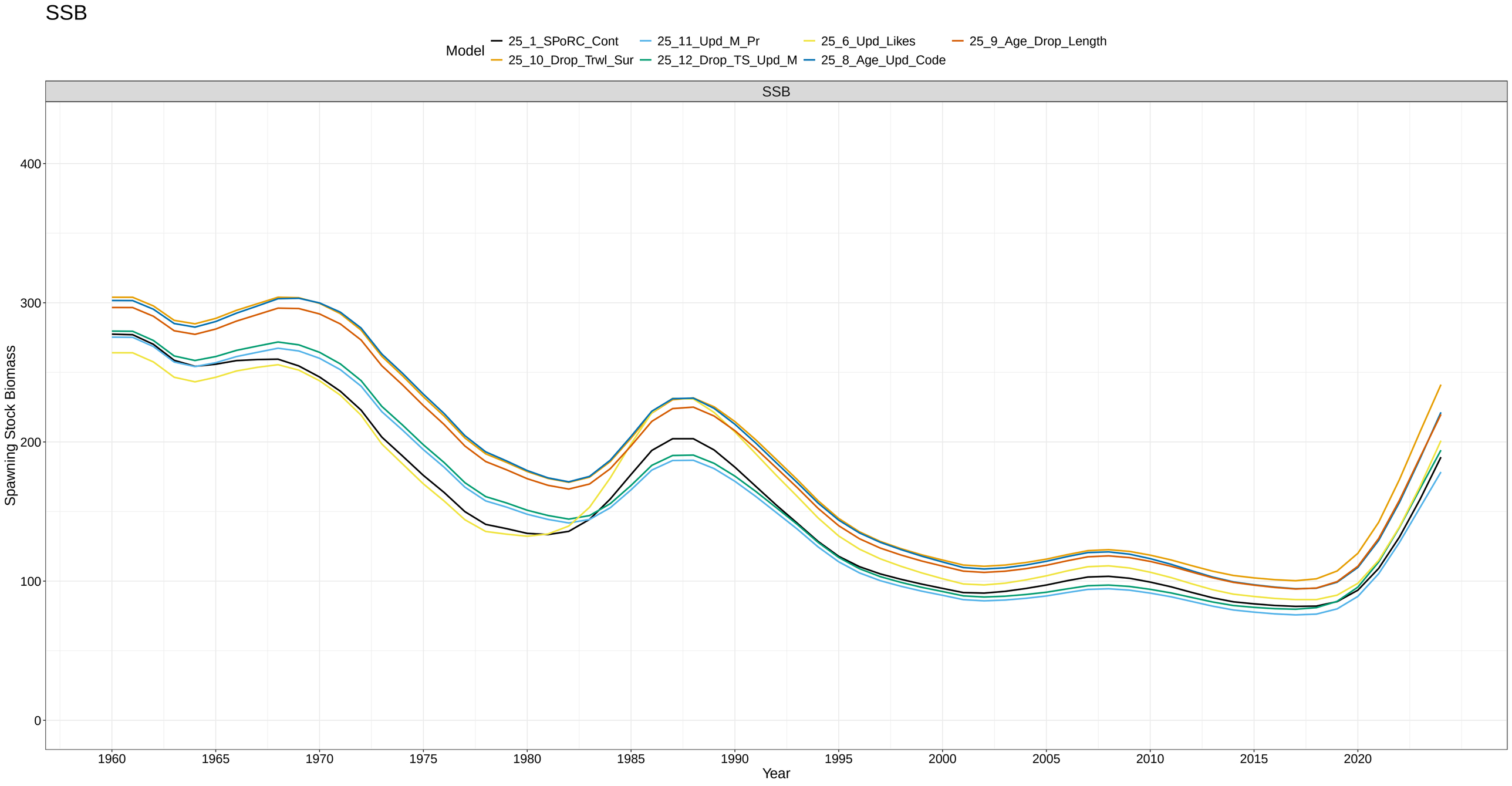
Time Series Plots



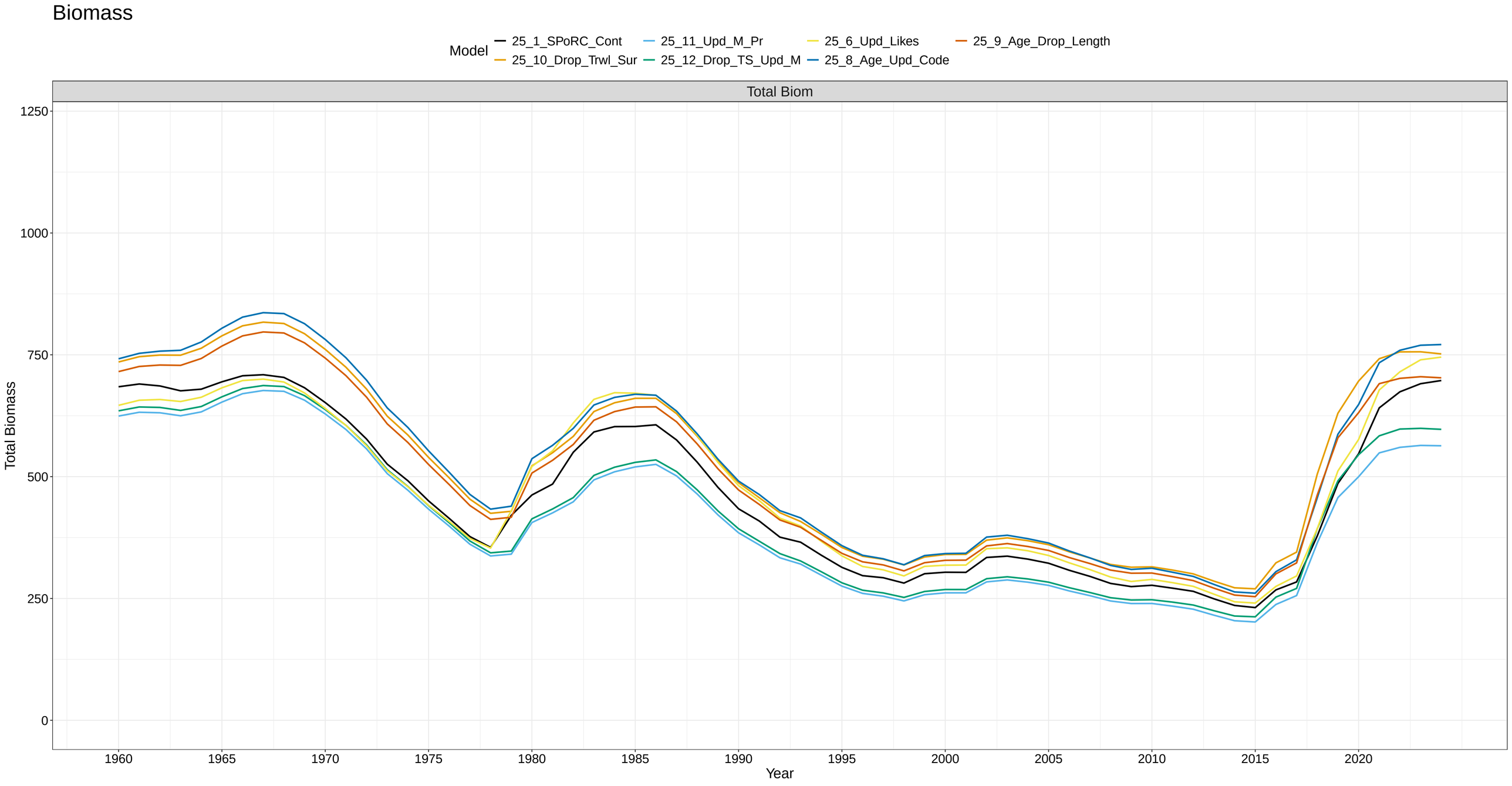
Fishing Mortality



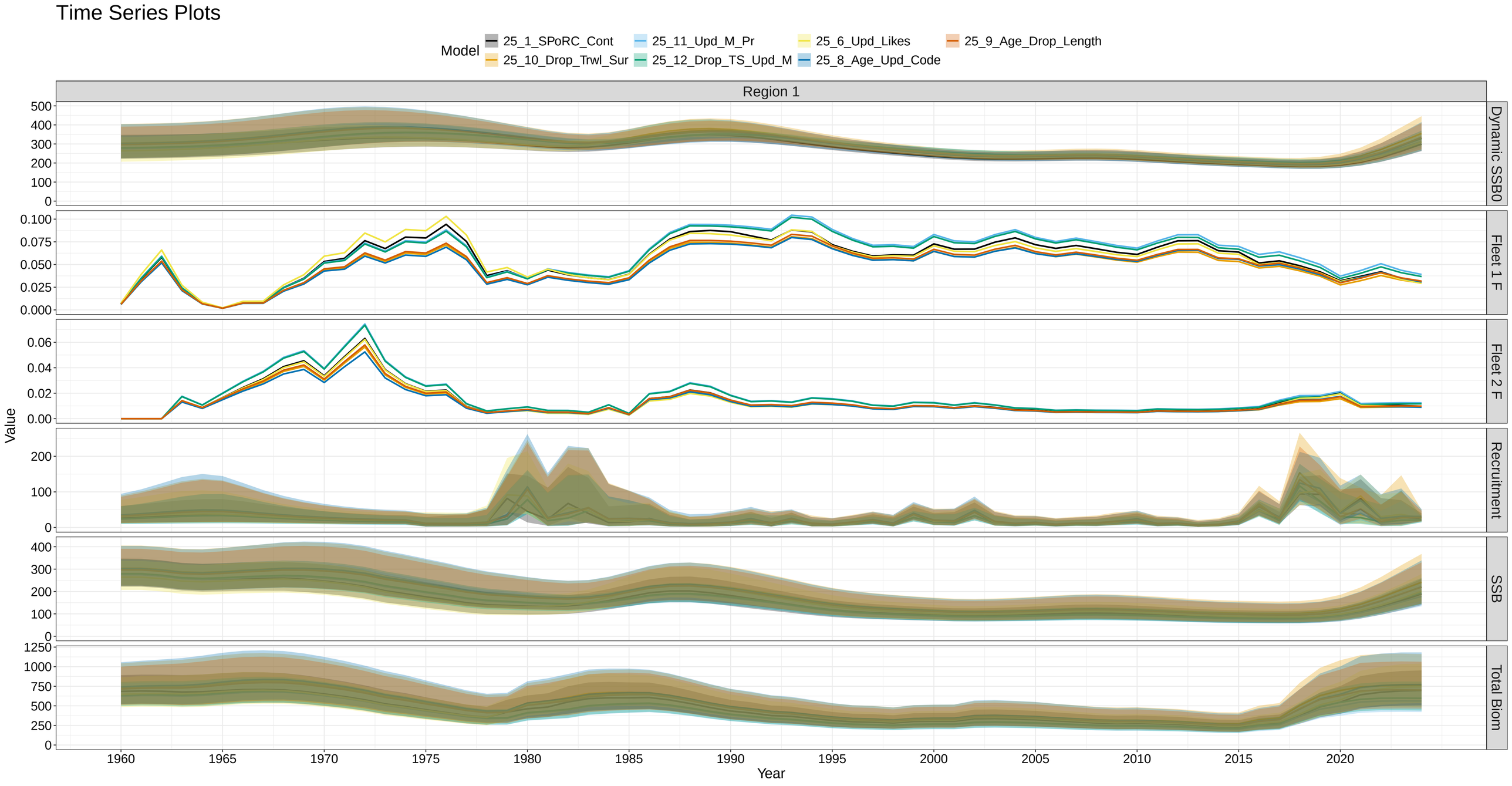

Recruitment
Model
25_1_SPoRC_Cont
25_11_Upd_M_Pr
25_6_Upd_Likes
25_9_Age_Drop_Length
25_10_Drop_Trwl_Sur
25_12_Drop_TS_Upd_M
25_8_Age_Upd_Code
Recruitment
Recruitment
200
100
0
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
2015
2020
Year


SSB
Model
25_1_SPoRC_Cont
25_10_Drop_Trwl_Sur
25_11_Upd_M_Pr
25_12_Drop_TS_Upd_M
25_6_Upd_Likes
25_8_Age_Upd_Code
25_9_Age_Drop_Length
SSB
Spawning Stock Biomass
0
100
200
300
400
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
2015
2020
Year

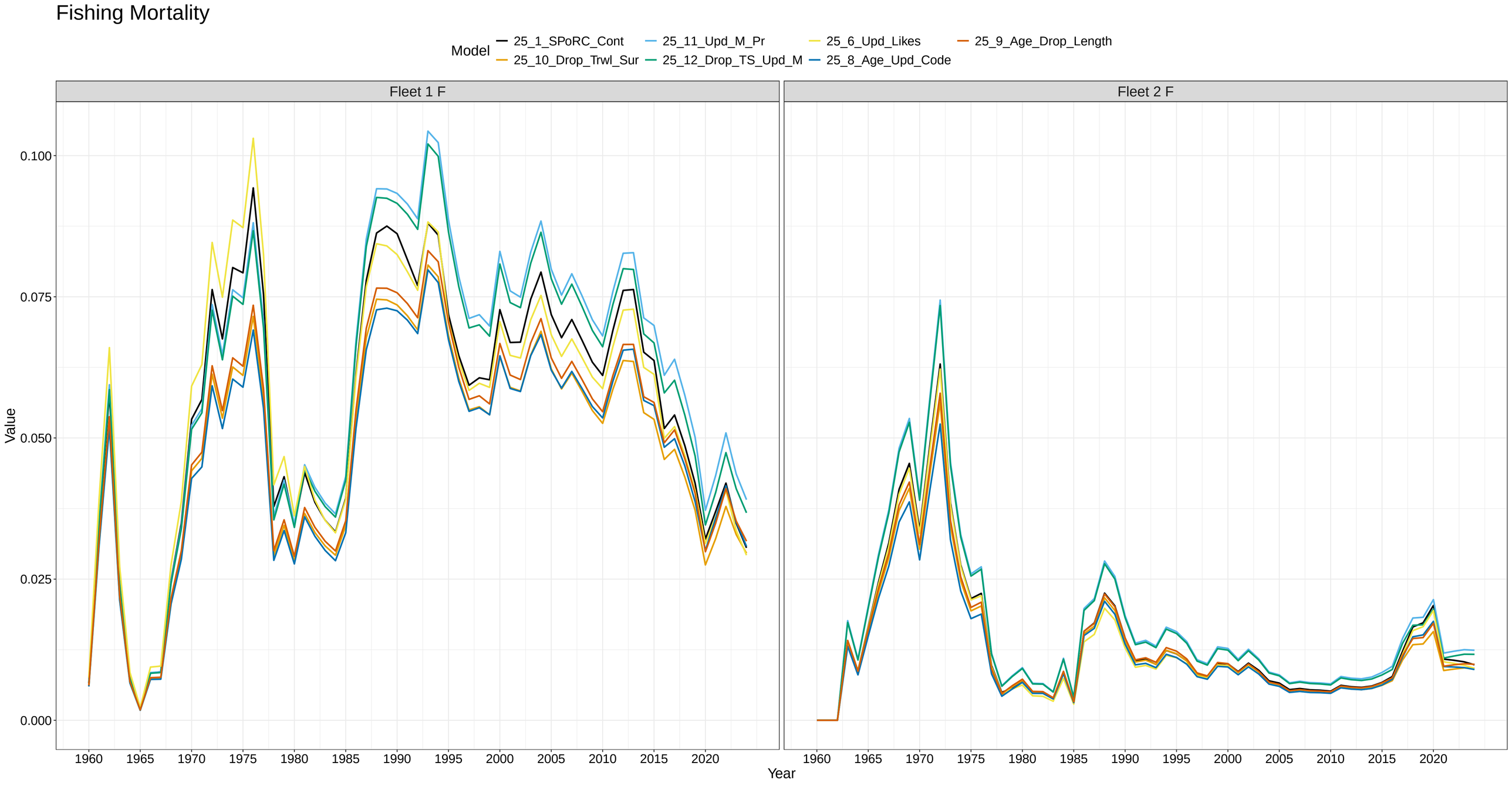
Biomass


Model
25_1_SPoRC_Cont
25_10_Drop_Trwl_Sur
25_11_Upd_M_Pr
25_12_Drop_TS_Upd_M
25_6_Upd_Likes
25_8_Age_Upd_Code
25_9_Age_Drop_Length
Total Biom
Total Biomass
1250
1000
750
500
250
0
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
2015
2020
Year

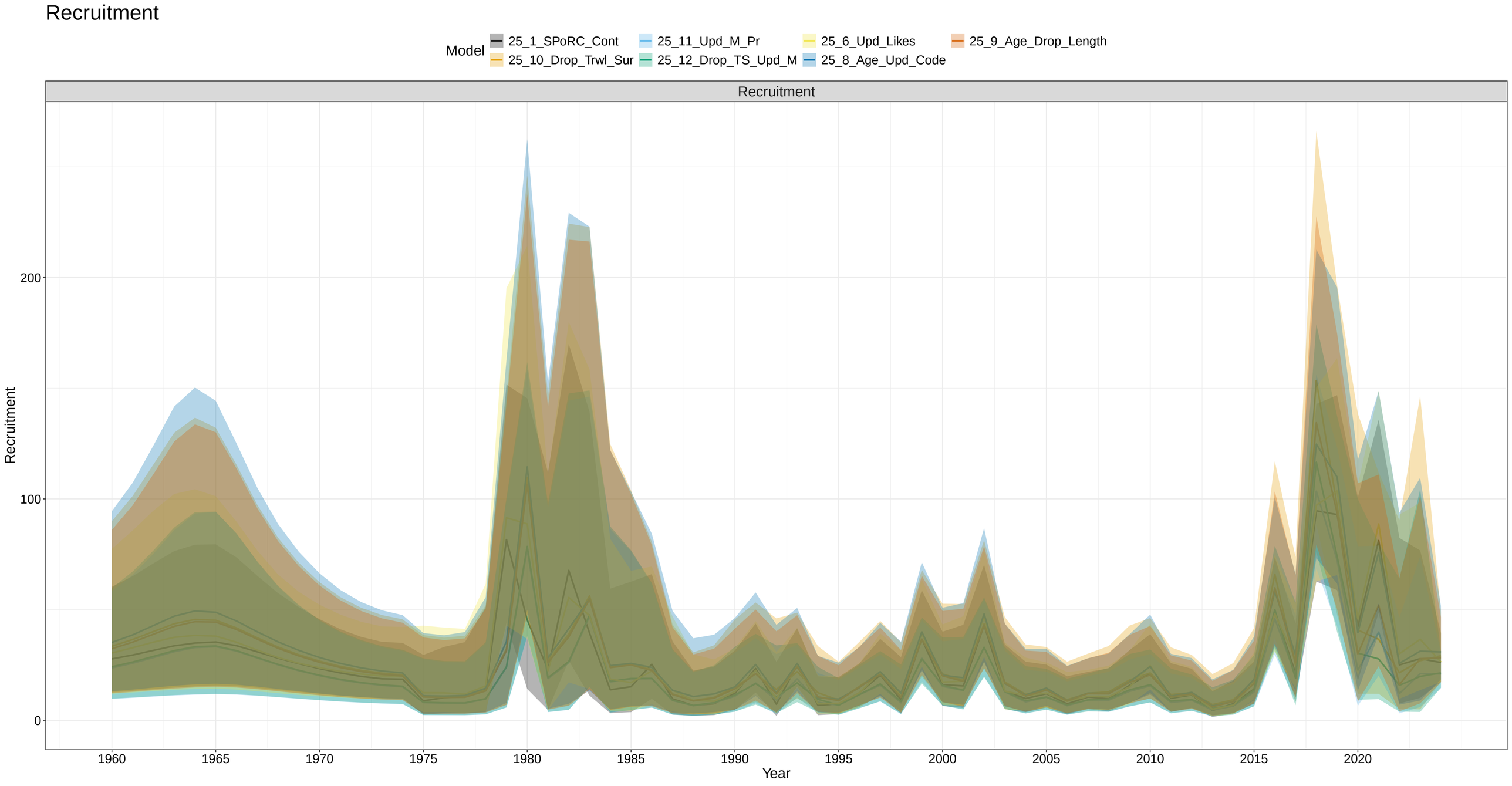
Time Series Plots

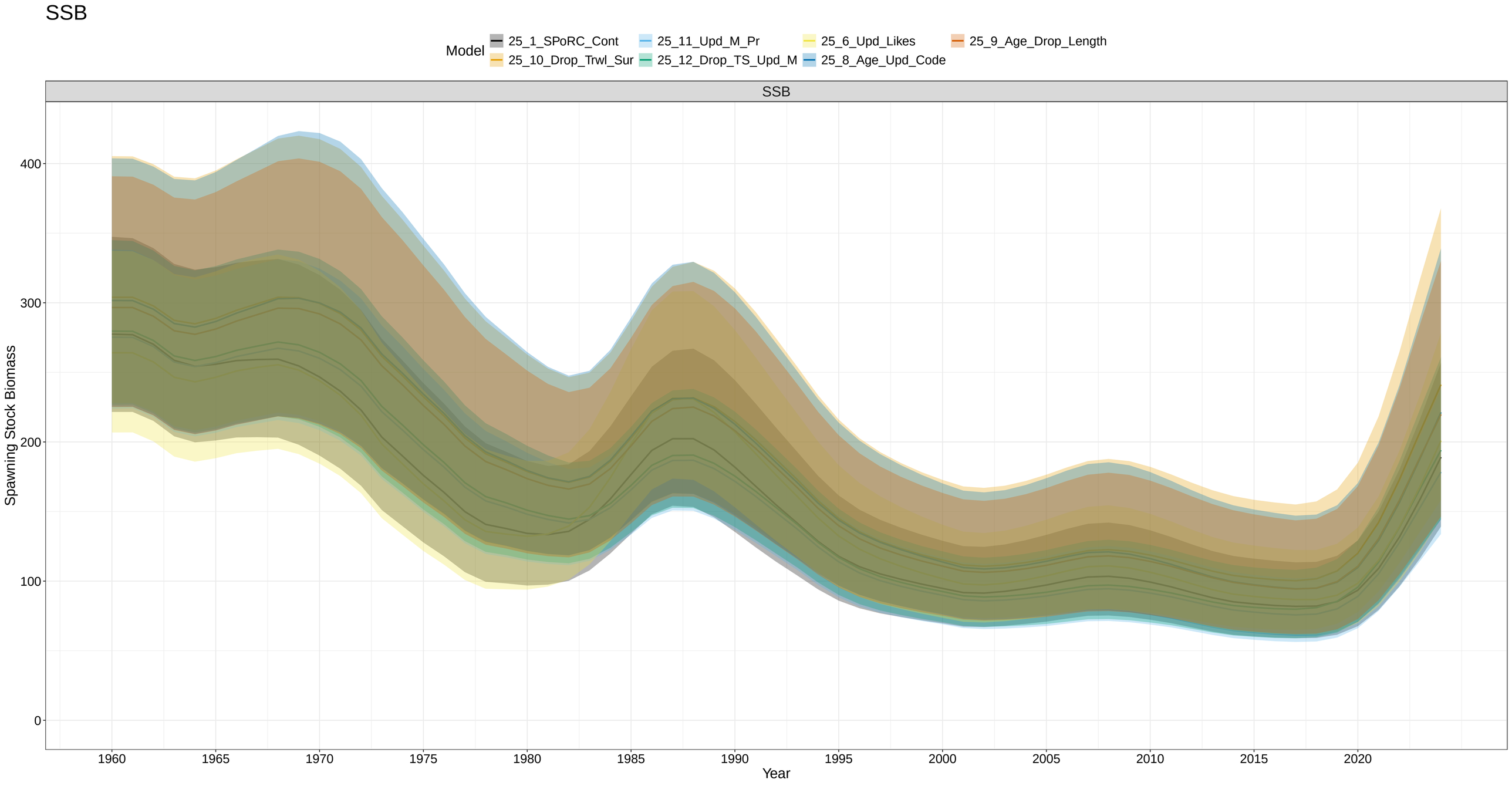


Fishing Mortality

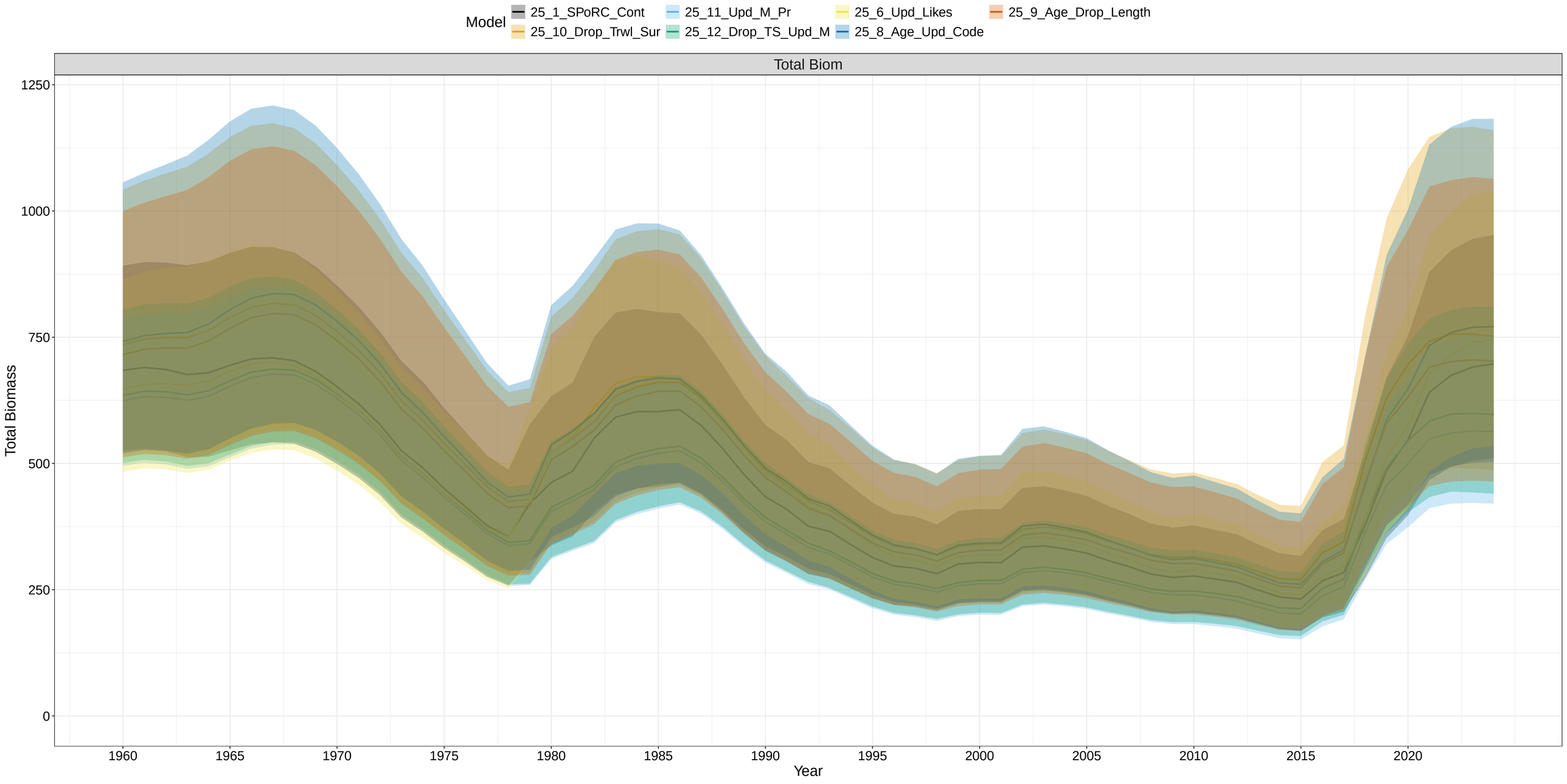


Recruitment




SSB
Model
25_1_SPoRC_Cont
25_11_Upd_M_Pr
25_6_Upd_Likes
25_9_Age_Drop_Length
25_10_Drop_Trwl_Sur
25_12_Drop_TS_Upd_M
25_8_Age_Upd_Code
SSB
Spawning Stock Biomass
0
100
200
300
400
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
2015
2020
Year

Biomass


Model
25_1_SPoRC_Cont
25_11_Upd_M_Pr
25_6_Upd_Likes
25_9_Age_Drop_Length
25_10_Drop_Trwl_Sur
25_12_Drop_TS_Upd_M
25_8_Age_Upd_Code
Total Biom
Total Biomass
1250
1000
750
500
250
0
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
2015
2020
Year