

**Rebuilding analysis for yelloweye rockfish based on
the 2011 update stock assessment**

Ian G. Taylor
National Marine Fisheries Service
Northwest Fisheries Science Center
2725 Montlake Blvd. E.
Seattle WA, 98112
206-861-7603 (phone)
206-860-6792 (fax)
Ian.Taylor@noaa.gov

13 October, 2011

Table of contents

Summary 3

Introduction..... 4

Summary of 2011 update assessment 5

Management performance under rebuilding 6

Rebuilding calculations..... 6

 1. Definition of SB_0 7

 2. Generation of future recruitment 7

 3. Fishery selectivity and allocation..... 7

 4. Inclusion of uncertainty 7

 5. Recalculate reference points 8

 6. Alternate rebuilding strategies 8

Results..... 9

Acknowledgements..... 9

References..... 10

Tables..... 11

Figures..... 20

Appendix A. Basic input file for rebuilding analyses..... 23

Appendix B. Parameter vector input file for rebuilding analyses..... 31

Summary

Based on the 2011 update stock assessment, this rebuilding analysis compares the results of applying a suite of potential future management actions to the U.S. yelloweye rockfish stock. The base case model for the 2011 assessment estimated that the yelloweye rockfish resource is at 21.4% of the unexploited equilibrium spawning output at the beginning of 2011. This represents a small increase from the 2009 stock assessment, which estimated depletion in 2009 to be 20.3%. Uncertainty about the base case results is included through the integration over eight alternate (and less likely) states of nature along two axes of uncertainty: steepness (h) and the magnitude of historical catch prior to 2000. In the yelloweye assessment, steepness is the primary parameter governing productivity and the rebuilding trajectory, while the magnitude of catch determines the absolute scale of the population estimate. The 2011-2012 ACLs (previously called OYs) used in this analysis are assumed to be the NMFS preferred alternative of 17 mt. In the context of the 2011 update assessment, the 17 mt ACLs are slightly below those associated with a projection using the NMFS preferred alternative SPR of 76%, which in turn is estimated to be far below that which would result in overfishing.

Assuming the 2011 and 2012 ACLs of 17 mt are removed, various management options for 2013 and beyond are considered ranging from zero fishing mortality to the largest removal that could occur without overfishing (OFL catches, previously known as ABC catches). In the absence of any future fishing mortality (beginning in 2013 and assuming a 2011 and 2012 ACL of 17 mt) the yelloweye rockfish stock is projected to have a 50% probability of recovery to the rebuilding target ($SB_{40\%}$) by 2045, slightly sooner than the estimate of 2047 from the 2009 rebuilding analysis. In contrast, the stock is not projected to reach this level within the next 500 years if the full OFL catches are removed. The current NMFS preferred alternative rebuilding harvest rate (SPR = 76%) would produce an ACL of 17.8 mt in 2011 (18.1 mt in 2012) and has a 50% probability of rebuilding by 2067. This is a slightly faster rebuilding rate under the updated model parameters than that associated with the NMFS preferred alternative $T_{TARGET} = 2074$, which has an associated SPR = 72.7% and would produce an ACL of 21.0 mt in 2011 (21.4 mt in 2012). A range of additional management approaches to recovery based on historical and recalculated reference points are presented.

Introduction

The yelloweye rockfish (*Sebastes ruberrimus*) stock was determined to be “overfished” in 2002, based on the 2001 stock assessment (Wallace 2001) which included only the California and Oregon portions of the stock. The next assessment included the entire U.S. coastal population (Methot et al. 2002) and estimated that the stock was at 24% of unexploited spawning biomass in 2002. An updated rebuilding analysis was conducted (Methot and Piner 2002) and the estimated rebuilding parameters were adopted by the Pacific Fishery Management Council (PFMC 2004). Subsequent rebuilding analyses were conducted on the basis of the 2005 (Wallace et al. 2005), 2006 (Wallace et al. 2006), 2007 (Wallace 2008), and 2009 (Stewart et al. 2009) stock assessments.

The 2002 rebuilding analysis estimated that the mean generation time for yelloweye rockfish was 44 years, and that if no fishing occurred beginning in 2003 there would be a 50% chance of rebuilding by 2027. The estimated value for steepness (h) from the 2002 assessment was 0.437, and the degree of recruitment variability (σ_r) was assumed to be 0.4. Management alternatives with ACLs for 2003 between 22 and 27 mt were presented.

The 2005 rebuilding analysis (Tsou and Wallace 2005) was based on the updated stock assessment and estimates of steepness, and recruitment variability that were unchanged from 2002. Mean generation time was again estimated to be 44 years, but the year in which a 50% chance of rebuilding was projected to be achieved was increased to 2036. The maximum allowable rebuilding time (T_{MAX}) was estimated to be 2071, and the probability of achieving this target under the target F of 0.0153 was 80%.

A full stock assessment and subsequent rebuilding analysis (Tsou and Wallace 2006) was conducted in 2006. The 2006 assessment included area-specific models and revised the assumed values for natural mortality (from 0.045 to 0.036), steepness (from 0.437 to 0.45) and the degree of recruitment variability (from 0.4 to 0.5). The 2006 assessment estimated the 2006 depletion level to be 17.7%, somewhat lower than previous analyses. As a result of these changes, the rebuilding plan estimated that the mean generation time was 50 years and that in the absence of fishing beginning in 2007 the coastwide yelloweye stock would not rebuild to target levels with a 50% probability until 2046. The selected target SPR rate was 71.9%, with further reductions in the 2007 and 2008 ACL levels to 14.0 and 14.3 mt respectively if this rate were to be maintained. The results of this rebuilding analysis were included in Amendment 16-4 of the 2006 Pacific Coast Groundfish Fishery Management Plan (PFMC 2006) re-evaluating and revising the yelloweye rockfish rebuilding plan so that the rebuilding periods are as short as possible, taking into account the status and biology of the species, the socioeconomic needs of West Coast fishing communities, and the interaction of the depleted species within the marine ecosystem. The council ultimately adopted a ‘ramp-down’ from the *status quo* catch levels to those consistent with the SPR target of 71.9%, which led to ACLs in 2007 and 2008 of 23 and 20 mt.

The 2007 updated yelloweye assessment included several changes which led to an overall downward revision in the estimate of current spawning biomass and the level of relative depletion, compared to the 2006 assessment. The 2007 rebuilding plan was consistent with previous analyses in predicting an extremely long period need to achieve

target stock levels, and did not require a revision of the target reference points or strategy from the previous analysis. The median year to rebuild with no fishing mortality beginning in 2009 was estimated to be 2049, and it was estimated that recovery would not be achieved at an SPR rate consistent with OFL harvest levels (50.0%). The median year to rebuild under the SPR target (71.9%) was estimated to be 2082. An SPR of 71.2% (slightly more fishing mortality) was estimated to be possible and still achieve a 50% probability of recovery by the target year in Amendment 16-4, 2084. Management alternatives were presented that included the ‘ramp-down’ from *status quo* ACL levels to those consistent with the SPR target of 71.9% by 2011, as well as immediate (2009) implementation of this level. The ‘ramp-down’ alternative provided in the 2007 rebuilding analysis consisted of 2009 and 2010 harvest of 17 and 14 mt respectively. Subsequent analysis indicated no change in the estimated year for rebuilding with a 50% probability for the option ultimately accepted by the council of 17 mt harvest in both years.

In the 2009 assessment (Stewart et al. 2009), all major structural and parameter assumptions from previous stock assessments were revisited. Revised inputs included the weight-length relationship, the maturity schedule, and the addition of a fecundity relationship. Instead of fixed parameter values, natural mortality and steepness were estimated, as well as all growth parameters. Structural changes included use of a two-sex model, with explicit treatment of areas (California, Oregon and Washington) linked via a common stock-recruit relationship and the removal of stochastic recruitment variability over the limited period for which it had been estimated in previous assessments (1968-1992). Because a fecundity relationship was used for yelloweye specifying that spawning output per unit weight increases with fish weight, all reference to spawning output was in terms of eggs produced, instead of spawning biomass.

The 2009 rebuilding analysis (Stewart 2009) had relatively similar results to the 2007 rebuilding analysis in spite of being based on a substantially revised assessment model, and with the added complexity of integrating uncertainty over a matrix of 9 states of nature. The $SPR_{TARGET} = 71.9\%$ was retained, and the associated values of Mean generation time, T_{TARGET} , T_{MIN} , and T_{MAX} all remained within 3 years of the values estimated in 2007. In 2010, a new $SPR_{TARGET} = 76\%$ was chosen (the “NMFS preferred alternative”). This was the SPR consistent with the status-quo catch of 17 mt and had an associated $T_{TARGET} = 1974$.

Summary of 2011 update assessment

The 2011 update assessment for yelloweye (Taylor and Wetzel 2011) retained all the model assumptions of the 2009 assessment, but added additional age and length composition data and extended and recalculated the indices of abundance. Estimated quantities from the update assessment were very similar to the those estimated in the 2009 assessment, with very small increases in the estimated equilibrium spawning output (from 994 to 1028 million eggs), in the stock-recruit steepness parameter (from 0.417 to 0.441) and in the stock status (from 20.3% to 21.3% in 2009). The estimated current (2011) status from the 2011 update assessment was a depletion of 21.4%.

Although the base case assessment models for 2009 assessment and 2011 update captured some uncertainty via asymptotic intervals, uncertainty from two sources is reported through alternate states of nature bracketing the base case results and included

explicitly in the decision table. The magnitude of the estimated catch time-series has a large influence on the estimate of stock size and the estimate of steepness of the stock-recruit relationship was closely linked to the projected recovery rates. Alternate values of each were used to bracket the best estimates with marginal probabilities one-half as likely. For historical catch these values, 75% and 150% of the estimated catch series prior to 2000 was retained to match the choices made in the 2009 assessment. For steepness the 12.5th and 87.5th percentiles were calculated from the likelihood profile as a proxy for the probability distribution about this point estimate. This profile reflected the additional data added since 2009 and thus the resulting steepness values were slightly different than in the 2009 assessment and rebuilding plan.

These two axes of uncertainty were both assigned a marginal probability such that the base case model was twice as likely as either the low or higher alternative (Table 1). Following the 2009 rebuilding plan, all nine combinations from these two axes are used in this analysis to provide a more realistic degree of uncertainty in this rebuilding analysis.

Management performance under rebuilding

Following the 2002 declaration that the yelloweye rockfish stock was overfished the catch of yelloweye was reduced well below the 2001 level and maintained between 10.9 and 23.0 mt since then (Table 2). These catch levels represent a 95% reduction from average catches observed in the 1980s and 1990s. Managers have constrained catches by eliminating all retention of yelloweye rockfish in both commercial and recreational fisheries, instituting broad spatial closures (some specifically for moving fixed-gear fleets away from known areas of yelloweye abundance), and creating new gear restrictions intended to reduce trawling in rocky shelf habitats and the coincident catch of rockfish in shelf flatfish trawls. From 2002-2010, the total yelloweye catch (126.6 mt) has been only 68% of the sum of the ACLs for 2002-2010 and only 32% of the sum of the OFLs for that period. The total 2010 catch (11.4 mt) is estimated to be just 2.5% of the peak annual catch that occurred in the early 1980s.

Rebuilding calculations

This rebuilding analysis was conducted using software developed by A. Punt (version 3.12b, January 2010). No changes to the rebuilding calculations occurred between this version and the previous version used in the 2009 yelloweye rebuilding analysis. Because the rebuilding software does not have the capability for modeling area-based dynamics consistent with those in Stock Synthesis, there may be some differences in the rebuilding trajectory estimated here and that from the stock assessment. The steps followed were:

1. Define how virgin biomass (SB_0) will be calculated.
2. Define how future recruitment will be generated.
3. Define the fishery selectivity and allocation to be applied during rebuilding.
4. Decide how to include uncertainty in input parameters from the stock assessment in the rebuilding analysis.
5. Recalculate rebuilding reference points from the most current assessment results
 - a) Calculate the projected year in which the stock would rebuild with a 50% probability if all future fishing mortality was eliminated ($T_{F=0}$).

- b) Calculate the projected year for a 50% probability of rebuilding from the year in which the stock was first declared overfished (T_{MIN}).
 - c) Calculate the mean generation time.
 - d) Calculate the maximum allowable rebuilding time (T_{MAX}).
6. Identification and analysis of alternative harvest strategies for rebuilding.

The method of calculation used in each case was identical to that used in the 2009 rebuilding analysis although the range of years considered was shifted to reflect the update assessment.

1. Definition of SB_0

The equilibrium spawning output level (SB_0) used in this rebuilding analysis is calculated via the stock-recruitment, growth, maturity and fecundity relationships in order to be consistent with assessment model results. This level is estimated to be 1028 million eggs in the base case assessment model, which dictates that the rebuilding target ($SB_{40\%}$) is 411 million eggs. This result is highly uncertain, based on the range of values among the nine states of nature (Table 3), and this uncertainty is included in rebuilding projections.

2. Generation of future recruitment

The estimated parameters of the stock recruitment relationship (unexploited equilibrium recruitment [natural log of R_0], and steepness [h]) for each of the nine states of nature, are used to generate future recruitments in the rebuilding analysis. Because the degree of recruitment variability (σ_r) was not a component or result of the 2009 stock assessment or the 2011 update assessment, a value of 0.5 is used to be consistent with the last three rebuilding analyses. The values for equilibrium recruitment and steepness for each combination of the two states of nature are provided in Table 4.

3. Fishery selectivity and allocation

In order to project the effect of fishing on the yelloweye rockfish rebuilding trajectory, it is necessary to specify the fishery selectivity and relative allocation among fleets. This rebuilding analysis projects forward using selectivity and allocation averaged over recent years (2007-2009), not including the terminal year with catch, 2010, since these catches are projected based on the GMT scorecard and may not well reflect the final fleet-specific values in that year. This choice also provides some consistency between assessment model results and short term-forecasts from the rebuilding analysis, although the two still may differ. The resulting selectivity and weight at age are included in the basic input data files (Appendices A and B).

4. Inclusion of uncertainty

Uncertainty is included in this rebuilding analysis via 1,600 random simulations of stochastic future recruitment strengths and integration over the nine combinations of the two states of nature. The choice of 1,600 simulations was designed to be evenly divisible by 16, which allows the 9 states of nature to be sampled exactly in proportion to the relative probabilities in Table 1. However, analyses conducted in 2009 indicated that

there was no appreciable change in results between 1,000 simulations and 1,600 simulations.

5. Recalculate reference points

The median year of recovery in the absence of fishing ($T_{F=0}$) was calculated by setting fishing mortality to zero in 2013, and is equal to 2045. The value for T_{MIN} , the median year for rebuilding to the target level in the absence of fishing since the year of declaration (2000) is 2037 (revised downward from 2044 in the 2009 analysis).

The estimated generation time has increased by one year to 46 years compared to the 2009 analysis. In conjunction with T_{MIN} , the mean generation time dictates the revised estimate of T_{MAX} , 2083 (decreased from 2089 in the 2009 analysis). The NMFS preferred alternative harvest rate ($SPR_{TARGET} = 76\%$) is revised from the 2009 rebuilding analysis (which used $SPR = 71.9\%$), and the NMFS preferred alternative T_{TARGET} of 2074 is revised from the 2009 $T_{TARGET} = 2087$. The $SPR = 76\%$ harvest rate generates a P_{MAX} (probability of recovery by T_{MAX}) of 72.9%, which is higher than 2009 estimate of 52.3% because the higher SPR value and updated stock dynamics more than offsets the reduction in T_{MAX} .

All reference points from Amendment 16-4, the 2009 rebuilding analysis, and those recalculated here are summarized in Table 5.

6. Alternate rebuilding strategies

Assuming that a constant rate of harvest will be applied throughout a rebuilding period, the basis for rebuilding alternatives can be divided into two approaches: 1) strategies based on selection of a harvest rate, and 2) strategies based selection of a T_{TARGET} (year for 50% probability of recovery). The result of each of these strategies is contingent on the actual ACL removed in 2011 and 2012, which are assumed to be 17 mt. This rebuilding analysis therefore presents 13 alternate strategies:

- 1) Eliminate all harvest beginning in 2013 ($F=0$),
- 2) Apply the harvest rate that would currently generate 14 mt 2013-14 average ACL ($SPR=80.5\%$),
- 3) Apply the harvest rate that would currently generate the 17 mt 2012 ACL ($SPR=76.5\%$),
- 4) Apply the NMFS preferred alternative current rebuilding harvest rate ($SPR_{TARGET}=76\%$),
- 5) Apply the harvest rate that is estimated to generate a 50% probability of recovery by the NMFS preferred alternative T_{TARGET} (2074, $SPR=72.7\%$),
- 6) Apply the harvest rate that estimated to generate a 50% probability of recovery by the T_{MAX} from 2011 (2083, $SPR=69.7\%$),
- 7) Apply the harvest rate that estimated to generate a 50% probability of recovery by the T_{MAX} from 2009 (2089, $SPR=68.2\%$),
- 8) Apply a 40:10 harvest policy,
- 9) Apply the OFL harvest rate ($SPR_{50\%}$),

Apply the harvest rate that achieves a 50% probability of recovery for years distributed between $T_{F=0}$ (2045) and the current T_{MAX} (2083):

- 10) 2053,
- 11) 2061,
- 12) 2069,
- 13) 2077.

Results

Summary results from all alternatives are presented in Table 6. Detailed results are presented in Tables 7-9 and Figures 1-3. In the absence of any future fishing mortality, the yelloweye rockfish stock is projected to have a 50% probability of recovery to the rebuilding target (SB40%) by 2045 (alternative 1). In contrast, the stock is not projected to reach this level during the 500 years over which this projection was performed if the OFL catches are removed (alternative 9). The SPR proxy target used to generate OFL catches is 50%, which represents substantially more fishing mortality than that estimated to produce MSY for the base case assessment model (SPR = 57.7%) occurring at an estimated 38.1% relative depletion. Even the most optimistic state of nature predicts MSY harvest to be achieved with less fishing mortality (SPR = 51.5%) than the MSY proxy. These two scenarios (alternatives 1 and 9) bound the range of fishing mortality between none and the overfishing level. All other scenarios lie within this range.

Fishing at the NMFS preferred alternative SPR target (alternative 4, SPR = 76%) results in an increase from the 17 mt ACL in 2012 to 17.8 mt in 2013. This harvest rate has a 50% probability of recovery by the year 2067, a 62.1% probability of recovery by $T_{\text{TARGET}} = 2074$ (the NMFS preferred alternative), and a 72.9% probability of recovery by $T_{\text{MAX}} = 2083$. The SPR that best matches the 17 mt ACL for 2011 and 2012 is 76.5%, indicating that under the updated estimates of stock dynamics, the current harvest rates are very close to the NMFS preferred alternative SPR target. The harvest rate calculated from the 2011 assessment that is most consistent with the 2012 ACL (17 mt) is SPR = 76.5% (alternate 2), which is close to the NMFS preferred alternative of 76%.

Alternate management actions 10-13 are based on the SPR rates that result in a 50% probability of recovery by a set of 4 years spanning the range between $T_{F=0}$ in 2013 (2045) and slightly above the recalculated T_{MAX} (2083). As expected, the SPR rates for these alternatives (Table 6) are fairly evenly distributed between those associated the $T_{F=0}$ and T_{MAX} rates, from SPR = 86.4% for alternative 8 with 50% probability of recovery in 2053 to SPR = 71.6% for alternative 11 with 50% recovery in 2077.

In general, the connection between SPR rates of rebuilding and predicted year of 50% probability of rebuilding are consistent with those estimated for the 2009 yelloweye rebuilding plan, with slightly faster rebuilding associated with the slightly higher estimates of stock-recruit steepness and stock status in the 2011 update assessment compared to the 2009 assessment.

Acknowledgements

Owen Hamel, John Wallace, and Ian Stewart provided assistance in using the rebuilding software. Andre Punt provided the rebuilding software as well as R code for analyzing the software output. This document draws on the work of many previous yelloweye assessment and rebuilding plan authors, especially Ian Stewart, author of the 2009 rebuilding plan.

References

- Methot, R. D. and K. R. Piner. 2002. Rebuilding analysis for yelloweye rockfish: update to incorporate results of coastwide assessment in 2002. Pacific Fishery Management Council. Portland, Oregon. 11 p.
- Methot, R. D., F. Wallace, and K. Piner. 2002. Status of yelloweye rockfish off the U.S. west coast in 2002. Seattle, WA. National Marine Fisheries Service. 76 p.
- PFMC. 2004. Appendix H to amendment 16-3 to the Pacific coast groundfish fishery management plan. Yelloweye rockfish (*Sebastes ruberrimus*) draft rebuilding plan. Adopted April 2004. Pacific Fishery Management Council. Portland, Oregon. 15 p.
- PFMC. 2006. Amendment 16-4 (Overfished species reprise) to the Pacific coast groundfish fishery management plan. Pacific Fishery Management Council. Portland, Oregon. 15 p.
- Stewart, I. J. 2009. Rebuilding analysis for yelloweye rockfish based on the 2009 stock assessment. Pacific Fishery Management Council. Portland, Oregon. 96 p.
- Stewart, I. J., J. R. Wallace, and C. R. McGilliard. 2009. Status of the U.S. yelloweye rockfish resource in 2009. Pacific Fishery Management Council, Portland, OR. 236 p.
- Taylor, I. G. and C. Wetzel. 2011. DRAFT Status of the U.S. yelloweye rockfish resource in 2011 (Update of 2009 assessment model). Pacific Fishery Management Council, Portland, OR.
- Tsou, T.-S. and F. R. Wallace. 2005. Rebuilding analysis for yelloweye rockfish for 2005. Pacific Fishery Management Council. Portland, Oregon. 12 p.
- Tsou, T.-S. and F. R. Wallace. 2006. Updated rebuilding analysis for yelloweye rockfish based on stock assessment in 2006. Pacific Fishery Management Council. Portland, Oregon. 31 p.
- Wallace, F. R. 2001. Status of the yelloweye rockfish resource in 2001 for northern California and Oregon waters. *in* Appendix to the Status of the Pacific Coast Groundfish Fishery Through 2001 and Recommended Acceptable Biological Catches for 2002. Stock Assessment and Fishery Evaluation. Pacific Fishery Management Council. Portland, OR. 86 p.
- Wallace, F. R., T.-S. Tsou, T. Jagielo, and Y. W. Cheng. 2006. Status of yelloweye rockfish off the U.S. west coast in 2006. *In* Status of the Pacific Coast Groundfish Fishery through 2005, Stock Assessment and Fishery Evaluation: Stock Assessments and Rebuilding Analyses: Volumes I-VII. Pacific Fishery Management Council. Portland, OR. 141 p.
- Wallace, F. R., T.-S. Tsou, and T. H. Jagielo. 2005. Status of yelloweye rockfish off the U.S. west coast in 2005 (*Sebastes ruberrimus*). 2005 Stock assessment and STAR panel reports. www.pcouncil.org. 91 p.
- Wallace, J. R. 2008. Update to the status of yelloweye rockfish (*Sebastes ruberrimus*) off the U.S. west coast in 2007. Status of the Pacific Coast groundfish fishery through 2008, stock assessment and fishery evaluation: stock assessments, STAR panel reports, and rebuilding analyses. Pacific Fishery Management Council, Portland, OR. 66 p.

Tables

Table 1. Relative probabilities for combinations of the two alternate states of nature used to represent uncertainty in this rebuilding analysis.

		Historical catch		
		Low	Best estimate	High
Steepness	Low	6.25%	12.5%	6.25%
	Estimated value	12.5%	25%	12.5%
	High	6.25%	12.5%	6.25%

Table 2. Yelloweye rockfish management performance under rebuilding.

Year	OFL (mt) ¹	ACL (mt) ¹	Commercial Catch (mt) ²	Recreational Catch (mt)	Total Catch (mt)
2002	27 ³	13.5 ³	6.4	9.3	15.8
2003	52	22	3.0	9.4	12.4
2004	53	22	4.3	8.0	12.3
2005	54	26	4.7	10.4	15.1
2006	55	27	3.7	8.7	12.4
2007	47	23	6.0	13.6	19.6
2008	47	20	7.7	9.0	16.7
2009	31	17	3.4	7.5	10.9
2010	32	17	5.5	5.9	11.4

¹OFL and ACL were called ABC and OY prior to 2010.

²Includes research catches.

³Includes the Columbia, Vancouver and Eureka INPFC areas only.

Table 3. Unexploited spawning output (SB_0 , millions eggs) for the nine states of nature included in this rebuilding analysis.

		Historical catch		
		Low	Best estimate	High
Steepness	Low	770	1,023	1,532
	Estimated value	773	1,028	1,537
	High	777	1,033	1,545

Table 4. Stock recruitment parameters R_0 (1000s) and steepness (h) for the nine states of nature included in this rebuilding analysis.

		Historical catch		
		Low	Best estimate	High
Steepness	Low = 0.383	178	235	348
	MLE = 0.441	174	228	338
	High = 0.508	171	224	331

Table 5. Summary of rebuilding reference points for yelloweye rockfish from Amendment 16-4, the 2009 rebuilding analysis, and recalculated values based on the 2011 assessment results.

Parameter	Source		
	Amendment 16-4	2009 Rebuilding analysis	2011 Rebuilding analysis
SB_0 (¹ Spawning biomass or ² Millions eggs)	3,322 ¹	994 ²	1028 ²
Rebuilding target ($SB_{40\%}$)	1,329 ¹	398 ²	411 ²
SB_{2011} (Millions eggs)	NA	NA	219
T_{MIN}	2046	2044	2037
Mean generation time	50	45	46
T_{MAX}	2096	2089	2083
$T_{F=0}$ (begin in 2007)	2048	NA	NA
$T_{F=0}$ (begin in 2011)	NA	2047	NA
$T_{F=0}$ (begin in 2013)	NA	NA	2045
P_{MAX}	80.0%	52.3%	72.9%
T_{TARGET}	2084	2087	2074 ³
SPR_{TARGET}	71.9%	71.9%	76% ³

³ T_{TARGET} and SPR_{TARGET} for 2011 rebuilding analysis are the NMFS preferred alternatives.

Table 6. Results of rebuilding alternatives based on selection of an SPR target or year for 50% probability of recovery. Alternatives 1-9 are ordered by decreasing SPR (bold). Alternatives 10-13 are sorted by increasing year of 50% probability of recovery (bold).

Run	1	2	3	4	5	6	7	8	9	10	11	12	13
	F=0 2013+	SPR with 2013- 14 avg. ACL of 14 mt	SPR from 2012 ACL of 17 mt	SPR = 76%	SPR that achieves 50% prob. recovery by T _{TARGET}	SPR that achieves 50% prob. recovery by 2011 T _{MAX}	SPR that achieves 50% prob. recovery by 2009 T _{MAX}	40:10 Harvest policy	OFL harvest rate SPR = 50%	SPR that achieves 50% prob. recovery by 2053	SPR that achieves 50% prob. recovery by 2061	SPR that achieves 50% prob. recovery by 2069	SPR that achieves 50% prob. recovery by 2077
Basis													
2013 ACL (mt)	0.0	13.8	17.4	17.8	21.0	24.1	25.7	37.7	51.2	9.1	14.7	19.1	22.1
2013 OFL (mt)	51.2	51.2	51.2	51.2	51.2	51.2	51.2	51.2	51.2	51.2	51.2	51.2	51.2
2014 ACL (mt)	0.0	14.1	17.7	18.1	21.4	24.5	26.0	38.3	51.4	9.3	15.0	19.4	22.5
2014 OFL (mt)	52.5	52.2	52.1	52.1	52.1	52.0	52.0	51.7	51.4	52.3	52.2	52.1	52.0
50% prob. recovery by:	2045	2060	2066	2067	2074	2083	2089	NA	NA	2053	2061	2069	2077
SPR _{TARGET}	100.0%	80.5%	76.5%	76.0%	72.7%	69.7%	68.2%	>=50%	50.0%	86.4%	79.5%	74.7%	71.6%
Probability of recovery by reference points based on the 2009 rebuilding analysis:													
2044 (T _{MIN})	46.9%	15.9%	9.6%	8.7%	4.5%	2.6%	1.3%	0.0%	0.0%	24.9%	14.9%	6.9%	3.7%
2047 (T _{F=0} from 2011)	62.0%	22.0%	15.4%	14.6%	8.8%	4.9%	3.5%	0.0%	0.0%	31.1%	19.9%	12.7%	6.8%
2087 (T _{TARGET})	100.0%	85.8%	77.5%	75.8%	65.6%	53.8%	47.9%	0.3%	0.1%	95.8%	83.4%	72.3%	61.2%
2089 (T _{MAX})	100.0%	87.7%	79.1%	77.5%	67.6%	55.4%	50.0%	0.4%	0.1%	96.8%	84.8%	73.7%	63.6%
Probability of recovery by recalculated 2011 reference points:													
2037 (T _{MIN})	22.9%	2.0%	0.6%	0.6%	0.1%	0.1%	0.1%	0.0%	0.0%	6.8%	1.8%	0.2%	0.1%
2045 (T _{F=0} from 2013)	52.5%	17.8%	11.9%	11.2%	5.9%	3.1%	2.2%	0.0%	0.0%	26.7%	16.4%	8.6%	4.7%
2067 (T _{SPR TARGET})	96.2%	66.5%	52.8%	50.9%	38.8%	29.2%	24.1%	0.0%	0.0%	77.9%	62.9%	45.6%	34.6%
2074 (T _{TARGET})	99.2%	75.1%	64.1%	62.1%	50.0%	37.2%	32.1%	0.2%	0.0%	85.3%	73.2%	57.7%	45.6%
2083 (T _{MAX})	99.9%	82.8%	73.9%	72.9%	61.3%	50.0%	42.8%	0.2%	0.1%	93.7%	81.0%	68.6%	57.2%

Table 7a. Probability of recovery for rebuilding alternatives for the years 2011-2030 (additional years in Table 7b)

Run	1	2	3	4	5	6	7	8	9	10	11	12	13
Basis	F=0 2013+	SPR with 2013-14 avg. ACL of 14 mt	SPR from 2012 ACL of 17 mt	SPR = 76%	SPR that achieves 50% prob. recovery by T_{TARGET}	SPR that achieves 50% prob. recovery by 2011 T_{MAX}	SPR that achieves 50% prob. recovery by 2009 T_{MAX}	40:10 Harvest policy	OFL harvest rate SPR = 50%	SPR that achieves 50% prob. recovery by 2053	SPR that achieves 50% prob. recovery by 2061	SPR that achieves 50% prob. recovery by 2069	SPR that achieves 50% prob. recovery by 2077
2011	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2012	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2013	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2014	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2015	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2016	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2017	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2018	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2019	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2020	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2021	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2022	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2023	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2024	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2025	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2026	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2027	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2028	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2029	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2030	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Table 7b. Probability of recovery for rebuilding alternatives every 5 years from 2035-2085 with reference point years from Table 6 interspersed. (continued from Table 7a)

Run	1	2	3	4	5	6	7	8	9	10	11	12	13
Basis	F=0 2013+	SPR with 2013-14 avg. ACL of 14 mt	SPR from 2012 ACL of 17 mt	SPR = 76%	SPR that achieves 50% prob. recovery by T_{TARGET}	SPR that achieves 50% prob. recovery by 2011 T_{MAX}	SPR that achieves 50% prob. recovery by 2009 T_{MAX}	40:10 Harvest policy	OFL harvest rate SPR = 50%	SPR that achieves 50% prob. recovery by 2053	SPR that achieves 50% prob. recovery by 2061	SPR that achieves 50% prob. recovery by 2069	SPR that achieves 50% prob. recovery by 2077
2035	16.3%	0.3%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	0.3%	0.1%	0.0%
2037	22.9%	2.0%	0.6%	0.6%	0.1%	0.1%	0.1%	0.0%	0.0%	6.8%	1.8%	0.3%	0.1%
2040	30.1%	6.8%	3.2%	2.9%	1.2%	0.4%	0.2%	0.0%	0.0%	15.1%	5.9%	2.0%	0.9%
2044	46.9%	15.9%	9.6%	8.7%	4.5%	2.6%	1.3%	0.0%	0.0%	24.9%	14.9%	6.9%	3.7%
2045	52.5%	17.8%	11.9%	11.2%	5.9%	3.1%	2.3%	0.0%	0.0%	26.7%	16.4%	8.6%	4.7%
2047	62.0%	22.0%	15.4%	14.6%	8.8%	4.9%	3.5%	0.0%	0.0%	31.1%	19.9%	12.7%	6.8%
2050	71.3%	27.4%	20.6%	19.8%	13.9%	7.8%	6.2%	0.0%	0.0%	39.9%	26.1%	16.8%	11.9%
2055	79.6%	38.7%	28.6%	27.3%	20.8%	14.5%	11.3%	0.0%	0.0%	56.1%	36.1%	25.0%	18.4%
2060	88.3%	51.0%	38.4%	36.6%	27.3%	20.5%	16.6%	0.0%	0.0%	67.8%	47.5%	32.6%	24.8%
2065	94.7%	62.8%	48.7%	46.6%	35.3%	26.3%	21.6%	0.0%	0.0%	75.8%	59.3%	42.3%	31.6%
2067	96.3%	66.5%	52.8%	50.9%	38.8%	29.2%	24.1%	0.0%	0.0%	77.9%	62.9%	45.6%	34.6%
2070	98.4%	70.4%	58.0%	56.3%	43.7%	32.3%	27.8%	0.1%	0.0%	81.1%	68.0%	51.1%	39.1%
2074	99.2%	75.1%	64.1%	62.1%	50.0%	37.2%	32.1%	0.2%	0.0%	85.3%	73.3%	57.7%	45.6%
2075	99.4%	75.9%	65.4%	64.0%	51.4%	38.9%	33.8%	0.3%	0.0%	86.7%	74.1%	59.0%	47.3%
2080	99.8%	80.8%	71.4%	69.6%	58.6%	45.9%	39.2%	0.3%	0.1%	91.2%	78.4%	65.4%	53.8%
2083	99.9%	82.8%	73.9%	72.9%	61.3%	50.0%	42.8%	0.3%	0.1%	93.7%	81.0%	68.6%	57.3%
2085	100.0%	84.2%	75.6%	74.1%	63.5%	52.1%	45.3%	0.3%	0.1%	94.4%	82.3%	70.7%	59.4%
2087	100.0%	85.8%	77.5%	75.8%	65.6%	53.8%	47.9%	0.3%	0.1%	95.8%	83.4%	72.3%	61.2%
2089	100.0%	87.7%	79.1%	77.5%	67.6%	55.4%	50.0%	0.4%	0.1%	96.8%	84.8%	73.7%	63.6%

Table 8a. Median catches (mt) for rebuilding alternatives for the years 2011-2030 (additional years in Table 8b)

Run	1	2	3	4	5	6	7	8	9	10	11	12	13
Basis	F=0 2013+	SPR with 2013-14 avg. ACL of 14 mt	SPR from 2012 ACL of 17 mt	SPR = 76%	SPR that achieves 50% prob. recovery by T_{TARGET}	SPR that achieves 50% prob. recovery by 2011 T_{MAX}	SPR that achieves 50% prob. recovery by 2009 T_{MAX}	40:10 Harvest policy	OFL harvest rate SPR = 50%	SPR that achieves 50% prob. recovery by 2053	SPR that achieves 50% prob. recovery by 2061	SPR that achieves 50% prob. recovery by 2069	SPR that achieves 50% prob. recovery by 2077
2011	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
2012	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
2013	0.0	13.8	17.4	17.8	21.0	24.1	25.7	37.7	51.2	9.1	14.7	19.1	22.1
2014	0.0	14.1	17.7	18.1	21.4	24.5	26.0	38.3	51.4	9.3	15.0	19.4	22.5
2015	0.0	14.4	18.0	18.4	21.7	24.8	26.4	38.9	51.5	9.5	15.2	19.7	22.8
2016	0.0	14.6	18.3	18.7	22.0	25.1	26.7	39.4	51.5	9.7	15.5	20.0	23.1
2017	0.0	14.9	18.5	19.0	22.3	25.4	27.0	39.8	51.6	9.9	15.7	20.3	23.4
2018	0.0	15.1	18.8	19.3	22.6	25.7	27.3	40.2	51.6	10.0	16.0	20.6	23.7
2019	0.0	15.3	19.0	19.5	22.8	26.0	27.6	40.6	51.6	10.2	16.2	20.8	24.0
2020	0.0	15.5	19.3	19.8	23.1	26.3	27.8	41.0	51.6	10.4	16.4	21.1	24.2
2021	0.0	15.8	19.5	20.0	23.4	26.5	28.1	41.3	51.5	10.5	16.7	21.3	24.5
2022	0.0	16.0	19.8	20.3	23.6	26.8	28.3	41.6	51.5	10.7	16.9	21.6	24.8
2023	0.0	16.2	20.0	20.5	23.9	27.0	28.6	41.9	51.5	10.8	17.1	21.8	25.0
2024	0.0	16.4	20.2	20.7	24.1	27.3	28.9	42.2	51.5	11.0	17.3	22.1	25.3
2025	0.0	16.6	20.5	21.0	24.4	27.5	29.1	42.5	51.5	11.2	17.5	22.3	25.5
2026	0.0	16.8	20.7	21.2	24.6	27.8	29.4	42.8	51.5	11.3	17.7	22.6	25.8
2027	0.0	17.0	20.9	21.4	24.9	28.0	29.6	43.1	51.5	11.5	18.0	22.8	26.0
2028	0.0	17.2	21.2	21.7	25.1	28.3	29.9	43.4	51.6	11.6	18.2	23.1	26.3
2029	0.0	17.5	21.4	21.9	25.4	28.6	30.1	43.8	51.7	11.8	18.4	23.3	26.5
2030	0.0	17.7	21.7	22.2	25.6	28.8	30.4	44.1	51.7	12.0	18.6	23.6	26.8

Table 8b. Median catches (mt) for rebuilding alternatives every 5 years from 2035-2085 with reference point years from Table 6 interspersed. (continued from Table 8a)

Run	1	2	3	4	5	6	7	8	9	10	11	12	13
Basis	F=0 2013+	SPR with 2013-14 avg. ACL of 14 mt	SPR from 2012 ACL of 17 mt	SPR = 76%	SPR that achieves 50% prob. recovery by T_{TARGET}	SPR that achieves 50% prob. recovery by 2011 T_{MAX}	SPR that achieves 50% prob. recovery by 2009 T_{MAX}	40:10 Harvest policy	OFL harvest rate SPR = 50%	SPR that achieves 50% prob. recovery by 2053	SPR that achieves 50% prob. recovery by 2061	SPR that achieves 50% prob. recovery by 2069	SPR that achieves 50% prob. recovery by 2077
2035	0.0	18.8	22.9	23.4	27.0	30.2	31.8	46.0	52.2	12.8	19.8	24.8	28.1
2037	0.0	19.2	23.4	23.9	27.5	30.7	32.3	46.7	52.4	13.2	20.2	25.4	28.7
2040	0.0	19.9	24.2	24.7	28.3	31.6	33.1	47.7	52.7	13.7	20.9	26.2	29.5
2044	0.0	20.8	25.2	25.7	29.4	32.7	34.3	48.8	53.1	14.4	21.9	27.2	30.6
2045	0.0	21.0	25.4	26.0	29.7	33.0	34.5	49.0	53.2	14.5	22.1	27.5	30.9
2047	0.0	21.5	25.9	26.5	30.2	33.5	35.0	49.4	53.5	14.8	22.5	28.0	31.4
2050	0.0	22.1	26.7	27.2	31.0	34.3	35.8	49.9	53.5	15.4	23.2	28.7	32.2
2055	0.0	23.2	27.8	28.4	32.1	35.4	37.0	51.1	53.9	16.2	24.3	29.9	33.3
2060	0.0	24.3	29.0	29.6	33.4	36.7	38.3	52.2	54.3	17.0	25.4	31.1	34.6
2065	0.0	25.3	30.1	30.7	34.6	38.0	39.6	53.3	54.8	17.9	26.5	32.3	35.9
2067	0.0	25.8	30.7	31.3	35.2	38.6	40.1	53.7	55.0	18.2	27.0	32.9	36.4
2070	0.0	26.4	31.3	31.9	35.8	39.2	40.8	54.4	55.0	18.7	27.6	33.5	37.1
2074	0.0	27.2	32.3	33.0	36.9	40.3	41.8	55.2	55.6	19.3	28.5	34.6	38.2
2075	0.0	27.5	32.5	33.2	37.1	40.5	42.0	55.4	55.6	19.5	28.7	34.8	38.3
2080	0.0	28.4	33.5	34.2	38.2	41.5	43.1	56.2	56.1	20.2	29.7	35.8	39.4
2083	0.0	29.0	34.2	34.8	38.8	42.2	43.8	56.9	56.3	20.7	30.3	36.5	40.1
2085	0.0	29.4	34.6	35.3	39.3	42.7	44.3	57.2	56.5	21.0	30.7	36.9	40.6
2087	0.0	29.7	35.0	35.6	39.7	43.1	44.6	57.4	56.7	21.3	31.0	37.3	40.9
2089	0.0	30.1	35.5	36.1	40.1	43.5	45.1	57.8	56.8	21.6	31.4	37.8	41.4

Table 9a. Median spawning output (millions eggs) for rebuilding alternatives for the years 2011-2030 (additional years in Table 9b)

Run	1	2	3	4	5	6	7	8	9	10	11	12	13
-----	---	---	---	---	---	---	---	---	---	----	----	----	----

Basis	F=0 2013+	SPR with 2013-14 avg. ACL of 14 mt	SPR from 2012 ACL of 17 mt	SPR = 76%	SPR that achieves 50% prob. recovery by T_{TARGET}	SPR that achieves 50% prob. recovery by 2011 T_{MAX}	SPR that achieves 50% prob. recovery by 2009 T_{MAX}	40:10 Harvest policy	OFL harvest rate SPR = 50%	SPR that achieves 50% prob. recovery by 2053	SPR that achieves 50% prob. recovery by 2061	SPR that achieves 50% prob. recovery by 2069	SPR that achieves 50% prob. recovery by 2077
2011	219.5	219.5	219.5	219.5	219.5	219.5	219.5	219.5	219.5	219.5	219.5	219.5	219.5
2012	224.4	224.4	224.4	224.4	224.4	224.4	224.4	224.4	224.4	224.4	224.4	224.4	224.4
2013	229.1	229.1	229.1	229.1	229.1	229.1	229.1	229.1	229.1	229.1	229.1	229.1	229.1
2014	235.4	233.9	233.6	233.5	233.2	232.9	232.7	231.4	230.0	234.4	233.8	233.4	233.1
2015	241.6	238.6	237.8	237.7	237.1	236.4	236.1	233.5	230.7	239.6	238.4	237.5	236.8
2016	247.6	243.1	242.0	241.8	240.8	239.8	239.3	235.4	231.2	244.6	242.8	241.4	240.4
2017	253.6	247.5	245.9	245.7	244.4	243.0	242.4	237.1	231.6	249.5	247.1	245.2	243.9
2018	259.4	251.7	249.8	249.5	247.8	246.1	245.3	238.6	231.8	254.3	251.3	248.8	247.2
2019	265.2	255.9	253.5	253.2	251.1	249.1	248.1	240.0	232.0	259.0	255.3	252.4	250.4
2020	271.0	259.9	257.2	256.8	254.4	252.0	250.8	241.3	232.1	263.7	259.3	255.8	253.5
2021	276.7	263.9	260.8	260.3	257.5	254.8	253.5	242.5	232.2	268.2	263.2	259.2	256.5
2022	282.3	267.8	264.3	263.8	260.6	257.6	256.0	243.7	232.2	272.7	267.0	262.5	259.5
2023	287.9	271.7	267.7	267.2	263.6	260.2	258.6	244.8	232.3	277.1	270.7	265.8	262.4
2024	293.5	275.5	271.1	270.6	266.7	262.9	261.1	245.9	232.4	281.5	274.5	269.0	265.3
2025	298.9	279.3	274.5	273.8	269.6	265.5	263.5	246.9	232.4	285.9	278.1	272.2	268.1
2026	304.4	282.9	277.7	277.1	272.4	268.0	265.8	247.8	232.4	290.1	281.7	275.2	270.8
2027	309.9	286.7	281.1	280.4	275.4	270.7	268.3	248.9	232.6	294.5	285.4	278.4	273.7
2028	315.5	290.5	284.4	283.7	278.3	273.2	270.7	249.9	232.7	298.8	289.0	281.5	276.5
2029	320.8	294.0	287.6	286.7	281.0	275.6	273.0	250.7	232.7	302.9	292.5	284.5	279.1
2030	326.4	297.8	290.9	290.0	284.0	278.3	275.4	251.9	232.9	307.2	296.1	287.6	281.9

Table 9b. Median spawning output (millions eggs) for rebuilding alternatives every 5 years from 2035-2085 with reference point years from Table 6 interspersed. (continued from Table 9a)

Run	1	2	3	4	5	6	7	8	9	10	11	12	13
-----	---	---	---	---	---	---	---	---	---	----	----	----	----

Basis	F=0 2013+	SPR with 2013-14 avg. ACL of 14 mt	SPR from 2012 ACL of 17 mt	SPR = 76%	SPR that achieves 50% prob. recovery by T_{TARGET}	SPR that achieves 50% prob. recovery by 2011 T_{MAX}	SPR that achieves 50% prob. recovery by 2009 T_{MAX}	40:10 Harvest policy	OFL harvest rate SPR = 50%	SPR that achieves 50% prob. recovery by 2053	SPR that achieves 50% prob. recovery by 2061	SPR that achieves 50% prob. recovery by 2069	SPR that achieves 50% prob. recovery by 2077
2035	354.6	316.7	307.7	306.6	298.7	291.3	287.6	257.1	234.5	329.2	314.5	303.4	296.0
2037	366.3	324.6	314.8	313.5	304.9	296.8	292.9	259.5	235.7	338.3	322.2	310.1	302.0
2040	384.1	336.4	325.4	323.9	314.3	305.2	300.8	262.8	237.1	351.9	333.8	320.1	311.0
2044	407.5	351.8	339.2	337.5	326.4	315.9	310.8	266.6	238.9	369.8	348.7	333.1	322.6
2045	414.1	356.1	342.8	341.1	329.6	318.8	313.5	267.7	239.5	374.9	352.9	336.5	325.7
2047	425.7	363.6	349.4	347.6	335.4	324.1	318.5	269.0	239.8	383.7	360.2	342.8	331.2
2050	442.3	375.0	359.5	357.5	344.2	331.7	325.6	270.9	241.8	396.2	371.3	352.2	339.6
2055	472.5	393.2	375.5	373.2	357.8	343.5	336.6	274.0	242.0	418.7	389.0	367.0	352.6
2060	501.9	411.8	391.6	389.1	372.0	356.2	348.6	278.5	243.9	440.8	406.9	382.2	366.3
2065	531.6	430.1	407.6	404.8	386.2	368.5	359.9	283.1	246.3	462.7	424.7	397.4	379.7
2067	545.1	438.1	414.8	411.8	392.1	374.3	365.4	284.5	247.0	472.2	432.6	403.8	385.6
2070	563.6	449.9	425.1	422.0	401.3	381.8	372.4	286.8	248.1	485.7	443.8	413.9	394.1
2074	586.1	464.0	437.4	434.0	411.3	391.1	381.1	289.6	249.2	503.4	457.6	424.9	404.0
2075	592.2	467.4	440.4	437.2	414.5	393.3	383.2	289.6	249.6	507.2	460.9	428.4	406.7
2080	622.8	486.2	456.2	452.4	428.0	405.4	394.3	292.6	251.9	529.0	479.2	443.0	419.7
2083	638.5	496.3	465.1	461.2	435.2	411.1	400.2	294.0	252.9	541.0	488.8	450.6	426.3
2085	649.3	502.1	470.4	466.4	439.9	416.1	405.0	295.6	253.6	547.8	494.6	455.7	431.2
2087	661.2	509.5	476.8	472.8	445.5	421.2	409.0	296.6	254.3	557.2	501.5	461.8	437.0
2089	671.9	515.3	481.3	477.4	450.0	425.3	412.8	297.1	255.2	564.3	507.0	466.3	441.2

Figures

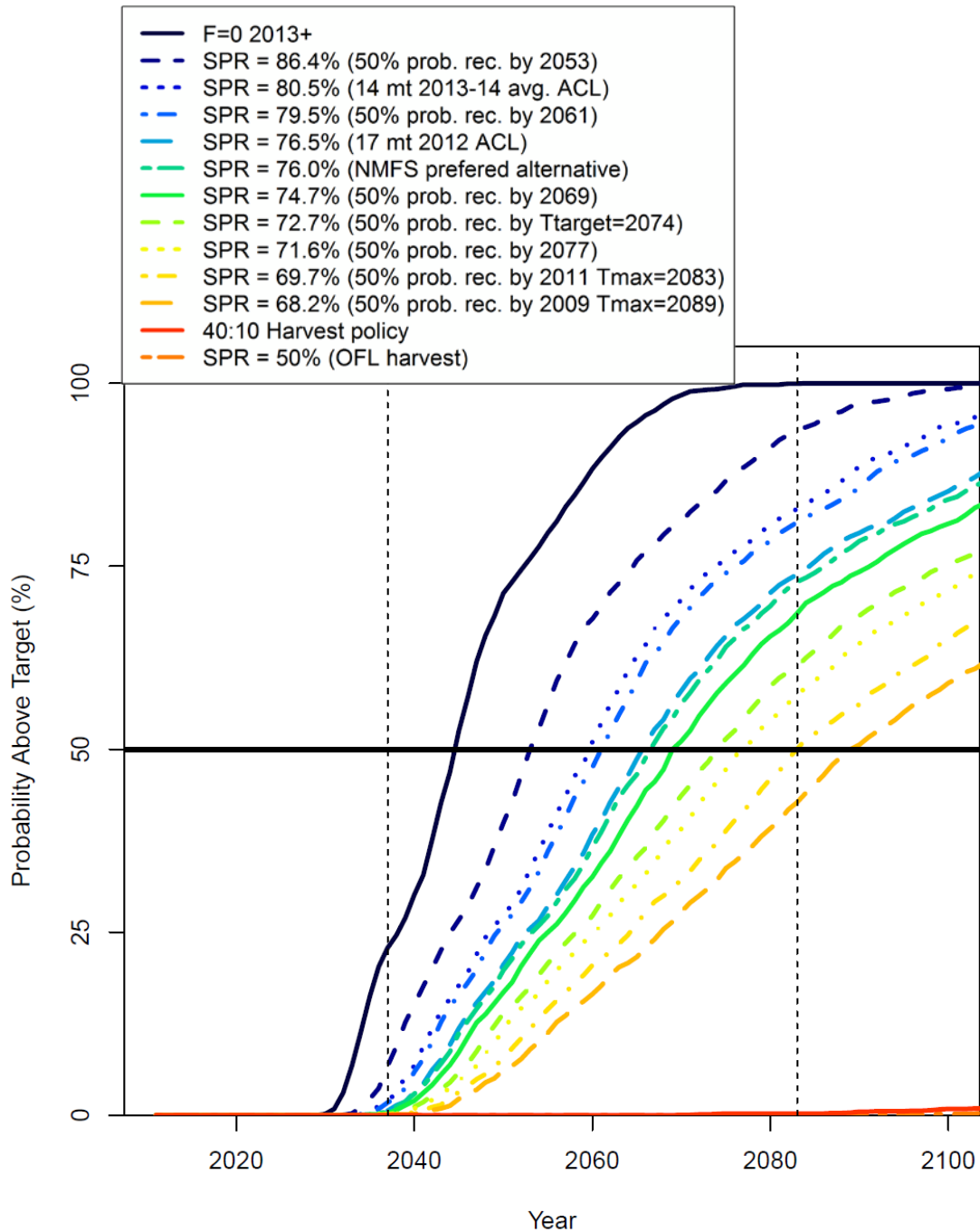


Figure 1. Probability of recovery for all rebuilding alternatives (SPR-based and year-based alternatives combined). Vertical dashed black lines indicate $T_{MIN} = 2037$ and $T_{MAX} = 2083$. Order of alternatives in legend matches the order of decreasing probability above target in any given year of the projections.

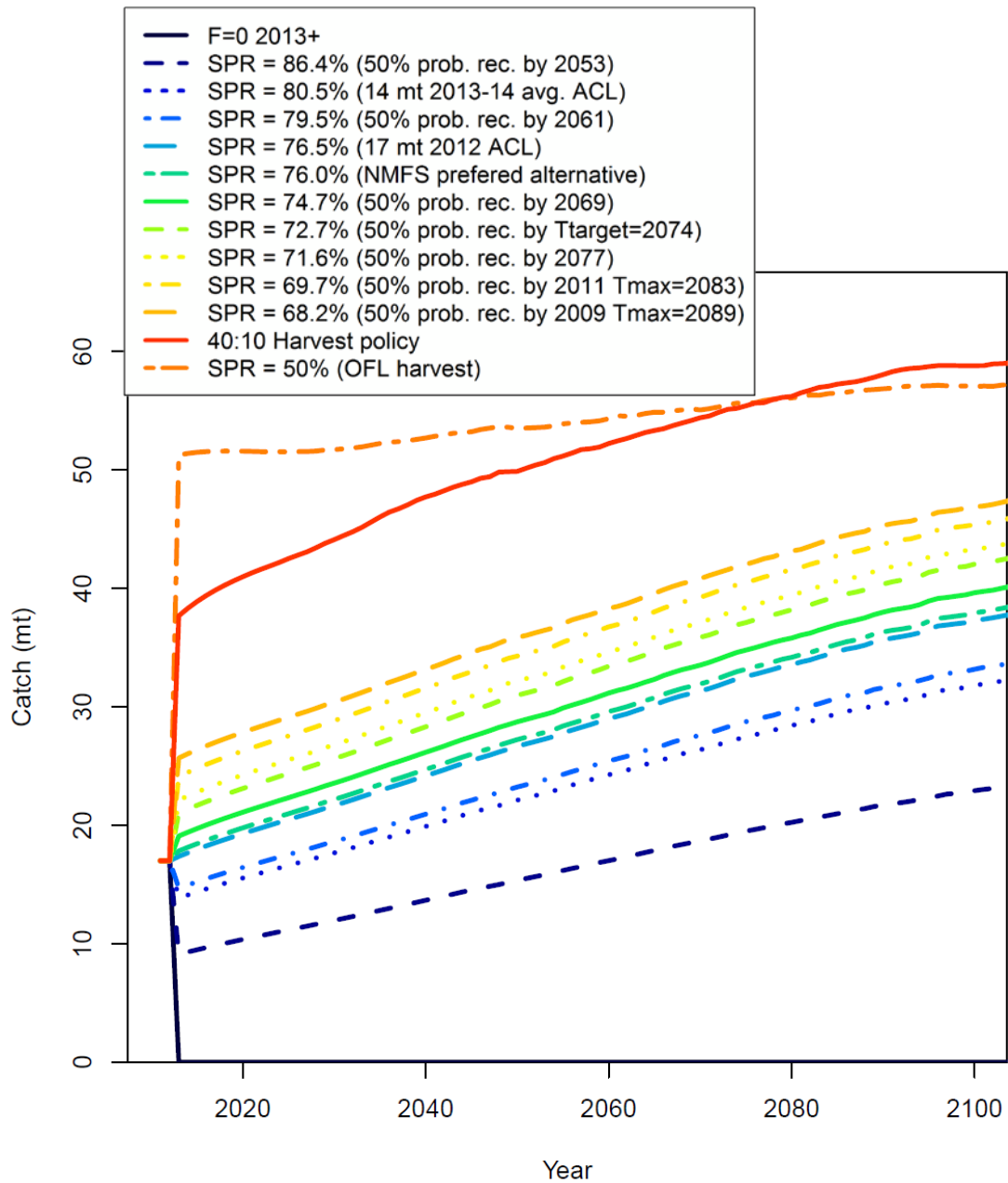


Figure 2. Projected median catch (mt) for rebuilding alternatives (SPR-based and year-based alternatives combined). Order of alternatives in legend matches the order of increasing catch in the year 2020 (reverse that of the order in the figure).

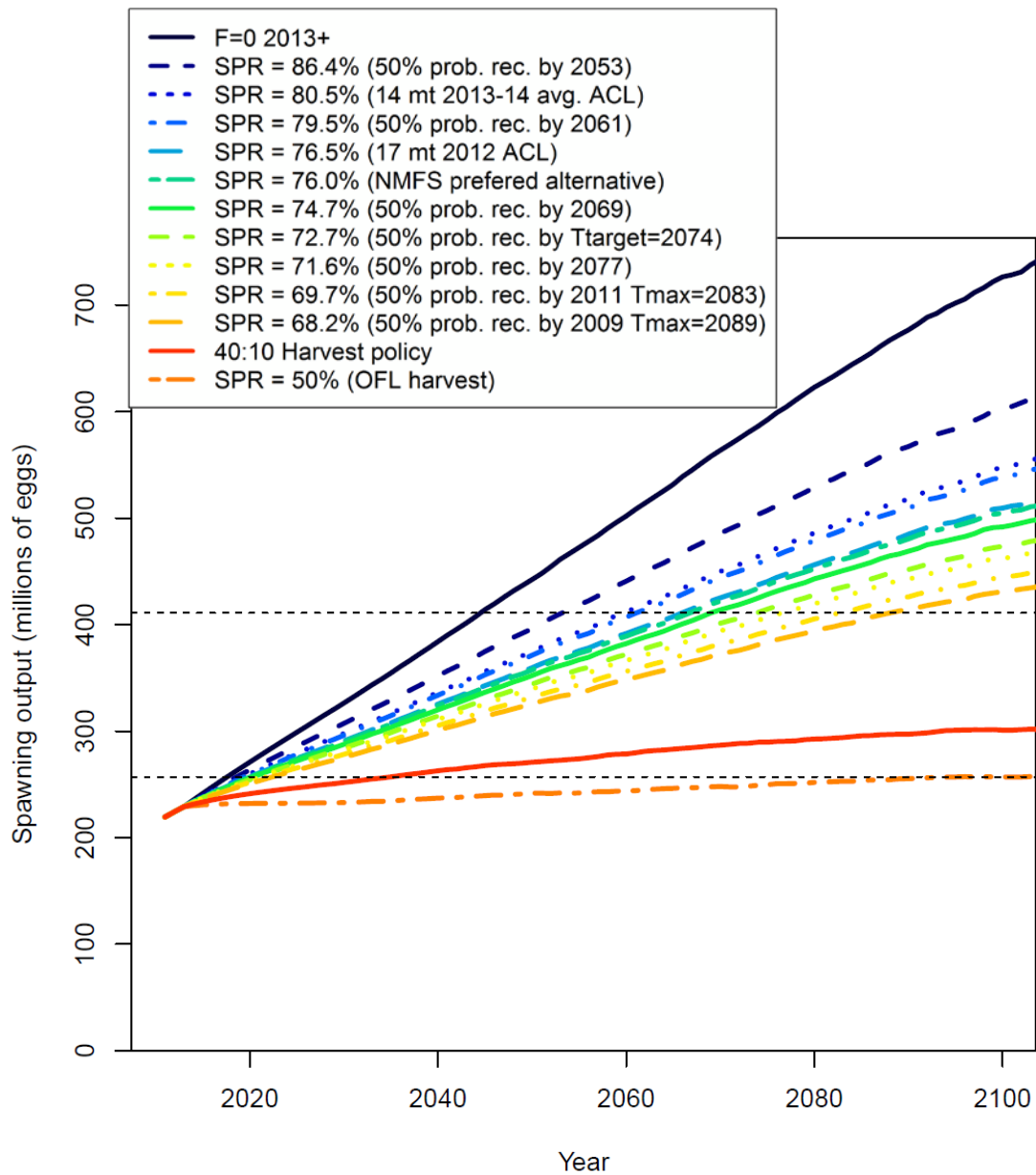


Figure 3. Projected median spawning output (millions of eggs) for rebuilding alternatives (SPR-based and year-based alternatives combined). Horizontal dashed black lines indicate 25% limit (256 million eggs) and 40% target (411 million eggs) relative to SB_0 (1028 million eggs). Order of alternatives in legend matches the order of decreasing spawning output in any given year of the projections.

Appendix A. Basic input file for rebuilding analyses

```
# Basic input file for 2011 yelloweye rebuilding analysis. This file used for projections
based on SPR rates.
Yelloweye_rebuilding_2011
# Number of sexes
2
# Age range to consider (minimum age; maximum age)
0 100
# Number of fleets
6
# First year of projection (Yinit)
2011
# First Year of rebuilding period (Ydecl)
2002
# Number of simulations
1600
# Maximum number of years
500
# Conduct projections with multiple starting values (0=No;else yes)
1
# Number of parameter vectors
16
# Is the maximum age a plus-group (1=Yes;2=No)
1
# Generate future recruitments using historical recruitments (1) historical
recruits/spawner (2) or a stock-recruitment (3)
3
# Constant fishing mortality (1) or constant Catch (2) projections
1
# Fishing mortality based on SPR (1) or actual rate (2)
1
# Pre-specify the year of recovery (or -1) to ignore
-1
# Fecundity-at-age
# 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61
62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91
92 93 94 95 96 97 98 99 100 #runnumber: 30 yelloweye_data.SS yelloweye_control.SS 6695.62
1.02769e+009 2.19494e+008
0 0 28.3083 103.285 341.553 1014.2 2671.83 6204.22 12732.7 23330.1 38706.4 59025.3
83919.4 112652 144327 178069 213134 248951 285123 321394 357616 393710 429639 465389
500951 536316 571471 606397 641068 675453 709517 743223 776532 809406 841807 873699
905048 935824 965999 995548 1.02445e+006 1.05268e+006 1.08023e+006 1.10709e+006
1.13325e+006 1.15869e+006 1.18343e+006 1.20744e+006 1.23075e+006 1.25334e+006
1.27523e+006 1.29641e+006 1.31691e+006 1.33672e+006 1.35586e+006 1.37433e+006
1.39217e+006 1.40936e+006 1.42594e+006 1.4419e+006 1.45728e+006 1.47208e+006 1.48632e+006
1.50001e+006 1.51318e+006 1.52583e+006 1.53798e+006 1.54965e+006 1.56086e+006
1.57161e+006 1.58192e+006 1.59208e+006 1.60182e+006 1.61116e+006 1.62012e+006 1.6287e+006
1.63692e+006 1.6448e+006 1.65234e+006 1.65957e+006 1.66648e+006 1.6731e+006 1.67944e+006
1.6855e+006 1.6913e+006 1.69685e+006 1.70216e+006 1.70724e+006 1.71209e+006 1.71673e+006
1.72117e+006 1.72541e+006 1.72946e+006 1.73334e+006 1.73704e+006 1.74058e+006
1.74396e+006 1.74719e+006 1.75027e+006 1.75322e+006 1.75866e+006 #female fecundity;
weighted by N in year Y_init across morphs and areas
# Age specific selectivity and weight adjusted for discard and discard mortality
#wt and selex for gender,fleet: 1 1
0.045147 0.163178 0.222696 0.290492 0.365223 0.445539 0.530285 0.618588 0.709839
0.803631 0.899683 0.997778 1.09772 1.19929 1.30227 1.4064 1.51143 1.61705 1.72297 1.82891
1.93457 2.03968 2.14398 2.24722 2.34919 2.44969 2.54855 2.6456 2.74072 2.8338 2.92474
3.01346 3.09991 3.18404 3.26582 3.34522 3.42225 3.4969 3.56919 3.63912 3.70673 3.77204
3.83509 3.89593 3.95458 4.0111 4.06554 4.11794 4.16836 4.21686 4.26348 4.30828 4.35131
4.39264 4.43231 4.47038 4.5069 4.54192 4.57551 4.6077 4.63855 4.6681 4.69641 4.72352
4.74949 4.77434 4.79812 4.82089 4.84267 4.86351 4.88357 4.9029 4.92139 4.93906 4.95596
4.97211 4.98755 5.0023 5.01641 5.02988 5.04276 5.05506 5.06681 5.07803 5.08876 5.099
5.10878 5.11812 5.12704 5.13555 5.14369 5.15145 5.15886 5.16594 5.1727 5.17914 5.1853
5.19117 5.19678 5.20214 5.212
0 0.0511233 0.0772332 0.112337 0.156989 0.21065 0.271667 0.337561 0.405497 0.472761
0.537103 0.596902 0.65118 0.699515 0.741909 0.778656 0.810226 0.837169 0.860061 0.879454
0.895857 0.909726 0.921458 0.931394 0.939825 0.946995 0.953108 0.958335 0.962819 0.966677
0.970009 0.972894 0.975403 0.977591 0.979505 0.981186 0.982667 0.983975 0.985135 0.986165
0.987085 0.987906 0.988643 0.989305 0.989902 0.990442 0.99093 0.991373 0.991776 0.992144
```

0.992479 0.992786 0.993068 0.993326 0.993564 0.993783 0.993985 0.994172 0.994345 0.994505
0.994654 0.994792 0.994921 0.995041 0.995152 0.995256 0.995354 0.995445 0.99553 0.995609
0.995681 0.995746 0.995807 0.995865 0.995919 0.995969 0.996017 0.996062 0.996105 0.996145
0.996183 0.996219 0.996253 0.996285 0.996315 0.996343 0.996371 0.996396 0.99642 0.996444
0.996465 0.996486 0.996506 0.996524 0.996542 0.996559 0.996575 0.99659 0.996604 0.996618
0.996643
#wt and selex for gender,fleet: 1 2
0.0462809 0.169552 0.232356 0.304214 0.383486 0.468356 0.557183 0.648721 0.74217
0.837091 0.933287 1.03069 1.12928 1.22902 1.32986 1.43167 1.53431 1.63757 1.74123 1.84504
1.94873 2.05204 2.15472 2.25653 2.35722 2.4566 2.55447 2.65067 2.74505 2.83748 2.92786
3.0161 3.10213 3.1859 3.26737 3.34651 3.4233 3.49775 3.56986 3.63965 3.70713 3.77233
3.83528 3.89603 3.95461 4.01106 4.06544 4.1178 4.16818 4.21663 4.26322 4.30799 4.351
4.39231 4.43196 4.47001 4.50651 4.54152 4.5751 4.60728 4.63811 4.66766 4.69597 4.72307
4.74903 4.77387 4.79766 4.82042 4.84219 4.86303 4.88309 4.90242 4.9209 4.93857 4.95546
4.97162 4.98705 5.00181 5.01591 5.02938 5.04226 5.05456 5.06631 5.07753 5.08825 5.09849
5.10827 5.11761 5.12653 5.13505 5.14318 5.15094 5.15835 5.16543 5.17218 5.17863 5.18479
5.19066 5.19627 5.20162 5.21149
0 0.0213283 0.0352642 0.0561355 0.0857149 0.125189 0.174691 0.233098 0.298189 0.367085
0.436791 0.504638 0.56856 0.627179 0.679765 0.726107 0.766378 0.800993 0.830503 0.855511
0.876615 0.89438 0.909315 0.921869 0.932428 0.941321 0.948827 0.955176 0.960562 0.965145
0.969056 0.972406 0.975285 0.977769 0.979918 0.981784 0.983411 0.984833 0.986082 0.987181
0.988151 0.989011 0.989776 0.990457 0.991066 0.991611 0.992102 0.992544 0.992943 0.993304
0.993632 0.993931 0.994202 0.994451 0.994678 0.994886 0.995077 0.995253 0.995415 0.995564
0.995702 0.99583 0.995949 0.996059 0.996161 0.996256 0.996344 0.996426 0.996503 0.996575
0.99664 0.996697 0.996751 0.996801 0.996849 0.996894 0.996936 0.996975 0.997012 0.997047
0.99708 0.997112 0.997141 0.997169 0.997195 0.99722 0.997243 0.997266 0.997287 0.997306
0.997325 0.997343 0.99736 0.997376 0.997391 0.997406 0.997419 0.997432 0.997444 0.997456
0.997478
#wt and selex for gender,fleet: 1 3
0.0504337 0.189018 0.257432 0.331995 0.409383 0.487655 0.566341 0.645863 0.726964
0.810375 0.896654 0.986129 1.07889 1.17484 1.2737 1.37507 1.4785 1.58348 1.68953 1.79614
1.90288 2.00933 2.11512 2.21995 2.32351 2.42558 2.52596 2.62445 2.72094 2.81528 2.9074
2.99721 3.08467 3.16972 3.25235 3.33253 3.41028 3.48558 3.55846 3.62895 3.69706 3.76284
3.82631 3.88754 3.94655 4.0034 4.05814 4.11083 4.16151 4.21025 4.25709 4.3021 4.34533
4.38683 4.42667 4.46489 4.50156 4.53672 4.57043 4.60273 4.63369 4.66335 4.69176 4.71896
4.745 4.76994 4.7938 4.81663 4.83848 4.85938 4.87949 4.89886 4.91738 4.93509 4.95202
4.96821 4.98368 4.99846 5.01259 5.02609 5.03899 5.05131 5.06309 5.07433 5.08507 5.09533
5.10513 5.11449 5.12342 5.13196 5.1401 5.14788 5.15531 5.1624 5.16916 5.17562 5.18179
5.18767 5.19329 5.19865 5.20854
0 0.0168565 0.0359177 0.0704144 0.125351 0.201915 0.296018 0.399604 0.503567 0.600364
0.685263 0.756326 0.813704 0.85879 0.893511 0.919871 0.93969 0.954505 0.965548 0.973775
0.979914 0.984509 0.987963 0.990573 0.992557 0.994075 0.995243 0.99615 0.996858 0.997415
0.997857 0.998209 0.998492 0.998722 0.998908 0.999062 0.999188 0.999293 0.99938 0.999454
0.999516 0.999569 0.999614 0.999653 0.999686 0.999715 0.99974 0.999762 0.999781 0.999798
0.999813 0.999826 0.999838 0.999848 0.999857 0.999866 0.999873 0.99988 0.999886 0.999892
0.999897 0.999902 0.999906 0.99991 0.999913 0.999916 0.999919 0.999922 0.999925 0.999927
0.999929 0.999931 0.999932 0.999934 0.999935 0.999937 0.999938 0.999939 0.99994 0.999941
0.999942 0.999943 0.999944 0.999945 0.999945 0.999946 0.999947 0.999947 0.999948 0.999948
0.999949 0.999949 0.99995 0.99995 0.999951 0.999951 0.999952 0.999952 0.999952 0.999952
0.999953
#wt and selex for gender,fleet: 1 4
0.0466444 0.171812 0.236089 0.310135 0.392403 0.480968 0.573886 0.669515 0.76669
0.864713 0.963252 1.0622 1.16158 1.26144 1.36181 1.4627 1.56407 1.66582 1.7678 1.86984
1.97175 2.0733 2.17428 2.27446 2.37364 2.4716 2.56818 2.66318 2.75648 2.84792 2.93742
3.02485 3.11016 3.19328 3.27417 3.35278 3.4291 3.50313 3.57486 3.6443 3.71147 3.77639
3.83909 3.8996 3.95797 4.01424 4.06845 4.12065 4.17089 4.21921 4.26568 4.31034 4.35325
4.39447 4.43403 4.472 4.50844 4.54338 4.57689 4.60901 4.6398 4.6693 4.69756 4.72462
4.75054 4.77535 4.79909 4.82182 4.84357 4.86437 4.88442 4.90372 4.92219 4.93984 4.95672
4.97286 4.98828 5.00302 5.01711 5.03057 5.04343 5.05572 5.06746 5.07868 5.08939 5.09962
5.10939 5.11873 5.12764 5.13615 5.14427 5.15203 5.15943 5.16651 5.17325 5.1797 5.18585
5.19172 5.19732 5.20267 5.21253
0 0.011426 0.0195259 0.0322319 0.0512246 0.078121 0.11406 0.159308 0.213068 0.273565
0.338381 0.40488 0.470599 0.533513 0.592155 0.645622 0.693497 0.735745 0.772597 0.804456
0.831809 0.855178 0.875076 0.891982 0.906331 0.91851 0.928852 0.937647 0.945139 0.951534
0.957006 0.961703 0.965744 0.969233 0.972253 0.974877 0.977164 0.979163 0.980916 0.982458
0.983819 0.985024 0.986093 0.987045 0.987895 0.988656 0.989339 0.989954 0.990509 0.99101
0.991464 0.991877 0.992253 0.992596 0.992909 0.993196 0.993459 0.993701 0.993923 0.994128
0.994317 0.994492 0.994655 0.994805 0.994944 0.995074 0.995195 0.995307 0.995412 0.99551
0.995597 0.995675 0.995748 0.995816 0.99588 0.995941 0.995997 0.996051 0.996101 0.996148
0.996193 0.996235 0.996275 0.996312 0.996348 0.996381 0.996413 0.996443 0.996471 0.996498

0.996523 0.996547 0.99657 0.996591 0.996612 0.996631 0.996649 0.996667 0.996683 0.996699
0.996728
#wt and selex for gender,fleet: 1 5
0.0458503 0.168306 0.231642 0.305371 0.388624 0.480165 0.578473 0.681886 0.788778
0.897715 1.00756 1.11747 1.22692 1.33558 1.44328 1.54993 1.65553 1.76007 1.86354 1.96594
2.06723 2.16738 2.26632 2.36398 2.46027 2.5551 2.64839 2.74004 2.82997 2.9181 3.00434
3.08863 3.17093 3.25117 3.32932 3.40534 3.47923 3.55097 3.62055 3.68798 3.75327 3.81643
3.87749 3.93648 3.99343 4.04836 4.10133 4.15238 4.20154 4.24886 4.29439 4.33817 4.38026
4.42071 4.45956 4.49687 4.53267 4.56703 4.59999 4.6316 4.6619 4.69094 4.71878 4.74544
4.77098 4.79543 4.81885 4.84126 4.86271 4.88324 4.90305 4.92218 4.94047 4.95796 4.97469
4.99068 5.00597 5.02058 5.03454 5.04789 5.06064 5.07282 5.08446 5.09558 5.1062 5.11635
5.12604 5.13529 5.14413 5.15257 5.16063 5.16832 5.17567 5.18268 5.18938 5.19577 5.20187
5.2077 5.21325 5.21856 5.22834
0 0.00497951 0.00812772 0.0129303 0.0200354 0.0302067 0.0442625 0.0629721 0.086926
0.116411 0.151331 0.191188 0.235142 0.282111 0.330901 0.380324 0.429299 0.476909 0.522437
0.565367 0.605371 0.642279 0.67605 0.706745 0.734491 0.759464 0.781866 0.801913 0.819821
0.835799 0.850049 0.862754 0.874085 0.884197 0.893229 0.901303 0.908532 0.915011 0.920828
0.926059 0.93077 0.935021 0.938862 0.94234 0.945494 0.948359 0.950967 0.953345 0.955515
0.957501 0.95932 0.960989 0.962523 0.963934 0.965235 0.966436 0.967546 0.968573 0.969524
0.970407 0.971227 0.971989 0.972699 0.97336 0.973977 0.974553 0.975091 0.975595 0.976066
0.976508 0.976906 0.977266 0.977603 0.977921 0.97822 0.978501 0.978766 0.979016 0.979252
0.979474 0.979684 0.979882 0.98007 0.980247 0.980414 0.980573 0.980723 0.980865 0.980999
0.981126 0.981247 0.981362 0.98147 0.981573 0.981671 0.981763 0.981851 0.981935 0.982014
0.982089 0.982227
#wt and selex for gender,fleet: 1 6
0.047457 0.17645 0.243537 0.321908 0.410686 0.508516 0.613589 0.723785 0.836934 0.951109
1.06483 1.17713 1.28749 1.39572 1.50187 1.60609 1.70859 1.80956 1.90918 2.00759 2.10486
2.20106 2.29619 2.39022 2.48312 2.5748 2.66519 2.7542 2.84174 2.92771 3.01203 3.09461
3.17538 3.25429 3.33126 3.40625 3.47924 3.55019 3.61909 3.68593 3.7507 3.81342 3.87411
3.93277 3.98943 4.04413 4.0969 4.14777 4.19679 4.24398 4.28941 4.33311 4.37514 4.41552
4.45433 4.4916 4.52738 4.56171 4.59466 4.62625 4.65655 4.68559 4.71343 4.74009 4.76564
4.7901 4.81352 4.83595 4.85741 4.87795 4.89777 4.91689 4.93519 4.95268 4.96941 4.98541
5.0007 5.01531 5.02928 5.04263 5.05538 5.06757 5.07922 5.09034 5.10097 5.11112 5.12081
5.13007 5.13891 5.14735 5.15542 5.16311 5.17046 5.17748 5.18418 5.19057 5.19668 5.20251
5.20807 5.21338 5.22317
0 0.00140879 0.00257294 0.0045632 0.00785473 0.0131087 0.0211776 0.0330585 0.0497792
0.0722262 0.100961 0.136078 0.177153 0.223289 0.273245 0.325598 0.378907 0.431846
0.483294 0.532373 0.578462 0.62117 0.660309 0.695849 0.727877 0.756568 0.782144 0.80486
0.824981 0.842767 0.858471 0.872327 0.884551 0.895338 0.904864 0.913285 0.920737 0.927341
0.933203 0.938416 0.943059 0.947203 0.950909 0.95423 0.957211 0.959893 0.962311 0.964495
0.966471 0.968263 0.969891 0.971372 0.972723 0.973958 0.975087 0.976122 0.977072 0.977946
0.97875 0.979492 0.980177 0.980811 0.981398 0.981942 0.982447 0.982916 0.983353 0.983759
0.984139 0.984493 0.984808 0.985089 0.985353 0.9856 0.985832 0.986049 0.986254 0.986446
0.986628 0.986798 0.986959 0.98711 0.987253 0.987388 0.987515 0.987635 0.987749 0.987856
0.987958 0.988054 0.988145 0.988231 0.988312 0.98839 0.988463 0.988532 0.988598 0.98866
0.98872 0.988776 0.988879
#wt and selex for gender,fleet: 2 1
0.0539259 0.185573 0.25267 0.328419 0.411174 0.499395 0.591863 0.687727 0.786456
0.887728 0.991338 1.09712 1.20489 1.31446 1.42557 1.53794 1.65126 1.7652 1.87941 1.99355
2.1073 2.22035 2.33241 2.44322 2.55253 2.66014 2.76586 2.86955 2.97105 3.07027 3.1671
3.26149 3.35337 3.44271 3.52948 3.61367 3.69528 3.77432 3.8508 3.92475 3.99621 4.06521
4.13179 4.19599 4.25787 4.31749 4.37488 4.43012 4.48325 4.53434 4.58344 4.63062 4.67593
4.71944 4.76119 4.80125 4.83969 4.87654 4.91187 4.94574 4.97819 5.00929 5.03907 5.06759
5.0949 5.12104 5.14607 5.17001 5.19293 5.21485 5.23595 5.25627 5.2757 5.29428 5.31205
5.32903 5.34526 5.36078 5.37561 5.38979 5.40333 5.41627 5.42863 5.44045 5.45173 5.46251
5.4728 5.48264 5.49203 5.501 5.50956 5.51774 5.52555 5.533 5.54012 5.54692 5.55341 5.5596
5.56551 5.57116 5.58159
0 0.0518398 0.079816 0.117909 0.166721 0.225504 0.292161 0.363647 0.436587 0.507864
0.575011 0.636368 0.691057 0.738838 0.779931 0.814846 0.844245 0.868839 0.889325 0.906346
0.920474 0.932201 0.941947 0.950061 0.956834 0.962504 0.967267 0.971282 0.974679 0.977566
0.980027 0.982135 0.983947 0.985511 0.986866 0.988045 0.989074 0.989975 0.990768 0.991468
0.992087 0.992636 0.993126 0.993564 0.993956 0.994308 0.994625 0.994912 0.995171 0.995406
0.99562 0.995816 0.995994 0.996157 0.996306 0.996443 0.996569 0.996686 0.996793 0.996892
0.996984 0.997069 0.997148 0.997221 0.997289 0.997353 0.997412 0.997468 0.997519 0.997568
0.997611 0.99765 0.997687 0.997721 0.997754 0.997784 0.997813 0.99784 0.997865 0.997889
0.997912 0.997933 0.997953 0.997972 0.99799 0.998008 0.998024 0.998039 0.998053 0.998067
0.99808 0.998092 0.998104 0.998115 0.998125 0.998135 0.998145 0.998154 0.998162 0.99817
0.998185
#wt and selex for gender,fleet: 2 2
0.0552534 0.192681 0.263397 0.343528 0.43103 0.5238 0.620085 0.718683 0.818926 0.920536
1.02346 1.12775 1.23345 1.34057 1.44904 1.55872 1.66943 1.78089 1.89283 2.00493 2.11687

2.22834 2.33904 2.44867 2.557 2.66377 2.7688 2.8719 2.97292 3.07173 3.16823 3.26234
 3.35399 3.44314 3.52976 3.61382 3.69532 3.77427 3.85069 3.92458 3.99599 4.06495 4.1315
 4.19568 4.25754 4.31714 4.37452 4.42975 4.48287 4.53396 4.58306 4.63023 4.67554 4.71904
 4.7608 4.80086 4.83929 4.87615 4.91149 4.94535 4.97781 5.0089 5.03869 5.06721 5.09452
 5.12067 5.14569 5.16964 5.19256 5.21448 5.23559 5.25591 5.27534 5.29392 5.31169 5.32867
 5.34491 5.36042 5.37526 5.38943 5.40297 5.41592 5.42828 5.44009 5.45138 5.46216 5.47245
 5.48229 5.49168 5.50065 5.50921 5.51739 5.5252 5.53266 5.53977 5.54657 5.55306 5.55925
 5.56517 5.57081 5.58124
 0 0.0217085 0.0367487 0.0596831 0.0925919 0.136787 0.192233 0.257331 0.329197 0.404272
 0.479017 0.550442 0.616385 0.675562 0.727455 0.772127 0.810028 0.841829 0.868293 0.890188
 0.908235 0.923079 0.935281 0.945317 0.953582 0.960405 0.966052 0.970742 0.974651 0.977922
 0.98067 0.982988 0.984953 0.986624 0.988052 0.989277 0.990333 0.991246 0.992039 0.992731
 0.993336 0.993868 0.994337 0.994751 0.995119 0.995446 0.995738 0.996 0.996235 0.996446
 0.996637 0.99681 0.996966 0.997109 0.997238 0.997357 0.997465 0.997564 0.997655 0.997739
 0.997816 0.997887 0.997953 0.998014 0.99807 0.998123 0.998171 0.998216 0.998259 0.998298
 0.998333 0.998364 0.998393 0.99842 0.998446 0.99847 0.998493 0.998514 0.998534 0.998553
 0.998571 0.998587 0.998603 0.998618 0.998632 0.998645 0.998658 0.99867 0.998681 0.998691
 0.998701 0.998711 0.99872 0.998728 0.998736 0.998744 0.998751 0.998758 0.998765 0.998771
 0.998782
 #wt and selex for gender,fleet: 2 3
 0.0601075 0.214219 0.290644 0.372767 0.456919 0.541321 0.625889 0.711421 0.798942
 0.889352 0.983281 1.08104 1.18265 1.28787 1.39629 1.50736 1.62049 1.73505 1.85046 1.96618
 2.08171 2.19662 2.31053 2.42313 2.53414 2.64333 2.7505 2.85551 2.95821 3.05851 3.15632
 3.25159 3.34425 3.4343 3.5217 3.60646 3.68857 3.76807 3.84497 3.91929 3.99109 4.06039
 4.12724 4.1917 4.25381 4.31363 4.37121 4.42662 4.47991 4.53115 4.58038 4.62768 4.6731
 4.71671 4.75856 4.79871 4.83723 4.87416 4.90956 4.94349 4.97601 5.00716 5.03699 5.06556
 5.09292 5.1191 5.14417 5.16815 5.1911 5.21306 5.23419 5.25452 5.27397 5.29257 5.31035
 5.32735 5.3436 5.35913 5.37398 5.38816 5.40172 5.41467 5.42705 5.43887 5.45016 5.46095
 5.47125 5.48109 5.49049 5.49947 5.50804 5.51623 5.52404 5.5315 5.53863 5.54543 5.55192
 5.55812 5.56404 5.56969 5.58013
 0 0.0173676 0.0382509 0.0767998 0.138612 0.224342 0.328234 0.44021 0.549681 0.648575
 0.732478 0.80025 0.852958 0.892796 0.92228 0.94378 0.959307 0.970457 0.978446 0.984174
 0.988291 0.991264 0.993423 0.995001 0.996164 0.997028 0.997674 0.998163 0.998535 0.99882
 0.999042 0.999215 0.999351 0.99946 0.999546 0.999616 0.999673 0.999719 0.999757 0.999789
 0.999815 0.999837 0.999856 0.999872 0.999885 0.999897 0.999907 0.999915 0.999923 0.999929
 0.999935 0.99994 0.999945 0.999949 0.999952 0.999955 0.999958 0.99996 0.999963 0.999965
 0.999966 0.999968 0.99997 0.999971 0.999972 0.999973 0.999974 0.999975 0.999976 0.999977
 0.999978 0.999978 0.999979 0.999979 0.99998 0.99998 0.999981 0.999981 0.999982 0.999982
 0.999982 0.999983 0.999983 0.999983 0.999983 0.999984 0.999984 0.999984 0.999984 0.999984
 0.999985 0.999985 0.999985 0.999985 0.999985 0.999985 0.999985 0.999986 0.999986 0.999986
 0.999986
 #wt and selex for gender,fleet: 2 4
 0.0556789 0.195209 0.267577 0.35015 0.44094 0.537655 0.638145 0.74075 0.844425 0.948657
 1.0533 1.15843 1.26416 1.37063 1.47791 1.58603 1.69489 1.80437 1.91426 2.02434 2.13434
 2.24397 2.35297 2.46106 2.56799 2.67352 2.77744 2.87956 2.97971 3.07777 3.17361 3.26714
 3.35829 3.447 3.53323 3.61695 3.69816 3.77685 3.85304 3.92673 3.99796 4.06676 4.13317
 4.19723 4.25898 4.31848 4.37577 4.43092 4.48397 4.53499 4.58403 4.63115 4.67641 4.71987
 4.76159 4.80161 4.84001 4.87684 4.91214 4.94599 4.97842 5.00949 5.03926 5.06776 5.09506
 5.12119 5.1462 5.17013 5.19304 5.21495 5.23604 5.25635 5.27578 5.29435 5.31211 5.32909
 5.34532 5.36083 5.37566 5.38983 5.40337 5.41631 5.42867 5.44048 5.45176 5.46253 5.47283
 5.48266 5.49205 5.50101 5.50957 5.51775 5.52556 5.53301 5.54013 5.54692 5.55341 5.5596
 5.56551 5.57116 5.58159
 0 0.0116461 0.020415 0.0344617 0.0557967 0.0863221 0.127287 0.178795 0.239606 0.307321
 0.37886 0.451034 0.521016 0.586629 0.646439 0.699711 0.746272 0.786357 0.820457 0.849204
 0.873276 0.893338 0.910009 0.92384 0.935311 0.94483 0.952741 0.95933 0.964832 0.96944
 0.973313 0.97658 0.979345 0.981696 0.983701 0.985419 0.986896 0.988172 0.989277 0.990239
 0.991079 0.991814 0.992462 0.993033 0.993538 0.993987 0.994387 0.994744 0.995065 0.995352
 0.995611 0.995845 0.996057 0.99625 0.996424 0.996584 0.996729 0.996862 0.996984 0.997096
 0.997199 0.997294 0.997382 0.997463 0.997538 0.997607 0.997672 0.997732 0.997788 0.99784
 0.997886 0.997927 0.997965 0.998001 0.998035 0.998066 0.998096 0.998124 0.99815 0.998175
 0.998198 0.99822 0.99824 0.99826 0.998278 0.998295 0.998312 0.998327 0.998342 0.998356
 0.998369 0.998381 0.998393 0.998404 0.998414 0.998424 0.998434 0.998443 0.998451 0.998459
 0.998474
 #wt and selex for gender,fleet: 2 5
 0.0547497 0.191323 0.26274 0.345176 0.437425 0.537908 0.644796 0.756201 0.870385 0.98592
 1.10176 1.21722 1.33192 1.44568 1.55846 1.6703 1.78122 1.89128 2.00049 2.10884 2.21629
 2.32278 2.42819 2.53244 2.63538 2.7369 2.83686 2.93515 3.03163 3.12621 3.21877 3.30925
 3.39755 3.48363 3.56744 3.64893 3.72809 3.80491 3.87937 3.9515 4.02129 4.08877 4.15397
 4.21692 4.27766 4.33623 4.39267 4.44703 4.49937 4.54972 4.59815 4.64471 4.68945 4.73243
 4.7737 4.81332 4.85133 4.8878 4.92278 4.95632 4.98847 5.01927 5.04879 5.07706 5.10414
 5.13007 5.15489 5.17865 5.20139 5.22314 5.24411 5.26433 5.28366 5.30215 5.31983 5.33674


```

0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
0.045087 0.045087
52.6066 49.3912 46.2971 43.3768 40.7037 38.0065 35.4707 33.0233 30.6692 28.4609 26.9206
25.2618 24.9744 24.0833 24.4625 24.3491 24.39 23.953 23.9473 23.8394 23.2722 21.8654
20.7287 19.1775 17.484 15.7275 14.2319 12.694 11.3336 10.1919 9.04001 7.94401 7.00898
6.18417 5.41966 4.75987 4.18558 3.6957 3.27249 2.91151 2.59848 2.32761 2.10015 1.89818
1.72437 1.57356 1.44698 1.3308 1.22951 1.14044 1.06067 0.989601 0.925714 0.868 0.815176
0.7665 0.721413 0.67952 0.640538 0.604586 0.571268 0.540039 0.510864 0.48395 0.458639
0.436059 0.415118 0.394545 0.375124 0.356101 0.338018 0.3208 0.30436 0.288791 0.274004
0.259979 0.246655 0.234042 0.222127 0.210922 0.20038 0.190476 0.181151 0.172346 0.164042
0.156202 0.148791 0.141772 0.135123 0.128821 0.122844 0.11717 0.111778 0.10666 0.101791
0.0971527 0.092725 0.0885102 0.0844965 0.0806734 1.736
# Age-structure at Ydeclare= 2013
54.1634 50.9936 47.9496 44.9513 42.0732 39.3559 36.8657 34.3578 32.0015 29.7326 27.5565
25.5209 24.0929 22.5667 22.2712 21.4425 21.7497 21.6244 21.6447 21.2521 21.2555 21.1835
20.7193 19.5208 18.5724 17.2568 15.8101 14.2969 13.0076 11.6639 10.4662 9.45424 8.418
7.42057 6.56278 5.80009 5.08803 4.4701 3.92968 3.46675 3.06534 2.72177 2.42299 2.16383
1.94559 1.75171 1.58472 1.43984 1.3181 1.20678 1.1099 1.02491 0.949067 0.881742 0.821467
0.767253 0.717882 0.672628 0.630936 0.592403 0.55673 0.523971 0.493739 0.465522 0.43926
0.415102 0.392462 0.372285 0.353619 0.335373 0.318209 0.301478 0.285632 0.270604 0.256307
0.242812 0.230031 0.217936 0.206468 0.195627 0.185394 0.175776 0.166732 0.158239 0.150249
0.142711 0.135609 0.128914 0.122595 0.11662 0.110971 0.105627 0.100568 0.0957748
0.0912288 0.0869224 0.082832 0.0789428 0.075237 0.0717155 1.49763
54.1634 51.0523 48.0599 45.106 42.2653 39.5788 37.1138 34.6243 32.2811 30.0201 27.8476
25.8124 24.388 22.8611 22.579 21.7543 22.0794 21.9618 21.9852 21.5798 21.5647 21.459
20.9411 19.6693 18.6419 17.243 15.7171 14.1356 12.7894 11.4058 10.1823 9.15567 8.12021
7.13523 6.29504 5.55401 4.86724 4.2746 3.75881 3.31887 2.93883 2.6147 2.33364 2.09045
1.88624 1.70493 1.54889 1.41351 1.29988 1.19559 1.10466 1.02469 0.953065 0.889252
0.831882 0.780051 0.732607 0.688884 0.648382 0.610746 0.575722 0.543419 0.513481 0.485418
0.459199 0.435012 0.412265 0.391972 0.373151 0.354659 0.337203 0.320105 0.30385 0.288373
0.273594 0.259598 0.246304 0.233694 0.221715 0.210376 0.199663 0.189589 0.180112 0.171208
0.162825 0.15491 0.147445 0.140397 0.133735 0.127426 0.12145 0.115786 0.110413 0.105312
0.100466 0.0958667 0.09149 0.0873211 0.0833414 0.0795531 1.70878
# Year for Tmin Age-structure (set to Ydecl by SS)
2002
# recruitment and biomass
# Number of historical assessment years
97
# Historical data
# year recruitment spawner in B0 in R project in R/S project
1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931
1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949
1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967
1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985
1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003
2004 2005 2006 2007 2008 2009 2010 2011 #years (with first value representing R0)
228.199 228.199 228.166 228.122 228.071 228.038 228.003 227.968 227.935 227.9 227.86
227.803 227.737 227.663 227.578 227.462 227.341 227.238 227.14 227.061 226.964 226.847
226.693 226.543 226.396 226.285 226.112 225.898 225.629 224.966 224.299 223.184 222.249
221.888 221.465 221.191 220.897 220.532 220.22 219.99 219.692 219.308 218.834 218.279
217.679 217.14 216.651 216.251 215.77 215.4 215.155 214.069 213.646 213.144 212.617
211.353 210.501 209.319 207.77 206.266 204.52 202.876 200.874 198.754 194.927 190.919
187.556 182.49 175.465 170.295 166.016 160.484 157.121 152.945 147.979 141.01 136.72
128.709 119.802 111.758 106.713 100.33 95.2454 88.9269 87.5695 84.2707 85.5017 86.1407
88.5068 90.9232 93.2207 95.3794 97.5645 99.3524 101.342 103.338 105.213 #recruits; first
value is R0 (virgin)
1.02769e+009 1.02769e+009 1.02723e+009 1.0266e+009 1.02589e+009 1.02542e+009
1.02492e+009 1.02443e+009 1.02396e+009 1.02347e+009 1.02291e+009 1.0221e+009 1.02118e+009
1.02014e+009 1.01895e+009 1.01732e+009 1.01562e+009 1.01419e+009 1.01282e+009
1.01172e+009 1.01038e+009 1.00876e+009 1.00664e+009 1.00457e+009 1.00254e+009
1.00103e+009 9.98666e+008 9.95743e+008 9.92105e+008 9.83185e+008 9.74338e+008
9.59766e+008 9.47766e+008 9.4319e+008 9.37871e+008 9.34446e+008 9.30784e+008 9.26264e+008
9.22426e+008 9.19604e+008 9.15972e+008 9.11322e+008 9.05614e+008 8.99004e+008
8.91914e+008 8.8562e+008 8.79954e+008 8.75358e+008 8.69862e+008 8.65667e+008 8.62907e+008
8.508e+008 8.46141e+008 8.40657e+008 8.34945e+008 8.21452e+008 8.12511e+008 8.00317e+008
7.84671e+008 7.69837e+008 7.53059e+008 7.37659e+008 7.19426e+008 7.00704e+008
6.68345e+008 6.36313e+008 6.10778e+008 5.74454e+008 5.27919e+008 4.96218e+008
4.71449e+008 4.4124e+008 4.23796e+008 4.03031e+008 3.79555e+008 3.48642e+008 3.307e+008
2.99193e+008 2.66925e+008 2.40004e+008 2.24091e+008 2.0494e+008 1.90416e+008 1.73207e+008
1.69624e+008 1.61081e+008 1.64243e+008 1.65896e+008 1.72094e+008 1.78547e+008

```



```
0
# File with time series of weight-at-age data
none
# Use bisection (0) or linear interpolation (1)
0
# Target Depletion
0.4
# CV of implementation error
0
```

Appendix B. Parameter vector input file for rebuilding analyses

```
# values from cat75_hlow, catch at 75% and steepness at low value. # this is state of
nature 1 out of 9 (in no particular order) # and parameter set number 1 out of 1 for this
state
0 0 29.7616 108.042 355.495 1050.11 2751.72 6357.19 12987 23703.3 39199.8 59624.7
84600.9 113389 145096 178851 213918 249730 285895 322160 358379 394474 430410 466169
501746 537131 572311 607266 641970 676393 710500 744252 777613 810542 843002 874957
906373 937219 967467 997092 1.02607e+006 1.05439e+006 1.08202e+006 1.10897e+006
1.13521e+006 1.16075e+006 1.18557e+006 1.20968e+006 1.23308e+006 1.25577e+006
1.27775e+006 1.29903e+006 1.31962e+006 1.33952e+006 1.35876e+006 1.37733e+006
1.39526e+006 1.41255e+006 1.42922e+006 1.44528e+006 1.46074e+006 1.47563e+006
1.48996e+006 1.50374e+006 1.517e+006 1.52973e+006 1.54197e+006 1.55372e+006 1.565e+006
1.57583e+006 1.58623e+006 1.59646e+006 1.60628e+006 1.6157e+006 1.62472e+006 1.63338e+006
1.64167e+006 1.64961e+006 1.65723e+006 1.66451e+006 1.67149e+006 1.67817e+006
1.68457e+006 1.69069e+006 1.69655e+006 1.70215e+006 1.70751e+006 1.71264e+006
1.71754e+006 1.72223e+006 1.72671e+006 1.731e+006 1.7351e+006 1.73901e+006 1.74276e+006
1.74633e+006 1.74975e+006 1.75302e+006 1.75614e+006 1.75912e+006 1.76463e+006 #female
fecundity; weighted by N in year Y_init across morphs and areas
0.0455376 0.16493 0.224524 0.292289 0.366898 0.447035 0.531582 0.619697 0.710794
0.804474 0.900459 0.998527 1.09847 1.20008 1.30312 1.40732 1.51242 1.61813 1.72414
1.83017 1.93592 2.04112 2.14551 2.24885 2.35091 2.45151 2.55047 2.64763 2.74286 2.83605
2.9271 3.01595 3.10252 3.18679 3.2687 3.34825 3.42542 3.50023 3.57266 3.64276 3.71053
3.776 3.83922 3.90022 3.95904 4.01573 4.07034 4.12292 4.17352 4.22218 4.26898 4.31395
4.35716 4.39865 4.43849 4.47673 4.51341 4.5486 4.58234 4.61469 4.6457 4.67541 4.70387
4.73113 4.75724 4.78223 4.80616 4.82906 4.85098 4.87194 4.89214 4.9116 4.93021 4.948
4.96502 4.98128 4.99684 5.0117 5.02591 5.03949 5.05246 5.06486 5.07671 5.08803 5.09884
5.10917 5.11903 5.12845 5.13745 5.14605 5.15425 5.16209 5.16957 5.17671 5.18353 5.19005
5.19626 5.2022 5.20786 5.21327 5.22326 #bodywt for gender,fleet: 1 / 1
0 0.0544711 0.0817579 0.118143 0.164042 0.218765 0.280533 0.346798 0.414724 0.481651
0.54541 0.60447 0.657934 0.705443 0.747045 0.783062 0.813977 0.840347 0.862744 0.881714
0.89776 0.911328 0.922809 0.932535 0.940791 0.947815 0.953807 0.958933 0.963332 0.967119
0.970391 0.973226 0.975692 0.977844 0.979728 0.981383 0.982841 0.98413 0.985273 0.98629
0.987197 0.988008 0.988736 0.98939 0.98998 0.990513 0.990995 0.991434 0.991832 0.992196
0.992528 0.992832 0.993111 0.993367 0.993603 0.99382 0.99402 0.994205 0.994377 0.994536
0.994683 0.994821 0.994948 0.995067 0.995178 0.995281 0.995378 0.995468 0.995553 0.995632
0.995704 0.995768 0.995829 0.995886 0.995939 0.99599 0.996037 0.996082 0.996125 0.996165
0.996202 0.996238 0.996272 0.996303 0.996334 0.996362 0.996389 0.996415 0.996439 0.996462
0.996483 0.996504 0.996524 0.996542 0.99656 0.996576 0.996592 0.996607 0.996622 0.996635
0.99666 #selex for gender,fleet: 1 / 1
0.0466962 0.171499 0.234454 0.306351 0.385551 0.470264 0.558887 0.650217 0.74348
0.838256 0.934353 1.0317 1.13027 1.23003 1.3309 1.43277 1.53548 1.63882 1.74256 1.84644
1.95022 2.05362 2.15638 2.25827 2.35906 2.45853 2.5565 2.6528 2.74728 2.83982 2.93031
3.01867 3.10482 3.18872 3.27032 3.3496 3.42654 3.50114 3.5734 3.64334 3.71097 3.77633
3.83945 3.90036 3.95911 4.01574 4.07029 4.12281 4.17336 4.22199 4.26875 4.31369 4.35687
4.39835 4.43816 4.47638 4.51305 4.54823 4.58196 4.61429 4.64529 4.67499 4.70345 4.7307
4.7568 4.78179 4.80571 4.82861 4.85052 4.87148 4.89168 4.91113 4.92974 4.94753 4.96454
4.98081 4.99636 5.01122 5.02543 5.03901 5.05198 5.06438 5.07622 5.08754 5.09835 5.10868
5.11854 5.12796 5.13696 5.14555 5.15376 5.16159 5.16907 5.17622 5.18304 5.18955 5.19576
5.2017 5.20736 5.21277 5.22276 #bodywt for gender,fleet: 1 / 2
0 0.0225958 0.0371544 0.0588146 0.0893036 0.129716 0.18007 0.239131 0.304606 0.373598
0.443136 0.510609 0.574019 0.632052 0.684031 0.729785 0.76951 0.803636 0.832718 0.857357
0.87815 0.895654 0.910371 0.922745 0.933156 0.941927 0.949332 0.955599 0.960917 0.965444
0.969309 0.972621 0.975469 0.977926 0.980053 0.981901 0.983512 0.984922 0.986159 0.987249
0.988212 0.989065 0.989824 0.9905 0.991105 0.991647 0.992134 0.992573 0.99297 0.99333
0.993656 0.993952 0.994223 0.99447 0.994696 0.994903 0.995093 0.995268 0.995429 0.995578
0.995716 0.995843 0.995961 0.996071 0.996172 0.996267 0.996355 0.996437 0.996514 0.996586
0.99665 0.996707 0.996761 0.996812 0.996859 0.996903 0.996945 0.996985 0.997022 0.997057
0.99709 0.997121 0.997151 0.997178 0.997205 0.997229 0.997253 0.997275 0.997296 0.997316
0.997335 0.997352 0.997369 0.997385 0.997401 0.997415 0.997429 0.997442 0.997454 0.997466
0.997487 #selex for gender,fleet: 1 / 2
0.0509818 0.191557 0.260062 0.33442 0.41139 0.489176 0.567422 0.646605 0.727485 0.810787
0.897052 0.986584 1.07946 1.17554 1.27456 1.37609 1.47967 1.5848 1.69097 1.7977 1.90454
2.01109 2.11697 2.22188 2.32553 2.42769 2.52814 2.62673 2.7233 2.81775 2.90997 2.99989
3.08746 3.17263 3.25538 3.3357 3.41358 3.48903 3.56206 3.63269 3.70096 3.76689 3.83053
3.89191 3.95109 4.00811 4.06302 4.11588 4.16673 4.21564 4.26265 4.30783 4.35123 4.3929
4.4329 4.47129 4.50812 4.54344 4.57731 4.60977 4.64089 4.6707 4.69926 4.72661 4.7528
4.77787 4.80187 4.82484 4.84682 4.86785 4.8881 4.90759 4.92624 4.94407 4.96112 4.97742
4.993 5.00789 5.02213 5.03573 5.04873 5.06115 5.07302 5.08436 5.09519 5.10554 5.11542
5.12486 5.13387 5.14248 5.1507 5.15855 5.16604 5.1732 5.18003 5.18656 5.19278 5.19873
5.2044 5.20982 5.21982 #bodywt for gender,fleet: 1 / 3
```

0 0.0179931 0.0382032 0.0744887 0.131698 0.210569 0.306484 0.411033 0.515049 0.611154
0.694887 0.764571 0.820557 0.864358 0.897963 0.923392 0.942457 0.956672 0.967243 0.975103
0.980958 0.985333 0.988617 0.991095 0.992976 0.994414 0.99552 0.996377 0.997046 0.997572
0.997988 0.99832 0.998587 0.998803 0.998978 0.999122 0.999241 0.999339 0.999422 0.999491
0.999549 0.999598 0.999641 0.999677 0.999708 0.999735 0.999758 0.999779 0.999797 0.999812
0.999826 0.999839 0.99985 0.999859 0.999868 0.999876 0.999883 0.999889 0.999895 0.9999
0.999905 0.999909 0.999913 0.999917 0.99992 0.999923 0.999926 0.999928 0.999931 0.999933
0.999935 0.999936 0.999938 0.999939 0.99994 0.999942 0.999943 0.999944 0.999945 0.999946
0.999947 0.999948 0.999948 0.999949 0.99995 0.99995 0.999951 0.999952 0.999952 0.999953
0.999953 0.999954 0.999954 0.999954 0.999955 0.999955 0.999955 0.999956 0.999956 0.999956
0.999957 #selex for gender,fleet: 1 / 3
0.047076 0.173866 0.238336 0.312456 0.394654 0.483012 0.575617 0.67088 0.767683 0.865368
0.963624 1.06236 1.16158 1.26135 1.36169 1.4626 1.56402 1.66584 1.76793 1.87009 1.97212
2.07381 2.17493 2.27526 2.37459 2.4727 2.56942 2.66458 2.75803 2.84963 2.93928 3.02688
3.11235 3.19563 3.27668 3.35546 3.43195 3.50615 3.57805 3.64767 3.71501 3.78011 3.84299
3.90368 3.96224 4.01868 4.07307 4.12545 4.17587 4.22438 4.27102 4.31586 4.35895 4.40034
4.44008 4.47822 4.51482 4.54993 4.58361 4.61589 4.64684 4.67649 4.70491 4.73212 4.75818
4.78314 4.80703 4.8299 4.85178 4.87272 4.89289 4.91233 4.93091 4.94869 4.96569 4.98194
4.99748 5.01233 5.02652 5.04009 5.05306 5.06544 5.07728 5.08859 5.09939 5.10971 5.11956
5.12898 5.13797 5.14656 5.15475 5.16258 5.17006 5.1772 5.18401 5.19052 5.19673 5.20266
5.20832 5.21373 5.2237 #bodywt for gender,fleet: 1 / 4
0 0.0122524 0.0208402 0.0342343 0.0541294 0.0821141 0.119247 0.165675 0.220472 0.281758
0.347053 0.413712 0.479302 0.541855 0.599971 0.652808 0.700006 0.741571 0.777766 0.809009
0.835802 0.85867 0.878123 0.89464 0.908651 0.920537 0.930628 0.939205 0.946511 0.952746
0.958081 0.962658 0.966598 0.969998 0.972942 0.9755 0.977729 0.979677 0.981386 0.98289
0.984217 0.985391 0.986434 0.987362 0.988191 0.988934 0.9896 0.9902 0.990741 0.99123
0.991673 0.992076 0.992443 0.992777 0.993083 0.993363 0.99362 0.993856 0.994073 0.994273
0.994458 0.994629 0.994787 0.994934 0.99507 0.995197 0.995315 0.995424 0.995527 0.995622
0.995708 0.995784 0.995855 0.995922 0.995985 0.996044 0.996099 0.996151 0.996201 0.996247
0.996291 0.996332 0.99637 0.996407 0.996442 0.996474 0.996505 0.996535 0.996562 0.996588
0.996613 0.996637 0.996659 0.99668 0.9967 0.996719 0.996737 0.996754 0.99677 0.996786
0.996814 #selex for gender,fleet: 1 / 4
0.0463972 0.170948 0.234773 0.308938 0.392524 0.484231 0.582478 0.685567 0.79187
0.899989 1.00884 1.11768 1.22602 1.3336 1.44029 1.54604 1.65086 1.75474 1.85769 1.95969
2.0607 2.16067 2.25953 2.35719 2.45355 2.54853 2.64201 2.73389 2.82409 2.9125 2.99906
3.08369 3.16632 3.24691 3.32542 3.4018 3.47605 3.54814 3.61808 3.68586 3.75149 3.81499
3.87639 3.9357 3.99297 4.04822 4.1015 4.15284 4.2023 4.24991 4.29572 4.33978 4.38214
4.42284 4.46195 4.4995 4.53555 4.57014 4.60333 4.63516 4.66568 4.69494 4.72297 4.74984
4.77557 4.80021 4.82381 4.8464 4.86802 4.88872 4.90869 4.92797 4.94641 4.96404 4.98091
4.99703 5.01245 5.02718 5.04127 5.05473 5.0676 5.0799 5.09164 5.10287 5.11359 5.12384
5.13362 5.14297 5.15189 5.16042 5.16856 5.17633 5.18376 5.19085 5.19761 5.20408 5.21024
5.21613 5.22176 5.22712 5.23703 #bodywt for gender,fleet: 1 / 5
0 0.00532106 0.00872229 0.0139284 0.0216487 0.0327128 0.0479958 0.0682969 0.0941933
0.125908 0.163234 0.205535 0.251825 0.300894 0.351448 0.402241 0.452167 0.500322 0.546022
0.5888 0.628383 0.664659 0.697643 0.727441 0.754223 0.778199 0.799597 0.818654 0.835599
0.850655 0.864027 0.875905 0.88646 0.895848 0.904206 0.911656 0.918307 0.924253 0.929577
0.934354 0.938646 0.942511 0.945997 0.949147 0.951999 0.954585 0.956935 0.959075 0.961025
0.962807 0.964438 0.965932 0.967304 0.968565 0.969726 0.970796 0.971785 0.972699 0.973545
0.97433 0.975058 0.975735 0.976364 0.97695 0.977497 0.978007 0.978483 0.978928 0.979345
0.979735 0.980087 0.980404 0.980701 0.980981 0.981244 0.981492 0.981725 0.981945 0.982152
0.982348 0.982532 0.982707 0.982871 0.983027 0.983174 0.983314 0.983445 0.98357 0.983688
0.9838 0.983906 0.984007 0.984102 0.984193 0.984279 0.98436 0.984437 0.984511 0.98458
0.984646 0.984768 #selex for gender,fleet: 1 / 5
0.0478953 0.1786 0.24595 0.324504 0.41336 0.511132 0.615988 0.725805 0.838438 0.952006
1.06508 1.17676 1.28654 1.39428 1.50003 1.60394 1.70622 1.80705 1.90661 2.00501 2.10234
2.19864 2.29391 2.38812 2.48121 2.57311 2.66374 2.75299 2.84078 2.92701 3.01159 3.09443
3.17547 3.25463 3.33186 3.40712 3.48036 3.55157 3.62072 3.68781 3.75283 3.81579 3.87672
3.93562 3.99252 4.04745 4.10044 4.15154 4.20077 4.24819 4.29383 4.33774 4.37997 4.42056
4.45956 4.49703 4.533 4.56752 4.60065 4.63243 4.6629 4.69212 4.72012 4.74695 4.77266
4.79728 4.82085 4.84343 4.86503 4.88572 4.90568 4.92494 4.94336 4.96099 4.97784 4.99396
5.00936 5.02409 5.03817 5.05163 5.06449 5.07678 5.08853 5.09975 5.11046 5.12071 5.13049
5.13983 5.14875 5.15728 5.16542 5.17319 5.18061 5.1877 5.19446 5.20092 5.20709 5.21298
5.2186 5.22396 5.23387 #bodywt for gender,fleet: 1 / 6
0 0.00154241 0.00280432 0.00495169 0.00848621 0.0140999 0.0226752 0.0352297 0.0527916
0.0762215 0.106028 0.142232 0.184334 0.231366 0.282034 0.334888 0.38848 0.441496 0.49284
0.541668 0.587391 0.629654 0.668295 0.703311 0.73481 0.762979 0.788052 0.810292 0.829966
0.847339 0.862663 0.876171 0.888079 0.89858 0.907847 0.916033 0.923274 0.929688 0.935379
0.940437 0.944942 0.94896 0.952553 0.955771 0.95866 0.961258 0.963599 0.965714 0.967627
0.969362 0.970938 0.972372 0.973679 0.974873 0.975966 0.976967 0.977886 0.978731 0.979509
0.980227 0.980889 0.981502 0.98207 0.982596 0.983084 0.983538 0.98396 0.984354 0.98472
0.985063 0.985368 0.98564 0.985894 0.986133 0.986357 0.986568 0.986766 0.986952 0.987127

0.987292 0.987447 0.987593 0.987732 0.987862 0.987985 0.988101 0.988211 0.988315 0.988413
0.988506 0.988594 0.988678 0.988757 0.988831 0.988902 0.988969 0.989033 0.989094 0.989151
0.989205 0.989305 #selex for gender,fleet: 1 / 6
0.0544418 0.187734 0.254926 0.330634 0.413235 0.501233 0.593451 0.689077 0.7876 0.888708
0.992193 1.09788 1.2056 1.31513 1.42622 1.53857 1.65189 1.76582 1.88002 1.99417 2.10793
2.22099 2.33307 2.4439 2.55325 2.66091 2.76669 2.87044 2.97202 3.07133 3.16827 3.26277
3.35477 3.44424 3.53116 3.6155 3.69728 3.77649 3.85315 3.92729 3.99894 4.06813 4.13491
4.19933 4.26142 4.32125 4.37886 4.43431 4.48767 4.53897 4.5883 4.6357 4.68123 4.72495
4.76692 4.8072 4.84585 4.88291 4.91846 4.95253 4.98519 5.01648 5.04646 5.07518 5.10268
5.12901 5.15422 5.17835 5.20144 5.22353 5.24481 5.26529 5.28489 5.30363 5.32155 5.33869
5.35508 5.37074 5.38571 5.40003 5.4137 5.42677 5.43927 5.4512 5.4626 5.4735 5.48391
5.49385 5.50335 5.51242 5.52108 5.52936 5.53726 5.5448 5.55201 5.55889 5.56546 5.57174
5.57773 5.58344 5.59403 #bodywt for gender,fleet: 2 / 1
0 0.0552626 0.0844875 0.123924 0.174006 0.233804 0.301086 0.372751 0.445452 0.516158
0.582514 0.64297 0.696736 0.743634 0.783924 0.818135 0.846931 0.87102 0.891089 0.90777
0.921621 0.933126 0.942693 0.950664 0.957322 0.9629 0.967589 0.971545 0.974895 0.977743
0.980173 0.982256 0.984047 0.985594 0.986936 0.988103 0.989123 0.990017 0.990803 0.991497
0.992112 0.992658 0.993145 0.993579 0.993969 0.99432 0.994635 0.994921 0.995179 0.995413
0.995626 0.995821 0.995998 0.996161 0.99631 0.996446 0.996572 0.996688 0.996795 0.996894
0.996986 0.997071 0.99715 0.997223 0.997291 0.997355 0.997414 0.997469 0.997521 0.997569
0.997613 0.997652 0.997689 0.997723 0.997755 0.997786 0.997815 0.997842 0.997867 0.997891
0.997914 0.997935 0.997955 0.997975 0.997993 0.99801 0.998026 0.998041 0.998056 0.998069
0.998082 0.998095 0.998106 0.998117 0.998128 0.998138 0.998147 0.998156 0.998165 0.998173
0.998188 #selex for gender,fleet: 2 / 1
0.055808 0.195115 0.26603 0.346215 0.433629 0.526201 0.62223 0.720562 0.82056 0.921964
1.02473 1.12889 1.2345 1.34155 1.44997 1.55962 1.6703 1.78174 1.89366 2.00575 2.11768
2.22915 2.33985 2.4495 2.55785 2.66466 2.76973 2.87288 2.97397 3.07287 3.16946 3.26368
3.35545 3.44473 3.53148 3.6157 3.69736 3.77648 3.85307 3.92715 3.99875 4.0679 4.13465
4.19904 4.26111 4.32092 4.37852 4.43396 4.4873 4.53861 4.58793 4.63532 4.68085 4.72457
4.76654 4.80682 4.84547 4.88253 4.91808 4.95215 4.98481 5.01611 5.04609 5.07481 5.10231
5.12865 5.15386 5.17799 5.20108 5.22318 5.24445 5.26494 5.28454 5.30328 5.3212 5.33834
5.35472 5.37039 5.38536 5.39968 5.41335 5.42643 5.43892 5.45085 5.46226 5.47315 5.48356
5.4935 5.503 5.51207 5.52074 5.52901 5.53691 5.54446 5.55167 5.55855 5.56512 5.57139
5.57738 5.5831 5.59369 #bodywt for gender,fleet: 2 / 2
0 0.0230208 0.0387365 0.0625263 0.0964052 0.141564 0.197821 0.263456 0.33552 0.410465
0.48481 0.555653 0.620921 0.679405 0.730639 0.774717 0.812104 0.843474 0.869585 0.891195
0.909015 0.923681 0.935743 0.945671 0.953852 0.960611 0.966208 0.97086 0.97474 0.977988
0.980719 0.983024 0.984978 0.986642 0.988064 0.989285 0.990337 0.991248 0.992039 0.992729
0.993333 0.993864 0.994332 0.994746 0.995114 0.995441 0.995733 0.995995 0.99623 0.996441
0.996632 0.996805 0.996962 0.997105 0.997234 0.997353 0.997461 0.997561 0.997652 0.997736
0.997813 0.997885 0.997951 0.998012 0.998068 0.998121 0.998169 0.998215 0.998257 0.998296
0.998332 0.998363 0.998392 0.998419 0.998445 0.998469 0.998492 0.998513 0.998533 0.998552
0.99857 0.998587 0.998603 0.998618 0.998632 0.998645 0.998658 0.99867 0.998681 0.998691
0.998702 0.998711 0.99872 0.998729 0.998737 0.998745 0.998752 0.998759 0.998765 0.998772
0.998783 #selex for gender,fleet: 2 / 2
0.0608538 0.21745 0.293985 0.375836 0.459465 0.543279 0.627327 0.712459 0.799709
0.889961 0.983818 1.08157 1.18321 1.28848 1.39694 1.50806 1.62122 1.73581 1.85124 1.96696
2.0825 2.19741 2.31134 2.42395 2.53499 2.64421 2.75143 2.85649 2.95927 3.05965 3.15755
3.25292 3.34571 3.43588 3.52342 3.60833 3.69061 3.77027 3.84735 3.92186 3.99384 4.06334
4.13039 4.19506 4.25738 4.31741 4.37521 4.43083 4.48434 4.53579 4.58525 4.63277 4.67841
4.72224 4.76431 4.80468 4.8434 4.88054 4.91616 4.9503 4.98301 5.01436 5.0444 5.07316
5.10071 5.12708 5.15233 5.1765 5.19962 5.22175 5.24305 5.26356 5.28317 5.30193 5.31987
5.33702 5.35342 5.3691 5.38409 5.39841 5.4121 5.42518 5.43769 5.44963 5.46104 5.47195
5.48237 5.49232 5.50182 5.5109 5.51957 5.52785 5.53576 5.54331 5.55052 5.55741 5.56399
5.57026 5.57626 5.58198 5.59257 #bodywt for gender,fleet: 2 / 3
0 0.0185868 0.0407569 0.0812905 0.145528 0.23354 0.338974 0.451455 0.560463 0.65822
0.740653 0.806901 0.858209 0.896852 0.925367 0.946109 0.961055 0.971768 0.979431 0.984916
0.988854 0.991694 0.993754 0.995258 0.996365 0.997186 0.997801 0.998264 0.998617 0.998888
0.999098 0.999261 0.99939 0.999492 0.999574 0.99964 0.999694 0.999737 0.999773 0.999803
0.999828 0.999848 0.999866 0.999881 0.999893 0.999904 0.999914 0.999922 0.999929 0.999935
0.99994 0.999945 0.999949 0.999952 0.999956 0.999959 0.999961 0.999963 0.999966 0.999967
0.999969 0.999971 0.999972 0.999973 0.999974 0.999976 0.999977 0.999977 0.999978 0.999979
0.99998 0.99998 0.999981 0.999981 0.999982 0.999982 0.999982 0.999983 0.999983 0.999983
0.999984 0.999984 0.999984 0.999985 0.999985 0.999985 0.999985 0.999985 0.999986 0.999986
0.999986 0.999986 0.999986 0.999986 0.999986 0.999987 0.999987 0.999987 0.999987 0.999987
0.999987 #selex for gender,fleet: 2 / 3
0.0562558 0.197784 0.270409 0.353087 0.4438 0.540266 0.640382 0.742552 0.845789 0.949623
1.05393 1.15879 1.26432 1.37065 1.47785 1.58591 1.69476 1.80424 1.91417 2.02428 2.13433
2.24403 2.35309 2.46126 2.56826 2.67388 2.77789 2.88011 2.98038 3.07856 3.17452 3.26819
3.35948 3.44834 3.53473 3.61863 3.70001 3.77889 3.85526 3.92915 4.00058 4.06959 4.1362
4.20047 4.26244 4.32215 4.37967 4.43504 4.48831 4.53955 4.58882 4.63616 4.68165 4.72533

4.76726 4.80751 4.84612 4.88316 4.91868 4.95273 4.98537 5.01664 5.04661 5.07531 5.1028
5.12911 5.15431 5.17843 5.20151 5.22359 5.24486 5.26534 5.28493 5.30367 5.32159 5.33872
5.3551 5.37076 5.38573 5.40004 5.41371 5.42678 5.43927 5.4512 5.4626 5.47349 5.4839
5.49384 5.50333 5.5124 5.52106 5.52934 5.53724 5.54478 5.55199 5.55887 5.56543 5.57171
5.5777 5.58341 5.594 #bodywt for gender,fleet: 2 / 4
0 0.012503 0.0218054 0.0366115 0.0589414 0.0906491 0.132871 0.185557 0.247316 0.315643
0.38742 0.459478 0.529056 0.594062 0.653148 0.705651 0.751451 0.790819 0.82427 0.852443
0.876016 0.895653 0.911963 0.925492 0.936709 0.946018 0.953754 0.960197 0.965578 0.970085
0.973873 0.977069 0.979775 0.982074 0.984037 0.985719 0.987165 0.988414 0.989496 0.990438
0.991261 0.991982 0.992616 0.993175 0.993671 0.994111 0.994503 0.994853 0.995167 0.995449
0.995703 0.995932 0.99614 0.996329 0.9965 0.996656 0.996799 0.996929 0.997049 0.997159
0.99726 0.997353 0.997439 0.997519 0.997592 0.997661 0.997724 0.997783 0.997837 0.997888
0.997934 0.997974 0.998012 0.998047 0.99808 0.998111 0.99814 0.998167 0.998193 0.998217
0.99824 0.998261 0.998282 0.998301 0.998319 0.998336 0.998352 0.998367 0.998381 0.998395
0.998408 0.99842 0.998432 0.998442 0.998453 0.998463 0.998472 0.998481 0.998489 0.998497
0.998512 #selex for gender,fleet: 2 / 4
0.0554559 0.194532 0.266532 0.349475 0.442087 0.542714 0.64946 0.760411 0.873844
0.988393 1.10309 1.21735 1.33086 1.4435 1.55527 1.66623 1.77643 1.88591 1.99469 2.10275
2.21002 2.31644 2.42188 2.52622 2.62934 2.73108 2.83131 2.92989 3.0267 3.12162 3.21454
3.30538 3.39406 3.48051 3.56469 3.64655 3.72608 3.80326 3.87809 3.95057 4.02072 4.08855
4.15409 4.21738 4.27845 4.33734 4.39411 4.44878 4.50143 4.55209 4.60082 4.64767 4.6927
4.73596 4.77751 4.81739 4.85568 4.89241 4.92764 4.96143 4.99382 5.02486 5.05461 5.08311
5.11041 5.13656 5.16159 5.18555 5.20849 5.23044 5.25161 5.272 5.29152 5.31018 5.32803
5.3451 5.36142 5.37702 5.39193 5.40619 5.41981 5.43284 5.44528 5.45717 5.46853 5.47939
5.48975 5.49966 5.50912 5.51816 5.5268 5.53504 5.54291 5.55043 5.55762 5.56447 5.57102
5.57727 5.58324 5.58894 5.59949 #bodywt for gender,fleet: 2 / 5
0 0.00541992 0.00909812 0.0148482 0.0235318 0.0361619 0.0538005 0.0773931 0.107574
0.144499 0.187764 0.236435 0.289165 0.344386 0.400491 0.455994 0.509647 0.560485 0.607842
0.651328 0.69078 0.726219 0.757797 0.785752 0.810375 0.831981 0.850888 0.867401 0.881809
0.894376 0.90534 0.91491 0.923273 0.930593 0.937008 0.942643 0.947601 0.951975 0.95584
0.959265 0.962307 0.965015 0.967431 0.969593 0.971531 0.973273 0.974841 0.976258 0.977539
0.978701 0.979756 0.980717 0.981594 0.982395 0.983128 0.9838 0.984418 0.984986 0.98551
0.985993 0.98644 0.986854 0.987237 0.987592 0.987923 0.98823 0.988516 0.988783 0.989032
0.989265 0.989473 0.989659 0.989834 0.989998 0.990152 0.990297 0.990433 0.990562 0.990682
0.990796 0.990903 0.991005 0.9911 0.99119 0.991275 0.991356 0.991432 0.991504 0.991572
0.991637 0.991698 0.991756 0.991811 0.991863 0.991912 0.991959 0.992003 0.992045 0.992085
0.992123 0.992193 #selex for gender,fleet: 2 / 5
0.0572213 0.203113 0.278993 0.3667 0.46494 0.571899 0.685336 0.802813 0.92204 1.04118
1.15899 1.27482 1.38844 1.49992 1.60951 1.7175 1.82417 1.92976 2.03447 2.13843 2.24168
2.34422 2.44603 2.547 2.64702 2.74598 2.84372 2.94009 3.03496 3.12819 3.21965 3.30923
3.39684 3.48237 3.56578 3.64699 3.72597 3.8027 3.87714 3.94931 4.01919 4.08681 4.15218
4.21533 4.27629 4.3351 4.3918 4.44642 4.49903 4.54966 4.59838 4.64522 4.69025 4.73351
4.77506 4.81496 4.85325 4.89 4.92524 4.95905 4.99145 5.02252 5.05229 5.0808 5.10812
5.13428 5.15934 5.18332 5.20627 5.22824 5.24942 5.26982 5.28934 5.30801 5.32587 5.34294
5.35927 5.37488 5.3898 5.40406 5.41769 5.43072 5.44317 5.45506 5.46643 5.47729 5.48766
5.49758 5.50704 5.51609 5.52472 5.53297 5.54085 5.54837 5.55556 5.56242 5.56897 5.57522
5.5812 5.5869 5.59745 #bodywt for gender,fleet: 2 / 6
0 0.00157913 0.00295503 0.00535838 0.00940687 0.0159639 0.0261349 0.0411838 0.0623537
0.0906206 0.126453 0.16966 0.219376 0.274181 0.332311 0.391898 0.451174 0.508625 0.563072
0.613693 0.66 0.701787 0.739072 0.772032 0.800954 0.826184 0.848093 0.867056 0.883432
0.897554 0.909727 0.920218 0.929267 0.93708 0.943835 0.949687 0.954766 0.959185 0.963038
0.966407 0.96936 0.971955 0.974242 0.976263 0.978053 0.979644 0.981061 0.982326 0.98346
0.984477 0.985392 0.986217 0.986963 0.987639 0.988253 0.988811 0.98932 0.989785 0.990211
0.990601 0.990959 0.991288 0.991592 0.991872 0.992131 0.992371 0.992592 0.992798 0.99299
0.993168 0.993325 0.993464 0.993594 0.993716 0.99383 0.993937 0.994037 0.994131 0.99422
0.994303 0.994381 0.994454 0.994524 0.994589 0.994651 0.994709 0.994764 0.994816 0.994865
0.994911 0.994955 0.994996 0.995035 0.995072 0.995108 0.995141 0.995172 0.995202 0.995231
0.995258 0.995307 #selex for gender,fleet: 2 / 6
0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214
0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214
0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214
0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214
0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214
0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214
0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214
0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214 0.047214
0.047214 0.047214 #mean M for year Yinit: 2011 sex: 1
32.7144 30.6871 28.7293 26.8989 25.2719 23.5694 21.9835 20.4404 18.9457 17.5511 16.7631
15.8093 15.7066 15.1594 15.5132 15.5098 15.6191 15.3873 15.4838 15.5284 15.2568 14.3713

13.7078 12.738 11.6605 10.5271 9.58662 8.59443 7.72065 6.99934 6.24347 5.50558 4.8763
4.31666 3.78699 3.32802 2.92622 2.58304 2.28529 2.03091 1.80914 1.61635 1.4548 1.31018
1.18563 1.07747 0.987317 0.903929 0.831452 0.767931 0.711145 0.66077 0.615671 0.575119
0.538135 0.504169 0.472813 0.443782 0.416871 0.392194 0.369442 0.348181 0.328388 0.310235
0.293204 0.278204 0.264376 0.250718 0.237867 0.225237 0.213267 0.201909 0.191097 0.180905
0.171261 0.162142 0.153496 0.145326 0.137618 0.130381 0.123581 0.117202 0.111203 0.105543
0.100213 0.0951884 0.0904484 0.0859676 0.0817333 0.0777297 0.0739423 0.0703562 0.0669574
0.0637412 0.0606882 0.0577868 0.0550224 0.0523977 0.0499045 0.0475355 0.973992 #numbers
for year Yinit: 2011 sex: 1
0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651
0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651
0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651
0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651
0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651
0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651
0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651
0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651
0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651
0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651 0.0459651
0.0459651 0.0459651 0.0459651 #mean M for year Yinit: 2011 sex: 2
32.7144 30.7254 28.8011 26.9994 25.3972 23.7141 22.1433 20.6108 19.1224 17.731 16.9493
15.9973 15.9048 15.3604 15.7269 15.728 15.8382 15.5954 15.6767 15.6948 15.3823 14.4427
13.7211 12.6914 11.5583 10.3785 9.39966 8.38237 7.49346 6.76428 6.01222 5.28677 4.67298
4.13135 3.62227 3.18344 2.80098 2.47559 2.19421 1.95458 1.74618 1.56534 1.41424 1.27892
1.16243 1.06123 0.976992 0.898692 0.830507 0.770592 0.716813 0.668928 0.625876 0.58699
0.551339 0.518414 0.48785 0.459396 0.432881 0.408463 0.385856 0.364637 0.344809 0.326573
0.309403 0.294273 0.280293 0.266405 0.253292 0.240335 0.228007 0.216264 0.205043 0.194431
0.184359 0.174814 0.165745 0.157165 0.149061 0.141449 0.134291 0.127573 0.121249 0.115277
0.109645 0.10433 0.0993068 0.0945497 0.0900457 0.0857786 0.081734 0.0778966 0.0742526
0.0707978 0.067512 0.0643835 0.0613971 0.0585564 0.0558533 0.0532806 1.12437 #numbers for
year Yinit: 2011 sex: 2
33.506 31.599 29.7562 27.8963 26.1029 24.4217 22.9219 21.3515 19.8863 18.4613 17.0831
15.7994 15.0656 14.1866 14.0742 13.566 13.8662 13.8484 13.9327 13.7145 13.7904 13.8211
13.5717 12.7778 12.1826 11.3164 10.3557 9.34646 8.50927 7.62688 6.85013 6.20907 5.53773
4.88263 4.32409 3.82748 3.35759 2.95048 2.59415 2.28984 2.02586 1.80036 1.60379 1.43291
1.28976 1.1616 1.05124 0.955407 0.875535 0.80165 0.737431 0.681146 0.630824 0.58618
0.546208 0.510263 0.477477 0.447361 0.419558 0.393813 0.369945 0.348057 0.327874 0.309013
0.291453 0.275348 0.260237 0.246927 0.234657 0.222537 0.211132 0.199923 0.189299 0.179218
0.169622 0.160575 0.152013 0.143918 0.136242 0.128989 0.122145 0.115721 0.109684 0.104021
0.0986958 0.0936715 0.0889396 0.0844799 0.0802726 0.0762955 0.0725373 0.0689839 0.0656225
0.0624397 0.0594233 0.0565689 0.0538593 0.0512844 0.0488311 0.0465017 0.950878 #numbers
for year Ydeclare: 2013 sex: 1
33.506 31.6385 29.8304 28.0002 26.2316 24.5705 23.0872 21.5279 20.0702 18.649 17.2714
15.9864 15.2554 14.3756 14.2714 13.7646 14.0763 14.0626 14.1481 13.9202 13.9831 13.9908
13.7053 12.8625 12.2153 11.2949 10.2836 9.2316 8.35918 7.45315 6.66176 6.01273 5.34367
4.69849 4.15271 3.6712 3.2187 2.82869 2.48883 2.1997 1.94971 1.73684 1.55172 1.3911
1.2569 1.13671 1.03326 0.943389 0.868585 0.799044 0.738485 0.685267 0.637493 0.594951
0.556697 0.522141 0.490456 0.461189 0.434017 0.408718 0.38514 0.363424 0.343318 0.324445
0.306808 0.290587 0.275313 0.261853 0.249415 0.23706 0.225392 0.213864 0.202894 0.192444
0.182458 0.173014 0.16405 0.155554 0.147483 0.139845 0.132632 0.125857 0.119486 0.113507
0.10788 0.102565 0.0975531 0.092823 0.0883534 0.0841205 0.080113 0.0763164 0.0727177
0.0693035 0.0660613 0.0629876 0.0600642 0.0572809 0.0546238 0.0520965 1.09743 #numbers
for year Ydeclare: 2013 sex: 2
#R0 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932
1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950
1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968
1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986
1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004
2005 2006 2007 2008 2009 2010 #years
178.478 178.478 178.446 178.402 178.353 178.32 178.285 178.251 178.218 178.184 178.145
178.089 178.024 177.951 177.868 177.753 177.634 177.533 177.436 177.358 177.263 177.148
176.997 176.85 176.704 176.596 176.426 176.215 175.951 175.301 174.649 173.56 172.649
172.297 171.886 171.62 171.334 170.979 170.676 170.451 170.161 169.788 169.327 168.788
168.205 167.682 167.206 166.816 166.346 165.983 165.74 164.691 164.276 163.786 163.271
162.056 161.234 160.1 158.622 157.19 155.536 153.981 152.099 150.115 146.572 142.893
139.825 135.257 129.014 124.471 120.74 115.972 113.083 109.525 105.336 99.5402 95.9819
89.4605 82.3251 75.9652 71.9741 66.9894 63.0161 58.1426 56.9647 54.3331 54.6485 54.3442
55.7585 57.2287 58.5901 59.8273 61.1155 62.0167 63.159 64.3413 65.4289 #Recruits
7.69897e+008 7.69897e+008 7.69555e+008 7.69084e+008 7.68554e+008 7.68205e+008
7.67834e+008 7.67467e+008 7.67118e+008 7.66755e+008 7.66337e+008 7.65737e+008

```

7.65051e+008 7.64275e+008 7.63389e+008 7.62176e+008 7.60916e+008 7.59848e+008
7.58828e+008 7.58011e+008 7.57009e+008 7.55804e+008 7.54226e+008 7.52684e+008
7.51173e+008 7.50045e+008 7.48279e+008 7.46098e+008 7.43384e+008 7.36736e+008
7.30141e+008 7.19283e+008 7.10341e+008 7.06926e+008 7.02958e+008 7.004e+008 6.97664e+008
6.94286e+008 6.91415e+008 6.89297e+008 6.86572e+008 6.83084e+008 6.78802e+008
6.73842e+008 6.68519e+008 6.63781e+008 6.59504e+008 6.56017e+008 6.51853e+008
6.48652e+008 6.46514e+008 6.37404e+008 6.33838e+008 6.29653e+008 6.2529e+008 6.15121e+008
6.08341e+008 5.99129e+008 5.8734e+008 5.76151e+008 5.63508e+008 5.51889e+008 5.38152e+008
5.24046e+008 4.99767e+008 4.7573e+008 4.56533e+008 4.29285e+008 3.9442e+008 3.70613e+008
3.51971e+008 3.2926e+008 3.16061e+008 3.00363e+008 2.82622e+008 2.59305e+008 2.4565e+008
2.21828e+008 1.97407e+008 1.76958e+008 1.64712e+008 1.50008e+008 1.38733e+008
1.25412e+008 1.22273e+008 1.15369e+008 1.16188e+008 1.15398e+008 1.1909e+008 1.22974e+008
1.26613e+008 1.29955e+008 1.33473e+008 1.35957e+008 1.39132e+008 1.42451e+008
1.45534e+008 #SpawnBio
0.383 0.5 0 # spawn-recr steepness, sigmaR, autocorr
# values from cat100_hlow, catch at 100% and steepness at low value. # this is state of
nature 2 out of 9 (in no particular order) # and parameter set number 1 out of 2 for this
state
0 0 31.1162 112.356 367.744 1080.46 2816.18 6473.87 13168.2 23948.2 39492.1 59937
84901.8 113650 145295 178975 213957 249683 285761 321940 358074 394085 429937 465613
501106 536408 571504 606376 640998 675340 709366 743040 776324 809179 841567 873453
904803 935587 965775 995344 1.02427e+006 1.05254e+006 1.08013e+006 1.10703e+006
1.13324e+006 1.15874e+006 1.18353e+006 1.20761e+006 1.23098e+006 1.25364e+006 1.2756e+006
1.29687e+006 1.31744e+006 1.33734e+006 1.35656e+006 1.37513e+006 1.39305e+006
1.41033e+006 1.427e+006 1.44306e+006 1.45853e+006 1.47342e+006 1.48776e+006 1.50154e+006
1.5148e+006 1.52754e+006 1.53979e+006 1.55155e+006 1.56285e+006 1.57369e+006 1.58409e+006
1.59434e+006 1.60417e+006 1.6136e+006 1.62265e+006 1.63131e+006 1.63962e+006 1.64758e+006
1.65521e+006 1.66251e+006 1.66951e+006 1.6762e+006 1.68262e+006 1.68875e+006 1.69462e+006
1.70024e+006 1.70562e+006 1.71076e+006 1.71568e+006 1.72038e+006 1.72488e+006
1.72918e+006 1.73329e+006 1.73722e+006 1.74098e+006 1.74457e+006 1.748e+006 1.75128e+006
1.75441e+006 1.75741e+006 1.76295e+006 #female fecundity; weighted by N in year Y_init
across morphs and areas
0.0459232 0.166695 0.22642 0.294237 0.368826 0.448887 0.533321 0.6213 0.712246 0.805766
0.901583 0.999474 1.09923 1.20065 1.30348 1.40747 1.51235 1.61783 1.72361 1.8294 1.93491
2.03987 2.14403 2.24713 2.34897 2.44935 2.5481 2.64506 2.74009 2.8331 2.92398 3.01267
3.09909 3.18321 3.265 3.34442 3.42149 3.49619 3.56854 3.63855 3.70624 3.77166 3.83482
3.89577 3.95455 4.01121 4.06579 4.11834 4.16892 4.21758 4.26437 4.30934 4.35255 4.39405
4.4339 4.47215 4.50885 4.54406 4.57782 4.6102 4.64123 4.67097 4.69946 4.72675 4.75289
4.77792 4.80188 4.82482 4.84677 4.86777 4.88801 4.9075 4.92615 4.94398 4.96103 4.97734
4.99293 5.00784 5.02208 5.0357 5.04871 5.06115 5.07303 5.08438 5.09523 5.10559 5.11549
5.12494 5.13397 5.1426 5.15084 5.1587 5.16621 5.17339 5.18024 5.18678 5.19302 5.19898
5.20467 5.2101 5.22015 #bodywt for gender,fleet: 1 / 1
0 0.055802 0.0834715 0.120224 0.166419 0.221317 0.283111 0.349258 0.416948 0.483562
0.546973 0.605686 0.658826 0.706052 0.747417 0.783242 0.814009 0.840267 0.862582 0.881495
0.897504 0.91105 0.92252 0.932243 0.940502 0.947532 0.953533 0.95867 0.963081 0.96688
0.970164 0.973011 0.975489 0.977651 0.979546 0.98121 0.982678 0.983975 0.985126 0.98615
0.987064 0.987882 0.988615 0.989274 0.989869 0.990407 0.990894 0.991336 0.991739 0.992106
0.992441 0.992748 0.99303 0.993289 0.993527 0.993746 0.993949 0.994136 0.994309 0.99447
0.994619 0.994758 0.994887 0.995007 0.995119 0.995224 0.995322 0.995413 0.995499 0.995579
0.995651 0.995717 0.995778 0.995836 0.99589 0.995941 0.995989 0.996035 0.996078 0.996118
0.996156 0.996192 0.996227 0.996259 0.996289 0.996318 0.996346 0.996371 0.996396 0.996419
0.996441 0.996462 0.996482 0.996501 0.996519 0.996536 0.996552 0.996567 0.996581 0.996595
0.996621 #selex for gender,fleet: 1 / 1
0.0470987 0.173394 0.236518 0.308495 0.387689 0.472325 0.560823 0.652 0.745096 0.8397
0.93562 1.03279 1.13117 1.23074 1.33141 1.43306 1.53555 1.63866 1.74216 1.84581 1.94934
2.0525 2.15502 2.25667 2.35723 2.45647 2.55422 2.65031 2.74459 2.83694 2.92726 3.01545
3.10145 3.1852 3.26666 3.34581 3.42264 3.49713 3.5693 3.63916 3.70672 3.77201 3.83507
3.89593 3.95464 4.01123 4.06575 4.11825 4.16878 4.2174 4.26415 4.30909 4.35228 4.39375
4.43358 4.47181 4.5085 4.54369 4.57744 4.60981 4.64083 4.67056 4.69904 4.72633 4.75246
4.77748 4.80144 4.82437 4.84631 4.86732 4.88755 4.90704 4.92568 4.94351 4.96056 4.97687
4.99246 5.00736 5.0216 5.03522 5.04823 5.06066 5.07254 5.08389 5.09474 5.1051 5.115
5.12445 5.13348 5.14211 5.15034 5.15821 5.16572 5.17289 5.17974 5.18628 5.19252 5.19848
5.20417 5.20961 5.21965 #bodywt for gender,fleet: 1 / 2
0 0.0231649 0.0379628 0.0598976 0.0906619 0.131303 0.181793 0.240869 0.306236 0.375017
0.444278 0.511445 0.574555 0.632317 0.684066 0.729637 0.769225 0.803254 0.832273 0.856877
0.877655 0.89516 0.909889 0.922281 0.932715 0.941512 0.948943 0.955236 0.960579 0.96513
0.969018 0.972351 0.975218 0.977693 0.979836 0.981699 0.983324 0.984747 0.985995 0.987095
0.988068 0.98893 0.989696 0.990379 0.990991 0.991539 0.992032 0.992476 0.992877 0.993241
0.993571 0.993871 0.994145 0.994395 0.994624 0.994834 0.995026 0.995204 0.995367 0.995518
0.995657 0.995786 0.995906 0.996017 0.99612 0.996216 0.996305 0.996389 0.996467 0.996539
0.996604 0.996662 0.996717 0.996768 0.996816 0.996861 0.996904 0.996944 0.996982 0.997017

```

0.997051 0.997082 0.997112 0.99714 0.997167 0.997192 0.997216 0.997238 0.99726 0.99728
0.997299 0.997317 0.997334 0.997351 0.997366 0.997381 0.997394 0.997408 0.99742 0.997432
0.997454 #selex for gender,fleet: 1 / 2
0.0514244 0.193633 0.262198 0.336463 0.413258 0.490855 0.568935 0.647983 0.728749
0.811945 0.898098 0.987506 1.08024 1.17616 1.27498 1.3763 1.47966 1.58455 1.69047 1.79695
1.90353 2.00983 2.11547 2.22013 2.32355 2.42547 2.52571 2.62409 2.72047 2.81473 2.90677
2.99653 3.08395 3.16898 3.2516 3.3318 3.40957 3.48492 3.55786 3.62841 3.69661 3.76248
3.82606 3.8874 3.94654 4.00353 4.05841 4.11125 4.16208 4.21098 4.25799 4.30317 4.34657
4.38825 4.42826 4.46667 4.50351 4.53886 4.57275 4.60524 4.63638 4.66622 4.69481 4.72219
4.74841 4.77352 4.79755 4.82056 4.84258 4.86364 4.88393 4.90346 4.92215 4.94001 4.9571
4.97344 4.98906 5.00399 5.01826 5.03191 5.04494 5.0574 5.0693 5.08068 5.09154 5.10193
5.11184 5.12131 5.13036 5.139 5.14725 5.15513 5.16266 5.16984 5.1767 5.18325 5.18951
5.19548 5.20118 5.20662 5.21668 #bodywt for gender,fleet: 1 / 3
0 0.0187216 0.0395013 0.0765259 0.134477 0.213866 0.309928 0.41425 0.517777 0.613279
0.69642 0.765595 0.821184 0.864698 0.89811 0.923416 0.942409 0.956585 0.96714 0.974997
0.980856 0.985239 0.988533 0.991021 0.992911 0.994358 0.995471 0.996335 0.99701 0.99754
0.997961 0.998296 0.998566 0.998785 0.998962 0.999108 0.999228 0.999328 0.999412 0.999482
0.999541 0.999591 0.999634 0.999671 0.999703 0.99973 0.999754 0.999775 0.999793 0.999809
0.999823 0.999835 0.999847 0.999857 0.999865 0.999873 0.999881 0.999887 0.999893 0.999898
0.999903 0.999907 0.999911 0.999915 0.999918 0.999921 0.999924 0.999927 0.999929 0.999931
0.999933 0.999935 0.999937 0.999938 0.999939 0.999941 0.999942 0.999943 0.999944 0.999945
0.999946 0.999947 0.999947 0.999948 0.999949 0.999949 0.99995 0.999951 0.999951 0.999952
0.999952 0.999953 0.999953 0.999954 0.999954 0.999954 0.999955 0.999955 0.999955 0.999955
0.999956 #selex for gender,fleet: 1 / 3
0.0474109 0.175448 0.239961 0.314032 0.396111 0.484318 0.576781 0.671937 0.768683
0.866353 0.964622 1.06338 1.16263 1.2624 1.36272 1.46358 1.56491 1.66661 1.76854 1.87052
1.97235 2.07382 2.1747 2.27479 2.37386 2.47172 2.5682 2.66311 2.75632 2.8477 2.93713
3.02452 3.10979 3.19289 3.27377 3.35239 3.42874 3.5028 3.57458 3.64408 3.71133 3.77633
3.83913 3.89976 3.95825 4.01464 4.06898 4.12132 4.17171 4.22019 4.26682 4.31164 4.35472
4.3961 4.43584 4.47399 4.5106 4.54572 4.57941 4.61171 4.64268 4.67235 4.70079 4.72803
4.75412 4.7791 4.80302 4.82592 4.84783 4.8688 4.88901 4.90848 4.92711 4.94492 4.96196
4.97824 4.99382 5.0087 5.02293 5.03654 5.04954 5.06196 5.07383 5.08517 5.09601 5.10636
5.11625 5.12569 5.13472 5.14333 5.15156 5.15942 5.16693 5.17409 5.18094 5.18747 5.19371
5.19966 5.20535 5.21078 5.22081 #bodywt for gender,fleet: 1 / 4
0 0.0128088 0.0216119 0.035232 0.0553143 0.0833798 0.120421 0.166544 0.220825 0.281429
0.345951 0.411829 0.476703 0.538655 0.596312 0.64884 0.695867 0.73738 0.77362 0.804981
0.831944 0.855014 0.874689 0.891435 0.905674 0.917781 0.928082 0.936857 0.944345 0.950749
0.956239 0.960958 0.965025 0.968542 0.971592 0.974245 0.97656 0.978587 0.980367 0.981935
0.98332 0.984547 0.985638 0.98661 0.987479 0.988258 0.988958 0.989588 0.990156 0.990671
0.991138 0.991563 0.991949 0.992302 0.992625 0.99292 0.993192 0.993441 0.993671 0.993883
0.994078 0.994259 0.994427 0.994582 0.994727 0.994861 0.994986 0.995102 0.995211 0.995313
0.995403 0.995484 0.99556 0.995631 0.995698 0.995761 0.99582 0.995875 0.995928 0.995977
0.996023 0.996067 0.996108 0.996148 0.996184 0.996219 0.996252 0.996283 0.996313 0.996341
0.996367 0.996392 0.996416 0.996439 0.99646 0.99648 0.996499 0.996517 0.996535 0.996551
0.996581 #selex for gender,fleet: 1 / 4
0.0466845 0.172305 0.236105 0.310153 0.393545 0.485022 0.583054 0.685994 0.792252
0.900449 1.0095 1.11862 1.22731 1.33526 1.44232 1.54843 1.65355 1.75769 1.86083 1.96296
2.06404 2.16402 2.26283 2.36039 2.45662 2.55143 2.64471 2.73637 2.82633 2.9145 3.0008
3.08518 3.16756 3.2479 3.32616 3.40231 3.47633 3.5482 3.61793 3.68552 3.75097 3.8143
3.87554 3.93471 3.99184 4.04697 4.10013 4.15137 4.20073 4.24825 4.29399 4.33798 4.38028
4.42093 4.45999 4.4975 4.53352 4.56808 4.60124 4.63306 4.66356 4.69281 4.72084 4.7477
4.77343 4.79807 4.82168 4.84427 4.86591 4.88661 4.9066 4.9259 4.94436 4.96202 4.97891
4.99506 5.01051 5.02527 5.03938 5.05287 5.06577 5.07809 5.08986 5.10111 5.11186 5.12213
5.13195 5.14132 5.15027 5.15882 5.16699 5.17479 5.18223 5.18935 5.19614 5.20262 5.20881
5.21472 5.22037 5.22575 5.23571 #bodywt for gender,fleet: 1 / 5
0 0.00553229 0.00897589 0.0141953 0.0218656 0.0327698 0.0477293 0.067493 0.0926048
0.123284 0.159355 0.200244 0.245049 0.292648 0.341832 0.391419 0.440349 0.487738 0.532906
0.575373 0.614845 0.65118 0.684364 0.714472 0.741648 0.766077 0.787966 0.807535 0.825
0.840573 0.854451 0.866819 0.877844 0.887678 0.896458 0.904306 0.911329 0.917624 0.923273
0.928353 0.932927 0.937053 0.940782 0.944157 0.947219 0.949999 0.95253 0.954837 0.956944
0.95887 0.960636 0.962255 0.963743 0.965113 0.966376 0.967541 0.968618 0.969615 0.970538
0.971395 0.972191 0.972931 0.97362 0.974262 0.97486 0.97542 0.975942 0.976431 0.976889
0.977317 0.977705 0.978054 0.978381 0.97869 0.97898 0.979253 0.979511 0.979754 0.979983
0.980199 0.980403 0.980595 0.980777 0.98095 0.981112 0.981267 0.981412 0.98155 0.981681
0.981805 0.981923 0.982034 0.98214 0.98224 0.982335 0.982425 0.982511 0.982592 0.98267
0.982743 0.982878 #selex for gender,fleet: 1 / 5
0.0483158 0.180652 0.248243 0.326973 0.415928 0.513717 0.61851 0.728197 0.840649
0.954007 1.06687 1.17832 1.28789 1.39542 1.50097 1.60469 1.70677 1.8074 1.90676 2.00496
2.10208 2.19816 2.29321 2.3872 2.48007 2.57175 2.66216 2.7512 2.83878 2.92481 3.0092
3.09186 3.17272 3.25172 3.32879 3.4039 3.47701 3.54809 3.61713 3.68411 3.74904 3.81192
3.87277 3.9316 3.98844 4.04332 4.09627 4.14732 4.19653 4.24392 4.28954 4.33344 4.37566

4.41625 4.45525 4.49272 4.5287 4.56324 4.59638 4.62817 4.65867 4.6879 4.71593 4.74279
4.76852 4.79317 4.81677 4.83938 4.86102 4.88173 4.90172 4.92102 4.93948 4.95714 4.97403
4.99019 5.00563 5.0204 5.03451 5.048 5.0609 5.07322 5.085 5.09626 5.10701 5.11728 5.1271
5.13647 5.14543 5.15398 5.16215 5.16995 5.1774 5.18452 5.19131 5.1978 5.20399 5.20991
5.21555 5.22094 5.2309 #bodywt for gender,fleet: 1 / 6
0 0.00158049 0.00286478 0.00504369 0.00861979 0.0142837 0.022913 0.0355154 0.0531053
0.0765276 0.106278 0.142371 0.184307 0.23113 0.281561 0.334166 0.387518 0.440315 0.491472
0.540151 0.585765 0.627956 0.666562 0.701571 0.733089 0.761296 0.786423 0.808726 0.828471
0.845919 0.861318 0.874903 0.886884 0.897457 0.906792 0.915042 0.922344 0.928815 0.934559
0.939666 0.944216 0.948277 0.951909 0.955163 0.958085 0.960713 0.963083 0.965224 0.967161
0.968918 0.970514 0.971967 0.973292 0.974502 0.975609 0.976625 0.977557 0.978414 0.979203
0.979931 0.980603 0.981225 0.981801 0.982335 0.98283 0.983291 0.98372 0.984119 0.984492
0.984839 0.985149 0.985425 0.985684 0.985927 0.986154 0.986368 0.986569 0.986758 0.986936
0.987104 0.987262 0.98741 0.987551 0.987683 0.987809 0.987927 0.988038 0.988144 0.988244
0.988339 0.988428 0.988513 0.988593 0.988669 0.988741 0.98881 0.988875 0.988936 0.988994
0.98905 0.989151 #selex for gender,fleet: 1 / 6
0.0548914 0.189688 0.257027 0.332795 0.415381 0.503307 0.595419 0.69092 0.789307
0.890271 0.993607 1.09914 1.20669 1.31604 1.42694 1.5391 1.65221 1.76593 1.87992 1.99384
2.10738 2.22022 2.33208 2.4427 2.55184 2.65929 2.76488 2.86845 2.96985 3.06899 3.16578
3.26013 3.352 3.44134 3.52814 3.61238 3.69405 3.77318 3.84976 3.92383 3.99541 4.06455
4.13129 4.19566 4.25772 4.31752 4.37511 4.43055 4.48389 4.53519 4.58451 4.63191 4.67745
4.72118 4.76317 4.80346 4.84213 4.87921 4.91478 4.94888 4.98157 5.01289 5.0429 5.07165
5.09918 5.12554 5.15078 5.17495 5.19807 5.2202 5.24151 5.26204 5.28167 5.30045 5.31841
5.33559 5.35201 5.36771 5.38272 5.39707 5.41078 5.42389 5.43641 5.44838 5.45982 5.47074
5.48118 5.49116 5.50069 5.50979 5.51848 5.52679 5.53472 5.54229 5.54952 5.55643 5.56303
5.56933 5.57534 5.58108 5.59172 #bodywt for gender,fleet: 2 / 1
0 0.056618 0.0862621 0.126104 0.17651 0.236494 0.303794 0.375315 0.447747 0.518106
0.584086 0.644176 0.697611 0.744227 0.784287 0.818318 0.846979 0.87097 0.89097 0.907605
0.921428 0.932918 0.942479 0.95045 0.957113 0.962698 0.967396 0.971362 0.974722 0.97758
0.98002 0.982112 0.983913 0.985468 0.986817 0.987992 0.989018 0.989918 0.99071 0.99141
0.992029 0.99258 0.99307 0.993509 0.993902 0.994256 0.994575 0.994862 0.995123 0.99536
0.995575 0.995771 0.995951 0.996115 0.996265 0.996404 0.996531 0.996648 0.996757 0.996857
0.996949 0.997035 0.997115 0.997189 0.997258 0.997322 0.997382 0.997438 0.997491 0.99754
0.997584 0.997623 0.99766 0.997695 0.997728 0.997759 0.997788 0.997815 0.997841 0.997865
0.997888 0.99791 0.99793 0.99795 0.997968 0.997985 0.998002 0.998017 0.998032 0.998046
0.998059 0.998071 0.998083 0.998094 0.998105 0.998115 0.998125 0.998134 0.998142 0.998151
0.998166 #selex for gender,fleet: 2 / 1
0.0562783 0.197221 0.268324 0.348601 0.436011 0.528507 0.624412 0.722595 0.822436
0.92368 1.02628 1.13028 1.23572 1.34259 1.45082 1.56027 1.67073 1.78196 1.89366 2.00552
2.11722 2.22846 2.33893 2.44836 2.5565 2.6631 2.76797 2.87094 2.97184 3.07057 3.167
3.26107 3.3527 3.44185 3.52849 3.61259 3.69415 3.77318 3.84969 3.9237 3.99524 4.06433
4.13103 4.19538 4.25741 4.3172 4.37477 4.4302 4.48353 4.53482 4.58414 4.63154 4.67707
4.7208 4.76279 4.80308 4.84175 4.87884 4.9144 4.9485 4.98119 5.01251 5.04253 5.07128
5.09881 5.12518 5.15042 5.17458 5.19771 5.21984 5.24116 5.26168 5.28132 5.3001 5.31806
5.33523 5.35166 5.36736 5.38237 5.39671 5.41043 5.42354 5.43606 5.44803 5.45947 5.4704
5.48084 5.49081 5.50034 5.50944 5.51814 5.52644 5.53437 5.54195 5.54918 5.55609 5.56268
5.56898 5.575 5.58074 5.59138 #bodywt for gender,fleet: 2 / 2
0 0.0236049 0.0395862 0.0636857 0.0978776 0.143296 0.199703 0.265347 0.337282 0.411987
0.486027 0.556544 0.621502 0.679714 0.730726 0.774635 0.811901 0.84319 0.869252 0.890839
0.908653 0.923325 0.935402 0.945349 0.953552 0.960332 0.965952 0.970625 0.974524 0.977791
0.980539 0.982859 0.984827 0.986503 0.987936 0.989167 0.990229 0.991148 0.991946 0.992643
0.993253 0.99379 0.994263 0.994681 0.995052 0.995383 0.995679 0.995943 0.996181 0.996395
0.996588 0.996763 0.996922 0.997066 0.997198 0.997318 0.997428 0.997528 0.997621 0.997706
0.997784 0.997856 0.997923 0.997985 0.998042 0.998095 0.998145 0.998191 0.998234 0.998274
0.998309 0.998341 0.998371 0.998398 0.998424 0.998449 0.998472 0.998494 0.998514 0.998533
0.998551 0.998568 0.998584 0.998599 0.998614 0.998627 0.99864 0.998652 0.998664 0.998674
0.998685 0.998694 0.998703 0.998712 0.99872 0.998728 0.998736 0.998743 0.998749 0.998756
0.998767 #selex for gender,fleet: 2 / 2
0.0613745 0.219761 0.296353 0.378092 0.461531 0.545156 0.629048 0.714063 0.80122
0.891388 0.985155 1.0828 1.18431 1.28943 1.39772 1.50864 1.62159 1.73595 1.85115 1.96664
2.08194 2.19663 2.31032 2.42272 2.53354 2.64256 2.74958 2.85446 2.95705 3.05727 3.15502
3.25024 3.34289 3.43294 3.52036 3.60517 3.68735 3.76693 3.84392 3.91836 3.99029 4.05973
4.12674 4.19136 4.25365 4.31365 4.37143 4.42704 4.48054 4.53199 4.58144 4.62897 4.67462
4.71845 4.76053 4.80092 4.83966 4.87683 4.91247 4.94663 4.97938 5.01075 5.04082 5.06962
5.09719 5.1236 5.14888 5.17308 5.19624 5.21841 5.23975 5.26029 5.27994 5.29874 5.31672
5.33391 5.35034 5.36606 5.38108 5.39544 5.40917 5.42228 5.43482 5.4468 5.45825 5.46918
5.47963 5.48961 5.49915 5.50826 5.51696 5.52527 5.53321 5.54079 5.54803 5.55494 5.56154
5.56784 5.57386 5.57961 5.59026 #bodywt for gender,fleet: 2 / 3
0 0.0193458 0.0421489 0.0835085 0.148558 0.237099 0.342626 0.454787 0.563211 0.660298
0.742107 0.807846 0.858775 0.897157 0.925504 0.946145 0.961034 0.971719 0.979372 0.984856
0.988798 0.991643 0.993709 0.99522 0.996333 0.997159 0.997778 0.998245 0.998601 0.998874

0.999086 0.999251 0.999382 0.999485 0.999568 0.999635 0.999689 0.999733 0.999769 0.9998
0.999825 0.999846 0.999864 0.999879 0.999891 0.999902 0.999912 0.99992 0.999927 0.999933
0.999939 0.999944 0.999948 0.999952 0.999955 0.999958 0.99996 0.999963 0.999965 0.999967
0.999969 0.99997 0.999972 0.999973 0.999974 0.999975 0.999976 0.999977 0.999978 0.999979
0.999979 0.99998 0.99998 0.999981 0.999981 0.999982 0.999982 0.999982 0.999983 0.999983
0.999983 0.999984 0.999984 0.999984 0.999984 0.999985 0.999985 0.999985 0.999985 0.999985
0.999986 0.999986 0.999986 0.999986 0.999986 0.999986 0.999986 0.999987 0.999987 0.999987
0.999987 #selex for gender,fleet: 2 / 3
0.0566467 0.19954 0.272222 0.35486 0.445466 0.541801 0.641806 0.74391 0.847133 0.950992
1.05535 1.16025 1.26582 1.37215 1.47932 1.58731 1.69605 1.80539 1.91513 2.02504 2.13486
2.24432 2.35313 2.46104 2.56779 2.67315 2.77692 2.8789 2.97894 3.0769 3.17265 3.26614
3.35726 3.44596 3.53219 3.61595 3.6972 3.77596 3.85223 3.92603 3.99738 4.06631 4.13286
4.19707 4.25899 4.31867 4.37615 4.43149 4.48474 4.53597 4.58522 4.63256 4.67805 4.72173
4.76367 4.80393 4.84255 4.87961 4.91515 4.94922 4.98188 5.01318 5.04317 5.0719 5.09942
5.12576 5.15099 5.17514 5.19825 5.22037 5.24168 5.26219 5.28182 5.30059 5.31855 5.33571
5.35213 5.36783 5.38283 5.39717 5.41088 5.42399 5.43651 5.44847 5.45991 5.47083 5.48127
5.49124 5.50077 5.50986 5.51856 5.52686 5.53479 5.54236 5.54959 5.55649 5.56309 5.56939
5.5754 5.58114 5.59178 #bodywt for gender,fleet: 2 / 4
0 0.0130705 0.0226077 0.0376627 0.0601967 0.0919837 0.134084 0.186407 0.247573 0.315144
0.386094 0.457353 0.526237 0.590702 0.649419 0.701718 0.74746 0.786886 0.820481 0.848857
0.872668 0.892558 0.909125 0.922904 0.934359 0.943888 0.951827 0.958455 0.964001 0.968657
0.972578 0.975892 0.978704 0.981097 0.983143 0.984899 0.986411 0.987718 0.988853 0.989842
0.990706 0.991465 0.992133 0.992722 0.993245 0.99371 0.994124 0.994495 0.994827 0.995126
0.995396 0.995639 0.99586 0.99606 0.996242 0.996408 0.99656 0.996699 0.996827 0.996944
0.997052 0.997151 0.997243 0.997328 0.997406 0.997479 0.997547 0.997609 0.997668 0.997722
0.997771 0.997814 0.997854 0.997892 0.997927 0.997961 0.997992 0.998021 0.998049 0.998075
0.998099 0.998122 0.998144 0.998164 0.998184 0.998202 0.998219 0.998236 0.998251 0.998266
0.998279 0.998292 0.998305 0.998317 0.998328 0.998338 0.998348 0.998358 0.998367 0.998375
0.998391 #selex for gender,fleet: 2 / 4
0.0557902 0.196036 0.26802 0.350854 0.443289 0.543716 0.650298 0.761172 0.874649
0.989368 1.10435 1.21896 1.33286 1.44589 1.55803 1.6693 1.77975 1.88941 1.99829 2.10638
2.21361 2.31992 2.4252 2.52935 2.63222 2.7337 2.83364 2.93193 3.02843 3.12305 3.21567
3.30621 3.39461 3.48079 3.56471 3.64633 3.72563 3.8026 3.87722 3.94952 4.01949 4.08717
4.15257 4.21573 4.27668 4.33547 4.39214 4.44674 4.49931 4.5499 4.59857 4.64538 4.69036
4.73359 4.77511 4.81497 4.85324 4.88996 4.92518 4.95896 4.99135 5.0224 5.05215 5.08066
5.10797 5.13413 5.15917 5.18316 5.20611 5.22808 5.24927 5.26969 5.28924 5.30793 5.32581
5.3429 5.35925 5.37488 5.38983 5.40411 5.41777 5.43082 5.44329 5.45521 5.4666 5.47749
5.48788 5.49782 5.50731 5.51637 5.52503 5.5333 5.5412 5.54875 5.55595 5.56283 5.5694
5.57568 5.58167 5.58739 5.59799 #bodywt for gender,fleet: 2 / 5
0 0.0056342 0.00935828 0.0151214 0.0237444 0.0361841 0.0534386 0.0763956 0.105656
0.141382 0.183221 0.230325 0.281457 0.335155 0.389908 0.444297 0.497111 0.547394 0.594468
0.637913 0.677529 0.713296 0.745326 0.77382 0.799038 0.821268 0.840807 0.857947 0.872963
0.886111 0.897625 0.907711 0.916555 0.92432 0.931148 0.937161 0.942467 0.947159 0.951317
0.955009 0.958295 0.961227 0.963848 0.966198 0.968308 0.970207 0.97192 0.97347 0.974873
0.976147 0.977307 0.978363 0.979328 0.98021 0.981019 0.981762 0.982444 0.983073 0.983653
0.984188 0.984684 0.985143 0.985568 0.985963 0.986331 0.986672 0.986991 0.987288 0.987565
0.987825 0.988057 0.988266 0.988461 0.988645 0.988817 0.988979 0.989131 0.989275 0.98941
0.989538 0.989658 0.989771 0.989878 0.98998 0.990075 0.990165 0.990251 0.990332 0.990408
0.990481 0.990549 0.990614 0.990676 0.990734 0.99079 0.990842 0.990892 0.99094 0.990985
0.991027 0.991106 #selex for gender,fleet: 2 / 5
0.0577138 0.2054 0.281558 0.36947 0.46783 0.574818 0.688196 0.80554 0.924583 1.04351
1.1611 1.27671 1.39012 1.5014 1.61079 1.71858 1.82505 1.93044 2.03495 2.13869 2.24172
2.34405 2.44563 2.54638 2.64618 2.74492 2.84244 2.93861 3.03328 3.12631 3.21759 3.307
3.39444 3.47983 3.56309 3.64417 3.72304 3.79965 3.874 3.94608 4.01589 4.08344 4.14875
4.21184 4.27276 4.33153 4.38819 4.44279 4.49538 4.546 4.5947 4.64154 4.68657 4.72984
4.7714 4.81131 4.84962 4.88638 4.92164 4.95547 4.9879 5.01899 5.04878 5.07733 5.10468
5.13087 5.15596 5.17997 5.20296 5.22496 5.24617 5.26661 5.28617 5.30488 5.32277 5.33988
5.35625 5.37189 5.38685 5.40114 5.41481 5.42787 5.44035 5.45228 5.46368 5.47458 5.48498
5.49492 5.50442 5.5135 5.52216 5.53044 5.53835 5.5459 5.55311 5.55999 5.56657 5.57285
5.57885 5.58457 5.59518 #bodywt for gender,fleet: 2 / 6
0 0.00161861 0.00301987 0.00546025 0.0095592 0.0161792 0.0264202 0.0415342 0.0627471
0.091016 0.126794 0.169884 0.219423 0.274007 0.331893 0.391233 0.45028 0.507533 0.561825
0.612335 0.658574 0.700333 0.737622 0.770615 0.799588 0.824882 0.846865 0.865906 0.882362
0.896563 0.908811 0.919374 0.92849 0.936365 0.943178 0.949083 0.95421 0.958672 0.962565
0.96597 0.968955 0.971579 0.973893 0.975938 0.97775 0.979361 0.980795 0.982077 0.983225
0.984255 0.985183 0.986019 0.986775 0.987461 0.988083 0.988649 0.989165 0.989637 0.990069
0.990464 0.990828 0.991162 0.99147 0.991754 0.992017 0.99226 0.992485 0.992695 0.992889
0.993069 0.993229 0.993371 0.993503 0.993626 0.993742 0.99385 0.993952 0.994048 0.994137
0.994222 0.994301 0.994376 0.994446 0.994513 0.994575 0.994635 0.99469 0.994743 0.994793
0.99484 0.994884 0.994926 0.994966 0.995004 0.99504 0.995074 0.995106 0.995136 0.995165
0.995192 0.995243 #selex for gender,fleet: 2 / 6

0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383
0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383
0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383
0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383
0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383
0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383
0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383
0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383
0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383
0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383 0.0469383
0.0469383 0.0469383 0.0469383 #mean M for year Yinit: 2011 sex: 1
43.4033 40.6772 38.0509 35.5804 33.3409 31.0561 28.9166 26.8498 24.8615 23.0039 21.782
20.428 20.3778 19.7277 20.292 20.3744 20.6088 20.3791 20.5917 20.7299 20.4322 19.29
18.4429 17.1696 15.7414 14.2297 12.9755 11.6445 10.4706 9.50117 8.48033 7.48097 6.62789
5.8682 5.14811 4.52379 3.977 3.50989 3.10453 2.75819 2.45623 2.1937 1.97375 1.77683
1.60726 1.46005 1.33739 1.22396 1.12542 1.0391 0.961981 0.893609 0.832436 0.777465
0.727362 0.681372 0.63894 0.599675 0.563293 0.529948 0.499217 0.470508 0.443789 0.419292
0.396312 0.376083 0.357437 0.339014 0.321681 0.304641 0.288492 0.273171 0.258586 0.24484
0.231832 0.219534 0.207873 0.196854 0.186456 0.176693 0.167517 0.158907 0.150808 0.143165
0.135964 0.129176 0.122771 0.116715 0.110991 0.105578 0.100457 0.0956068 0.0910094
0.0866583 0.0825272 0.0786005 0.0748585 0.0713048 0.0679286 0.06472 1.33372 #numbers for
year Yinit: 2011 sex: 1
0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867
0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867
0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867
0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867
0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867
0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867
0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867
0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867
0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867
0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867 0.0456867
0.0456867 0.0456867 0.0456867 #mean M for year Yinit: 2011 sex: 2
43.4033 40.7281 38.1462 35.7137 33.507 31.2481 29.129 27.077 25.0983 23.2462 22.0324
20.6814 20.6482 20.005 20.5907 20.6834 20.9234 20.6824 20.8779 20.9831 20.6313 19.4149
18.4879 17.1309 15.6243 14.0461 12.7367 11.3684 10.171 9.18825 8.17019 7.1857 6.352
5.61551 4.92248 4.32493 3.80403 3.36089 2.97772 2.65147 2.36775 2.12161 1.91598 1.73186
1.57342 1.43581 1.32133 1.21497 1.1224 1.04112 0.968208 0.903337 0.845053 0.792447
0.744247 0.69976 0.658484 0.620076 0.5843 0.551369 0.520891 0.492292 0.465573 0.441006
0.417876 0.397505 0.378683 0.359978 0.342316 0.324858 0.308247 0.292425 0.277306 0.263008
0.24944 0.23658 0.224362 0.2128 0.201879 0.191617 0.181966 0.172905 0.164375 0.156316
0.148714 0.141538 0.134754 0.128329 0.122245 0.11648 0.111014 0.105827 0.100901 0.0962303
0.091787 0.0875555 0.0835152 0.0796713 0.0760129 0.0725302 1.53984 #numbers for year
Yinit: 2011 sex: 2
44.6192 42.0139 39.5036 37.0063 34.6033 32.3386 30.2808 28.1797 26.2105 24.3087 22.4812
20.7759 19.649 18.4067 18.3422 17.7399 18.2314 18.2911 18.4887 18.2713 18.452 18.567
18.2927 17.2638 16.5004 15.3569 14.0759 12.7213 11.5978 10.4063 9.3558 8.48842 7.5755
6.6821 5.91959 5.2407 4.59733 4.03961 3.55121 3.13402 2.77204 2.46279 2.19318 1.95881
1.76246 1.58668 1.43533 1.30393 1.19445 1.0932 1.00525 0.928203 0.859359 0.798323
0.743709 0.694629 0.649891 0.608823 0.570929 0.535859 0.503363 0.473577 0.446124 0.420476
0.396605 0.374719 0.354186 0.336111 0.319451 0.302988 0.287499 0.272271 0.25784 0.244147
0.231112 0.218826 0.207199 0.196206 0.185783 0.175933 0.166639 0.157912 0.14971 0.142014
0.134775 0.127943 0.121507 0.115441 0.109716 0.104304 0.099188 0.0943505 0.0897736
0.0854391 0.0813306 0.0774421 0.0737503 0.0702412 0.0668972 0.0637214 1.31042 #numbers
for year Ydeclare: 2013 sex: 1
44.6192 42.0665 39.6024 37.1447 34.7749 32.5374 30.5019 28.4167 26.4586 24.5633 22.7384
21.0328 19.9096 18.6668 18.6167 18.0192 18.5306 18.5997 18.8029 18.5754 18.7415 18.8276
18.505 17.4081 16.5723 15.3521 13.9988 12.5824 11.4076 10.1806 9.10721 8.22635 7.31424
6.43242 5.6858 5.02633 4.40587 3.87095 3.40469 3.00808 2.66516 2.37319 2.11932 1.89908
1.71511 1.55037 1.40862 1.28551 1.1831 1.08793 1.00511 0.93238 0.867135 0.809081 0.756917
0.70983 0.666683 0.626855 0.589898 0.555505 0.523468 0.493975 0.466679 0.441063 0.41713
0.395124 0.374405 0.356156 0.339295 0.322537 0.306714 0.291072 0.27619 0.262013 0.248465
0.235654 0.223495 0.211971 0.201022 0.19066 0.180873 0.171677 0.163029 0.154909 0.147265
0.140044 0.133233 0.126803 0.120725 0.114968 0.109517 0.104352 0.0994549 0.0948083
0.090395 0.0862104 0.0822297 0.0784388 0.0748191 0.0713755 1.51258 #numbers for year
Ydeclare: 2013 sex: 2
#R0 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932
1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950
1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968

```

1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986
1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004
2005 2006 2007 2008 2009 2010 #years
234.505 234.505 234.463 234.405 234.34 234.297 234.251 234.205 234.162 234.117 234.066
233.991 233.906 233.81 233.7 233.549 233.391 233.258 233.13 233.028 232.902 232.75
232.551 232.356 232.164 232.021 231.796 231.518 231.17 230.312 229.451 228.014 226.812
226.348 225.805 225.453 225.075 224.606 224.205 223.908 223.524 223.03 222.42 221.709
220.938 220.246 219.617 219.1 218.479 217.999 217.676 216.29 215.741 215.092 214.411
212.804 211.716 210.217 208.263 206.369 204.181 202.125 199.635 197.009 192.321 187.452
183.39 177.34 169.071 163.048 158.098 151.772 147.932 143.205 137.638 129.935 125.198
116.522 107.025 98.5535 93.226 86.5727 81.2614 74.7485 73.1516 69.6204 70.5327 70.8433
72.858 74.9234 76.871 78.6801 80.5198 81.9544 83.6025 85.2641 86.8067 #Recruits
1.02333e+009 1.02333e+009 1.02287e+009 1.02224e+009 1.02153e+009 1.02107e+009
1.02057e+009 1.02008e+009 1.01962e+009 1.01913e+009 1.01857e+009 1.01777e+009
1.01686e+009 1.01582e+009 1.01464e+009 1.01302e+009 1.01134e+009 1.00991e+009
1.00855e+009 1.00746e+009 1.00612e+009 1.00452e+009 1.00241e+009 1.00035e+009
9.98331e+008 9.96824e+008 9.94466e+008 9.91554e+008 9.87931e+008 9.79059e+008
9.70258e+008 9.55769e+008 9.43835e+008 9.39275e+008 9.33976e+008 9.30556e+008
9.26899e+008 9.22386e+008 9.18547e+008 9.15712e+008 9.12066e+008 9.07403e+008
9.01681e+008 8.95053e+008 8.8794e+008 8.81608e+008 8.75891e+008 8.71228e+008 8.65661e+008
8.61378e+008 8.58513e+008 8.46347e+008 8.41578e+008 8.3598e+008 8.30146e+008 8.16566e+008
8.07506e+008 7.95201e+008 7.79458e+008 7.64514e+008 7.47629e+008 7.32109e+008
7.13762e+008 6.94922e+008 6.62508e+008 6.30414e+008 6.04778e+008 5.68395e+008
5.21846e+008 4.90053e+008 4.65147e+008 4.34808e+008 4.17158e+008 3.96173e+008
3.72458e+008 3.41306e+008 3.23038e+008 2.91204e+008 2.58577e+008 2.31249e+008
2.14856e+008 1.95185e+008 1.80085e+008 1.62258e+008 1.57998e+008 1.48727e+008
1.51103e+008 1.51915e+008 1.57219e+008 1.62727e+008 1.67987e+008 1.72931e+008
1.78018e+008 1.82026e+008 1.86677e+008 1.91417e+008 1.95863e+008 #SpawnBio
0.383 0.5 0 # spawn-recr steepness, sigmaR, autocorr
# values from cat100_hlow, catch at 100% and steepness at low value. # this is state of
nature 2 out of 9 (in no particular order) # and parameter set number 2 out of 2 for this
state
0 0 31.1162 112.356 367.744 1080.46 2816.18 6473.87 13168.2 23948.2 39492.1 59937
84901.8 113650 145295 178975 213957 249683 285761 321940 358074 394085 429937 465613
501106 536408 571504 606376 640998 675340 709366 743040 776324 809179 841567 873453
904803 935587 965775 995344 1.02427e+006 1.05254e+006 1.08013e+006 1.10703e+006
1.13324e+006 1.15874e+006 1.18353e+006 1.20761e+006 1.23098e+006 1.25364e+006 1.2756e+006
1.29687e+006 1.31744e+006 1.33734e+006 1.35656e+006 1.37513e+006 1.39305e+006
1.41033e+006 1.427e+006 1.44306e+006 1.45853e+006 1.47342e+006 1.48776e+006 1.50154e+006
1.5148e+006 1.52754e+006 1.53979e+006 1.55155e+006 1.56285e+006 1.57369e+006 1.58409e+006
1.59434e+006 1.60417e+006 1.6136e+006 1.62265e+006 1.63131e+006 1.63962e+006 1.64758e+006
1.65521e+006 1.66251e+006 1.66951e+006 1.6762e+006 1.68262e+006 1.68875e+006 1.69462e+006
1.70024e+006 1.70562e+006 1.71076e+006 1.71568e+006 1.72038e+006 1.72488e+006
1.72918e+006 1.73329e+006 1.73722e+006 1.74098e+006 1.74457e+006 1.748e+006 1.75128e+006
1.75441e+006 1.75741e+006 1.76295e+006 #female fecundity; weighted by N in year Y_init
across morphs and areas
0.0459232 0.166695 0.22642 0.294237 0.368826 0.448887 0.533321 0.6213 0.712246 0.805766
0.901583 0.999474 1.09923 1.20065 1.30348 1.40747 1.51235 1.61783 1.72361 1.8294 1.93491
2.03987 2.14403 2.24713 2.34897 2.44935 2.5481 2.64506 2.74009 2.8331 2.92398 3.01267
3.09909 3.18321 3.265 3.34442 3.42149 3.49619 3.56854 3.63855 3.70624 3.77166 3.83482
3.89577 3.95455 4.01121 4.06579 4.11834 4.16892 4.21758 4.26437 4.30934 4.35255 4.39405
4.4339 4.47215 4.50885 4.54406 4.57782 4.6102 4.64123 4.67097 4.69946 4.72675 4.75289
4.77792 4.80188 4.82482 4.84677 4.86777 4.88801 4.9075 4.92615 4.94398 4.96103 4.97734
4.99293 5.00784 5.02208 5.0357 5.04871 5.06115 5.07303 5.08438 5.09523 5.10559 5.11549
5.12494 5.13397 5.1426 5.15084 5.1587 5.16621 5.17339 5.18024 5.18678 5.19302 5.19898
5.20467 5.2101 5.22015 #bodywt for gender.fleet: 1 / 1
0 0.055802 0.0834715 0.120224 0.166419 0.221317 0.283111 0.349258 0.416948 0.483562
0.546973 0.605686 0.658826 0.706052 0.747417 0.783242 0.814009 0.840267 0.862582 0.881495
0.897504 0.91105 0.92252 0.932243 0.940502 0.947532 0.953533 0.95867 0.963081 0.96688
0.970164 0.973011 0.975489 0.977651 0.979546 0.98121 0.982678 0.983975 0.985126 0.98615
0.987064 0.987882 0.988615 0.989274 0.989869 0.990407 0.990894 0.991336 0.991739 0.992106
0.992441 0.992748 0.99303 0.993289 0.993527 0.993746 0.993949 0.994136 0.994309 0.99447
0.994619 0.994758 0.994887 0.995007 0.995119 0.995224 0.995322 0.995413 0.995499 0.995579
0.995651 0.995717 0.995778 0.995836 0.99589 0.995941 0.995989 0.996035 0.996078 0.996118
0.996156 0.996192 0.996227 0.996259 0.996289 0.996318 0.996346 0.996371 0.996396 0.996419
0.996441 0.996462 0.996482 0.996501 0.996519 0.996536 0.996552 0.996567 0.996581 0.996595
0.996621 #selex for gender.fleet: 1 / 1
0.0470987 0.173394 0.236518 0.308495 0.387689 0.472325 0.560823 0.652 0.745096 0.8397
0.93562 1.03279 1.13117 1.23074 1.33141 1.43306 1.53555 1.63866 1.74216 1.84581 1.94934
2.0525 2.15502 2.25667 2.35723 2.45647 2.55422 2.65031 2.74459 2.83694 2.92726 3.01545
3.10145 3.1852 3.26666 3.34581 3.42264 3.49713 3.5693 3.63916 3.70672 3.77201 3.83507

```

3.89593 3.95464 4.01123 4.06575 4.11825 4.16878 4.2174 4.26415 4.30909 4.35228 4.39375
4.43358 4.47181 4.5085 4.54369 4.57744 4.60981 4.64083 4.67056 4.69904 4.72633 4.75246
4.77748 4.80144 4.82437 4.84631 4.86732 4.88755 4.90704 4.92568 4.94351 4.96056 4.97687
4.99246 5.00736 5.0216 5.03522 5.04823 5.06066 5.07254 5.08389 5.09474 5.1051 5.115
5.12445 5.13348 5.14211 5.15034 5.15821 5.16572 5.17289 5.17974 5.18628 5.19252 5.19848
5.20417 5.20961 5.21965 #bodywt for gender,fleet: 1 / 2
0 0.0231649 0.0379628 0.0598976 0.0906619 0.131303 0.181793 0.240869 0.306236 0.375017
0.444278 0.511445 0.574555 0.632317 0.684066 0.729637 0.769225 0.803254 0.832273 0.856877
0.877655 0.89516 0.909889 0.922281 0.932715 0.941512 0.948943 0.955236 0.960579 0.96513
0.969018 0.972351 0.975218 0.977693 0.979836 0.981699 0.983324 0.984747 0.985995 0.987095
0.988068 0.98893 0.989696 0.990379 0.990991 0.991539 0.992032 0.992476 0.992877 0.993241
0.993571 0.993871 0.994145 0.994395 0.994624 0.994834 0.995026 0.995204 0.995367 0.995518
0.995657 0.995786 0.995906 0.996017 0.99612 0.996216 0.996305 0.996389 0.996467 0.996539
0.996604 0.996662 0.996717 0.996768 0.996816 0.996861 0.996904 0.996944 0.996982 0.997017
0.997051 0.997082 0.997112 0.99714 0.997167 0.997192 0.997216 0.997238 0.99726 0.99728
0.997299 0.997317 0.997334 0.997351 0.997366 0.997381 0.997394 0.997408 0.99742 0.997432
0.997454 #selex for gender,fleet: 1 / 2
0 0.0514244 0.193633 0.262198 0.336463 0.413258 0.490855 0.568935 0.647983 0.728749
0.811945 0.898098 0.987506 1.08024 1.17616 1.27498 1.3763 1.47966 1.58455 1.69047 1.79695
1.90353 2.00983 2.11547 2.22013 2.32355 2.42547 2.52571 2.62409 2.72047 2.81473 2.90677
2.99653 3.08395 3.16898 3.2516 3.3318 3.40957 3.48492 3.55786 3.62841 3.69661 3.76248
3.82606 3.8874 3.94654 4.00353 4.05841 4.11125 4.16208 4.21098 4.25799 4.30317 4.34657
4.38825 4.42826 4.46667 4.50351 4.53886 4.57275 4.60524 4.63638 4.66622 4.69481 4.72219
4.74841 4.77352 4.79755 4.82056 4.84258 4.86364 4.88393 4.90346 4.92215 4.94001 4.9571
4.97344 4.98906 5.00399 5.01826 5.03191 5.04494 5.0574 5.0693 5.08068 5.09154 5.10193
5.11184 5.12131 5.13036 5.139 5.14725 5.15513 5.16266 5.16984 5.1767 5.18325 5.18951
5.19548 5.20118 5.20662 5.21668 #bodywt for gender,fleet: 1 / 3
0 0.0187216 0.0395013 0.0765259 0.134477 0.213866 0.309928 0.41425 0.517777 0.613279
0.69642 0.765595 0.821184 0.864698 0.89811 0.923416 0.942409 0.956585 0.96714 0.974997
0.980856 0.985239 0.988533 0.991021 0.992911 0.994358 0.995471 0.996335 0.99701 0.99754
0.997961 0.998296 0.998566 0.998785 0.998962 0.999108 0.999228 0.999328 0.999412 0.999482
0.999541 0.999591 0.999634 0.999671 0.999703 0.99973 0.999754 0.999775 0.999793 0.999809
0.999823 0.999835 0.999847 0.999857 0.999865 0.999873 0.999881 0.999887 0.999893 0.999898
0.999903 0.999907 0.999911 0.999915 0.999918 0.999921 0.999924 0.999927 0.999929 0.999931
0.999933 0.999935 0.999937 0.999938 0.999939 0.999941 0.999942 0.999943 0.999944 0.999945
0.999946 0.999947 0.999947 0.999948 0.999949 0.999949 0.99995 0.99995 0.999951 0.999952
0.999952 0.999953 0.999953 0.999954 0.999954 0.999954 0.999955 0.999955 0.999955 0.999956
0.999956 #selex for gender,fleet: 1 / 3
0 0.0474109 0.175448 0.239961 0.314032 0.396111 0.484318 0.576781 0.671937 0.768683
0.866353 0.964622 1.06338 1.16263 1.2624 1.36272 1.46358 1.56491 1.66661 1.76854 1.87052
1.97235 2.07382 2.1747 2.27479 2.37386 2.47172 2.5682 2.66311 2.75632 2.8477 2.93713
3.02452 3.10979 3.19289 3.27377 3.35239 3.42874 3.5028 3.57458 3.64408 3.71133 3.77633
3.83913 3.89976 3.95825 4.01464 4.06898 4.12132 4.17171 4.22019 4.26682 4.31164 4.35472
4.3961 4.43584 4.47399 4.5106 4.54572 4.57941 4.61171 4.64268 4.67235 4.70079 4.72803
4.75412 4.7791 4.80302 4.82592 4.84783 4.8688 4.88901 4.90848 4.92711 4.94492 4.96196
4.97824 4.99382 5.0087 5.02293 5.03654 5.04954 5.06196 5.07383 5.08517 5.09601 5.10636
5.11625 5.12569 5.13472 5.14333 5.15156 5.15942 5.16693 5.17409 5.18094 5.18747 5.19371
5.19966 5.20535 5.21078 5.22081 #bodywt for gender,fleet: 1 / 4
0 0.0128088 0.0216119 0.035232 0.0553143 0.0833798 0.120421 0.166544 0.220825 0.281429
0.345951 0.411829 0.476703 0.538655 0.596312 0.64884 0.695867 0.73738 0.77362 0.804981
0.831944 0.855014 0.874689 0.891435 0.905674 0.917781 0.928082 0.936857 0.944345 0.950749
0.956239 0.960958 0.965025 0.968542 0.971592 0.974245 0.97656 0.978587 0.980367 0.981935
0.98332 0.984547 0.985638 0.98661 0.987479 0.988258 0.988958 0.989588 0.990156 0.990671
0.991138 0.991563 0.991949 0.992302 0.992625 0.99292 0.993192 0.993441 0.993671 0.993883
0.994078 0.994259 0.994427 0.994582 0.994727 0.994861 0.994986 0.995102 0.995211 0.995313
0.995403 0.995484 0.99556 0.995631 0.995698 0.995761 0.99582 0.995875 0.995928 0.995977
0.996023 0.996067 0.996108 0.996148 0.996184 0.996219 0.996252 0.996283 0.996313 0.996341
0.996367 0.996392 0.996416 0.996439 0.99646 0.99648 0.996499 0.996517 0.996535 0.996551
0.996581 #selex for gender,fleet: 1 / 4
0 0.0466845 0.172305 0.236105 0.310153 0.393545 0.485022 0.583054 0.685994 0.792252
0.900449 1.0095 1.11862 1.22731 1.33526 1.44232 1.54843 1.65355 1.75769 1.86083 1.96296
2.06404 2.16402 2.26283 2.36039 2.45662 2.55143 2.64471 2.73637 2.82633 2.9145 3.0008
3.08518 3.16756 3.2479 3.32616 3.40231 3.47633 3.5482 3.61793 3.68552 3.75097 3.8143
3.87554 3.93471 3.99184 4.04697 4.10013 4.15137 4.20073 4.24825 4.29399 4.33798 4.38028
4.42093 4.45999 4.4975 4.53352 4.56808 4.60124 4.63306 4.66356 4.69281 4.72084 4.7477
4.77343 4.79807 4.82168 4.84427 4.86591 4.88661 4.9066 4.9259 4.94436 4.96202 4.97891
4.99506 5.01051 5.02527 5.03938 5.05287 5.06577 5.07809 5.08986 5.10111 5.11186 5.12213
5.13195 5.14132 5.15027 5.15882 5.16699 5.17479 5.18223 5.18935 5.19614 5.20262 5.20881
5.21472 5.22037 5.22575 5.23571 #bodywt for gender,fleet: 1 / 5
0 0.00553229 0.00897589 0.0141953 0.0218656 0.0327698 0.0477293 0.067493 0.0926048
0.123284 0.159355 0.200244 0.245049 0.292648 0.341832 0.391419 0.440349 0.487738 0.532906

0.575373 0.614845 0.65118 0.684364 0.714472 0.741648 0.766077 0.787966 0.807535 0.825
0.840573 0.854451 0.866819 0.877844 0.887678 0.896458 0.904306 0.911329 0.917624 0.923273
0.928353 0.932927 0.937053 0.940782 0.944157 0.947219 0.949999 0.95253 0.954837 0.956944
0.95887 0.960636 0.962255 0.963743 0.965113 0.966376 0.967541 0.968618 0.969615 0.970538
0.971395 0.972191 0.972931 0.97362 0.974262 0.97486 0.97542 0.975942 0.976431 0.976889
0.977317 0.977705 0.978054 0.978381 0.97869 0.97898 0.979253 0.979511 0.979754 0.979983
0.980199 0.980403 0.980595 0.980777 0.98095 0.981112 0.981267 0.981412 0.98155 0.981681
0.981805 0.981923 0.982034 0.98214 0.98224 0.982335 0.982425 0.982511 0.982592 0.98267
0.982743 0.982878 #selex for gender,fleet: 1 / 5
0.0483158 0.180652 0.248243 0.326973 0.415928 0.513717 0.61851 0.728197 0.840649
0.954007 1.06687 1.17832 1.28789 1.39542 1.50097 1.60469 1.70677 1.8074 1.90676 2.00496
2.10208 2.19816 2.29321 2.3872 2.48007 2.57175 2.66216 2.7512 2.83878 2.92481 3.0092
3.09186 3.17272 3.25172 3.32879 3.4039 3.47701 3.54809 3.61713 3.68411 3.74904 3.81192
3.87277 3.9316 3.98844 4.04332 4.09627 4.14732 4.19653 4.24392 4.28954 4.33344 4.37566
4.41625 4.45525 4.49272 4.5287 4.56324 4.59638 4.62817 4.65867 4.6879 4.71593 4.74279
4.76852 4.79317 4.81677 4.83938 4.86102 4.88173 4.90172 4.92102 4.93948 4.95714 4.97403
4.99019 5.00563 5.0204 5.03451 5.048 5.0609 5.07322 5.085 5.09626 5.10701 5.11728 5.1271
5.13647 5.14543 5.15398 5.16215 5.16995 5.1774 5.18452 5.19131 5.1978 5.20399 5.20991
5.21555 5.22094 5.2309 #bodywt for gender,fleet: 1 / 6
0.00158049 0.00286478 0.00504369 0.00861979 0.0142837 0.022913 0.0355154 0.0531053
0.0765276 0.106278 0.142371 0.184307 0.23113 0.281561 0.334166 0.387518 0.440315 0.491472
0.540151 0.585765 0.627956 0.666562 0.701571 0.733089 0.761296 0.786423 0.808726 0.828471
0.845919 0.861318 0.874903 0.886884 0.897457 0.906792 0.915042 0.922344 0.928815 0.934559
0.939666 0.944216 0.948277 0.951909 0.955163 0.958085 0.960713 0.963083 0.965224 0.967161
0.968918 0.970514 0.971967 0.973292 0.974502 0.975609 0.976625 0.977557 0.978414 0.979203
0.979931 0.980603 0.981225 0.981801 0.982335 0.98283 0.983291 0.98372 0.984119 0.984492
0.984839 0.985149 0.985425 0.985684 0.985927 0.986154 0.986368 0.986569 0.986758 0.986936
0.987104 0.987262 0.98741 0.987551 0.987683 0.987809 0.987927 0.988038 0.988144 0.988244
0.988339 0.988428 0.988513 0.988593 0.988669 0.988741 0.98881 0.988875 0.988936 0.988994
0.98905 0.989151 #selex for gender,fleet: 1 / 6
0.0548914 0.189688 0.257027 0.332795 0.415381 0.503307 0.595419 0.69092 0.789307
0.890271 0.993607 1.09914 1.20669 1.31604 1.42694 1.5391 1.65221 1.76593 1.87992 1.99384
2.10738 2.22022 2.33208 2.4427 2.55184 2.65929 2.76488 2.86845 2.96985 3.06899 3.16578
3.26013 3.352 3.44134 3.52814 3.61238 3.69405 3.77318 3.84976 3.92383 3.99541 4.06455
4.13129 4.19566 4.25772 4.31752 4.37511 4.43055 4.48389 4.53519 4.58451 4.63191 4.67745
4.72118 4.76317 4.80346 4.84213 4.87921 4.91478 4.94888 4.98157 5.01289 5.0429 5.07165
5.09918 5.12554 5.15078 5.17495 5.19807 5.2202 5.24151 5.26204 5.28167 5.30045 5.31841
5.33559 5.35201 5.36771 5.38272 5.39707 5.41078 5.42389 5.43641 5.44838 5.45982 5.47074
5.48118 5.49116 5.50069 5.50979 5.51848 5.52679 5.53472 5.54229 5.54952 5.55643 5.56303
5.56933 5.57534 5.58108 5.59172 #bodywt for gender,fleet: 2 / 1
0.056618 0.0862621 0.126104 0.17651 0.236494 0.303794 0.375315 0.447747 0.518106
0.584086 0.644176 0.697611 0.744227 0.784287 0.818318 0.846979 0.87097 0.89097 0.907605
0.921428 0.932918 0.942479 0.95045 0.957113 0.962698 0.967396 0.971362 0.974722 0.97758
0.98002 0.982112 0.983913 0.985468 0.986817 0.987992 0.989018 0.989918 0.99071 0.99141
0.992029 0.99258 0.99307 0.993509 0.993902 0.994256 0.994575 0.994862 0.995123 0.99536
0.995575 0.995771 0.995951 0.996115 0.996265 0.996404 0.996531 0.996648 0.996757 0.996857
0.996949 0.997035 0.997115 0.997189 0.997258 0.997322 0.997382 0.997438 0.997491 0.99754
0.997584 0.997623 0.99766 0.997695 0.997728 0.997759 0.997788 0.997815 0.997841 0.997865
0.997888 0.99791 0.99793 0.99795 0.997968 0.997985 0.998002 0.998017 0.998032 0.998046
0.998059 0.998071 0.998083 0.998094 0.998105 0.998115 0.998125 0.998134 0.998142 0.998151
0.998166 #selex for gender,fleet: 2 / 1
0.0562783 0.197221 0.268324 0.348601 0.436011 0.528507 0.624412 0.722595 0.822436
0.92368 1.02628 1.13028 1.23572 1.34259 1.45082 1.56027 1.67073 1.78196 1.89366 2.00552
2.11722 2.22846 2.33893 2.44836 2.5565 2.6631 2.76797 2.87094 2.97184 3.07057 3.167
3.26107 3.3527 3.44185 3.52849 3.61259 3.69415 3.77318 3.84969 3.9237 3.99524 4.06433
4.13103 4.19538 4.25741 4.3172 4.37477 4.4302 4.48353 4.53482 4.58414 4.63154 4.67707
4.7208 4.76279 4.80308 4.84175 4.87884 4.9144 4.9485 4.98119 5.01251 5.04253 5.07128
5.09881 5.12518 5.15042 5.17458 5.19771 5.21984 5.24116 5.26168 5.28132 5.3001 5.31806
5.33523 5.35166 5.36736 5.38237 5.39671 5.41043 5.42354 5.43606 5.44803 5.45947 5.4704
5.48084 5.49081 5.50034 5.50944 5.51814 5.52644 5.53437 5.54195 5.54918 5.55609 5.56268
5.56898 5.575 5.58074 5.59138 #bodywt for gender,fleet: 2 / 2
0.0236049 0.0395862 0.0636857 0.0978776 0.143296 0.199703 0.265347 0.337282 0.411987
0.486027 0.556544 0.621502 0.679714 0.730726 0.774635 0.811901 0.84319 0.869252 0.890839
0.908653 0.923325 0.935402 0.945349 0.953552 0.960332 0.965952 0.970625 0.974524 0.977791
0.980539 0.982859 0.984827 0.986503 0.987936 0.989167 0.990229 0.991148 0.991946 0.992643
0.993253 0.99379 0.994263 0.994681 0.995052 0.995383 0.995679 0.995943 0.996181 0.996395
0.996588 0.996763 0.996922 0.997066 0.997198 0.997318 0.997428 0.997528 0.997621 0.997706
0.997784 0.997856 0.997923 0.997985 0.998042 0.998095 0.998145 0.998191 0.998234 0.998274
0.998309 0.998341 0.998371 0.998398 0.998424 0.998449 0.998472 0.998494 0.998514 0.998533
0.998551 0.998568 0.998584 0.998599 0.998614 0.998627 0.99864 0.998652 0.998664 0.998674

0.998685 0.998694 0.998703 0.998712 0.99872 0.998728 0.998736 0.998743 0.998749 0.998756
 0.998767 #selex for gender,fleet: 2 / 2
 0.0613745 0.219761 0.296353 0.378092 0.461531 0.545156 0.629048 0.714063 0.80122
 0.891388 0.985155 1.0828 1.18431 1.28943 1.39772 1.50864 1.62159 1.73595 1.85115 1.96664
 2.08194 2.19663 2.31032 2.42272 2.53354 2.64256 2.74958 2.85446 2.95705 3.05727 3.15502
 3.25024 3.34289 3.43294 3.52036 3.60517 3.68735 3.76693 3.84392 3.91836 3.99029 4.05973
 4.12674 4.19136 4.25365 4.31365 4.37143 4.42704 4.48054 4.53199 4.58144 4.62897 4.67462
 4.71845 4.76053 4.80092 4.83966 4.87683 4.91247 4.94663 4.97938 5.01075 5.04082 5.06962
 5.09719 5.1236 5.14888 5.17308 5.19624 5.21841 5.23975 5.26029 5.27994 5.29874 5.31672
 5.33391 5.35034 5.36606 5.38108 5.39544 5.40917 5.42228 5.43482 5.4468 5.45825 5.46918
 5.47963 5.48961 5.49915 5.50826 5.51696 5.52527 5.53321 5.54079 5.54803 5.55494 5.56154
 5.56784 5.57386 5.57961 5.59026 #bodywt for gender,fleet: 2 / 3
 0 0.0193458 0.0421489 0.0835085 0.148558 0.237099 0.342626 0.454787 0.563211 0.660298
 0.742107 0.807846 0.858775 0.897157 0.925504 0.946145 0.961034 0.971719 0.979372 0.984856
 0.988798 0.991643 0.993709 0.99522 0.996333 0.997159 0.997778 0.998245 0.998601 0.998874
 0.999086 0.999251 0.999382 0.999485 0.999568 0.999635 0.999689 0.999733 0.999769 0.9998
 0.999825 0.999846 0.999864 0.999879 0.999891 0.999902 0.999912 0.99992 0.999927 0.999933
 0.999939 0.999944 0.999948 0.999952 0.999955 0.999958 0.99996 0.999963 0.999965 0.999967
 0.999969 0.99997 0.999972 0.999973 0.999974 0.999975 0.999976 0.999977 0.999978 0.999979
 0.999979 0.99998 0.99998 0.999981 0.999981 0.999982 0.999982 0.999982 0.999983 0.999983
 0.999983 0.999984 0.999984 0.999984 0.999984 0.999985 0.999985 0.999985 0.999985 0.999985
 0.999986 0.999986 0.999986 0.999986 0.999986 0.999986 0.999986 0.999987 0.999987 0.999987
 0.999987 #selex for gender,fleet: 2 / 3
 0.0566467 0.19954 0.272222 0.35486 0.445466 0.541801 0.641806 0.74391 0.847133 0.950992
 1.05535 1.16025 1.26582 1.37215 1.47932 1.58731 1.69605 1.80539 1.91513 2.02504 2.13486
 2.24432 2.35313 2.46104 2.56779 2.67315 2.77692 2.8789 2.97894 3.0769 3.17267 3.26614
 3.35726 3.44596 3.53219 3.61595 3.6972 3.77596 3.85223 3.92603 3.99738 4.06631 4.13286
 4.19707 4.25899 4.31867 4.37615 4.43149 4.48474 4.53597 4.58522 4.63256 4.67805 4.72173
 4.76367 4.80393 4.84255 4.87961 4.91515 4.94922 4.98188 5.01318 5.04317 5.0719 5.09942
 5.12576 5.15099 5.17514 5.19825 5.22037 5.24168 5.26219 5.28182 5.30059 5.31855 5.33571
 5.35213 5.36783 5.38283 5.39717 5.41088 5.42399 5.43651 5.44847 5.45991 5.47083 5.48127
 5.49124 5.50077 5.50986 5.51856 5.52686 5.53479 5.54236 5.54959 5.55649 5.56309 5.56939
 5.5754 5.58114 5.59178 #bodywt for gender,fleet: 2 / 4
 0 0.0130705 0.0226077 0.0376627 0.0601967 0.0919837 0.134084 0.186407 0.247573 0.315144
 0.386094 0.457353 0.526237 0.590702 0.649419 0.701718 0.74746 0.786886 0.820481 0.848857
 0.872668 0.892558 0.909125 0.922904 0.934359 0.943888 0.951827 0.958455 0.964001 0.968657
 0.972578 0.975892 0.978704 0.981097 0.983143 0.984899 0.986411 0.987718 0.988853 0.989842
 0.990706 0.991465 0.992133 0.992722 0.993245 0.99371 0.994124 0.994495 0.994827 0.995126
 0.995396 0.995639 0.99586 0.99606 0.996242 0.996408 0.99656 0.996699 0.996827 0.996944
 0.997052 0.997151 0.997243 0.997328 0.997406 0.997479 0.997547 0.997609 0.997668 0.997722
 0.997771 0.997814 0.997854 0.997892 0.997927 0.997961 0.997992 0.998021 0.998049 0.998075
 0.998099 0.998122 0.998144 0.998164 0.998184 0.998202 0.998219 0.998236 0.998251 0.998266
 0.998279 0.998292 0.998305 0.998317 0.998328 0.998338 0.998348 0.998358 0.998367 0.998375
 0.998391 #selex for gender,fleet: 2 / 4
 0.0557902 0.196036 0.26802 0.350854 0.443289 0.543716 0.650298 0.761172 0.874649
 0.989368 1.10435 1.21896 1.33286 1.44589 1.55803 1.6693 1.77975 1.88941 1.99829 2.10638
 2.21361 2.31992 2.4252 2.52935 2.63222 2.7337 2.83364 2.93193 3.02843 3.12305 3.21567
 3.30621 3.39461 3.48079 3.56471 3.64633 3.72563 3.8026 3.87722 3.94952 4.01949 4.08717
 4.15257 4.21573 4.27668 4.33547 4.39214 4.44674 4.49931 4.5499 4.59857 4.64538 4.69036
 4.73359 4.77511 4.81497 4.85324 4.88996 4.92518 4.95896 4.99135 5.0224 5.05215 5.08066
 5.10797 5.13413 5.15917 5.18316 5.20611 5.22808 5.24927 5.26969 5.28924 5.30793 5.32581
 5.3429 5.35925 5.37488 5.38983 5.40411 5.41777 5.43082 5.44329 5.45521 5.4666 5.47749
 5.48788 5.49782 5.50731 5.51637 5.52503 5.5333 5.5412 5.54875 5.55595 5.56283 5.5694
 5.57568 5.58167 5.58739 5.59799 #bodywt for gender,fleet: 2 / 5
 0 0.0056342 0.00935828 0.0151214 0.0237444 0.0361841 0.0534386 0.0763956 0.105656
 0.141382 0.183221 0.230325 0.281457 0.335155 0.389908 0.444297 0.497111 0.547394 0.594468
 0.637913 0.677529 0.713296 0.745326 0.77382 0.799038 0.821268 0.840807 0.857947 0.872963
 0.886111 0.897625 0.907711 0.916555 0.92432 0.931148 0.937161 0.942467 0.947159 0.951317
 0.955009 0.958295 0.961227 0.963848 0.966198 0.968308 0.970207 0.97192 0.97347 0.974873
 0.976147 0.977307 0.978363 0.979328 0.98021 0.981019 0.981762 0.982444 0.983073 0.983653
 0.984188 0.984684 0.985143 0.985568 0.985963 0.986331 0.986672 0.986991 0.987288 0.987565
 0.987825 0.988057 0.988266 0.988461 0.988645 0.988817 0.988979 0.989131 0.989275 0.98941
 0.989538 0.989658 0.989771 0.989878 0.98998 0.990075 0.990165 0.990251 0.990332 0.990408
 0.990481 0.990549 0.990614 0.990676 0.990734 0.99079 0.990842 0.990892 0.99094 0.990985
 0.991027 0.991106 #selex for gender,fleet: 2 / 5
 0.0577138 0.2054 0.281558 0.36947 0.46783 0.574818 0.688196 0.80554 0.924583 1.04351
 1.1611 1.27671 1.39012 1.5014 1.61079 1.71858 1.82505 1.93044 2.03495 2.13869 2.24172
 2.34405 2.44563 2.54638 2.64618 2.74492 2.84244 2.93861 3.03328 3.12631 3.21759 3.307
 3.39444 3.47983 3.56309 3.64417 3.72304 3.79965 3.874 3.94608 4.01589 4.08344 4.14875
 4.21184 4.27276 4.33153 4.38819 4.44279 4.49538 4.546 4.5947 4.64154 4.68657 4.72984
 4.7714 4.81131 4.84962 4.88638 4.92164 4.95547 4.9879 5.01899 5.04878 5.07733 5.10468

0.0854391 0.0813306 0.0774421 0.0737503 0.0702412 0.0668972 0.0637214 1.31042 #numbers
for year Ydeclare: 2013 sex: 1
44.6192 42.0665 39.6024 37.1447 34.7749 32.5374 30.5019 28.4167 26.4586 24.5633 22.7384
21.0328 19.9096 18.6668 18.6167 18.0192 18.5306 18.5997 18.8029 18.5754 18.7415 18.8276
18.505 17.4081 16.5723 15.3521 13.9988 12.5824 11.4076 10.1806 9.10721 8.22635 7.31424
6.43242 5.6858 5.02633 4.40587 3.87095 3.40469 3.00808 2.66516 2.37319 2.11932 1.89908
1.71511 1.55037 1.40862 1.28551 1.1831 1.08793 1.00511 0.93238 0.867135 0.809081 0.756917
0.70983 0.666683 0.626855 0.589898 0.555505 0.523468 0.493975 0.466679 0.441063 0.41713
0.395124 0.374405 0.356156 0.339295 0.322537 0.306714 0.291072 0.27619 0.262013 0.248465
0.235654 0.223495 0.211971 0.201022 0.19066 0.180873 0.171677 0.163029 0.154909 0.147265
0.140044 0.133233 0.126803 0.120725 0.114968 0.109517 0.104352 0.0994549 0.0948083
0.090395 0.0862104 0.0822297 0.0784388 0.0748191 0.0713755 1.51258 #numbers for year
Ydeclare: 2013 sex: 2
#R0 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932
1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950
1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968
1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986
1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004
2005 2006 2007 2008 2009 2010 #years
234.505 234.505 234.463 234.405 234.34 234.297 234.251 234.205 234.162 234.117 234.066
233.991 233.906 233.81 233.7 233.549 233.391 233.258 233.13 233.028 232.902 232.75
232.551 232.356 232.164 232.021 231.796 231.518 231.17 230.312 229.451 228.014 226.812
226.348 225.805 225.453 225.075 224.606 224.205 223.908 223.524 223.03 222.42 221.709
220.938 220.246 219.617 219.1 218.479 217.999 217.676 216.29 215.741 215.092 214.411
212.804 211.716 210.217 208.263 206.369 204.181 202.125 199.635 197.009 192.321 187.452
183.39 177.34 169.071 163.048 158.098 151.772 147.932 143.205 137.638 129.935 125.198
116.522 107.025 98.5535 93.226 86.5727 81.2614 74.7485 73.1516 69.6204 70.5327 70.8433
72.858 74.9234 76.871 78.6801 80.5198 81.9544 83.6025 85.2641 86.8067 #Recruits
1.02333e+009 1.02333e+009 1.02287e+009 1.02224e+009 1.02153e+009 1.02107e+009
1.02057e+009 1.02008e+009 1.01962e+009 1.01913e+009 1.01857e+009 1.01777e+009
1.01686e+009 1.01582e+009 1.01464e+009 1.01302e+009 1.01134e+009 1.00991e+009
1.00855e+009 1.00746e+009 1.00612e+009 1.00452e+009 1.00241e+009 1.00035e+009
9.98331e+008 9.96824e+008 9.94466e+008 9.91554e+008 9.87931e+008 9.79059e+008
9.70258e+008 9.55769e+008 9.43835e+008 9.39275e+008 9.33976e+008 9.30556e+008
9.26899e+008 9.22386e+008 9.18547e+008 9.15712e+008 9.12066e+008 9.07403e+008
9.01681e+008 8.95053e+008 8.8794e+008 8.81608e+008 8.75891e+008 8.71228e+008 8.65661e+008
8.61378e+008 8.58513e+008 8.46347e+008 8.41578e+008 8.3598e+008 8.30146e+008 8.16566e+008
8.07506e+008 7.95201e+008 7.79458e+008 7.64514e+008 7.47629e+008 7.32109e+008
7.13762e+008 6.94922e+008 6.62508e+008 6.30414e+008 6.04778e+008 5.68395e+008
5.21846e+008 4.90053e+008 4.65147e+008 4.34808e+008 4.17158e+008 3.96173e+008
3.72458e+008 3.41306e+008 3.23038e+008 2.91204e+008 2.58577e+008 2.31249e+008
2.14856e+008 1.95185e+008 1.80085e+008 1.62258e+008 1.57998e+008 1.48727e+008
1.51103e+008 1.51915e+008 1.57219e+008 1.62727e+008 1.67987e+008 1.72931e+008
1.78018e+008 1.82026e+008 1.86677e+008 1.91417e+008 1.95863e+008 #SpawnBio
0.383 0.5 0 # spawn-recr steepness, sigmaR, autocorr
values from cat150_hlow, catch at 150% and steepness at low value. # this is state of
nature 3 out of 9 (in no particular order) # and parameter set number 1 out of 1 for this
state
0 0 31.8431 114.773 374.898 1098.88 2856.7 6549.63 13289.7 24118.1 39703 60173.8 85145.8
113883 145504 179151 214094 249779 285815 321953 358046 394016 429826 465459 500909
536165 571215 606038 640610 674900 708874 742495 775725 808525 840858 872689 903985
934713 964847 994362 1.02324e+006 1.05145e+006 1.07899e+006 1.10584e+006 1.132e+006
1.15745e+006 1.18219e+006 1.20623e+006 1.22955e+006 1.25217e+006 1.27409e+006
1.29531e+006 1.31585e+006 1.33571e+006 1.35489e+006 1.37342e+006 1.39131e+006
1.40856e+006 1.42519e+006 1.44122e+006 1.45666e+006 1.47153e+006 1.48583e+006 1.4996e+006
1.51283e+006 1.52555e+006 1.53777e+006 1.54951e+006 1.56078e+006 1.5716e+006 1.58199e+006
1.59222e+006 1.60204e+006 1.61145e+006 1.62048e+006 1.62913e+006 1.63743e+006
1.64537e+006 1.65299e+006 1.66028e+006 1.66726e+006 1.67395e+006 1.68035e+006
1.68647e+006 1.69234e+006 1.69795e+006 1.70331e+006 1.70845e+006 1.71336e+006
1.71806e+006 1.72255e+006 1.72684e+006 1.73095e+006 1.73487e+006 1.73862e+006
1.74221e+006 1.74563e+006 1.74891e+006 1.75204e+006 1.75502e+006 1.76056e+006 #female
fecundity; weighted by N in year Y_init across morphs and areas
0.0461246 0.167611 0.227448 0.295335 0.369949 0.449996 0.534385 0.622298 0.713164
0.806597 0.902323 1.00012 1.09978 1.2011 1.30383 1.40772 1.51249 1.61786 1.72353 1.8292
1.9346 2.03944 2.14347 2.24645 2.34817 2.44842 2.54704 2.64387 2.73878 2.83167 2.92243
3.01099 3.0973 3.18131 3.26298 3.3423 3.41926 3.49386 3.5661 3.63602 3.70362 3.76894
3.83202 3.89288 3.95158 4.00816 4.06267 4.11515 4.16566 4.21425 4.26098 4.30589 4.34904
4.39049 4.43028 4.46848 4.50514 4.5403 4.57402 4.60635 4.63735 4.66705 4.6955 4.72276
4.74887 4.77386 4.7978 4.8207 4.84263 4.86361 4.88382 4.90329 4.92192 4.93973 4.95677
4.97306 4.98863 5.00352 5.01775 5.03135 5.04435 5.05677 5.06864 5.07999 5.09082 5.10117

5.11106 5.12051 5.12953 5.13815 5.14638 5.15424 5.16174 5.16891 5.17575 5.18229 5.18853
5.19448 5.20017 5.2056 5.21563 #bodywt for gender,fleet: 1 / 1
0 0.0565659 0.0845255 0.121601 0.168118 0.223297 0.285298 0.351559 0.419268 0.485817
0.549099 0.60764 0.660589 0.707617 0.748789 0.784437 0.815041 0.841156 0.863346 0.882152
0.898069 0.911537 0.92294 0.932607 0.940818 0.947808 0.953775 0.958882 0.963268 0.967046
0.970312 0.973144 0.975608 0.977759 0.979643 0.981299 0.982759 0.98405 0.985195 0.986214
0.987123 0.987936 0.988666 0.989322 0.989914 0.990449 0.990934 0.991374 0.991775 0.99214
0.992474 0.99278 0.99306 0.993317 0.993554 0.993773 0.993974 0.994161 0.994333 0.994493
0.994642 0.99478 0.994908 0.995028 0.99514 0.995244 0.995341 0.995432 0.995517 0.995597
0.995669 0.995734 0.995795 0.995853 0.995907 0.995958 0.996006 0.996051 0.996094 0.996134
0.996172 0.996208 0.996242 0.996274 0.996304 0.996333 0.99636 0.996386 0.996411 0.996434
0.996456 0.996477 0.996496 0.996515 0.996533 0.99655 0.996566 0.996581 0.996595 0.996609
0.996634 #selex for gender,fleet: 1 / 1
0.0473105 0.174394 0.237662 0.309742 0.388988 0.473625 0.562083 0.653189 0.746199
0.840705 0.936525 1.03359 1.13187 1.23133 1.33189 1.43344 1.53581 1.63881 1.74219 1.84572
1.94913 2.05216 2.15456 2.25608 2.3565 2.45562 2.55324 2.6492 2.74335 2.83557 2.92576
3.01383 3.09971 3.18334 3.26469 3.34373 3.42045 3.49484 3.56691 3.63666 3.70413 3.76933
3.8323 3.89308 3.9517 4.00821 4.06266 4.11509 4.16555 4.2141 4.26079 4.30567 4.34879
4.39021 4.42999 4.46817 4.50481 4.53995 4.57366 4.60598 4.63696 4.66665 4.6951 4.72235
4.74845 4.77344 4.79737 4.82027 4.84219 4.86317 4.88338 4.90285 4.92147 4.93928 4.95631
4.9726 4.98817 5.00306 5.01729 5.03089 5.04388 5.0563 5.06817 5.07951 5.09035 5.1007
5.11059 5.12003 5.12905 5.13767 5.1459 5.15376 5.16126 5.16843 5.17527 5.1818 5.18804
5.194 5.19968 5.20511 5.21514 #bodywt for gender,fleet: 1 / 2
0 0.023468 0.0384239 0.0605618 0.0915627 0.132449 0.183158 0.242399 0.307857 0.376651
0.445855 0.512914 0.575881 0.633486 0.685076 0.730496 0.769947 0.803856 0.832771 0.857287
0.877992 0.895436 0.910116 0.922468 0.932868 0.941638 0.949048 0.955323 0.960652 0.965191
0.969069 0.972395 0.975255 0.977724 0.979863 0.981723 0.983345 0.984764 0.986011 0.987109
0.98808 0.98894 0.989705 0.990388 0.990998 0.991546 0.992038 0.992481 0.992882 0.993245
0.993575 0.993875 0.994148 0.994398 0.994627 0.994836 0.995029 0.995206 0.995369 0.99552
0.995659 0.995788 0.995908 0.996019 0.996122 0.996218 0.996307 0.99639 0.996468 0.996541
0.996606 0.996664 0.996718 0.996769 0.996817 0.996863 0.996905 0.996945 0.996983 0.997018
0.997052 0.997083 0.997113 0.997141 0.997168 0.997193 0.997217 0.997239 0.997261 0.997281
0.9973 0.997318 0.997335 0.997351 0.997367 0.997381 0.997395 0.997408 0.997421 0.997433
0.997454 #selex for gender,fleet: 1 / 2
0.0516744 0.194793 0.263442 0.337682 0.414372 0.491837 0.569791 0.648734 0.729418
0.812551 0.898652 0.988013 1.0807 1.17656 1.27532 1.37658 1.47985 1.58465 1.69047 1.79684
1.90332 2.00949 2.115 2.21954 2.32283 2.42463 2.52474 2.62299 2.71924 2.81337 2.90529
2.99492 3.08222 3.16714 3.24964 3.32973 3.40739 3.48263 3.55547 3.62593 3.69403 3.7598
3.8233 3.88455 3.94361 4.00052 4.05532 4.10809 4.15886 4.20769 4.25463 4.29975 4.34309
4.38471 4.42468 4.46303 4.49982 4.53512 4.56897 4.60142 4.63252 4.66232 4.69087 4.71822
4.74441 4.76948 4.79349 4.81647 4.83846 4.8595 4.87976 4.89927 4.91794 4.93578 4.95285
4.96917 4.98478 4.99969 5.01395 5.02758 5.0406 5.05305 5.06494 5.0763 5.08716 5.09753
5.10743 5.1169 5.12594 5.13457 5.14281 5.15068 5.1582 5.16538 5.17224 5.17878 5.18503
5.191 5.19669 5.20213 5.21218 #bodywt for gender,fleet: 1 / 3
0 0.0191498 0.0403209 0.0779081 0.136503 0.21646 0.312867 0.417253 0.520598 0.61576
0.698489 0.767255 0.822476 0.865682 0.898848 0.923965 0.942814 0.956884 0.967361 0.975161
0.980978 0.985331 0.988602 0.991074 0.992952 0.994389 0.995496 0.996354 0.997025 0.997553
0.997971 0.998305 0.998573 0.99879 0.998967 0.999112 0.999232 0.999331 0.999414 0.999484
0.999543 0.999593 0.999636 0.999672 0.999704 0.999731 0.999755 0.999776 0.999794 0.99981
0.999824 0.999836 0.999847 0.999857 0.999866 0.999874 0.999881 0.999887 0.999893 0.999899
0.999903 0.999908 0.999912 0.999915 0.999919 0.999922 0.999925 0.999927 0.99993 0.999932
0.999934 0.999935 0.999937 0.999938 0.99994 0.999941 0.999942 0.999943 0.999944 0.999945
0.999946 0.999947 0.999948 0.999948 0.999949 0.99995 0.99995 0.999951 0.999951 0.999952
0.999952 0.999953 0.999953 0.999954 0.999954 0.999954 0.999955 0.999955 0.999955 0.999956
0.999956 #selex for gender,fleet: 1 / 3
0.0475637 0.176167 0.240716 0.31478 0.396816 0.484963 0.57737 0.672494 0.769235 0.866929
0.965242 1.06406 1.16336 1.26318 1.36353 1.4644 1.56572 1.66739 1.76927 1.87118 1.97292
2.07428 2.17505 2.275 2.37394 2.47166 2.56798 2.66274 2.7558 2.84702 2.9363 3.02354
3.10867 3.19163 3.27236 3.35085 3.42707 3.501 3.57266 3.64204 3.70917 3.77407 3.83676
3.89729 3.95568 4.01198 4.06624 4.1185 4.1688 4.2172 4.26376 4.30851 4.35152 4.39284
4.43252 4.47061 4.50717 4.54224 4.57587 4.60813 4.63905 4.66868 4.69708 4.72428 4.75033
4.77528 4.79917 4.82203 4.84392 4.86486 4.88504 4.90449 4.92309 4.94088 4.9579 4.97417
4.98972 5.00459 5.01881 5.03239 5.04538 5.05779 5.06964 5.08097 5.0918 5.10214 5.11202
5.12145 5.13047 5.13908 5.1473 5.15515 5.16265 5.1698 5.17664 5.18317 5.1894 5.19535
5.20103 5.20645 5.21648 #bodywt for gender,fleet: 1 / 4
0 0.0132072 0.0221757 0.0359825 0.0562443 0.0844399 0.121516 0.167547 0.221597 0.281852
0.345944 0.411359 0.475784 0.537335 0.594663 0.646943 0.693801 0.73522 0.771426 0.802804
0.82982 0.85297 0.872742 0.889594 0.903945 0.916164 0.926574 0.935454 0.943042 0.949538
0.955114 0.959913 0.964053 0.967637 0.970748 0.973457 0.975823 0.977896 0.979718 0.981324
0.982744 0.984004 0.985124 0.986123 0.987016 0.987817 0.988537 0.989185 0.989771 0.990302
0.990784 0.991221 0.99162 0.991985 0.992318 0.992624 0.992904 0.993162 0.993399 0.993619

0.993821 0.994009 0.994182 0.994343 0.994493 0.994632 0.994761 0.994882 0.994995 0.9951
0.995194 0.995278 0.995357 0.995431 0.9955 0.995565 0.995626 0.995684 0.995738 0.99579
0.995838 0.995883 0.995926 0.995967 0.996005 0.996042 0.996076 0.996108 0.996139 0.996168
0.996195 0.996221 0.996246 0.99627 0.996292 0.996313 0.996333 0.996352 0.99637 0.996387
0.996418 #selex for gender,fleet: 1 / 4
0.0468033 0.172867 0.236657 0.310655 0.393972 0.485368 0.583344 0.686283 0.792617
0.900972 1.01026 1.11967 1.22869 1.33699 1.4444 1.55082 1.65623 1.76061 1.86394 1.96621
2.06738 2.16741 2.26622 2.36375 2.4599 2.5546 2.64775 2.73926 2.82906 2.91705 3.00316
3.08734 3.16952 3.24965 3.32771 3.40366 3.47748 3.54916 3.6187 3.6861 3.75137 3.81453
3.8756 3.93461 3.99158 4.04656 4.09958 4.15069 4.19992 4.24732 4.29293 4.33681 4.379
4.41955 4.45852 4.49593 4.53186 4.56634 4.59943 4.63116 4.6616 4.69077 4.71874 4.74554
4.77121 4.7958 4.81935 4.8419 4.86348 4.88414 4.9041 4.92336 4.94179 4.95942 4.97628
4.99241 5.00782 5.02256 5.03665 5.05012 5.06299 5.07529 5.08705 5.09828 5.10902 5.11927
5.12907 5.13842 5.14736 5.1559 5.16405 5.17184 5.17928 5.18638 5.19316 5.19964 5.20582
5.21172 5.21736 5.22274 5.23268 #bodywt for gender,fleet: 1 / 5
0 0.00564427 0.00909876 0.0143023 0.0219061 0.0326614 0.0473542 0.0667009 0.091225
0.121145 0.156308 0.196184 0.239926 0.286476 0.334679 0.383399 0.431608 0.478437 0.523208
0.565436 0.60481 0.641171 0.674482 0.704799 0.732246 0.75699 0.779225 0.799156 0.816993
0.832936 0.84718 0.859902 0.871268 0.881428 0.890518 0.898657 0.905955 0.912507 0.918397
0.923701 0.928485 0.932807 0.936717 0.940262 0.94348 0.946407 0.949074 0.951507 0.953731
0.955767 0.957634 0.959349 0.960926 0.962378 0.963718 0.964955 0.9661 0.967159 0.968142
0.969054 0.969901 0.97069 0.971424 0.972109 0.972748 0.973345 0.973903 0.974425 0.974914
0.975372 0.975787 0.97616 0.976511 0.976842 0.977153 0.977446 0.977722 0.977982 0.978228
0.97846 0.978678 0.978885 0.979081 0.979265 0.97944 0.979606 0.979762 0.979911 0.980051
0.980184 0.980311 0.98043 0.980544 0.980652 0.980754 0.980851 0.980943 0.98103 0.981113
0.981192 0.981337 #selex for gender,fleet: 1 / 5
0.0485381 0.181746 0.249538 0.328452 0.417562 0.515464 0.620317 0.730003 0.842398
0.955653 1.06837 1.17967 1.28907 1.39644 1.50182 1.60538 1.7073 1.80779 1.90699 2.00504
2.10202 2.19797 2.29288 2.38673 2.47946 2.571 2.66128 2.75018 2.83763 2.92353 3.00779
3.09032 3.17106 3.24994 3.3269 3.4019 3.47489 3.54587 3.6148 3.68168 3.74651 3.80929
3.87005 3.92879 3.98555 4.04035 4.09322 4.1442 4.19334 4.24066 4.28622 4.33005 4.37221
4.41274 4.45169 4.48911 4.52504 4.55953 4.59262 4.62438 4.65483 4.68403 4.71202 4.73884
4.76454 4.78915 4.81273 4.8353 4.85692 4.8776 4.89757 4.91685 4.93529 4.95293 4.9698
4.98594 5.00137 5.01612 5.03022 5.04369 5.05658 5.06889 5.08066 5.0919 5.10264 5.1129
5.12271 5.13207 5.14102 5.14957 5.15773 5.16552 5.17297 5.18007 5.18686 5.19334 5.19953
5.20544 5.21108 5.21647 5.22642 #bodywt for gender,fleet: 1 / 6
0 0.00160229 0.00290218 0.00510579 0.00871927 0.014437 0.0231391 0.0358336 0.0535307
0.0770675 0.106928 0.143117 0.185123 0.231984 0.28242 0.335001 0.388303 0.441033 0.492112
0.540707 0.586237 0.628349 0.666881 0.701826 0.733286 0.761444 0.786529 0.808798 0.828515
0.84594 0.861321 0.874891 0.886862 0.897426 0.906754 0.915 0.922299 0.928767 0.93451
0.939617 0.944166 0.948228 0.95186 0.955115 0.958037 0.960667 0.963038 0.965179 0.967118
0.968876 0.970473 0.971927 0.973253 0.974464 0.975573 0.976589 0.977522 0.97838 0.97917
0.97989 0.980572 0.981194 0.981771 0.982305 0.982802 0.983263 0.983692 0.984092 0.984465
0.984813 0.985124 0.9854 0.985659 0.985902 0.98613 0.986344 0.986545 0.986734 0.986912
0.98708 0.987238 0.987387 0.987528 0.98766 0.987786 0.987904 0.988016 0.988122 0.988222
0.988317 0.988406 0.988491 0.988571 0.988648 0.98872 0.988788 0.988853 0.988915 0.988973
0.989029 0.989131 #selex for gender,fleet: 1 / 6
0.0551043 0.190621 0.258075 0.333915 0.41653 0.504451 0.596533 0.69199 0.790328 0.891241
0.994528 1.10001 1.20752 1.31682 1.42767 1.53978 1.65282 1.76648 1.8804 1.99425 2.1077
2.22046 2.33222 2.44274 2.55178 2.65913 2.76461 2.86806 2.96936 3.06838 3.16505 3.25929
3.35104 3.44027 3.52695 3.61108 3.69264 3.77165 3.84812 3.92208 3.99356 4.0626 4.12923
4.1935 4.25547 4.31517 4.37267 4.42801 4.48127 4.53248 4.58172 4.62904 4.6745 4.71816
4.76007 4.8003 4.83889 4.87591 4.91142 4.94545 4.97808 5.00934 5.0393 5.06799 5.09547
5.12179 5.14698 5.1711 5.19418 5.21626 5.23753 5.25802 5.27761 5.29636 5.31428 5.33142
5.34781 5.36348 5.37846 5.39278 5.40646 5.41954 5.43204 5.44399 5.4554 5.4663 5.47672
5.48668 5.49618 5.50527 5.51394 5.52223 5.53014 5.5377 5.54492 5.55181 5.55839 5.56467
5.57068 5.57641 5.58702 #bodywt for gender,fleet: 2 / 1
0 0.0573857 0.0873481 0.127552 0.178323 0.23863 0.306168 0.377822 0.450276 0.520562
0.586396 0.646292 0.69951 0.745904 0.78575 0.819583 0.848065 0.871898 0.891762 0.908281
0.922004 0.93341 0.9429 0.950812 0.957425 0.962968 0.96763 0.971566 0.974901 0.977737
0.980159 0.982235 0.984022 0.985567 0.986906 0.988072 0.989091 0.989984 0.99077 0.991465
0.99208 0.992626 0.993114 0.993549 0.99394 0.994291 0.994607 0.994893 0.995152 0.995387
0.995601 0.995796 0.995974 0.996137 0.996287 0.996424 0.99655 0.996667 0.996775 0.996874
0.996966 0.997051 0.997131 0.997204 0.997273 0.997337 0.997396 0.997452 0.997504 0.997552
0.997596 0.997635 0.997672 0.997707 0.99774 0.99777 0.997799 0.997826 0.997852 0.997876
0.997899 0.99792 0.997941 0.99796 0.997978 0.997995 0.998012 0.998027 0.998042 0.998055
0.998068 0.998081 0.998093 0.998104 0.998114 0.998124 0.998134 0.998143 0.998152 0.99816
0.998175 #selex for gender,fleet: 2 / 1
0.0565007 0.19823 0.269478 0.349855 0.437314 0.529812 0.625684 0.723814 0.823591 0.92477
1.02731 1.13125 1.23663 1.34344 1.45161 1.561 1.6714 1.78256 1.89419 2.00597 2.11759
2.22874 2.33912 2.44845 2.55648 2.66297 2.76773 2.87059 2.97138 3.06999 3.1663 3.26025

3.35177 3.4408 3.52732 3.61131 3.69276 3.77168 3.84807 3.92197 3.9934 4.06239 4.12899
4.19324 4.25517 4.31486 4.37234 4.42768 4.48092 4.53213 4.58136 4.62868 4.67414 4.71779
4.7597 4.79993 4.83852 4.87554 4.91105 4.94509 4.97771 5.00898 5.03893 5.06763 5.09511
5.12143 5.14662 5.17074 5.19382 5.21591 5.23719 5.25767 5.27727 5.29601 5.31393 5.33108
5.34747 5.36314 5.37811 5.39243 5.40612 5.4192 5.4317 5.44365 5.45506 5.46596 5.47638
5.48634 5.49585 5.50493 5.5136 5.52189 5.5298 5.53736 5.54458 5.55147 5.55805 5.56434
5.57034 5.57607 5.58669 #bodywt for gender,fleet: 2 / 2
0 0.0239091 0.0400637 0.0643925 0.0988572 0.144562 0.201232 0.267078 0.33913 0.413862
0.487849 0.55825 0.623052 0.68109 0.731924 0.775662 0.812772 0.843923 0.869865 0.89135
0.909078 0.923679 0.935697 0.945594 0.953757 0.960505 0.966097 0.970748 0.974629 0.97788
0.980615 0.982925 0.984884 0.986553 0.98798 0.989205 0.990262 0.991177 0.99177 0.992667
0.993274 0.993809 0.99428 0.994697 0.995067 0.995396 0.99569 0.995954 0.996191 0.996404
0.996597 0.996771 0.996929 0.997073 0.997204 0.997324 0.997433 0.997534 0.997626 0.997711
0.997789 0.997861 0.997927 0.997989 0.998046 0.998099 0.998148 0.998194 0.998237 0.998277
0.998312 0.998344 0.998373 0.998401 0.998427 0.998451 0.998474 0.998496 0.998516 0.998535
0.998553 0.99857 0.998586 0.998602 0.998616 0.998629 0.998642 0.998654 0.998665 0.998676
0.998686 0.998696 0.998705 0.998714 0.998722 0.99873 0.998737 0.998744 0.998751 0.998757
0.998769 #selex for gender,fleet: 2 / 2
0.0616312 0.2209 0.297557 0.379253 0.462584 0.546089 0.629884 0.714835 0.801959 0.892119
0.985894 1.08355 1.18508 1.2902 1.39849 1.50939 1.62231 1.73663 1.85177 1.96719 2.08241
2.197 2.3106 2.42289 2.5336 2.64251 2.74942 2.85417 2.95665 3.05674 3.15437 3.24947 3.342
3.43193 3.51923 3.60392 3.68599 3.76545 3.84233 3.91666 3.98847 4.05781 4.12472 4.18924
4.25143 4.31133 4.36902 4.42454 4.47795 4.52931 4.57868 4.62612 4.67169 4.71545 4.75746
4.79777 4.83645 4.87355 4.90912 4.94322 4.97591 5.00723 5.03723 5.06598 5.0935 5.11986
5.14509 5.16925 5.19236 5.21448 5.23578 5.25628 5.2759 5.29466 5.3126 5.32976 5.34616
5.36184 5.37683 5.39117 5.40486 5.41795 5.43046 5.44242 5.45384 5.46476 5.47518 5.48514
5.49466 5.50375 5.51243 5.52072 5.52864 5.53621 5.54343 5.55033 5.55692 5.5632 5.56921
5.57494 5.58557 #bodywt for gender,fleet: 2 / 3
0 0.0197778 0.0430061 0.0849893 0.150759 0.239931 0.345833 0.458053 0.566263 0.662961
0.744311 0.809597 0.860125 0.898176 0.926261 0.946702 0.961442 0.972017 0.979589 0.985016
0.988915 0.99173 0.993775 0.995269 0.99637 0.997188 0.9978 0.998262 0.998614 0.998885
0.999095 0.999258 0.999387 0.99949 0.999572 0.999638 0.999691 0.999735 0.999771 0.999801
0.999826 0.999847 0.999865 0.99988 0.999892 0.999903 0.999913 0.999921 0.999928 0.999934
0.999939 0.999944 0.999948 0.999952 0.999955 0.999958 0.999961 0.999963 0.999965 0.999967
0.999969 0.99997 0.999972 0.999973 0.999974 0.999975 0.999976 0.999977 0.999978 0.999979
0.999979 0.99998 0.99998 0.999981 0.999981 0.999982 0.999982 0.999983 0.999983 0.999983
0.999984 0.999984 0.999984 0.999984 0.999985 0.999985 0.999985 0.999985 0.999985 0.999986
0.999986 0.999986 0.999986 0.999986 0.999986 0.999986 0.999987 0.999987 0.999987 0.999987
0.999987 #selex for gender,fleet: 2 / 3
0.0567989 0.20023 0.272937 0.355558 0.446119 0.542406 0.642382 0.744494 0.847762
0.951698 1.05615 1.16116 1.26682 1.37325 1.48048 1.58852 1.69727 1.8066 1.91631 2.02617
2.13591 2.24527 2.35397 2.46176 2.56838 2.67361 2.77724 2.87908 2.97897 3.07679 3.17241
3.26574 3.35671 3.44527 3.53137 3.61499 3.69611 3.77474 3.85088 3.92455 3.99578 4.06459
4.13103 4.19513 4.25694 4.31651 4.37389 4.42914 4.4823 4.53343 4.58259 4.62985 4.67525
4.71885 4.76071 4.80089 4.83945 4.87643 4.9119 4.94591 4.97851 5.00975 5.03968 5.06835
5.09581 5.12211 5.14729 5.17139 5.19446 5.21653 5.23779 5.25827 5.27785 5.29659 5.31451
5.33164 5.34802 5.36369 5.37866 5.39297 5.40665 5.41973 5.43222 5.44416 5.45557 5.46648
5.47689 5.48684 5.49634 5.50542 5.5141 5.52238 5.53029 5.53785 5.54506 5.55195 5.55853
5.56481 5.57081 5.57654 5.58715 #bodywt for gender,fleet: 2 / 4
0 0.0134714 0.0231864 0.0384445 0.0611744 0.0931017 0.135236 0.187453 0.248367 0.315567
0.386075 0.456874 0.525328 0.58943 0.647867 0.699973 0.745604 0.784989 0.818598 0.847028
0.870923 0.890915 0.907593 0.921484 0.933051 0.942689 0.950729 0.95745 0.963083 0.967817
0.97181 0.975188 0.978057 0.980503 0.982596 0.984393 0.985943 0.987284 0.988449 0.989465
0.990354 0.991135 0.991823 0.992431 0.99297 0.99345 0.993878 0.99426 0.994604 0.994913
0.995192 0.995444 0.995673 0.99588 0.996069 0.996241 0.996399 0.996543 0.996676 0.996797
0.996909 0.997013 0.997108 0.997196 0.997278 0.997354 0.997424 0.997489 0.99755 0.997607
0.997658 0.997702 0.997745 0.997784 0.997821 0.997855 0.997888 0.997919 0.997947 0.997974
0.998 0.998024 0.998047 0.998068 0.998088 0.998107 0.998125 0.998142 0.998158 0.998174
0.998188 0.998202 0.998215 0.998227 0.998239 0.99825 0.99826 0.99827 0.998279 0.998288
0.998305 #selex for gender,fleet: 2 / 4
0.0559041 0.196558 0.268518 0.351291 0.443647 0.544004 0.650562 0.761487 0.875108
0.990062 1.10535 1.22033 1.33461 1.44803 1.56053 1.67212 1.78284 1.89271 2.00174 2.10992
2.21719 2.32349 2.42871 2.53276 2.6355 2.73682 2.83658 2.93467 3.03096 3.12536 3.21775
3.30807 3.39624 3.48219 3.56589 3.64729 3.72638 3.80314 3.87757 3.94967 4.01946 4.08696
4.15218 4.21518 4.27597 4.33461 4.39113 4.44558 4.49801 4.54848 4.59703 4.64371 4.68858
4.7317 4.77311 4.81287 4.85104 4.88767 4.9228 4.9565 4.9888 5.01977 5.04945 5.07789
5.10513 5.13122 5.15621 5.18013 5.20302 5.22494 5.24607 5.26645 5.28595 5.3046 5.32244
5.33949 5.3558 5.3714 5.38631 5.40056 5.41418 5.4272 5.43964 5.45154 5.4629 5.47375
5.48413 5.49404 5.5035 5.51255 5.52118 5.52944 5.53732 5.54484 5.55203 5.55889 5.56545
5.57171 5.57768 5.58339 5.59396 #bodywt for gender,fleet: 2 / 5


```

1.07576 1.01231 0.95329 0.898328 0.84775 0.800951 0.757042 0.716024 0.678317 0.642816
0.611562 0.582685 0.553977 0.526869 0.500066 0.474564 0.450271 0.427056 0.405105 0.384272
0.364528 0.345768 0.328014 0.311241 0.295479 0.280653 0.266731 0.25362 0.241231 0.229543
0.218507 0.208073 0.198188 0.188826 0.179953 0.171541 0.163557 0.155972 0.148779 0.141936
0.135418 0.129193 0.12327 0.117632 0.112264 2.39397 #numbers for year Yinit: 2011 sex: 2
68.0317 63.7081 59.5787 55.7882 52.1455 48.6988 45.5154 42.3456 39.3622 36.5001 33.7654
31.2059 29.2811 27.2956 27.3243 26.5252 27.4041 27.6194 28.0468 27.8286 28.2227 28.5099
28.183 26.6665 25.5531 23.8327 21.8848 19.8104 18.0891 16.2521 14.6295 13.2887 11.8702
10.4777 9.28766 8.22638 7.2187 6.34435 5.57803 4.92307 4.35446 3.86851 3.44469 3.07613
2.76734 2.49081 2.25269 2.04596 1.87374 1.71449 1.57618 1.45506 1.34687 1.25099 1.16524
1.08821 1.01802 0.953618 0.894216 0.839262 0.788357 0.741714 0.698737 0.658595 0.621242
0.587001 0.554882 0.526617 0.500568 0.474822 0.450598 0.426779 0.404207 0.382789 0.362402
0.343187 0.325005 0.307815 0.291515 0.27611 0.261574 0.247923 0.235091 0.223049 0.21172
0.201025 0.190949 0.181448 0.172481 0.164002 0.155986 0.148405 0.141231 0.134436 0.127994
0.121897 0.116107 0.110602 0.105356 0.100373 2.07288 #numbers for year Ydeclare: 2013
sex: 1
68.0317 63.7879 59.7281 55.9982 52.4072 49.0042 45.8574 42.7157 39.7533 36.9053 34.1784
31.6218 29.7023 27.7164 27.7727 26.9853 27.9018 28.1376 28.5798 28.3503 28.7267 28.9728
28.5719 26.9473 25.7182 23.8735 21.8073 19.6301 17.8232 15.925 14.2613 12.8949 11.4734
10.0953 8.92703 7.89368 6.91998 6.07992 5.34729 4.72389 4.18474 3.72564 3.32637 2.97998
2.69062 2.43151 2.20856 2.01498 1.85396 1.70438 1.57427 1.46005 1.35763 1.26655 1.18475
1.11095 1.04336 0.980993 0.923144 0.869328 0.819213 0.773094 0.73042 0.690381 0.652978
0.618594 0.58622 0.557719 0.531385 0.505205 0.480484 0.456041 0.432784 0.410629 0.389457
0.369438 0.350438 0.33243 0.315322 0.299129 0.283832 0.269457 0.255936 0.243238 0.231282
0.219983 0.209324 0.19926 0.189745 0.18073 0.172193 0.164101 0.15643 0.149149 0.142232
0.135673 0.129433 0.123489 0.117812 0.112411 2.39273 #numbers for year Ydeclare: 2013
sex: 2
#R0 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932
1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950
1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968
1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986
1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004
2005 2006 2007 2008 2009 2010 #years
347.985 347.985 347.922 347.836 347.738 347.674 347.606 347.538 347.474 347.407 347.33
347.22 347.093 346.95 346.786 346.561 346.327 346.128 345.938 345.785 345.598 345.372
345.075 344.785 344.5 344.286 343.952 343.537 343.019 341.742 340.461 338.323 336.533
335.842 335.033 334.509 333.945 333.246 332.648 332.204 331.632 330.896 329.987 328.926
327.778 326.747 325.808 325.037 324.111 323.394 322.911 320.847 320.028 319.06 318.043
315.649 314.027 311.792 308.879 306.055 302.793 299.726 296.013 292.096 285.105 277.842
271.78 262.751 250.407 241.411 234.014 224.559 218.814 211.741 203.409 191.884 184.787
171.793 157.567 144.868 136.869 126.88 118.897 109.111 106.685 101.364 103.477 105.014
108.243 111.513 114.645 117.609 120.563 123.071 125.74 128.371 130.833 #Recruits
1.53162e+009 1.53162e+009 1.53094e+009 1.52999e+009 1.52893e+009 1.52823e+009
1.52749e+009 1.52675e+009 1.52606e+009 1.52533e+009 1.52449e+009 1.52329e+009
1.52191e+009 1.52036e+009 1.51858e+009 1.51615e+009 1.51363e+009 1.51149e+009
1.50944e+009 1.50781e+009 1.5058e+009 1.50338e+009 1.50022e+009 1.49712e+009 1.4941e+009
1.49183e+009 1.48829e+009 1.48392e+009 1.47848e+009 1.46516e+009 1.45195e+009
1.43021e+009 1.41229e+009 1.40544e+009 1.39748e+009 1.39235e+009 1.38685e+009
1.38007e+009 1.3743e+009 1.37003e+009 1.36455e+009 1.35754e+009 1.34894e+009 1.33898e+009
1.3283e+009 1.31878e+009 1.31019e+009 1.30318e+009 1.29481e+009 1.28837e+009 1.28406e+009
1.26579e+009 1.25862e+009 1.2502e+009 1.24143e+009 1.22104e+009 1.20742e+009 1.18894e+009
1.1653e+009 1.14285e+009 1.1175e+009 1.09418e+009 1.06663e+009 1.03833e+009 9.8966e+008
9.41469e+008 9.02968e+008 8.48331e+008 7.78436e+008 7.30686e+008 6.93266e+008
6.47693e+008 6.21156e+008 5.89613e+008 5.53971e+008 5.07169e+008 4.79696e+008
4.31862e+008 3.82843e+008 3.41777e+008 3.17112e+008 2.87525e+008 2.64797e+008
2.37979e+008 2.31503e+008 2.17525e+008 2.23039e+008 2.27079e+008 2.35654e+008
2.44458e+008 2.53006e+008 2.61202e+008 2.69476e+008 2.76583e+008 2.84232e+008
2.91858e+008 2.99076e+008 #SpawnBio
0.383 0.5 0 # spawn-recr steepness, sigmaR, autocorr
# values from cat75_hmle, catch at 75% and steepness at mle value. # this is state of
nature 4 out of 9 (in no particular order) # and parameter set number 1 out of 2 for this
state
0 0 27.1664 99.6169 331.041 987.879 2615.28 6100.71 12570.2 23108.5 38439.4 58737.6
83639.5 112406 144137 177948 213089 248986 285239 321591 357892 394066 430075 465904
501545 536990 572225 607230 641980 676443 710584 744366 777749 810695 843166 875126
906540 937378 967612 997216 1.02617e+006 1.05445e+006 1.08205e+006 1.10895e+006
1.13515e+006 1.16063e+006 1.1854e+006 1.20945e+006 1.23278e+006 1.25539e+006 1.2773e+006
1.29851e+006 1.31902e+006 1.33885e+006 1.358e+006 1.37649e+006 1.39433e+006 1.41153e+006
1.42811e+006 1.44408e+006 1.45946e+006 1.47426e+006 1.4885e+006 1.50219e+006 1.51536e+006
1.528e+006 1.54015e+006 1.55182e+006 1.56301e+006 1.57376e+006 1.58406e+006 1.59421e+006
1.60394e+006 1.61328e+006 1.62222e+006 1.63079e+006 1.639e+006 1.64687e+006 1.6544e+006

```

1.66161e+006 1.66851e+006 1.67512e+006 1.68145e+006 1.6875e+006 1.69329e+006 1.69882e+006
1.70412e+006 1.70918e+006 1.71403e+006 1.71865e+006 1.72308e+006 1.72731e+006
1.73135e+006 1.73521e+006 1.73891e+006 1.74243e+006 1.7458e+006 1.74902e+006 1.75209e+006
1.75503e+006 1.76045e+006 #female fecundity; weighted by N in year Y_init across morphs
and areas
0.0447959 0.161569 0.220963 0.288709 0.363455 0.443836 0.528681 0.617102 0.708484
0.802415 0.898614 0.996863 1.09696 1.19871 1.30187 1.4062 1.51143 1.61726 1.7234 1.82956
1.93545 2.04078 2.1453 2.24876 2.35095 2.45166 2.55072 2.64797 2.74328 2.83653 2.92764
3.01652 3.10312 3.18739 3.2693 3.34882 3.42596 3.50072 3.57309 3.64311 3.7108 3.77618
3.83929 3.90018 3.95888 4.01544 4.06991 4.12234 4.17279 4.2213 4.26794 4.31275 4.35579
4.39711 4.43678 4.47484 4.51136 4.54637 4.57994 4.61211 4.64295 4.67248 4.70077 4.72786
4.7538 4.77863 4.80239 4.82512 4.84688 4.86769 4.88772 4.90702 4.92548 4.94312 4.95998
4.97611 4.99152 5.00624 5.02031 5.03376 5.0466 5.05887 5.0706 5.08179 5.09249 5.1027
5.11245 5.12177 5.13066 5.13915 5.14725 5.15499 5.16238 5.16943 5.17616 5.18259 5.18872
5.19458 5.20016 5.2055 5.21532 #bodywt for gender,fleet: 1 / 1
0 0.0499826 0.0757589 0.110542 0.154938 0.208453 0.269462 0.33548 0.403648 0.471214
0.535888 0.596015 0.650594 0.699187 0.741794 0.778709 0.810404 0.837439 0.860392 0.879824
0.896248 0.910125 0.921855 0.931784 0.940202 0.947356 0.953452 0.958662 0.963128 0.966969
0.970284 0.973154 0.975647 0.977821 0.979722 0.981391 0.98286 0.984158 0.985308 0.98633
0.987241 0.988055 0.988785 0.989441 0.990032 0.990565 0.991049 0.991487 0.991886 0.992249
0.992581 0.992884 0.993163 0.993418 0.993653 0.993869 0.994069 0.994254 0.994425 0.994583
0.99473 0.994866 0.994993 0.995111 0.995221 0.995324 0.99542 0.99551 0.995594 0.995672
0.995743 0.995807 0.995867 0.995924 0.995977 0.996027 0.996074 0.996119 0.996161 0.9962
0.996238 0.996273 0.996306 0.996338 0.996368 0.996396 0.996423 0.996448 0.996472 0.996494
0.996516 0.996536 0.996556 0.996574 0.996591 0.996608 0.996623 0.996638 0.996652 0.996666
0.99669 #selex for gender,fleet: 1 / 1
0.0459148 0.167829 0.230479 0.302262 0.381538 0.466476 0.555413 0.647086 0.740681
0.835752 0.932102 1.02966 1.12842 1.22833 1.32935 1.43135 1.53419 1.63767 1.74155 1.84557
1.94949 2.05303 2.15594 2.25797 2.35889 2.45848 2.55656 2.65296 2.74754 2.84015 2.9307
3.01911 3.1053 3.18921 3.27081 3.35007 3.42698 3.50154 3.57375 3.64362 3.71117 3.77644
3.83946 3.90026 3.95889 4.01539 4.06981 4.12219 4.17259 4.22107 4.26767 4.31245 4.35547
4.39678 4.43642 4.47447 4.51097 4.54597 4.57953 4.61169 4.64251 4.67204 4.70032 4.72741
4.75334 4.77816 4.80192 4.82465 4.8464 4.86721 4.88724 4.90654 4.92499 4.94263 4.95949
4.97561 4.99102 5.00575 5.01982 5.03326 5.0461 5.05837 5.07009 5.08129 5.09198 5.10219
5.11195 5.12126 5.13015 5.13864 5.14675 5.15448 5.16187 5.16892 5.17566 5.18208 5.18821
5.19407 5.19965 5.20498 5.21481 #bodywt for gender,fleet: 1 / 2
0 0.020837 0.0345637 0.0551946 0.0845334 0.12381 0.1732 0.231608 0.296814 0.36592
0.435895 0.504035 0.568241 0.627114 0.67991 0.726417 0.766807 0.801503 0.83106 0.856089
0.877196 0.89495 0.909864 0.922391 0.932921 0.941783 0.949257 0.955576 0.960933 0.965488
0.969374 0.972701 0.975558 0.978022 0.980153 0.982003 0.983614 0.985023 0.986259 0.987347
0.988307 0.989158 0.989914 0.990587 0.991189 0.991729 0.992213 0.99265 0.993044 0.993401
0.993725 0.994019 0.994287 0.994532 0.994756 0.994961 0.99515 0.995323 0.995483 0.99563
0.995767 0.995893 0.996009 0.996118 0.996218 0.996312 0.996399 0.99648 0.996556 0.996627
0.99669 0.996747 0.9968 0.99685 0.996896 0.99694 0.996982 0.997021 0.997057 0.997092
0.997124 0.997155 0.997184 0.997211 0.997237 0.997261 0.997285 0.997306 0.997327 0.997347
0.997365 0.997383 0.997399 0.997415 0.99743 0.997444 0.997457 0.99747 0.997482 0.997494
0.997515 #selex for gender,fleet: 1 / 2
0.0500339 0.187136 0.255487 0.330126 0.407671 0.486115 0.564953 0.644596 0.725799
0.809303 0.895678 0.985262 1.07816 1.17425 1.27328 1.37485 1.47848 1.58369 1.68996
1.79681 1.90379 2.01047 2.11651 2.22156 2.32535 2.42764 2.52822 2.62692 2.72359 2.81811
2.9104 3.00037 3.08798 3.17317 3.25592 3.33623 3.41408 3.48948 3.56246 3.63302 3.70121
3.76705 3.83059 3.89186 3.95092 4.00781 4.06259 4.1153 4.16601 4.21476 4.26162 4.30663
4.34986 4.39137 4.4312 4.46942 4.50607 4.54122 4.57491 4.6072 4.63814 4.66778 4.69617
4.72335 4.74937 4.77427 4.79811 4.82091 4.84273 4.8636 4.88369 4.90303 4.92152 4.93919
4.95609 4.97225 4.98769 5.00244 5.01654 5.03001 5.04288 5.05517 5.06691 5.07813 5.08885
5.09908 5.10885 5.11818 5.12708 5.13559 5.14371 5.15146 5.15886 5.16593 5.17267 5.17911
5.18525 5.19112 5.19671 5.20205 5.21189 #bodywt for gender,fleet: 1 / 3
0 0.0162404 0.0348082 0.0686495 0.122909 0.198975 0.292908 0.396669 0.50106 0.598401
0.683845 0.755381 0.813131 0.858486 0.89339 0.919865 0.939753 0.954603 0.965659 0.973888
0.980022 0.984608 0.988051 0.990651 0.992625 0.994133 0.995294 0.996194 0.996896 0.997448
0.997885 0.998234 0.998514 0.998741 0.998925 0.999076 0.999201 0.999305 0.999391 0.999463
0.999525 0.999577 0.999621 0.999659 0.999692 0.99972 0.999745 0.999766 0.999785 0.999802
0.999816 0.999829 0.999841 0.999851 0.99986 0.999869 0.999876 0.999883 0.999889 0.999894
0.999899 0.999904 0.999908 0.999912 0.999915 0.999918 0.999921 0.999924 0.999926 0.999929
0.99993 0.999932 0.999934 0.999935 0.999937 0.999938 0.999939 0.99994 0.999941 0.999942
0.999943 0.999944 0.999945 0.999946 0.999946 0.999947 0.999948 0.999948 0.999949 0.999949
0.99995 0.99995 0.999951 0.999951 0.999952 0.999952 0.999952 0.999953 0.999953 0.999953
0.999954 #selex for gender,fleet: 1 / 3
0.0463442 0.170395 0.234643 0.308748 0.391139 0.479853 0.572904 0.668622 0.765832
0.863844 0.96234 1.06124 1.16056 1.26039 1.36076 1.46168 1.56312 1.66496 1.76708 1.86929
1.97138 2.07315 2.17435 2.27477 2.37419 2.4724 2.56921 2.66446 2.75798 2.84965 2.93936

3.027 3.11251 3.19581 3.27686 3.35564 3.43211 3.50627 3.57812 3.64768 3.71495 3.77997
3.84275 3.90335 3.96178 4.01811 4.07237 4.12462 4.17489 4.22325 4.26975 4.31443 4.35736
4.39858 4.43816 4.47614 4.51257 4.54751 4.58102 4.61313 4.64391 4.67339 4.70163 4.72868
4.75458 4.77937 4.8031 4.8258 4.84752 4.86831 4.88832 4.9076 4.92604 4.94366 4.96051
4.97662 4.99201 5.00673 5.02079 5.03422 5.04705 5.05932 5.07103 5.08222 5.0929 5.10311
5.11285 5.12216 5.13104 5.13953 5.14763 5.15536 5.16274 5.16979 5.17652 5.18294 5.18906
5.19491 5.2005 5.20582 5.21564 #bodywt for gender,fleet: 1 / 4
0 0.0109446 0.0188536 0.0313591 0.0501888 0.0770249 0.113072 0.158639 0.212927 0.274115
0.339711 0.406994 0.473428 0.536936 0.596026 0.649787 0.697815 0.740093 0.77688 0.8086
0.835765 0.858914 0.878574 0.895238 0.909348 0.921296 0.93142 0.940011 0.947313 0.953535
0.958849 0.963401 0.967312 0.970682 0.973596 0.976123 0.978322 0.980242 0.981924 0.983402
0.984704 0.985856 0.986877 0.987786 0.988596 0.989321 0.989971 0.990556 0.991082 0.991558
0.99199 0.992381 0.992737 0.993062 0.993358 0.99363 0.993878 0.994107 0.994317 0.99451
0.994689 0.994854 0.995007 0.995149 0.99528 0.995402 0.995516 0.995622 0.99572 0.995812
0.995895 0.995968 0.996036 0.9961 0.996161 0.996217 0.996271 0.996321 0.996368 0.996412
0.996454 0.996494 0.996531 0.996566 0.996599 0.996631 0.99666 0.996688 0.996715 0.99674
0.996763 0.996786 0.996807 0.996827 0.996846 0.996865 0.996882 0.996898 0.996914 0.996928
0.996955 #selex for gender,fleet: 1 / 4
0.0455957 0.167106 0.230483 0.304345 0.387804 0.479588 0.578126 0.681701 0.788647
0.89751 1.00715 1.11677 1.22586 1.33411 1.4414 1.54768 1.65293 1.75718 1.86043 1.96266
2.06386 2.16397 2.26292 2.36065 2.45705 2.55203 2.6455 2.73735 2.8275 2.91586 3.00235
3.08689 3.16943 3.24991 3.3283 3.40456 3.47868 3.55063 3.62042 3.68804 3.75351 3.81685
3.87807 3.93721 3.9943 4.04937 4.10246 4.15361 4.20287 4.25029 4.2959 4.33976 4.38192
4.42243 4.46134 4.49869 4.53454 4.56894 4.60193 4.63356 4.66389 4.69295 4.7208 4.74748
4.77303 4.79749 4.82091 4.84332 4.86477 4.8853 4.9051 4.92421 4.94249 4.95997 4.97667
4.99265 5.00791 5.02251 5.03645 5.04978 5.06251 5.07467 5.08629 5.09739 5.10799 5.11812
5.12779 5.13702 5.14584 5.15426 5.1623 5.16997 5.1773 5.18429 5.19097 5.19735 5.20343
5.20923 5.21478 5.22007 5.22981 #bodywt for gender,fleet: 1 / 5
0 0.00478955 0.00789791 0.0126864 0.0198349 0.0301512 0.044506 0.0637195 0.0884179
0.118897 0.155035 0.196276 0.2417 0.290137 0.340309 0.39096 0.440962 0.489374 0.535471
0.578749 0.618899 0.655779 0.689377 0.719784 0.747155 0.77169 0.793613 0.813156 0.83055
0.846016 0.859761 0.871977 0.882839 0.892503 0.90111 0.908785 0.915638 0.921766 0.927255
0.93218 0.936607 0.940593 0.944188 0.947438 0.95038 0.953048 0.955473 0.95768 0.959693
0.961532 0.963214 0.964756 0.966171 0.967472 0.96867 0.969775 0.970795 0.971738 0.972611
0.97342 0.974171 0.974869 0.975519 0.976123 0.976687 0.977213 0.977704 0.978163 0.978593
0.978995 0.979358 0.979684 0.979991 0.980279 0.980551 0.980806 0.981047 0.981273 0.981487
0.981688 0.981878 0.982058 0.982228 0.982388 0.98254 0.982683 0.982819 0.982947 0.983069
0.983184 0.983293 0.983397 0.983495 0.983588 0.983676 0.98376 0.983839 0.983914 0.983986
0.984054 0.984178 #selex for gender,fleet: 1 / 5
0.0470765 0.1746 0.241472 0.319691 0.408389 0.506214 0.611355 0.721678 0.834996 0.949362
1.06328 1.17577 1.28631 1.39471 1.50103 1.60542 1.70808 1.80922 1.90901 2.00759 2.10505
2.20144 2.29677 2.391 2.4841 2.57598 2.66658 2.75579 2.84352 2.92968 3.01419 3.09695
3.17789 3.25696 3.33408 3.40922 3.48234 3.55342 3.62243 3.68938 3.75425 3.81706 3.87783
3.93656 3.99329 4.04805 4.10087 4.15178 4.20084 4.24807 4.29352 4.33724 4.37928 4.41968
4.4585 4.49577 4.53155 4.56588 4.59882 4.63041 4.6607 4.68973 4.71754 4.74419 4.76972
4.79416 4.81756 4.83997 4.8614 4.88192 4.90171 4.92081 4.93908 4.95655 4.97325 4.98921
5.00447 5.01906 5.033 5.04632 5.05905 5.07121 5.08282 5.09392 5.10452 5.11464 5.12431
5.13354 5.14236 5.15078 5.15881 5.16649 5.17381 5.18081 5.18748 5.19386 5.19994 5.20575
5.21129 5.21658 5.22632 #bodywt for gender,fleet: 1 / 6
0 0.00137578 0.0025204 0.00448316 0.00773858 0.0129493 0.0209726 0.0328152 0.0495178
0.0719822 0.100782 0.136019 0.177266 0.223618 0.273818 0.326423 0.379977 0.433139
0.484776 0.534006 0.580204 0.622983 0.662157 0.697701 0.729709 0.758358 0.783878 0.806527
0.826573 0.844281 0.859905 0.873682 0.885828 0.89654 0.905995 0.914347 0.921735 0.92828
0.934086 0.939247 0.943843 0.947943 0.951607 0.95489 0.957836 0.960486 0.962874 0.96503
0.966981 0.968749 0.970355 0.971817 0.97315 0.974366 0.97548 0.9765 0.977436 0.978297
0.97909 0.979821 0.980496 0.98112 0.981697 0.982233 0.98273 0.983192 0.983622 0.984022
0.984396 0.984744 0.985055 0.985331 0.98559 0.985833 0.986061 0.986275 0.986477 0.986666
0.986844 0.987011 0.987169 0.987318 0.987458 0.987591 0.987716 0.987834 0.987946 0.988051
0.988151 0.988245 0.988335 0.988419 0.988499 0.988575 0.988647 0.988715 0.98878 0.988841
0.988899 0.988955 0.989055 #selex for gender,fleet: 1 / 6
0.0535125 0.183774 0.250731 0.326419 0.409184 0.497467 0.590027 0.686003 0.784853
0.886253 0.989997 1.09592 1.20385 1.31358 1.42487 1.53743 1.65094 1.76508 1.8795 1.99386
2.10782 2.22109 2.33336 2.44437 2.55388 2.66169 2.7676 2.87147 2.97314 3.07252 3.16951
3.26404 3.35606 3.44552 3.53241 3.6167 3.69841 3.77754 3.8541 3.92813 3.99965 4.06871
4.13533 4.19958 4.2615 4.32115 4.37857 4.43383 4.48697 4.53807 4.58718 4.63436 4.67967
4.72317 4.76492 4.80497 4.84339 4.88023 4.91555 4.94939 4.98183 5.0129 5.04265 5.07115
5.09843 5.12455 5.14954 5.17346 5.19635 5.21824 5.23931 5.2596 5.27899 5.29754 5.31528
5.33223 5.34843 5.36392 5.37872 5.39286 5.40637 5.41928 5.43162 5.4434 5.45465 5.4654
5.47567 5.48548 5.49484 5.50378 5.51232 5.52047 5.52826 5.53569 5.54278 5.54956 5.55602
5.56219 5.56808 5.57371 5.58409 #bodywt for gender,fleet: 2 / 1

0 0.0506765 0.078287 0.116026 0.164557 0.223188 0.289848 0.361487 0.434695 0.506309
 0.573814 0.635515 0.690509 0.738544 0.779837 0.814904 0.844411 0.869078 0.88961 0.906656
 0.920794 0.932521 0.942259 0.950361 0.957119 0.962773 0.967519 0.971518 0.9749 0.977771
 0.980218 0.982313 0.984112 0.985665 0.98701 0.988179 0.9892 0.990094 0.990879 0.991572
 0.992185 0.99273 0.993215 0.993648 0.994035 0.994384 0.994698 0.994981 0.995237 0.99547
 0.995681 0.995874 0.99605 0.996211 0.996358 0.996494 0.996618 0.996733 0.996839 0.996937
 0.997027 0.997111 0.997189 0.997262 0.997329 0.997392 0.99745 0.997505 0.997556 0.997603
 0.997646 0.997685 0.997721 0.997755 0.997787 0.997817 0.997845 0.997872 0.997897 0.99792
 0.997943 0.997964 0.997983 0.998002 0.99802 0.998037 0.998053 0.998068 0.998082 0.998095
 0.998108 0.99812 0.998132 0.998143 0.998153 0.998163 0.998172 0.998181 0.998189 0.998197
 0.998212 #selex for gender,fleet: 2 / 1
 0.0548212 0.190749 0.261286 0.341329 0.428829 0.521666 0.618061 0.716791 0.817175
 0.918929 1.022 1.12644 1.2323 1.33958 1.44823 1.5581 1.669 1.78068 1.89283 2.00515
 2.11731 2.229 2.33991 2.44976 2.5583 2.66528 2.7705 2.87378 2.97497 3.07395 3.17061
 3.26487 3.35666 3.44594 3.53267 3.61684 3.69845 3.77749 3.85398 3.92795 3.99943 4.06845
 4.13504 4.19927 4.26117 4.3208 4.37821 4.43346 4.4866 4.53769 4.5868 4.63397 4.67928
 4.72278 4.76453 4.80458 4.843 4.87984 4.91516 4.94901 4.98144 5.01252 5.04228 5.07077
 5.09806 5.12418 5.14917 5.1731 5.19598 5.21788 5.23895 5.25924 5.27864 5.29718 5.31492
 5.33187 5.34807 5.36356 5.37836 5.3925 5.40602 5.41893 5.43126 5.44305 5.4543 5.46505
 5.47532 5.48513 5.49449 5.50343 5.51197 5.52013 5.52791 5.53534 5.54244 5.54921 5.55568
 5.56185 5.56774 5.57336 5.58375 #bodywt for gender,fleet: 2 / 2
 0 0.0212035 0.0360113 0.0586739 0.0913087 0.135281 0.190605 0.255714 0.32772 0.403037
 0.478081 0.549819 0.616055 0.675483 0.727575 0.772393 0.810394 0.842255 0.868749 0.89065
 0.908688 0.923513 0.93569 0.945697 0.953923 0.960726 0.966346 0.97101 0.974896 0.978145
 0.980873 0.983173 0.985121 0.986778 0.988193 0.989407 0.990453 0.991357 0.992142 0.992826
 0.993425 0.99395 0.994413 0.994823 0.995186 0.99551 0.995798 0.996057 0.996288 0.996497
 0.996686 0.996856 0.99701 0.997151 0.997279 0.997396 0.997502 0.9976 0.99769 0.997773
 0.997849 0.997919 0.997984 0.998044 0.998099 0.998151 0.998199 0.998243 0.998285 0.998323
 0.998358 0.998388 0.998417 0.998444 0.998469 0.998493 0.998515 0.998536 0.998556 0.998574
 0.998592 0.998608 0.998624 0.998638 0.998652 0.998665 0.998678 0.998689 0.9987 0.998711
 0.998721 0.99873 0.998739 0.998747 0.998755 0.998763 0.99877 0.998777 0.998783 0.998789
 0.9988 #selex for gender,fleet: 2 / 2
 0.0596307 0.212095 0.288451 0.370664 0.454989 0.539567 0.624281 0.709923 0.797531
 0.888021 0.982034 1.0799 1.18163 1.28699 1.39558 1.50684 1.62016 1.73494 1.85057 1.96652
 2.08227 2.1974 2.31153 2.42434 2.53556 2.64494 2.75231 2.8575 2.96037 3.06083 3.1588
 3.2542 3.347 3.43716 3.52468 3.60954 3.69176 3.77134 3.84832 3.92271 3.99457 4.06393
 4.13083 4.19533 4.25747 4.31732 4.37493 4.43036 4.48366 4.53491 4.58415 4.63145 4.67687
 4.72047 4.76232 4.80246 4.84096 4.87787 4.91326 4.94717 4.97966 5.01079 5.0406 5.06914
 5.09647 5.12263 5.14766 5.17162 5.19454 5.21646 5.23756 5.25787 5.27728 5.29585 5.3136
 5.33056 5.34678 5.36228 5.3771 5.39125 5.40477 5.4177 5.43004 5.44183 5.4531 5.46386
 5.47413 5.48395 5.49332 5.50227 5.51081 5.51897 5.52676 5.5342 5.5413 5.54808 5.55455
 5.56073 5.56662 5.57225 5.58264 #bodywt for gender,fleet: 2 / 3
 0 0.0167249 0.0370579 0.0748703 0.135936 0.221155 0.32493 0.437177 0.547174 0.646684
 0.731167 0.799414 0.852474 0.892553 0.922189 0.943779 0.959353 0.970525 0.97852 0.984246
 0.988357 0.991322 0.993473 0.995044 0.9962 0.997058 0.9977 0.998184 0.998552 0.998836
 0.999055 0.999226 0.999361 0.999468 0.999553 0.999622 0.999678 0.999724 0.999761 0.999793
 0.999818 0.99984 0.999859 0.999874 0.999887 0.999899 0.999909 0.999917 0.999924 0.999931
 0.999936 0.999941 0.999946 0.99995 0.999953 0.999956 0.999959 0.999961 0.999963 0.999965
 0.999967 0.999969 0.99997 0.999972 0.999973 0.999974 0.999975 0.999976 0.999977 0.999978
 0.999978 0.999979 0.999979 0.99998 0.99998 0.999981 0.999981 0.999982 0.999982 0.999982
 0.999983 0.999983 0.999983 0.999983 0.999984 0.999984 0.999984 0.999984 0.999984 0.999985
 0.999985 0.999985 0.999985 0.999985 0.999985 0.999986 0.999986 0.999986 0.999986 0.999986
 0.999986 #selex for gender,fleet: 2 / 3
 0.0553231 0.193613 0.265935 0.348553 0.439452 0.536294 0.636886 0.739542 0.843213
 0.947398 1.05198 1.15703 1.26271 1.36915 1.47646 1.58462 1.69359 1.8032 1.91327 2.02355
 2.13377 2.24364 2.35289 2.46123 2.56841 2.67419 2.77835 2.8807 2.98109 3.07936 3.1754
 3.26912 3.36044 3.44931 3.53569 3.61956 3.70089 3.7797 3.85599 3.92978 4.00109 4.06997
 4.13644 4.20056 4.26236 4.3219 4.37924 4.43441 4.48749 4.53853 4.58759 4.63472 4.67999
 4.72345 4.76516 4.80518 4.84357 4.88039 4.91568 4.94951 4.98192 5.01298 5.04272 5.0712
 5.09847 5.12458 5.14956 5.17347 5.19635 5.21823 5.2393 5.25958 5.27897 5.29752 5.31524
 5.33219 5.34839 5.36387 5.37867 5.39281 5.40632 5.41923 5.43156 5.44334 5.45459 5.46534
 5.4756 5.48541 5.49477 5.50371 5.51225 5.5204 5.52818 5.53561 5.5427 5.54948 5.55594
 5.56211 5.568 5.57362 5.584 #bodywt for gender,fleet: 2 / 4
 0 0.0111546 0.0197152 0.0335408 0.0546981 0.0851674 0.126274 0.178165 0.239587 0.308076
 0.380456 0.453438 0.524114 0.590258 0.650422 0.703874 0.750467 0.790465 0.824393 0.852912
 0.876723 0.89651 0.912906 0.926472 0.937693 0.946981 0.954682 0.96108 0.966411 0.970867
 0.974604 0.97775 0.980408 0.982664 0.984585 0.986228 0.987639 0.988856 0.989909 0.990824
 0.991622 0.992321 0.992934 0.993475 0.993953 0.994378 0.994756 0.995093 0.995395 0.995666
 0.99591 0.99613 0.99633 0.99651 0.996675 0.996824 0.996961 0.997086 0.9972 0.997305
 0.997402 0.99749 0.997573 0.997648 0.997718 0.997783 0.997844 0.9979 0.997952 0.998
 0.998043 0.998082 0.998117 0.998151 0.998182 0.998212 0.998239 0.998265 0.99829 0.998313

0.998334 0.998354 0.998374 0.998392 0.998409 0.998425 0.99844 0.998455 0.998468 0.998481
0.998493 0.998505 0.998516 0.998526 0.998536 0.998545 0.998554 0.998562 0.99857 0.998577
0.998591 #selex for gender,fleet: 2 / 4
0.0544482 0.189972 0.261417 0.343974 0.436411 0.537106 0.644173 0.75567 0.869823
0.985195 1.10075 1.21585 1.33014 1.44349 1.55589 1.66737 1.77802 1.88787 1.99696 2.10525
2.21272 2.31928 2.42484 2.52926 2.63243 2.7342 2.83444 2.93301 3.02979 3.12466 3.21752
3.30828 3.39687 3.48322 3.56728 3.64902 3.72841 3.80544 3.8801 3.95241 4.02237 4.09002
4.15536 4.21845 4.27931 4.33798 4.39452 4.44898 4.50139 4.55181 4.60031 4.64692 4.69171
4.73473 4.77603 4.81568 4.85372 4.89021 4.9252 4.95875 4.99091 5.02172 5.05123 5.07951
5.10658 5.1325 5.15731 5.18106 5.20379 5.22553 5.24648 5.26668 5.28599 5.30446 5.32211
5.33899 5.35512 5.37055 5.38528 5.39937 5.41283 5.42568 5.43797 5.4497 5.46091 5.47162
5.48185 5.49162 5.50095 5.50985 5.51836 5.52648 5.53424 5.54164 5.54871 5.55546 5.5619
5.56805 5.57392 5.57952 5.58987 #bodywt for gender,fleet: 2 / 5
0 0.00487217 0.00822975 0.0135146 0.0215531 0.0333344 0.0499208 0.0722927 0.101156
0.136764 0.178821 0.226485 0.278479 0.333262 0.389225 0.444855 0.498855 0.550208 0.598195
0.642378 0.682555 0.718716 0.750992 0.779605 0.804839 0.827004 0.846415 0.863382 0.878195
0.891122 0.902404 0.912256 0.920868 0.928406 0.935016 0.940821 0.945931 0.950438 0.954422
0.957952 0.961087 0.963879 0.966369 0.968598 0.970595 0.972391 0.974008 0.975468 0.976789
0.97789 0.979074 0.980065 0.980968 0.981794 0.982549 0.983242 0.983879 0.984464 0.985004
0.985502 0.985963 0.986389 0.986783 0.98715 0.98749 0.987807 0.988101 0.988376 0.988633
0.988872 0.989087 0.989279 0.989459 0.989628 0.989787 0.989936 0.990076 0.990208 0.990332
0.99045 0.99056 0.990664 0.990762 0.990855 0.990943 0.991026 0.991104 0.991178 0.991248
0.991314 0.991377 0.991437 0.991493 0.991547 0.991597 0.991645 0.991691 0.991734 0.991775
0.991814 0.991885 #selex for gender,fleet: 2 / 5
0.056179 0.198303 0.273566 0.360816 0.458807 0.565773 0.679497 0.797528 0.917516 1.03754
1.15627 1.27298 1.3874 1.49959 1.60978 1.71826 1.82534 1.93126 2.03624 2.1404 2.24381
2.34648 2.44837 2.54941 2.64949 2.74847 2.84622 2.94259 3.03744 3.13063 3.22205 3.31157
3.3991 3.48455 3.56786 3.64896 3.72782 3.80441 3.87872 3.95073 4.02045 4.08789 4.15308
4.21604 4.2768 4.3354 4.39189 4.4463 4.49868 4.54909 4.59758 4.64419 4.68898 4.73201
4.77333 4.81299 4.85105 4.88756 4.92257 4.95614 4.98831 5.01915 5.04869 5.07698 5.10408
5.13002 5.15485 5.17862 5.20137 5.22313 5.2441 5.2643 5.28362 5.3021 5.31976 5.33665
5.35279 5.36822 5.38296 5.39706 5.41052 5.42339 5.43568 5.44742 5.45864 5.46935 5.47958
5.48936 5.49869 5.5076 5.51611 5.52424 5.532 5.53941 5.54648 5.55323 5.55968 5.56583
5.5717 5.57731 5.58766 #bodywt for gender,fleet: 2 / 6
0 0.00140585 0.00265155 0.00484502 0.00857009 0.014654 0.0241738 0.0383868 0.0585636
0.085746 0.120497 0.162727 0.211661 0.265937 0.323815 0.383413 0.442928 0.500796 0.555783
0.607016 0.653965 0.69639 0.734286 0.767815 0.797256 0.822949 0.845269 0.864592 0.881281
0.895674 0.90808 0.918772 0.927993 0.935954 0.942836 0.948797 0.95397 0.95847 0.962393
0.965822 0.968828 0.971469 0.973796 0.975852 0.977673 0.979291 0.980732 0.982019 0.983171
0.984204 0.985135 0.985973 0.986732 0.987418 0.988042 0.988609 0.989126 0.989598 0.990031
0.990427 0.99079 0.991125 0.991433 0.991718 0.99198 0.992223 0.992449 0.992658 0.992852
0.993032 0.993192 0.993333 0.993465 0.993589 0.993705 0.993813 0.993915 0.99401 0.9941
0.994184 0.994263 0.994338 0.994408 0.994474 0.994537 0.994596 0.994651 0.994704 0.994754
0.9948 0.994845 0.994887 0.994926 0.994964 0.995 0.995033 0.995065 0.995096 0.995124
0.995151 0.995201 #selex for gender,fleet: 2 / 6
0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303
0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303
0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303
0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303
0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303
0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303
0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303
0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303
0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303
0.0465303 0.0465303 0.0465303 #mean M for year Yinit: 2011 sex: 1
39.8119 37.3577 34.9965 32.7823 30.7891 28.7442 26.8336 24.9836 23.1981 21.5285 20.4911
19.3023 19.0008 18.2612 18.453 18.2892 18.2443 17.862 17.8057 17.6903 17.2581 16.2309
15.4129 14.3004 13.086 11.822 10.745 9.62776 8.63302 7.79303 6.93605 6.11293 5.40555
4.77723 4.19126 3.6829 3.23842 2.85767 2.52753 2.24493 1.99916 1.78596 1.60637 1.44684
1.30939 1.1901 1.08983 0.99812 0.918261 0.848167 0.785588 0.730004 0.680211 0.635401
0.594572 0.557129 0.522617 0.490707 0.461153 0.434003 0.408938 0.385538 0.363754 0.34371
0.324924 0.308174 0.292678 0.277535 0.263289 0.249407 0.23626 0.22379 0.211928 0.20073
0.190125 0.180089 0.170574 0.16158 0.153092 0.145115 0.137616 0.130575 0.123952 0.117706
0.111823 0.106277 0.101044 0.0960975 0.0914213 0.086998 0.0828113 0.078845 0.075084
0.0715218 0.0681389 0.0649231 0.0618596 0.0589489 0.0561823 0.0535519 1.11375 #numbers
for year Yinit: 2011 sex: 1
0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798
0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798
0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798

0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798
0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798
0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798
0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798
0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798
0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798
0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798
0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798
0.0453798 0.0453798 0.0453798 #mean M for year Yinit: 2011 sex: 2
39.8119 37.4007 35.077 32.8952 30.9298 28.9071 27.0138 25.1761 23.3984 21.7329 20.7018
19.515 19.223 18.4856 18.6887 18.5281 18.4823 18.087 18.0124 17.8669 17.3899 16.3042
15.4231 14.2454 12.9699 11.6542 10.5344 9.38866 8.37659 7.52793 6.67487 5.86495 5.17455
4.56612 4.00271 3.51656 3.09345 2.73248 2.42059 2.1545 1.92371 1.72396 1.55618 1.40717
1.27889 1.16754 1.07404 0.988183 0.91328 0.847365 0.78829 0.735624 0.688244 0.645413
0.606187 0.570018 0.536499 0.50534 0.476334 0.44957 0.424759 0.401497 0.379761 0.359704
0.340842 0.324007 0.308393 0.293058 0.278584 0.26441 0.250936 0.238108 0.225859 0.214259
0.203241 0.19279 0.182863 0.173467 0.164593 0.156249 0.148401 0.14103 0.134092 0.127543
0.121368 0.115539 0.11003 0.104814 0.099874 0.0951923 0.0907526 0.0865384 0.0825348
0.078736 0.0751217 0.0716798 0.0683948 0.0652686 0.0622921 0.0594575 1.27126 #numbers for
year Yinit: 2011 sex: 2
41.4045 38.7781 36.2741 34.0379 31.8864 29.8688 28.0526 26.1892 24.448 22.7618 21.1344
19.6125 18.6663 17.5822 17.3063 16.6311 16.8043 16.6536 16.6111 16.2614 16.2086 16.1021
15.7072 14.7709 14.0253 13.0118 11.9057 10.7547 9.77405 8.75701 7.85155 7.08699 6.30714
5.55822 4.91469 4.34314 3.81018 3.34787 2.94368 2.59747 2.29731 2.04038 1.81696 1.62316
1.45993 1.31493 1.19001 1.08161 0.990483 0.907149 0.834584 0.770893 0.714031 0.663524
0.618279 0.577561 0.54046 0.506434 0.475071 0.446071 0.419212 0.394536 0.371755 0.350486
0.330686 0.312466 0.29539 0.280165 0.266078 0.252313 0.239362 0.226742 0.214789 0.203453
0.192668 0.182487 0.172845 0.163721 0.155069 0.146892 0.139174 0.131922 0.125103 0.118702
0.112681 0.107003 0.101654 0.096612 0.0918546 0.0873574 0.0831063 0.0790851 0.0752791
0.0716735 0.0682546 0.0650163 0.0619411 0.0590178 0.0562329 0.053587 1.1122 #numbers for
year Ydeclare: 2013 sex: 1
41.4045 38.8228 36.3577 34.1556 32.0334 30.0407 28.2457 26.3981 24.6687 22.9898 21.3656
19.8437 18.901 17.816 17.5478 16.873 17.0565 16.9082 16.8645 16.5022 16.4325 16.2982
15.8615 14.8699 14.0651 12.9899 11.8258 10.6253 9.60357 8.55831 7.63514 6.86107 6.08314
5.34467 4.71524 4.16059 3.64704 3.20396 2.81835 2.4894 2.2052 1.96275 1.75247 1.57049
1.41763 1.28189 1.16504 1.06362 0.978455 0.900255 0.832035 0.772 0.718196 0.670228
0.627074 0.588062 0.552331 0.519385 0.488851 0.460466 0.43404 0.409657 0.387052 0.365858
0.346054 0.327779 0.310592 0.295252 0.281025 0.267052 0.253861 0.240946 0.228667 0.216977
0.205814 0.195242 0.185201 0.175676 0.166629 0.158066 0.149978 0.142374 0.135222 0.128505
0.122182 0.116214 0.110586 0.105275 0.100255 0.0955023 0.091001 0.0867351 0.0826896
0.0788498 0.0752019 0.0717404 0.0684473 0.0653111 0.0623181 0.0594695 1.26925 #numbers
for year Ydeclare: 2013 sex: 2
#R0 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932
1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950
1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968
1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986
1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004
2005 2006 2007 2008 2009 2010 #years
173.838 173.838 173.813 173.779 173.741 173.716 173.689 173.663 173.637 173.611 173.581
173.538 173.488 173.432 173.367 173.279 173.187 173.109 173.034 172.975 172.901 172.813
172.696 172.582 172.471 172.387 172.256 172.093 171.89 171.386 170.881 170.035 169.326
169.053 168.733 168.525 168.303 168.026 167.79 167.616 167.391 167.101 166.742 166.322
165.867 165.46 165.09 164.788 164.424 164.144 163.96 163.138 162.818 162.439 162.04
161.084 160.44 159.546 158.374 157.236 155.916 154.673 153.16 151.558 148.665 145.637
143.097 139.273 133.971 130.074 126.85 122.684 120.156 117.016 113.284 108.047 104.83
98.8191 92.1397 86.1151 82.3463 77.5783 73.7874 69.076 68.0837 65.6376 66.1885 66.1294
67.8099 69.5473 71.1769 72.6839 74.2398 75.4187 76.8292 78.2741 79.6238 #Recruits
7.73168e+008 7.73168e+008 7.72824e+008 7.7235e+008 7.71817e+008 7.71465e+008
7.71091e+008 7.70722e+008 7.70371e+008 7.70004e+008 7.69583e+008 7.6898e+008 7.68289e+008
7.67508e+008 7.66616e+008 7.65395e+008 7.64126e+008 7.63052e+008 7.62026e+008
7.61204e+008 7.60197e+008 7.58986e+008 7.574e+008 7.5585e+008 7.54333e+008 7.53202e+008
7.5143e+008 7.49242e+008 7.46517e+008 7.39835e+008 7.33207e+008 7.22289e+008 7.133e+008
7.09874e+008 7.05893e+008 7.03331e+008 7.00592e+008 6.97211e+008 6.94341e+008
6.92234e+008 6.89519e+008 6.86043e+008 6.81773e+008 6.76828e+008 6.71524e+008
6.66816e+008 6.62579e+008 6.59144e+008 6.55035e+008 6.51901e+008 6.49843e+008 6.4078e+008
6.37299e+008 6.33201e+008 6.28931e+008 6.18831e+008 6.12143e+008 6.03017e+008
5.91305e+008 5.80202e+008 5.67643e+008 5.56118e+008 5.4247e+008 5.28457e+008 5.04227e+008
4.80242e+008 4.61127e+008 4.33931e+008 3.99085e+008 3.75354e+008 3.56821e+008
3.34212e+008 3.21174e+008 3.05646e+008 2.8809e+008 2.6496e+008 2.51554e+008 2.27984e+008
2.03839e+008 1.83703e+008 1.71822e+008 1.57515e+008 1.46678e+008 1.33828e+008
1.31204e+008 1.24853e+008 1.26269e+008 1.26117e+008 1.30485e+008 1.35084e+008

```

1.39476e+008 1.43609e+008 1.47948e+008 1.51285e+008 1.55337e+008 1.59554e+008
1.63557e+008 #SpawnBio
0.44056 0.5 0 # spawn-recr steepness, sigmaR, autocorr
# values from cat75_hmle, catch at 75% and steepness at mle value. # this is state of
nature 4 out of 9 (in no particular order) # and parameter set number 2 out of 2 for this
state
0 0 27.1664 99.6169 331.041 987.879 2615.28 6100.71 12570.2 23108.5 38439.4 58737.6
83639.5 112406 144137 177948 213089 248986 285239 321591 357892 394066 430075 465904
501545 536990 572225 607230 641980 676443 710584 744366 777749 810695 843166 875126
906540 937378 967612 997216 1.02617e+006 1.05445e+006 1.08205e+006 1.10895e+006
1.13515e+006 1.16063e+006 1.1854e+006 1.20945e+006 1.23278e+006 1.25539e+006 1.2773e+006
1.29851e+006 1.31902e+006 1.33885e+006 1.358e+006 1.37649e+006 1.39433e+006 1.41153e+006
1.42811e+006 1.44408e+006 1.45946e+006 1.47426e+006 1.4885e+006 1.50219e+006 1.51536e+006
1.528e+006 1.54015e+006 1.55182e+006 1.56301e+006 1.57376e+006 1.58406e+006 1.59421e+006
1.60394e+006 1.61328e+006 1.62222e+006 1.63079e+006 1.639e+006 1.64687e+006 1.6544e+006
1.66161e+006 1.66851e+006 1.67512e+006 1.68145e+006 1.6875e+006 1.69329e+006 1.69882e+006
1.70412e+006 1.70918e+006 1.71403e+006 1.71865e+006 1.72308e+006 1.72731e+006
1.73135e+006 1.73521e+006 1.73891e+006 1.74243e+006 1.7458e+006 1.74902e+006 1.75209e+006
1.75503e+006 1.76045e+006 #female fecundity; weighted by N in year Y_init across morphs
and areas
0.0447959 0.161569 0.220963 0.288709 0.363455 0.443836 0.528681 0.617102 0.708484
0.802415 0.898614 0.996863 1.09696 1.19871 1.30187 1.4062 1.51143 1.61726 1.7234 1.82956
1.93545 2.04078 2.1453 2.24876 2.35095 2.45166 2.55072 2.64797 2.74328 2.83653 2.92764
3.01652 3.10312 3.18739 3.2693 3.34882 3.42596 3.50072 3.57309 3.64311 3.7108 3.77618
3.83929 3.90018 3.95888 4.01544 4.06991 4.12234 4.17279 4.2213 4.26794 4.31275 4.35579
4.39711 4.43678 4.47484 4.51136 4.54637 4.57994 4.61211 4.64295 4.67248 4.70077 4.72786
4.7538 4.77863 4.80239 4.82512 4.84688 4.86769 4.88772 4.90702 4.92548 4.94312 4.95998
4.97611 4.99152 5.00624 5.02031 5.03376 5.0466 5.05887 5.0706 5.08179 5.09249 5.1027
5.11245 5.12177 5.13066 5.13915 5.14725 5.15499 5.16238 5.16943 5.17616 5.18259 5.18872
5.19458 5.20016 5.2055 5.21532 #bodywt for gender,fleet: 1 / 1
0 0.0499826 0.0757589 0.110542 0.154938 0.208453 0.269462 0.33548 0.403648 0.471214
0.535888 0.596015 0.650594 0.699187 0.741794 0.778709 0.810404 0.837439 0.860392 0.879824
0.896248 0.910125 0.921855 0.931784 0.940202 0.947356 0.953452 0.958662 0.963128 0.966969
0.970284 0.973154 0.975647 0.977821 0.979722 0.981391 0.98286 0.984158 0.985308 0.98633
0.987241 0.988055 0.988785 0.989441 0.990032 0.990565 0.991049 0.991487 0.991886 0.992249
0.992581 0.992884 0.993163 0.993418 0.993653 0.993869 0.994069 0.994254 0.994425 0.994583
0.99473 0.994866 0.994993 0.995111 0.995221 0.995324 0.99542 0.99551 0.995594 0.995672
0.995743 0.995807 0.995867 0.995924 0.995977 0.996027 0.996074 0.996119 0.996161 0.9962
0.996238 0.996273 0.996306 0.996338 0.996368 0.996396 0.996423 0.996448 0.996472 0.996494
0.996516 0.996536 0.996556 0.996574 0.996591 0.996608 0.996623 0.996638 0.996652 0.996666
0.99669 #selex for gender,fleet: 1 / 1
0.0459148 0.167829 0.230479 0.302262 0.381538 0.466476 0.555413 0.647086 0.740681
0.835752 0.932102 1.02966 1.12842 1.22833 1.32935 1.43135 1.53419 1.63767 1.74155 1.84557
1.94949 2.05303 2.15594 2.25797 2.35889 2.45848 2.55656 2.65296 2.74754 2.84015 2.9307
3.01911 3.1053 3.18921 3.27081 3.35007 3.42698 3.50154 3.57375 3.64362 3.71117 3.77644
3.83946 3.90026 3.95889 4.01539 4.06981 4.12219 4.17259 4.22107 4.26767 4.31245 4.35547
4.39678 4.43642 4.47447 4.51097 4.54597 4.57953 4.61169 4.64251 4.67204 4.70032 4.72741
4.75334 4.77816 4.80192 4.82465 4.8464 4.86721 4.88724 4.90654 4.92499 4.94263 4.95949
4.97561 4.99102 5.00575 5.01982 5.03326 5.0461 5.05837 5.07009 5.08129 5.09198 5.10219
5.11195 5.12126 5.13015 5.13864 5.14675 5.15448 5.16187 5.16892 5.17566 5.18208 5.18821
5.19407 5.19965 5.20498 5.21481 #bodywt for gender,fleet: 1 / 2
0 0.020837 0.0345637 0.0551946 0.0845334 0.12381 0.1732 0.231608 0.296814 0.36592
0.435895 0.504035 0.568241 0.627114 0.67991 0.726417 0.766807 0.801503 0.83106 0.856089
0.877196 0.89495 0.909864 0.922391 0.932921 0.941783 0.949257 0.955576 0.960933 0.965488
0.969374 0.972701 0.975558 0.978022 0.980153 0.982003 0.983614 0.985023 0.986259 0.987347
0.988307 0.989158 0.989914 0.990587 0.991189 0.991729 0.992213 0.99265 0.993044 0.993401
0.993725 0.994019 0.994287 0.994532 0.994756 0.994961 0.99515 0.995323 0.995483 0.99563
0.995767 0.995893 0.996009 0.996118 0.996218 0.996312 0.996399 0.99648 0.996556 0.996627
0.99669 0.996747 0.9968 0.99685 0.996896 0.99694 0.996982 0.997021 0.997057 0.997092
0.997124 0.997155 0.997184 0.997211 0.997237 0.997261 0.997285 0.997306 0.997327 0.997347
0.997365 0.997383 0.997399 0.997415 0.99743 0.997444 0.997457 0.99747 0.997482 0.997494
0.997515 #selex for gender,fleet: 1 / 2
0.0500339 0.187136 0.255487 0.330126 0.407671 0.486115 0.564953 0.644596 0.725799
0.809303 0.895678 0.985262 1.07816 1.17425 1.27328 1.37485 1.47848 1.58369 1.68996
1.79681 1.90379 2.01047 2.11651 2.22156 2.32535 2.42764 2.52822 2.62692 2.72359 2.81811
2.9104 3.00037 3.08798 3.17317 3.25592 3.33623 3.41408 3.48948 3.56246 3.63302 3.70121
3.76705 3.83059 3.89186 3.95092 4.00781 4.06259 4.1153 4.16601 4.21476 4.26162 4.30663
4.34986 4.39137 4.4312 4.46942 4.50607 4.54122 4.57491 4.6072 4.63814 4.66778 4.69617
4.72335 4.74937 4.77427 4.79811 4.82091 4.84273 4.8636 4.88369 4.90303 4.92152 4.93919
4.95609 4.97225 4.98769 5.00244 5.01654 5.03001 5.04288 5.05517 5.06691 5.07813 5.08885

```

5.09908 5.10885 5.11818 5.12708 5.13559 5.14371 5.15146 5.15886 5.16593 5.17267 5.17911
5.18525 5.19112 5.19671 5.20205 5.21189 #bodywt for gender,fleet: 1 / 3
0 0.0162404 0.0348082 0.0686495 0.122909 0.198975 0.292908 0.396669 0.50106 0.598401
0.683845 0.755381 0.813131 0.858486 0.89339 0.919865 0.939753 0.954603 0.965659 0.973888
0.980022 0.984608 0.988051 0.990651 0.992625 0.994133 0.995294 0.996194 0.996896 0.997448
0.997885 0.998234 0.998514 0.998741 0.998925 0.999076 0.999201 0.999305 0.999391 0.999463
0.999525 0.999577 0.999621 0.999659 0.999692 0.99972 0.999745 0.999766 0.999785 0.999802
0.999816 0.999829 0.999841 0.999851 0.99986 0.999869 0.999876 0.999883 0.999889 0.999894
0.999899 0.999904 0.999908 0.999912 0.999915 0.999918 0.999921 0.999924 0.999926 0.999929
0.99993 0.999932 0.999934 0.999935 0.999937 0.999938 0.999939 0.99994 0.999941 0.999942
0.999943 0.999944 0.999945 0.999946 0.999947 0.999948 0.999948 0.999948 0.999949 0.999949
0.99995 0.99995 0.999951 0.999951 0.999952 0.999952 0.999953 0.999953 0.999953
0.999954 #selex for gender,fleet: 1 / 3
0.0463442 0.170395 0.234643 0.308748 0.391139 0.479853 0.572904 0.668622 0.765832
0.863844 0.96234 1.06124 1.16056 1.26039 1.36076 1.46168 1.56312 1.66496 1.76708 1.86929
1.97138 2.07315 2.17435 2.27477 2.37419 2.4724 2.56921 2.66446 2.75798 2.84965 2.93936
3.027 3.11251 3.19581 3.27686 3.35564 3.43211 3.50627 3.57812 3.64768 3.71495 3.77997
3.84275 3.90335 3.96178 4.01811 4.07237 4.12462 4.17489 4.22325 4.26975 4.31443 4.35736
4.39858 4.43816 4.47614 4.51257 4.54751 4.58102 4.61313 4.64391 4.67339 4.70163 4.72868
4.75458 4.77937 4.8031 4.8258 4.84752 4.86831 4.88832 4.9076 4.92604 4.94366 4.96051
4.97662 4.99201 5.00673 5.02079 5.03422 5.04705 5.05932 5.07103 5.08222 5.0929 5.10311
5.11285 5.12216 5.13104 5.13953 5.14763 5.15536 5.16274 5.16979 5.17652 5.18294 5.18906
5.19491 5.2005 5.20582 5.21564 #bodywt for gender,fleet: 1 / 4
0 0.0109446 0.0188536 0.0313591 0.0501888 0.0770249 0.113072 0.158639 0.212927 0.274115
0.339711 0.406994 0.473428 0.536936 0.596026 0.649787 0.697815 0.740093 0.77688 0.8086
0.835765 0.858914 0.878574 0.895238 0.909348 0.921296 0.93142 0.940011 0.947313 0.953535
0.958849 0.963401 0.967312 0.970682 0.973596 0.976123 0.978322 0.980242 0.981924 0.983402
0.984704 0.985856 0.986877 0.987786 0.988596 0.989321 0.989971 0.990556 0.991082 0.991558
0.99199 0.992381 0.992737 0.993062 0.993358 0.99363 0.993878 0.994107 0.994317 0.99451
0.994689 0.994854 0.995007 0.995149 0.99528 0.995402 0.995516 0.995622 0.99572 0.995812
0.995895 0.995968 0.996036 0.9961 0.996161 0.996217 0.996271 0.996321 0.996368 0.996412
0.996454 0.996494 0.996531 0.996566 0.996599 0.996631 0.99666 0.996688 0.996715 0.99674
0.996763 0.996786 0.996807 0.996827 0.996846 0.996865 0.996882 0.996898 0.996914 0.996928
0.996955 #selex for gender,fleet: 1 / 4
0.0455957 0.167106 0.230483 0.304345 0.387804 0.479588 0.578126 0.681701 0.788647
0.89751 1.00715 1.11677 1.22586 1.33411 1.4414 1.54768 1.65293 1.75718 1.86043 1.96266
2.06386 2.16397 2.26292 2.36065 2.45705 2.55203 2.6455 2.73735 2.8275 2.91586 3.00235
3.08689 3.16943 3.24991 3.3283 3.40456 3.47868 3.55063 3.62042 3.68804 3.75351 3.81685
3.87807 3.93721 3.9943 4.04937 4.10246 4.15361 4.20287 4.25029 4.2959 4.33976 4.38192
4.42243 4.46134 4.49869 4.53454 4.56894 4.60193 4.63356 4.66389 4.69295 4.7208 4.74748
4.77303 4.79749 4.82091 4.84332 4.86477 4.8853 4.9051 4.92421 4.94249 4.95997 4.97667
4.99265 5.00791 5.02251 5.03645 5.04978 5.06251 5.07467 5.08629 5.09739 5.10799 5.11812
5.12779 5.13702 5.14584 5.15426 5.1623 5.16997 5.1773 5.18429 5.19097 5.19735 5.20343
5.20923 5.21478 5.22007 5.22981 #bodywt for gender,fleet: 1 / 5
0 0.00478955 0.00789791 0.0126864 0.0198349 0.0301512 0.044506 0.0637195 0.0884179
0.118897 0.155035 0.196276 0.2417 0.290137 0.340309 0.39096 0.440962 0.489374 0.535471
0.578749 0.618899 0.655779 0.689377 0.719784 0.747155 0.77169 0.793613 0.813156 0.83055
0.846016 0.859761 0.871977 0.882839 0.892503 0.90111 0.908785 0.915638 0.921766 0.927255
0.93218 0.936607 0.940593 0.944188 0.947438 0.95038 0.953048 0.955473 0.95768 0.959693
0.961532 0.963214 0.964756 0.966171 0.967472 0.96867 0.969775 0.970795 0.971738 0.972611
0.97342 0.974171 0.974869 0.975519 0.976123 0.976687 0.977213 0.977704 0.978163 0.978593
0.978995 0.979358 0.979684 0.979991 0.980279 0.980551 0.980806 0.981047 0.981273 0.981487
0.981688 0.981878 0.982058 0.982228 0.982388 0.98254 0.982683 0.982819 0.982947 0.983069
0.983184 0.983293 0.983397 0.983495 0.983588 0.983676 0.98376 0.983839 0.983914 0.983986
0.984054 0.984178 #selex for gender,fleet: 1 / 5
0.0470765 0.1746 0.241472 0.319691 0.408389 0.506214 0.611355 0.721678 0.834996 0.949362
1.06328 1.17577 1.28631 1.39471 1.50103 1.60542 1.70808 1.80922 1.90901 2.00759 2.10505
2.20144 2.29677 2.391 2.4841 2.57598 2.66658 2.75579 2.84352 2.92968 3.01419 3.09695
3.17789 3.25696 3.33408 3.40922 3.48234 3.55342 3.62243 3.68938 3.75425 3.81706 3.87783
3.93656 3.99329 4.04805 4.10087 4.15178 4.20084 4.24807 4.29352 4.33724 4.37928 4.41968
4.4585 4.49577 4.53155 4.56588 4.59882 4.63041 4.6607 4.68973 4.71754 4.74419 4.76972
4.79416 4.81756 4.83997 4.8614 4.88192 4.90171 4.92081 4.93908 4.95655 4.97325 4.98921
5.00447 5.01906 5.033 5.04632 5.05905 5.07121 5.08282 5.09392 5.10452 5.11464 5.12431
5.13354 5.14236 5.15078 5.15881 5.16649 5.17381 5.18081 5.18748 5.19386 5.19994 5.20575
5.21129 5.21658 5.22632 #bodywt for gender,fleet: 1 / 6
0 0.00137578 0.0025204 0.00448316 0.00773858 0.0129493 0.0209726 0.0328152 0.0495178
0.0719822 0.100782 0.136019 0.177266 0.223618 0.273818 0.326423 0.379977 0.433139
0.484776 0.534006 0.580204 0.622983 0.662157 0.697701 0.729709 0.758358 0.783878 0.806527
0.826573 0.844281 0.859905 0.873682 0.885828 0.89654 0.905995 0.914347 0.921735 0.92828
0.934086 0.939247 0.943843 0.947943 0.951607 0.95489 0.957836 0.960486 0.962874 0.96503
0.966981 0.968749 0.970355 0.971817 0.97315 0.974366 0.97548 0.9765 0.977436 0.978297

0.97909 0.979821 0.980496 0.98112 0.981697 0.982233 0.98273 0.983192 0.983622 0.984022
0.984396 0.984744 0.985055 0.985331 0.98559 0.985833 0.986061 0.986275 0.986477 0.986666
0.986844 0.987011 0.987169 0.987318 0.987458 0.987591 0.987716 0.987834 0.987946 0.988051
0.988151 0.988245 0.988335 0.988419 0.988499 0.988575 0.988647 0.988715 0.98878 0.988841
0.988899 0.988955 0.989055 #selex for gender,fleet: 1 / 6
0.0535125 0.183774 0.250731 0.326419 0.409184 0.497467 0.590027 0.686003 0.784853
0.886253 0.989997 1.09592 1.20385 1.31358 1.42487 1.53743 1.65094 1.76508 1.8795 1.99386
2.10782 2.22109 2.33336 2.44437 2.55388 2.66169 2.7676 2.87147 2.97314 3.07252 3.16951
3.26404 3.35606 3.44552 3.53241 3.6167 3.69841 3.77754 3.8541 3.92813 3.99965 4.06871
4.13533 4.19958 4.2615 4.32115 4.37857 4.43383 4.48697 4.53807 4.58718 4.63436 4.67967
4.72317 4.76492 4.80497 4.84339 4.88023 4.91555 4.94939 4.98183 5.0129 5.04265 5.07115
5.09843 5.12455 5.14954 5.17346 5.19635 5.21824 5.23931 5.2596 5.27899 5.29754 5.31528
5.33223 5.34843 5.36392 5.37872 5.39286 5.40637 5.41928 5.43162 5.4434 5.45465 5.4654
5.47567 5.48548 5.49484 5.50378 5.51232 5.52047 5.52826 5.53569 5.54278 5.54956 5.55602
5.56219 5.56808 5.57371 5.58409 #bodywt for gender,fleet: 2 / 1
0 0.0506765 0.078287 0.116026 0.164557 0.223188 0.289848 0.361487 0.434695 0.506309
0.573814 0.635515 0.690509 0.738544 0.779837 0.814904 0.844411 0.869078 0.88961 0.906656
0.920794 0.932521 0.942259 0.950361 0.957119 0.962773 0.967519 0.971518 0.9749 0.977771
0.980218 0.982313 0.984112 0.985665 0.98701 0.988179 0.9892 0.990094 0.990879 0.991572
0.992185 0.99273 0.993215 0.993648 0.994035 0.994384 0.994698 0.994981 0.995237 0.99547
0.995681 0.995874 0.99605 0.996211 0.996358 0.996494 0.996618 0.996733 0.996839 0.996937
0.997027 0.997111 0.997189 0.997262 0.997329 0.997392 0.99745 0.997505 0.997556 0.997603
0.997646 0.997685 0.997721 0.997755 0.997787 0.997817 0.997845 0.997872 0.997897 0.99792
0.997943 0.997964 0.997983 0.998002 0.99802 0.998037 0.998053 0.998068 0.998082 0.998095
0.998108 0.99812 0.998132 0.998143 0.998153 0.998163 0.998172 0.998181 0.998189 0.998197
0.998212 #selex for gender,fleet: 2 / 1
0.0548212 0.190749 0.261286 0.341329 0.428829 0.521666 0.618061 0.716791 0.817175
0.918929 1.022 1.12644 1.2323 1.33958 1.44823 1.5581 1.669 1.78068 1.89283 2.00515
2.11731 2.229 2.33991 2.44976 2.5583 2.66528 2.7705 2.87378 2.97497 3.07395 3.17061
3.26487 3.35666 3.44594 3.53267 3.61684 3.69845 3.77749 3.85398 3.92795 3.99943 4.06845
4.13504 4.19927 4.26117 4.3208 4.37821 4.43346 4.4866 4.53769 4.5868 4.63397 4.67928
4.72278 4.76453 4.80458 4.843 4.87984 4.91516 4.94901 4.98144 5.01252 5.04228 5.07077
5.09806 5.12418 5.14917 5.1731 5.19598 5.21788 5.23895 5.25924 5.27864 5.29718 5.31492
5.33187 5.34807 5.36356 5.37836 5.3925 5.40602 5.41893 5.43126 5.44305 5.4543 5.46505
5.47532 5.48513 5.49449 5.50343 5.51197 5.52013 5.52791 5.53534 5.54244 5.54921 5.55568
5.56185 5.56774 5.57336 5.58375 #bodywt for gender,fleet: 2 / 2
0 0.0212035 0.0360113 0.0586739 0.0913087 0.135281 0.190605 0.255714 0.32772 0.403037
0.478081 0.549819 0.616055 0.675483 0.727575 0.772393 0.810394 0.842255 0.868749 0.89065
0.908688 0.923513 0.93569 0.945697 0.953933 0.960726 0.966346 0.97101 0.974896 0.978145
0.980873 0.983173 0.985121 0.986778 0.988193 0.989407 0.990453 0.991357 0.992142 0.992826
0.993425 0.99395 0.994413 0.994823 0.995186 0.99551 0.995798 0.996057 0.996288 0.996497
0.996686 0.996856 0.99701 0.997151 0.997279 0.997396 0.997502 0.9976 0.99769 0.997773
0.997849 0.997919 0.997984 0.998044 0.998099 0.998151 0.998199 0.998243 0.998285 0.998323
0.998358 0.998388 0.998417 0.998444 0.998469 0.998493 0.998515 0.998536 0.998556 0.998574
0.998592 0.998608 0.998624 0.998638 0.998652 0.998665 0.998678 0.998689 0.9987 0.998711
0.998721 0.99873 0.998739 0.998747 0.998755 0.998763 0.99877 0.998777 0.998783 0.998789
0.9988 #selex for gender,fleet: 2 / 2
0.0596307 0.212095 0.288451 0.370664 0.454989 0.539567 0.624281 0.709923 0.797531
0.888021 0.982034 1.0799 1.18163 1.28699 1.39558 1.50684 1.62016 1.73494 1.85057 1.96652
2.08227 2.1974 2.31153 2.42434 2.53556 2.64494 2.75231 2.8575 2.96037 3.06083 3.1588
3.2542 3.347 3.43716 3.52468 3.60954 3.69176 3.77134 3.84832 3.92271 3.99457 4.06393
4.13083 4.19533 4.25747 4.31732 4.37493 4.43036 4.48366 4.53491 4.58415 4.63145 4.67687
4.72047 4.76232 4.80246 4.84096 4.87787 4.91326 4.94717 4.97966 5.01079 5.0406 5.06914
5.09647 5.12263 5.14766 5.17162 5.19454 5.21646 5.23756 5.25787 5.27728 5.29585 5.3136
5.33056 5.34678 5.36228 5.3771 5.39125 5.40477 5.4177 5.43004 5.44183 5.4531 5.46386
5.47413 5.48395 5.49332 5.50227 5.51081 5.51897 5.52676 5.5342 5.5413 5.54808 5.55455
5.56073 5.56662 5.57225 5.58264 #bodywt for gender,fleet: 2 / 3
0 0.0167249 0.0370579 0.0748703 0.135936 0.221155 0.32493 0.437177 0.547174 0.646684
0.731167 0.799414 0.852474 0.892553 0.922189 0.943779 0.959353 0.970525 0.97852 0.984246
0.988357 0.991322 0.993473 0.995044 0.9962 0.997058 0.9977 0.998184 0.998552 0.998836
0.999055 0.999226 0.999361 0.999468 0.999553 0.999622 0.999678 0.999724 0.999761 0.999793
0.999818 0.99984 0.999859 0.999874 0.999887 0.999899 0.999909 0.999917 0.999924 0.999931
0.999936 0.999941 0.999946 0.99995 0.999953 0.999956 0.999959 0.999961 0.999963 0.999965
0.999967 0.999969 0.99997 0.999972 0.999973 0.999974 0.999975 0.999976 0.999977 0.999978
0.999978 0.999979 0.999979 0.99998 0.99998 0.99998 0.999981 0.999982 0.999982 0.999982
0.999983 0.999983 0.999983 0.999983 0.999984 0.999984 0.999984 0.999984 0.999984 0.999985
0.999985 0.999985 0.999985 0.999985 0.999986 0.999986 0.999986 0.999986 0.999986
0.999986 #selex for gender,fleet: 2 / 3
0.0553231 0.193613 0.265935 0.348553 0.439452 0.536294 0.636886 0.739542 0.843213
0.947398 1.05198 1.15703 1.26271 1.36915 1.47646 1.58462 1.69359 1.8032 1.91327 2.02355
2.13377 2.24364 2.35289 2.46123 2.56841 2.67419 2.77835 2.8807 2.98109 3.07936 3.1754

0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303 0.0465303
 0.0465303 0.0465303 0.0465303 #mean M for year Yinit: 2011 sex: 1
 39.8119 37.3577 34.9965 32.7823 30.7891 28.7442 26.8336 24.9836 23.1981 21.5285 20.4911
 19.3023 19.0008 18.2612 18.453 18.2892 18.2443 17.862 17.8057 17.6903 17.2581 16.2309
 15.4129 14.3004 13.086 11.822 10.745 9.62776 8.63302 7.79303 6.93605 6.11293 5.40555
 4.77723 4.19126 3.6829 3.23842 2.85767 2.52753 2.24493 1.99916 1.78596 1.60637 1.44684
 1.30939 1.1901 1.08983 0.99812 0.918261 0.848167 0.785588 0.730004 0.680211 0.635401
 0.594572 0.557129 0.522617 0.490707 0.461153 0.434003 0.408938 0.385538 0.363754 0.34371
 0.324924 0.308174 0.292678 0.277535 0.263289 0.249407 0.23626 0.22379 0.211928 0.20073
 0.190125 0.180089 0.170574 0.16158 0.153092 0.145115 0.137616 0.130575 0.123952 0.117706
 0.111823 0.106277 0.101044 0.0960975 0.0914213 0.086998 0.0828113 0.078845 0.075084
 0.0715218 0.0681389 0.0649231 0.0618596 0.0589489 0.0561823 0.0535519 1.11375 #numbers
 for year Yinit: 2011 sex: 1
 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798
 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798
 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798
 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798
 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798
 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798
 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798
 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798
 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798
 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798 0.0453798
 0.0453798 0.0453798 0.0453798 #mean M for year Yinit: 2011 sex: 2
 39.8119 37.4007 35.077 32.8952 30.9298 28.9071 27.0138 25.1761 23.3984 21.7329 20.7018
 19.515 19.223 18.4856 18.6887 18.5281 18.4823 18.087 18.0124 17.8669 17.3899 16.3042
 15.4231 14.2454 12.9699 11.6542 10.5344 9.38866 8.37659 7.52793 6.67487 5.86495 5.17455
 4.56612 4.00271 3.51656 3.09345 2.73248 2.42059 2.1545 1.92371 1.72396 1.55618 1.40717
 1.27889 1.16754 1.07404 0.988183 0.91328 0.847365 0.78829 0.735624 0.688244 0.645413
 0.606187 0.570018 0.536499 0.50534 0.476334 0.44957 0.424759 0.401497 0.379761 0.359704
 0.340842 0.324007 0.308393 0.293058 0.278584 0.26441 0.250936 0.238108 0.225859 0.214259
 0.203241 0.19279 0.182863 0.173467 0.164593 0.156249 0.148401 0.14103 0.134092 0.127543
 0.121368 0.115539 0.11003 0.104814 0.099874 0.0951923 0.0907526 0.0865384 0.0825348
 0.078736 0.0751217 0.0716798 0.0683948 0.0652686 0.0622921 0.0594575 1.27126 #numbers for
 year Yinit: 2011 sex: 2
 41.4045 38.7781 36.2741 34.0379 31.8864 29.8688 28.0526 26.1892 24.448 22.7618 21.1344
 19.6125 18.6663 17.5822 17.3063 16.6311 16.8043 16.6536 16.6111 16.2614 16.2086 16.1021
 15.7072 14.7709 14.0253 13.0118 11.9057 10.7547 9.77405 8.75701 7.85155 7.08699 6.30714
 5.55822 4.91469 4.34314 3.81018 3.34787 2.94368 2.59747 2.29731 2.04038 1.81696 1.62316
 1.45993 1.31493 1.19001 1.08161 0.990483 0.907149 0.834584 0.770893 0.714031 0.663524
 0.618279 0.577561 0.54046 0.506434 0.475071 0.446071 0.419212 0.394536 0.371755 0.350486
 0.330686 0.312466 0.29539 0.280165 0.266078 0.252313 0.239362 0.226742 0.214789 0.203453
 0.192668 0.182487 0.172845 0.163721 0.155069 0.146892 0.139174 0.131922 0.125103 0.118702
 0.112681 0.107003 0.101654 0.096612 0.0918546 0.0873574 0.0831063 0.0790851 0.0752791
 0.0716735 0.0682546 0.0650163 0.0619411 0.0590178 0.0562329 0.053587 1.1122 #numbers for
 year Ydeclare: 2013 sex: 1
 41.4045 38.8228 36.3577 34.1556 32.0334 30.0407 28.2457 26.3981 24.6687 22.9898 21.3656
 19.8437 18.901 17.816 17.5478 16.873 17.0565 16.9082 16.8645 16.5022 16.4325 16.2982
 15.8615 14.8699 14.0651 12.9899 11.8258 10.6253 9.60357 8.55831 7.63514 6.86107 6.08314
 5.34467 4.71524 4.16059 3.64704 3.20396 2.81835 2.4894 2.2052 1.96275 1.75247 1.57049
 1.41763 1.28189 1.16504 1.06362 0.978455 0.900255 0.832035 0.772 0.718196 0.670228
 0.627074 0.588062 0.552331 0.519385 0.488851 0.460466 0.43404 0.409657 0.387052 0.365858
 0.346054 0.327779 0.310592 0.295252 0.281025 0.267052 0.253861 0.240946 0.228667 0.216977
 0.205814 0.195242 0.185201 0.175676 0.166629 0.158066 0.149978 0.142374 0.135222 0.128505
 0.122182 0.116214 0.110586 0.105275 0.100255 0.0955023 0.091001 0.0867351 0.0826896
 0.0788498 0.0752019 0.0717404 0.0684473 0.0653111 0.0623181 0.0594695 1.26925 #numbers
 for year Ydeclare: 2013 sex: 2
 #R0 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932
 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950
 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968
 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986
 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004
 2005 2006 2007 2008 2009 2010 #years
 173.838 173.838 173.813 173.779 173.741 173.716 173.689 173.663 173.637 173.611 173.581
 173.538 173.488 173.432 173.367 173.279 173.187 173.109 173.034 172.975 172.901 172.813
 172.696 172.582 172.471 172.387 172.256 172.093 171.89 171.386 170.881 170.035 169.326
 169.053 168.733 168.525 168.303 168.026 167.79 167.616 167.391 167.101 166.742 166.322
 165.867 165.46 165.09 164.788 164.424 164.144 163.96 163.138 162.818 162.439 162.04
 161.084 160.44 159.546 158.374 157.236 155.916 154.673 153.16 151.558 148.665 145.637
 143.097 139.273 133.971 130.074 126.85 122.684 120.156 117.016 113.284 108.047 104.83

```

98.8191 92.1397 86.1151 82.3463 77.5783 73.7874 69.076 68.0837 65.6376 66.1885 66.1294
67.8099 69.5473 71.1769 72.6839 74.2398 75.4187 76.8292 78.2741 79.6238 #Recruits
7.73168e+008 7.73168e+008 7.72824e+008 7.7235e+008 7.71817e+008 7.71465e+008
7.71091e+008 7.70722e+008 7.70371e+008 7.70004e+008 7.69583e+008 7.6898e+008 7.68289e+008
7.67508e+008 7.66616e+008 7.65395e+008 7.64126e+008 7.63052e+008 7.62026e+008
7.61204e+008 7.60197e+008 7.58986e+008 7.574e+008 7.5585e+008 7.54333e+008 7.53202e+008
7.5143e+008 7.49242e+008 7.46517e+008 7.39835e+008 7.33207e+008 7.22289e+008 7.133e+008
7.09874e+008 7.05893e+008 7.03331e+008 7.00592e+008 6.97211e+008 6.94341e+008
6.92234e+008 6.89519e+008 6.86043e+008 6.81773e+008 6.76828e+008 6.71524e+008
6.66816e+008 6.62579e+008 6.59144e+008 6.55035e+008 6.51901e+008 6.49843e+008 6.4078e+008
6.37299e+008 6.33201e+008 6.28931e+008 6.18831e+008 6.12143e+008 6.03017e+008
5.91305e+008 5.80202e+008 5.67643e+008 5.56118e+008 5.4247e+008 5.28457e+008 5.04227e+008
4.80242e+008 4.61127e+008 4.33931e+008 3.99085e+008 3.75354e+008 3.56821e+008
3.34212e+008 3.21174e+008 3.05646e+008 2.8809e+008 2.6496e+008 2.51554e+008 2.27984e+008
2.03839e+008 1.83703e+008 1.71822e+008 1.57515e+008 1.46678e+008 1.33828e+008
1.31204e+008 1.24853e+008 1.26269e+008 1.26117e+008 1.30485e+008 1.35084e+008
1.39476e+008 1.43609e+008 1.47948e+008 1.51285e+008 1.55337e+008 1.59554e+008
1.63557e+008 #SpawnBio
0.44056 0.5 0 # spawn-recr steepness, sigmaR, autocorr
# values from cat100_hmle, catch at 100% and steepness at mle value. # this is state of
nature 5 out of 9 (in no particular order) # and parameter set number 1 out of 4 for this
state
0 0 28.3083 103.285 341.553 1014.2 2671.83 6204.22 12732.7 23330.1 38706.4 59025.3
83919.4 112652 144327 178069 213134 248951 285123 321394 357616 393710 429639 465389
500951 536316 571471 606397 641068 675453 709517 743223 776532 809406 841807 873699
905048 935824 965999 995548 1.02445e+006 1.05268e+006 1.08023e+006 1.10709e+006
1.13325e+006 1.15869e+006 1.18343e+006 1.20744e+006 1.23075e+006 1.25334e+006
1.27523e+006 1.29641e+006 1.31691e+006 1.33672e+006 1.35586e+006 1.37433e+006
1.39217e+006 1.40936e+006 1.42594e+006 1.4419e+006 1.45728e+006 1.47208e+006 1.48632e+006
1.50001e+006 1.51318e+006 1.52583e+006 1.53798e+006 1.54965e+006 1.56086e+006
1.57161e+006 1.58192e+006 1.59208e+006 1.60182e+006 1.61116e+006 1.62012e+006 1.6287e+006
1.63692e+006 1.6448e+006 1.65234e+006 1.65957e+006 1.66648e+006 1.6731e+006 1.67944e+006
1.6855e+006 1.6913e+006 1.69685e+006 1.70216e+006 1.70724e+006 1.71209e+006 1.71673e+006
1.72117e+006 1.72541e+006 1.72946e+006 1.73334e+006 1.73704e+006 1.74058e+006
1.74396e+006 1.74719e+006 1.75027e+006 1.75322e+006 1.75866e+006 #female fecundity;
weighted by N in year Y_init across morphs and areas
0.045147 0.163178 0.222696 0.290492 0.365223 0.445539 0.530285 0.618588 0.709839
0.803631 0.899683 0.997778 1.09772 1.19929 1.30227 1.4064 1.51143 1.61705 1.72297 1.82891
1.93457 2.03968 2.14398 2.24722 2.34919 2.44969 2.54855 2.6456 2.74072 2.8338 2.92474
3.01346 3.09991 3.18404 3.26582 3.34522 3.42225 3.4969 3.56919 3.63912 3.70673 3.77204
3.83509 3.89593 3.95458 4.0111 4.06554 4.11794 4.16836 4.21686 4.26348 4.30828 4.35131
4.39264 4.43231 4.47038 4.5069 4.54192 4.57551 4.6077 4.63855 4.6681 4.69641 4.72352
4.74949 4.77434 4.79812 4.82089 4.84267 4.86351 4.88357 4.9029 4.92139 4.93906 4.95596
4.97211 4.98755 5.0023 5.01641 5.02988 5.04276 5.05506 5.06681 5.07803 5.08876 5.099
5.10878 5.11812 5.12704 5.13555 5.14369 5.15145 5.15886 5.16594 5.1727 5.17914 5.1853
5.19117 5.19678 5.20214 5.212 #bodywt for gender,fleet: 1 / 1
0 0.0511233 0.0772332 0.112337 0.156989 0.21065 0.271667 0.337561 0.405497 0.472761
0.537103 0.596902 0.65118 0.699515 0.741909 0.778656 0.810226 0.837169 0.860061 0.879454
0.895857 0.909726 0.921458 0.931394 0.939825 0.946995 0.953108 0.958335 0.962819 0.966677
0.970009 0.972894 0.975403 0.977591 0.979505 0.981186 0.982667 0.983975 0.985135 0.986165
0.987085 0.987906 0.988643 0.989305 0.989902 0.990442 0.99093 0.991373 0.991776 0.992144
0.992479 0.992786 0.993068 0.993326 0.993564 0.993783 0.993985 0.994172 0.994345 0.994505
0.994654 0.994792 0.994921 0.995041 0.995152 0.995256 0.995354 0.995445 0.99553 0.995609
0.995681 0.995746 0.995807 0.995865 0.995919 0.995969 0.996017 0.996062 0.996105 0.996145
0.996183 0.996219 0.996253 0.996285 0.996315 0.996343 0.996371 0.996396 0.99642 0.996444
0.996465 0.996486 0.996506 0.996524 0.996542 0.996559 0.996575 0.99659 0.996604 0.996618
0.996643 #selex for gender,fleet: 1 / 1
0.0462809 0.169552 0.232356 0.304214 0.383486 0.468356 0.557183 0.648721 0.74217
0.837091 0.933287 1.03069 1.12928 1.22902 1.32986 1.43167 1.53431 1.63757 1.74123 1.84504
1.94873 2.05204 2.15472 2.25653 2.35722 2.4566 2.55447 2.65067 2.74505 2.83748 2.92786
3.0161 3.10213 3.1859 3.26737 3.34651 3.4233 3.49775 3.56986 3.63965 3.70713 3.77233
3.83528 3.89603 3.95461 4.01106 4.06544 4.1178 4.16818 4.21663 4.26322 4.30799 4.351
4.39231 4.43196 4.47001 4.50651 4.54152 4.5751 4.60728 4.63811 4.66766 4.69597 4.72307
4.74903 4.77387 4.79766 4.82042 4.84219 4.86303 4.88309 4.90242 4.9209 4.93857 4.95546
4.97162 4.98705 5.00181 5.01591 5.02938 5.04226 5.05456 5.06631 5.07753 5.08825 5.09849
5.10827 5.11761 5.12653 5.13505 5.14318 5.15094 5.15835 5.16543 5.17218 5.17863 5.18479
5.19066 5.19627 5.20162 5.21149 #bodywt for gender,fleet: 1 / 2
0 0.0213283 0.0352642 0.0561355 0.0857149 0.125189 0.174691 0.233098 0.298189 0.367085
0.436791 0.504638 0.56856 0.627179 0.679765 0.726107 0.766378 0.800993 0.830503 0.855511
0.876615 0.89438 0.909315 0.921869 0.932428 0.941321 0.948827 0.955176 0.960562 0.965145
0.969056 0.972406 0.975285 0.977769 0.979918 0.981784 0.983411 0.984833 0.986082 0.987181

```

0.988151 0.989011 0.989776 0.990457 0.991066 0.991611 0.992102 0.992544 0.992943 0.993304
0.993632 0.993931 0.994202 0.994451 0.994678 0.994886 0.995077 0.995253 0.995415 0.995564
0.995702 0.99583 0.995949 0.996059 0.996161 0.996256 0.996344 0.996426 0.996503 0.996575
0.99664 0.996697 0.996751 0.996801 0.996849 0.996894 0.996936 0.996975 0.997012 0.997047
0.99708 0.997112 0.997141 0.997169 0.997195 0.99722 0.997243 0.997266 0.997287 0.997306
0.997325 0.997343 0.99736 0.997376 0.997391 0.997406 0.997419 0.997432 0.997444 0.997456
0.997478 #selex for gender,fleet: 1 / 2
0.0504337 0.189018 0.257432 0.331995 0.409383 0.487655 0.566341 0.645863 0.726964
0.810375 0.896654 0.986129 1.07889 1.17484 1.2737 1.37507 1.4785 1.58348 1.68953 1.79614
1.90288 2.00933 2.11512 2.21995 2.32351 2.42558 2.52596 2.62445 2.72094 2.81528 2.9074
2.99721 3.08467 3.16972 3.25235 3.33253 3.41028 3.48558 3.55846 3.62895 3.69706 3.76284
3.82631 3.88754 3.94655 4.0034 4.05814 4.11083 4.16151 4.21025 4.25709 4.3021 4.34533
4.38683 4.42667 4.46489 4.50156 4.53672 4.57043 4.60273 4.63369 4.66335 4.69176 4.71896
4.745 4.76994 4.7938 4.81663 4.83848 4.85938 4.87949 4.89886 4.91738 4.93509 4.95202
4.96821 4.98368 4.99846 5.01259 5.02609 5.03899 5.05131 5.06309 5.07433 5.08507 5.09533
5.10513 5.11449 5.12342 5.13196 5.1401 5.14788 5.15531 5.1624 5.16916 5.17562 5.18179
5.18767 5.19329 5.19865 5.20854 #bodywt for gender,fleet: 1 / 3
0 0.0168565 0.0359177 0.0704144 0.125351 0.201915 0.296018 0.399604 0.503567 0.600364
0.685263 0.756326 0.813704 0.85879 0.893511 0.919871 0.93969 0.954505 0.965548 0.973775
0.979914 0.984509 0.987963 0.990573 0.992557 0.994075 0.995243 0.99615 0.996858 0.997415
0.997857 0.998209 0.998492 0.998722 0.998908 0.999062 0.999188 0.999293 0.99938 0.999454
0.999516 0.999569 0.999614 0.999653 0.999686 0.999715 0.99974 0.999762 0.999781 0.999798
0.999813 0.999826 0.999838 0.999848 0.999857 0.999866 0.999873 0.99988 0.999886 0.999892
0.999897 0.999902 0.999906 0.99991 0.999913 0.999916 0.999919 0.999922 0.999925 0.999927
0.999929 0.999931 0.999932 0.999934 0.999935 0.999937 0.999938 0.999939 0.99994 0.999941
0.999942 0.999943 0.999944 0.999945 0.999945 0.999946 0.999947 0.999947 0.999948 0.999948
0.999949 0.999949 0.99995 0.99995 0.999951 0.999951 0.999952 0.999952 0.999952 0.999952
0.999953 #selex for gender,fleet: 1 / 3
0.0466444 0.171812 0.236089 0.310135 0.392403 0.480968 0.573886 0.669515 0.76669
0.864713 0.963252 1.0622 1.16158 1.26144 1.36181 1.4627 1.56407 1.66582 1.7678 1.86984
1.97175 2.0733 2.17428 2.27446 2.37364 2.4716 2.56818 2.66318 2.75648 2.84792 2.93742
3.02485 3.11016 3.19328 3.27417 3.35278 3.4291 3.50313 3.57486 3.6443 3.71147 3.77639
3.83909 3.8996 3.95797 4.01424 4.06845 4.12065 4.17089 4.21921 4.26568 4.31034 4.35325
4.39447 4.43403 4.472 4.50844 4.54338 4.57689 4.60901 4.6398 4.6693 4.69756 4.72462
4.75054 4.77535 4.79909 4.82182 4.84357 4.86437 4.88442 4.90372 4.92219 4.93984 4.95672
4.97286 4.98828 5.00302 5.01711 5.03057 5.04343 5.05572 5.06746 5.07868 5.08939 5.09962
5.10939 5.11873 5.12764 5.13615 5.14427 5.15203 5.15943 5.16651 5.17325 5.1797 5.18585
5.19172 5.19732 5.20267 5.21253 #bodywt for gender,fleet: 1 / 4
0 0.011426 0.0195259 0.0322319 0.0512246 0.078121 0.11406 0.159308 0.213068 0.273565
0.338381 0.40488 0.470599 0.533513 0.592155 0.645622 0.693497 0.735745 0.772597 0.804456
0.831809 0.855178 0.875076 0.891982 0.906331 0.91851 0.928852 0.937647 0.945139 0.951534
0.957006 0.961703 0.965744 0.969233 0.972253 0.974877 0.977164 0.979163 0.980916 0.982458
0.983819 0.985024 0.986093 0.987045 0.987895 0.988656 0.989339 0.989954 0.990509 0.99101
0.991464 0.991877 0.992253 0.992596 0.992909 0.993196 0.993459 0.993701 0.993923 0.994128
0.994317 0.994492 0.994655 0.994805 0.994944 0.995074 0.995195 0.995307 0.995412 0.99551
0.995597 0.995675 0.995748 0.995816 0.99588 0.995941 0.995997 0.996051 0.996101 0.996148
0.996193 0.996235 0.996275 0.996312 0.996348 0.996381 0.996413 0.996443 0.996471 0.996498
0.996523 0.996547 0.99657 0.996591 0.996612 0.996631 0.996649 0.996667 0.996683 0.996699
0.996728 #selex for gender,fleet: 1 / 4
0.0458503 0.168306 0.231642 0.305371 0.388624 0.480165 0.578473 0.681886 0.788778
0.897715 1.00756 1.11747 1.22692 1.33558 1.44328 1.54993 1.65553 1.76007 1.86354 1.96594
2.06723 2.16738 2.26632 2.36398 2.46027 2.5551 2.64839 2.74004 2.82997 2.9181 3.00434
3.08863 3.17093 3.25117 3.32932 3.40534 3.47923 3.55097 3.62055 3.68798 3.75327 3.81643
3.87749 3.93648 3.99343 4.04836 4.10133 4.15238 4.20154 4.24886 4.29439 4.33817 4.38026
4.42071 4.45956 4.49687 4.53267 4.56703 4.59999 4.6316 4.6619 4.69094 4.71878 4.74544
4.77098 4.79543 4.81885 4.84126 4.86271 4.88324 4.90305 4.92218 4.94047 4.95796 4.97469
4.99068 5.00597 5.02058 5.03454 5.04789 5.06064 5.07282 5.08446 5.09558 5.1062 5.11635
5.12604 5.13529 5.14413 5.15257 5.16063 5.16832 5.17567 5.18268 5.18938 5.19577 5.20187
5.2077 5.21325 5.21856 5.22834 #bodywt for gender,fleet: 1 / 5
0 0.00497951 0.00812772 0.0129303 0.0200354 0.0302067 0.0442625 0.0629721 0.086926
0.116411 0.151331 0.191188 0.235142 0.282111 0.330901 0.380324 0.429299 0.476909 0.522437
0.565367 0.605371 0.642279 0.67605 0.706745 0.734491 0.759464 0.781866 0.801913 0.819821
0.835799 0.850049 0.862754 0.874085 0.884197 0.893229 0.901303 0.908532 0.915011 0.920828
0.926059 0.93077 0.935021 0.938862 0.94234 0.945494 0.948359 0.950967 0.953345 0.955515
0.957501 0.95932 0.960989 0.962523 0.963934 0.965235 0.966436 0.967546 0.968573 0.969524
0.970407 0.971227 0.971989 0.972699 0.97336 0.973977 0.974553 0.975091 0.975595 0.976066
0.976508 0.976906 0.977266 0.977603 0.977921 0.97822 0.978501 0.978766 0.979016 0.979252
0.979474 0.979684 0.979882 0.98007 0.980247 0.980414 0.980573 0.980723 0.980865 0.980999
0.981126 0.981247 0.981362 0.98147 0.981573 0.981671 0.981763 0.981851 0.981935 0.982014
0.982089 0.982227 #selex for gender,fleet: 1 / 5

0.047457 0.17645 0.243537 0.321908 0.410686 0.508516 0.613589 0.723785 0.836934 0.951109
1.06483 1.17713 1.28749 1.39572 1.50187 1.60609 1.70859 1.80956 1.90918 2.00759 2.10486
2.20106 2.29619 2.39022 2.48312 2.5748 2.66519 2.7542 2.84174 2.92771 3.01203 3.09461
3.17538 3.25429 3.33126 3.40625 3.47924 3.55019 3.61909 3.68593 3.7507 3.81342 3.87411
3.93277 3.98943 4.04413 4.0969 4.14777 4.19679 4.24398 4.28941 4.33311 4.37514 4.41552
4.45433 4.4916 4.52738 4.56171 4.59466 4.62625 4.65655 4.68559 4.71343 4.74009 4.76564
4.7901 4.81352 4.83595 4.85741 4.87795 4.89777 4.91689 4.93519 4.95268 4.96941 4.98541
5.0007 5.01531 5.02928 5.04263 5.05538 5.06757 5.07922 5.09034 5.10097 5.11112 5.12081
5.13007 5.13891 5.14735 5.15542 5.16311 5.17046 5.17748 5.18418 5.19057 5.19668 5.20251
5.20807 5.21338 5.22317 #bodywt for gender,fleet: 1 / 6
0 0.00140879 0.00257294 0.0045632 0.00785473 0.0131087 0.0211776 0.0330585 0.0497792
0.0722262 0.100961 0.136078 0.177153 0.223289 0.273245 0.325598 0.378907 0.431846
0.483294 0.532373 0.578462 0.62117 0.660309 0.695849 0.727877 0.756568 0.782144 0.80486
0.824981 0.842767 0.858471 0.872327 0.884551 0.895338 0.904864 0.913285 0.920737 0.927341
0.933203 0.938416 0.943059 0.947203 0.950909 0.95423 0.957211 0.959893 0.962311 0.964495
0.966471 0.968263 0.969891 0.971372 0.972723 0.973958 0.975087 0.976122 0.977072 0.977946
0.97875 0.979492 0.980177 0.980811 0.981398 0.981942 0.982447 0.982916 0.983353 0.983759
0.984139 0.984493 0.984808 0.985089 0.985353 0.9856 0.985832 0.986049 0.986254 0.986446
0.986628 0.986798 0.986959 0.98711 0.987253 0.987388 0.987515 0.987635 0.987749 0.987856
0.987958 0.988054 0.988145 0.988231 0.988312 0.98839 0.988463 0.988532 0.988598 0.98866
0.98872 0.988776 0.988879 #selex for gender,fleet: 1 / 6
0 0.0539259 0.185573 0.25267 0.328419 0.411174 0.499395 0.591863 0.687727 0.786456
0.887728 0.991338 1.09712 1.20489 1.31446 1.42557 1.53794 1.65126 1.7652 1.87941 1.99355
2.1073 2.22035 2.33241 2.44322 2.55253 2.66014 2.76586 2.86955 2.97105 3.07027 3.1671
3.26149 3.35337 3.44271 3.52948 3.61367 3.69528 3.77432 3.8508 3.92475 3.99621 4.06521
4.13179 4.19599 4.25787 4.31749 4.37488 4.43012 4.48325 4.53434 4.58344 4.63062 4.67593
4.71944 4.76119 4.80125 4.83969 4.87654 4.91187 4.94574 4.97819 5.00929 5.03907 5.06759
5.0949 5.12104 5.14607 5.17001 5.19293 5.21485 5.23595 5.25627 5.2757 5.29428 5.31205
5.32903 5.34526 5.36078 5.37561 5.38979 5.40333 5.41627 5.42863 5.44045 5.45173 5.46251
5.4728 5.48264 5.49203 5.501 5.50956 5.51774 5.52555 5.533 5.54012 5.54692 5.55341 5.5596
5.56551 5.57116 5.58159 #bodywt for gender,fleet: 2 / 1
0 0.0518398 0.079816 0.117909 0.166721 0.225504 0.292161 0.363647 0.436587 0.507864
0.575011 0.636368 0.691057 0.738838 0.779931 0.814846 0.844245 0.868839 0.889325 0.906346
0.920474 0.932201 0.941947 0.950061 0.956834 0.962504 0.967267 0.971282 0.974679 0.977566
0.980027 0.982135 0.983947 0.985511 0.986866 0.988045 0.989074 0.989975 0.990768 0.991468
0.992087 0.992636 0.993126 0.993564 0.993956 0.994308 0.994625 0.994912 0.995171 0.995406
0.99562 0.995816 0.995994 0.996157 0.996306 0.996443 0.996569 0.996686 0.996793 0.996892
0.996984 0.997069 0.997148 0.997221 0.997289 0.997353 0.997412 0.997468 0.997519 0.997568
0.997611 0.99765 0.997687 0.997721 0.997754 0.997784 0.997813 0.99784 0.997865 0.997889
0.997912 0.997933 0.997953 0.997972 0.99799 0.998008 0.998024 0.998039 0.998053 0.998067
0.99808 0.998092 0.998104 0.998115 0.998125 0.998135 0.998145 0.998154 0.998162 0.99817
0.998185 #selex for gender,fleet: 2 / 1
0 0.0552534 0.192681 0.263397 0.343528 0.43103 0.5238 0.620085 0.718683 0.818926 0.920536
1.02346 1.12775 1.23345 1.34057 1.44904 1.55872 1.66943 1.78089 1.89283 2.00493 2.11687
2.22834 2.33904 2.44867 2.557 2.66377 2.7688 2.8719 2.97292 3.07173 3.16823 3.26234
3.35399 3.44314 3.52976 3.61382 3.69532 3.77427 3.85069 3.92458 3.99599 4.06495 4.1315
4.19568 4.25754 4.31714 4.37452 4.42975 4.48287 4.53396 4.58306 4.63023 4.67554 4.71904
4.7608 4.80086 4.83929 4.87615 4.91149 4.94535 4.97781 5.0089 5.03869 5.06721 5.09452
5.12067 5.14569 5.16964 5.19256 5.21448 5.23559 5.25591 5.27534 5.29392 5.31169 5.32867
5.34491 5.36042 5.37526 5.38943 5.40297 5.41592 5.42828 5.44009 5.45138 5.46216 5.47245
5.48229 5.49168 5.50065 5.50921 5.51739 5.5252 5.53266 5.53977 5.54657 5.55306 5.55925
5.56517 5.57081 5.58124 #bodywt for gender,fleet: 2 / 2
0 0.0217085 0.0367487 0.0596831 0.0925919 0.136787 0.192233 0.257331 0.329197 0.404272
0.479017 0.550442 0.616385 0.675562 0.727455 0.772127 0.810028 0.841829 0.868293 0.890188
0.908235 0.923079 0.935281 0.945317 0.953582 0.960405 0.966052 0.970742 0.974651 0.977922
0.98067 0.982988 0.984953 0.986624 0.988052 0.989277 0.990333 0.991246 0.992039 0.992731
0.993336 0.993868 0.994337 0.994751 0.995119 0.995446 0.995738 0.996 0.996235 0.996446
0.996637 0.99681 0.996966 0.997109 0.997238 0.997357 0.997465 0.997564 0.997655 0.997739
0.997816 0.997887 0.997953 0.998014 0.99807 0.998123 0.998171 0.998216 0.998259 0.998298
0.998333 0.998364 0.998393 0.99842 0.998446 0.99847 0.998493 0.998514 0.998534 0.998553
0.998571 0.998587 0.998603 0.998618 0.998632 0.998645 0.998658 0.99867 0.998681 0.998691
0.998701 0.998711 0.99872 0.998728 0.998736 0.998744 0.998751 0.998758 0.998765 0.998771
0.998782 #selex for gender,fleet: 2 / 2
0 0.0601075 0.214219 0.290644 0.372767 0.456919 0.541321 0.625889 0.711421 0.798942
0.889352 0.983281 1.08104 1.18265 1.28787 1.39629 1.50736 1.62049 1.73505 1.85046 1.96618
2.08171 2.19662 2.31053 2.42313 2.53414 2.64333 2.7505 2.85551 2.95821 3.05851 3.15632
3.25159 3.34425 3.4343 3.5217 3.60646 3.68857 3.76807 3.84497 3.91929 3.99109 4.06039
4.12724 4.1917 4.25381 4.31363 4.37121 4.42662 4.47991 4.53115 4.58038 4.62768 4.6731
4.71671 4.75856 4.79871 4.83723 4.87416 4.90956 4.94349 4.97601 5.00716 5.03699 5.06556
5.09292 5.1191 5.14417 5.16815 5.1911 5.21306 5.23419 5.25452 5.27397 5.29257 5.31035
5.32735 5.3436 5.35913 5.37398 5.38816 5.40172 5.41467 5.42705 5.43887 5.45016 5.46095

5.47125 5.48109 5.49049 5.49947 5.50804 5.51623 5.52404 5.5315 5.53863 5.54543 5.55192
5.55812 5.56404 5.56969 5.58013 #bodywt for gender,fleet: 2 / 3
0 0.0173676 0.0382509 0.0767998 0.138612 0.224342 0.328234 0.44021 0.549681 0.648575
0.732478 0.80025 0.852958 0.892796 0.92228 0.94378 0.959307 0.970457 0.978446 0.984174
0.988291 0.991264 0.993423 0.995001 0.996164 0.997028 0.997674 0.998163 0.998535 0.99882
0.999042 0.999215 0.999351 0.99946 0.999546 0.999616 0.999673 0.999719 0.999757 0.999789
0.999815 0.999837 0.999856 0.999872 0.999885 0.999897 0.999907 0.999915 0.999923 0.999929
0.999935 0.99994 0.999945 0.999949 0.999952 0.999955 0.999958 0.99996 0.999963 0.999965
0.999966 0.999968 0.99997 0.999971 0.999972 0.999973 0.999974 0.999975 0.999976 0.999977
0.999978 0.999978 0.999979 0.999979 0.99998 0.99998 0.999981 0.999981 0.999982 0.999982
0.999982 0.999983 0.999983 0.999983 0.999983 0.999984 0.999984 0.999984 0.999984 0.999984
0.999985 0.999985 0.999985 0.999985 0.999985 0.999985 0.999985 0.999986 0.999986 0.999986
0.999986 #selex for gender,fleet: 2 / 3
0.0556789 0.195209 0.267577 0.35015 0.44094 0.537655 0.638145 0.74075 0.844425 0.948657
1.0533 1.15843 1.26416 1.37063 1.47791 1.58603 1.69489 1.80437 1.91426 2.02434 2.13434
2.24397 2.35297 2.46106 2.56799 2.67352 2.77744 2.87956 2.97971 3.07777 3.17361 3.26714
3.35829 3.447 3.53323 3.61695 3.69816 3.77685 3.85304 3.92673 3.99796 4.06676 4.13317
4.19723 4.25898 4.31848 4.37577 4.43092 4.48397 4.53499 4.58403 4.63115 4.67641 4.71987
4.76159 4.80161 4.84001 4.87684 4.91214 4.94599 4.97842 5.00949 5.03926 5.06776 5.09506
5.12119 5.1462 5.17013 5.19304 5.21495 5.23604 5.25635 5.27578 5.29435 5.31211 5.32909
5.34532 5.36083 5.37566 5.38983 5.40337 5.41631 5.42867 5.44048 5.45176 5.46253 5.47283
5.48266 5.49205 5.50101 5.50957 5.51775 5.52556 5.53301 5.54013 5.54692 5.55341 5.5596
5.56551 5.57116 5.58159 #bodywt for gender,fleet: 2 / 4
0 0.0116461 0.020415 0.0344617 0.0557967 0.0863221 0.127287 0.178795 0.239606 0.307321
0.37886 0.451034 0.521016 0.586629 0.646439 0.699711 0.746272 0.786357 0.820457 0.849204
0.873276 0.893338 0.910009 0.92384 0.935311 0.94483 0.952741 0.95933 0.964832 0.96944
0.973313 0.97658 0.979345 0.981696 0.983701 0.985419 0.986896 0.988172 0.989277 0.990239
0.991079 0.991814 0.992462 0.993033 0.993538 0.993987 0.994387 0.994744 0.995065 0.995352
0.995611 0.995845 0.996057 0.99625 0.996424 0.996584 0.996729 0.996862 0.996984 0.997096
0.997199 0.997294 0.997382 0.997463 0.997538 0.997607 0.997672 0.997732 0.997788 0.99784
0.997886 0.997927 0.997965 0.998001 0.998035 0.998066 0.998096 0.998124 0.99815 0.998175
0.998198 0.99822 0.99824 0.99826 0.998278 0.998278 0.998295 0.998312 0.998327 0.998342 0.998356
0.998369 0.998381 0.998393 0.998404 0.998414 0.998424 0.998434 0.998443 0.998451 0.998459
0.998474 #selex for gender,fleet: 2 / 4
0.0547497 0.191323 0.26274 0.345176 0.437425 0.537908 0.644796 0.756201 0.870385 0.98592
1.10176 1.21722 1.33192 1.44568 1.55846 1.6703 1.78122 1.89128 2.00049 2.10884 2.21629
2.32278 2.42819 2.53244 2.63538 2.7369 2.83686 2.93515 3.03163 3.12621 3.21877 3.30925
3.39755 3.48363 3.56744 3.64893 3.72809 3.80491 3.87937 3.9515 4.02129 4.08877 4.15397
4.21692 4.27766 4.33623 4.39267 4.44703 4.49937 4.54972 4.59815 4.64471 4.68945 4.73243
4.7737 4.81332 4.85133 4.8878 4.92278 4.95632 4.98847 5.01927 5.04879 5.07706 5.10414
5.13007 5.15489 5.17865 5.20139 5.22314 5.24411 5.26433 5.28366 5.30215 5.31983 5.33674
5.3529 5.36834 5.3831 5.39721 5.4107 5.42358 5.43589 5.44765 5.45888 5.46962 5.47987
5.48966 5.49901 5.50794 5.51647 5.52461 5.53239 5.53981 5.5469 5.55367 5.56013 5.5663
5.57219 5.57781 5.5882 #bodywt for gender,fleet: 2 / 5
0 0.00506505 0.00846584 0.0137649 0.0217505 0.0333584 0.049588 0.0713603 0.0993433
0.133791 0.174451 0.220563 0.270956 0.324199 0.37878 0.433257 0.486373 0.537128 0.584791
0.628896 0.669207 0.705673 0.738382 0.767523 0.793343 0.816128 0.836171 0.853766 0.86919
0.882702 0.89454 0.904913 0.914012 0.922003 0.92903 0.93522 0.940683 0.945514 0.949795
0.953597 0.956981 0.960001 0.9627 0.965119 0.967293 0.969249 0.971013 0.972609 0.974054
0.975367 0.97656 0.977648 0.978642 0.979551 0.980383 0.981148 0.981851 0.982498 0.983095
0.983646 0.984156 0.984628 0.985066 0.985473 0.985851 0.986203 0.986531 0.986836 0.987122
0.987389 0.987628 0.987842 0.988044 0.988232 0.98841 0.988577 0.988733 0.988881 0.98902
0.989151 0.989275 0.989392 0.989502 0.989606 0.989704 0.989797 0.989884 0.989968 0.990046
0.990121 0.990191 0.990258 0.990321 0.990381 0.990438 0.990492 0.990543 0.990592 0.990638
0.990681 0.990762 #selex for gender,fleet: 2 / 5
0.0566297 0.200386 0.275902 0.363338 0.461434 0.568422 0.682087 0.799992 0.91981 1.03964
1.15817 1.27469 1.38893 1.50094 1.61096 1.71927 1.82617 1.93192 2.03671 2.14067 2.24388
2.34635 2.44803 2.54886 2.64872 2.74749 2.84503 2.9412 3.03586 3.12886 3.2201 3.30945
3.39682 3.48212 3.56529 3.64626 3.725 3.80148 3.87569 3.94761 4.01724 4.08462 4.14974
4.21264 4.27335 4.33191 4.38836 4.44274 4.4951 4.5455 4.59397 4.64057 4.68536 4.72838
4.7697 4.80937 4.84744 4.88396 4.91898 4.95257 4.98476 5.01562 5.04518 5.07349 5.10061
5.12658 5.15144 5.17524 5.19801 5.2198 5.2408 5.26103 5.28038 5.29889 5.31659 5.3335
5.34968 5.36514 5.37991 5.39404 5.40753 5.42043 5.43275 5.44452 5.45576 5.46651 5.47677
5.48657 5.49593 5.50487 5.5134 5.52155 5.52934 5.53677 5.54387 5.55064 5.55711 5.56328
5.56918 5.57481 5.5852 #bodywt for gender,fleet: 2 / 6
0 0.00144011 0.00270794 0.00493369 0.00870259 0.0148408 0.0244198 0.0386853 0.0588914
0.0860613 0.120743 0.162841 0.211584 0.265626 0.323248 0.382589 0.441867 0.499532
0.554361 0.605484 0.652368 0.69477 0.732677 0.766246 0.795745 0.821513 0.843915 0.863325
0.880102 0.894582 0.90707 0.917841 0.927136 0.935165 0.942111 0.948129 0.953355 0.957902
0.961869 0.965337 0.968378 0.971051 0.973407 0.97549 0.977335 0.978974 0.980435 0.981739
0.982907 0.983956 0.984899 0.98575 0.98652 0.987217 0.98785 0.988426 0.988951 0.98943

0.989869 0.990271 0.990641 0.990981 0.991294 0.991583 0.99185 0.992097 0.992326 0.992538
 0.992736 0.992919 0.993082 0.993225 0.993359 0.993485 0.993603 0.993713 0.993816 0.993913
 0.994004 0.99409 0.994171 0.994247 0.994318 0.994386 0.994449 0.994509 0.994566 0.994619
 0.99467 0.994717 0.994762 0.994805 0.994846 0.994884 0.99492 0.994954 0.994987 0.995018
 0.995047 0.995075 0.995125 #selex for gender,fleet: 2 / 6
 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
 0.0462379 0.0462379 0.0462379 #mean M for year Yinit: 2011 sex: 1
 52.6066 49.3344 46.1908 43.2277 40.518 37.7914 35.2322 32.7677 30.4021 28.1869 26.6381
 24.9759 24.6723 23.7748 24.1344 24.0124 24.0501 23.627 23.6423 23.5725 23.0647 21.7377
 20.6877 19.2273 17.6195 15.9364 14.5019 13.006 11.6721 10.5449 9.39019 8.27837 7.32203
 6.47157 5.67741 4.98814 4.38525 3.86876 3.42086 3.03746 2.70401 2.41476 2.17115 1.95474
 1.76833 1.60659 1.47067 1.3464 1.23825 1.14337 1.05871 0.98356 0.916282 0.855775 0.800677
 0.750177 0.703656 0.660664 0.620864 0.584319 0.550594 0.519118 0.489825 0.462879 0.437628
 0.415124 0.394307 0.373958 0.354816 0.336158 0.318489 0.301731 0.28579 0.270742 0.256492
 0.243007 0.230222 0.218135 0.206726 0.196004 0.18592 0.176452 0.167543 0.159138 0.15122
 0.143755 0.136709 0.130047 0.123748 0.117789 0.112148 0.106802 0.101733 0.0969308
 0.0923695 0.0880326 0.0839001 0.079973 0.0762397 0.0726893 1.52113 #numbers for year
 Yinit: 2011 sex: 1
 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
 0.045087 0.045087 0.045087 #mean M for year Yinit: 2011 sex: 2
 52.6066 49.3912 46.2971 43.3768 40.7037 38.0065 35.4707 33.0233 30.6692 28.4609 26.9206
 25.2618 24.9744 24.0833 24.4625 24.3491 24.39 23.953 23.9473 23.8394 23.2722 21.8654
 20.7287 19.1775 17.484 15.7275 14.2319 12.694 11.3336 10.1919 9.04001 7.94401 7.00898
 6.18417 5.41966 4.75987 4.18558 3.6957 3.27249 2.91151 2.59848 2.32761 2.10015 1.89818
 1.72437 1.57356 1.44698 1.3308 1.22951 1.14044 1.06067 0.989601 0.925714 0.868 0.815176
 0.7665 0.721413 0.67952 0.640538 0.604586 0.571268 0.540039 0.510864 0.48395 0.458639
 0.436059 0.415118 0.394545 0.375124 0.356101 0.338018 0.3208 0.30436 0.288791 0.274004
 0.259979 0.246655 0.234042 0.222127 0.210922 0.20038 0.190476 0.181151 0.172346 0.164042
 0.156202 0.148791 0.141772 0.135123 0.128821 0.122844 0.11717 0.111778 0.10666 0.101791
 0.0971527 0.092725 0.0885102 0.0844965 0.0806734 1.736 #numbers for year Yinit: 2011 sex:
 2
 54.1634 50.9936 47.9496 44.9513 42.0732 39.3559 36.8657 34.3578 32.0015 29.7326 27.5565
 25.5209 24.0929 22.5667 22.2712 21.4425 21.7497 21.6244 21.6447 21.2521 21.2555 21.1835
 20.7193 19.5208 18.5724 17.2568 15.8101 14.2969 13.0076 11.6639 10.4662 9.45424 8.418
 7.42057 6.56278 5.80009 5.08803 4.4701 3.92968 3.46675 3.06534 2.72177 2.42299 2.16383
 1.94559 1.75171 1.58472 1.43984 1.3181 1.20678 1.1099 1.02491 0.949067 0.881742 0.821467
 0.767253 0.717882 0.672628 0.630936 0.592403 0.55673 0.523971 0.493739 0.465522 0.43926
 0.415102 0.392462 0.372285 0.353619 0.335373 0.318209 0.301478 0.285632 0.270604 0.256307
 0.242812 0.230031 0.217936 0.206468 0.195627 0.185394 0.175776 0.166732 0.158239 0.150249
 0.142711 0.135609 0.128914 0.122595 0.11662 0.110971 0.105627 0.100568 0.0957748
 0.0912288 0.0869224 0.082832 0.0789428 0.075237 0.0717155 1.49763 #numbers for year
 Ydeclare: 2013 sex: 1
 54.1634 51.0523 48.0599 45.106 42.2653 39.5788 37.1138 34.6243 32.2811 30.0201 27.8476
 25.8124 24.388 22.8611 22.579 21.7543 22.0794 21.9618 21.9852 21.5798 21.5647 21.459
 20.9411 19.6693 18.6419 17.243 15.7171 14.1356 12.7894 11.4058 10.1823 9.15567 8.12021
 7.13523 6.29504 5.55401 4.86724 4.2746 3.75881 3.31887 2.93883 2.6147 2.33364 2.09045
 1.88624 1.70493 1.54889 1.41351 1.29988 1.19559 1.10466 1.02469 0.953065 0.889252
 0.831882 0.780051 0.732607 0.688884 0.648382 0.610746 0.575722 0.543419 0.513481 0.485418
 0.459199 0.435012 0.412265 0.391972 0.373151 0.354659 0.337203 0.320105 0.30385 0.288373
 0.273594 0.259598 0.246304 0.233694 0.221715 0.210376 0.199663 0.189589 0.180112 0.171208
 0.162825 0.15491 0.147445 0.140397 0.133735 0.127426 0.12145 0.115786 0.110413 0.105312

```

0.100466 0.0958667 0.09149 0.0873211 0.0833414 0.0795531 1.70878 #numbers for year
Ydeclare: 2013 sex: 2
#R0 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932
1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950
1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968
1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986
1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004
2005 2006 2007 2008 2009 2010 #years
228.199 228.199 228.166 228.122 228.071 228.038 228.003 227.968 227.935 227.9 227.86
227.803 227.737 227.663 227.578 227.462 227.341 227.238 227.14 227.061 226.964 226.847
226.693 226.543 226.396 226.285 226.112 225.898 225.629 224.966 224.299 223.184 222.249
221.888 221.465 221.191 220.897 220.532 220.22 219.99 219.692 219.308 218.834 218.279
217.679 217.14 216.651 216.251 215.77 215.4 215.155 214.069 213.646 213.144 212.617
211.353 210.501 209.319 207.77 206.266 204.52 202.876 200.874 198.754 194.927 190.919
187.556 182.49 175.465 170.295 166.016 160.484 157.121 152.945 147.979 141.01 136.72
128.709 119.802 111.758 106.713 100.33 95.2454 88.9269 87.5695 84.2707 85.5017 86.1407
88.5068 90.9232 93.2207 95.3794 97.5645 99.3524 101.342 103.338 105.213 #Recruits
1.02769e+009 1.02769e+009 1.02723e+009 1.0266e+009 1.02589e+009 1.02542e+009
1.02492e+009 1.02443e+009 1.02396e+009 1.02347e+009 1.02291e+009 1.0221e+009 1.02118e+009
1.02014e+009 1.01895e+009 1.01732e+009 1.01562e+009 1.01419e+009 1.01282e+009
1.01172e+009 1.01038e+009 1.00876e+009 1.00664e+009 1.00457e+009 1.00254e+009
1.00103e+009 9.98666e+008 9.95743e+008 9.92105e+008 9.83185e+008 9.74338e+008
9.59766e+008 9.47766e+008 9.4319e+008 9.37871e+008 9.34446e+008 9.30784e+008 9.26264e+008
9.22426e+008 9.19604e+008 9.15972e+008 9.11322e+008 9.05614e+008 8.99004e+008
8.91914e+008 8.8562e+008 8.79954e+008 8.75358e+008 8.69862e+008 8.65667e+008 8.62907e+008
8.508e+008 8.46141e+008 8.40657e+008 8.34945e+008 8.21452e+008 8.12511e+008 8.00317e+008
7.84671e+008 7.69837e+008 7.53059e+008 7.37659e+008 7.19426e+008 7.00704e+008
6.68345e+008 6.36313e+008 6.10778e+008 5.74454e+008 5.27919e+008 4.96218e+008
4.71449e+008 4.4124e+008 4.23796e+008 4.03031e+008 3.79555e+008 3.48642e+008 3.307e+008
2.99193e+008 2.66925e+008 2.40004e+008 2.24091e+008 2.0494e+008 1.90416e+008 1.73207e+008
1.69624e+008 1.61081e+008 1.64243e+008 1.65896e+008 1.72094e+008 1.78547e+008
1.84803e+008 1.90791e+008 1.96963e+008 2.02098e+008 2.07907e+008 2.13833e+008
2.19494e+008 #SpawnBio
0.44056 0.5 0 # spawn-recr steepness, sigmaR, autocorr
# values from cat100_hmle, catch at 100% and steepness at mle value. # this is state of
nature 5 out of 9 (in no particular order) # and parameter set number 2 out of 4 for this
state
0 0 28.3083 103.285 341.553 1014.2 2671.83 6204.22 12732.7 23330.1 38706.4 59025.3
83919.4 112652 144327 178069 213134 248951 285123 321394 357616 393710 429639 465389
500951 536316 571471 606397 641068 675453 709517 743223 776532 809406 841807 873699
905048 935824 965999 995548 1.02445e+006 1.05268e+006 1.08023e+006 1.10709e+006
1.13325e+006 1.15869e+006 1.18343e+006 1.20744e+006 1.23075e+006 1.25334e+006
1.27523e+006 1.29641e+006 1.31691e+006 1.33672e+006 1.35586e+006 1.37433e+006
1.39217e+006 1.40936e+006 1.42594e+006 1.4419e+006 1.45728e+006 1.47208e+006 1.48632e+006
1.50001e+006 1.51318e+006 1.52583e+006 1.53798e+006 1.54965e+006 1.56086e+006
1.57161e+006 1.58192e+006 1.59208e+006 1.60182e+006 1.61116e+006 1.62012e+006 1.6287e+006
1.63692e+006 1.6448e+006 1.65234e+006 1.65957e+006 1.66648e+006 1.6731e+006 1.67944e+006
1.6855e+006 1.6913e+006 1.69685e+006 1.70216e+006 1.70724e+006 1.71209e+006 1.71673e+006
1.72117e+006 1.72541e+006 1.72946e+006 1.73334e+006 1.73704e+006 1.74058e+006
1.74396e+006 1.74719e+006 1.75027e+006 1.75322e+006 1.75866e+006 #female fecundity;
weighted by N in year Y_init across morphs and areas
0.045147 0.163178 0.222696 0.290492 0.365223 0.445539 0.530285 0.618588 0.709839
0.803631 0.899683 0.997778 1.09772 1.19929 1.30227 1.4064 1.51143 1.61705 1.72297 1.82891
1.93457 2.03968 2.14398 2.24722 2.34919 2.44969 2.54855 2.6456 2.74072 2.8338 2.92474
3.01346 3.09991 3.18404 3.26582 3.34522 3.42225 3.4969 3.56919 3.63912 3.70673 3.77204
3.83509 3.89593 3.95458 4.0111 4.06554 4.11794 4.16836 4.21686 4.26348 4.30828 4.35131
4.39264 4.43231 4.47038 4.5069 4.54192 4.57551 4.6077 4.63855 4.6681 4.69641 4.72352
4.74949 4.77434 4.79812 4.82089 4.84267 4.86351 4.88357 4.9029 4.92139 4.93906 4.95596
4.97211 4.98755 5.0023 5.01641 5.02988 5.04276 5.05506 5.06681 5.07803 5.08876 5.099
5.10878 5.11812 5.12704 5.13555 5.14369 5.15145 5.15886 5.16594 5.1727 5.17914 5.1853
5.19117 5.19678 5.20214 5.212 #bodywt for gender, fleet: 1 / 1
0 0.0511233 0.0772332 0.112337 0.156989 0.21065 0.271667 0.337561 0.405497 0.472761
0.537103 0.596902 0.65118 0.699515 0.741909 0.778656 0.810226 0.837169 0.860061 0.879454
0.895857 0.909726 0.921458 0.931394 0.939825 0.946995 0.953108 0.958335 0.962819 0.966677
0.970009 0.972894 0.975403 0.977591 0.979505 0.981186 0.982667 0.983975 0.985135 0.986165
0.987085 0.987906 0.988643 0.989305 0.989902 0.990442 0.99093 0.991373 0.991776 0.992144
0.992479 0.992786 0.993068 0.993326 0.993564 0.993783 0.993985 0.994172 0.994345 0.994505
0.994654 0.994792 0.994921 0.995041 0.995152 0.995256 0.995354 0.995445 0.99553 0.995609
0.995681 0.995746 0.995807 0.995865 0.995919 0.995969 0.996017 0.996062 0.996105 0.996145
0.996183 0.996219 0.996253 0.996285 0.996315 0.996343 0.996371 0.996396 0.99642 0.996444

```

0.996465 0.996486 0.996506 0.996524 0.996542 0.996559 0.996575 0.99659 0.996604 0.996618
0.996643 #selex for gender,fleet: 1 / 1
0.0462809 0.169552 0.232356 0.304214 0.383486 0.468356 0.557183 0.648721 0.74217
0.837091 0.933287 1.03069 1.12928 1.22902 1.32986 1.43167 1.53431 1.63757 1.74123 1.84504
1.94873 2.05204 2.15472 2.25653 2.35722 2.4566 2.55447 2.65067 2.74505 2.83748 2.92786
3.0161 3.10213 3.1859 3.26737 3.34651 3.4233 3.49775 3.56986 3.63965 3.70713 3.77233
3.83528 3.89603 3.95461 4.01106 4.06544 4.1178 4.16818 4.21663 4.26322 4.30799 4.351
4.39231 4.43196 4.47001 4.50651 4.54152 4.5751 4.60728 4.63811 4.66766 4.69597 4.72307
4.74903 4.77387 4.79766 4.82042 4.84219 4.86303 4.88309 4.90242 4.9209 4.93857 4.95546
4.97162 4.98705 5.00181 5.01591 5.02938 5.04226 5.05456 5.06631 5.07753 5.08825 5.09849
5.10827 5.11761 5.12653 5.13505 5.14318 5.15094 5.15835 5.16543 5.17218 5.17863 5.18479
5.19066 5.19627 5.20162 5.21149 #bodywt for gender,fleet: 1 / 2
0 0.0213283 0.0352642 0.0561355 0.0857149 0.125189 0.174691 0.233098 0.298189 0.367085
0.436791 0.504638 0.56856 0.627179 0.679765 0.726107 0.766378 0.800993 0.830503 0.855511
0.876615 0.89438 0.909315 0.921869 0.932428 0.941321 0.948827 0.955176 0.960562 0.965145
0.969056 0.972406 0.975285 0.977769 0.979918 0.981784 0.983411 0.984833 0.986082 0.987181
0.988151 0.989011 0.989776 0.990457 0.991066 0.991611 0.992102 0.992544 0.992943 0.993304
0.993632 0.993931 0.994202 0.994451 0.994678 0.994886 0.995077 0.995253 0.995415 0.995564
0.995702 0.99583 0.995949 0.996059 0.996161 0.996256 0.996344 0.996426 0.996503 0.996575
0.99664 0.996697 0.996751 0.996801 0.996849 0.996894 0.996936 0.996975 0.997012 0.997047
0.99708 0.997112 0.997141 0.997169 0.997195 0.99722 0.997243 0.997266 0.997287 0.997306
0.997325 0.997343 0.99736 0.997376 0.997391 0.997406 0.997419 0.997432 0.997444 0.997456
0.997478 #selex for gender,fleet: 1 / 2
0.0504337 0.189018 0.257432 0.331995 0.409383 0.487655 0.566341 0.645863 0.726964
0.810375 0.896654 0.986129 1.07889 1.17484 1.2737 1.37507 1.4785 1.58348 1.68953 1.79614
1.90288 2.00933 2.11512 2.21995 2.32351 2.42558 2.52596 2.62445 2.72094 2.81528 2.9074
2.99721 3.08467 3.16972 3.25235 3.33253 3.41028 3.48558 3.55846 3.62895 3.69706 3.76284
3.82631 3.88754 3.94655 4.0034 4.05814 4.11083 4.16151 4.21025 4.25709 4.3021 4.34533
4.38683 4.42667 4.46489 4.50156 4.53672 4.57043 4.60273 4.63369 4.66335 4.69176 4.71896
4.745 4.76994 4.7938 4.81663 4.83848 4.85938 4.87949 4.89886 4.91738 4.93509 4.95202
4.96821 4.98368 4.99846 5.01259 5.02609 5.03899 5.05131 5.06309 5.07433 5.08507 5.09533
5.10513 5.11449 5.12342 5.13196 5.1401 5.14788 5.15531 5.1624 5.16916 5.17562 5.18179
5.18767 5.19329 5.19865 5.20854 #bodywt for gender,fleet: 1 / 3
0 0.0168565 0.0359177 0.0704144 0.125351 0.201915 0.296018 0.399604 0.503567 0.600364
0.685263 0.756326 0.813704 0.85879 0.893511 0.919871 0.93969 0.954505 0.965548 0.973775
0.979914 0.984509 0.987963 0.990573 0.992557 0.994075 0.995243 0.99615 0.996858 0.997415
0.997857 0.998209 0.998492 0.998722 0.998908 0.999062 0.999188 0.999293 0.99938 0.999454
0.999516 0.999569 0.999614 0.999653 0.999686 0.999715 0.99974 0.999762 0.999781 0.999798
0.999813 0.999826 0.999838 0.999848 0.999857 0.999866 0.999873 0.99988 0.999886 0.999892
0.999897 0.999902 0.999906 0.99991 0.999913 0.999916 0.999919 0.999922 0.999925 0.999927
0.999929 0.999931 0.999932 0.999934 0.999935 0.999937 0.999938 0.999939 0.99994 0.999941
0.999942 0.999943 0.999944 0.999945 0.999945 0.999946 0.999947 0.999947 0.999948 0.999948
0.999949 0.999949 0.99995 0.99995 0.999951 0.999951 0.999952 0.999952 0.999952 0.999952
0.999953 #selex for gender,fleet: 1 / 3
0.0466444 0.171812 0.236089 0.310135 0.392403 0.480968 0.573886 0.669515 0.76669
0.864713 0.963252 1.0622 1.16158 1.26144 1.36181 1.4627 1.56407 1.66582 1.7678 1.86984
1.97175 2.0733 2.17428 2.27446 2.37364 2.4716 2.56818 2.66318 2.75648 2.84792 2.93742
3.02485 3.11016 3.19328 3.27417 3.35278 3.4291 3.50313 3.57486 3.6443 3.71147 3.77639
3.83909 3.8996 3.95797 4.01424 4.06845 4.12065 4.17089 4.21921 4.26568 4.31034 4.35325
4.39447 4.43403 4.472 4.50844 4.54338 4.57689 4.60901 4.6398 4.6693 4.69756 4.72462
4.75054 4.77535 4.79909 4.82182 4.84357 4.86437 4.88442 4.90372 4.92219 4.93984 4.95672
4.97286 4.98828 5.00302 5.01711 5.03057 5.04343 5.05572 5.06746 5.07868 5.08939 5.09962
5.10939 5.11873 5.12764 5.13615 5.14427 5.15203 5.15943 5.16651 5.17325 5.1797 5.18585
5.19172 5.19732 5.20267 5.21253 #bodywt for gender,fleet: 1 / 4
0 0.011426 0.0195259 0.0322319 0.0512246 0.078121 0.11406 0.159308 0.213068 0.273565
0.338381 0.40488 0.470599 0.533513 0.592155 0.645622 0.693497 0.735745 0.772597 0.804456
0.831809 0.855178 0.875076 0.891982 0.906331 0.91851 0.928852 0.937647 0.945139 0.951534
0.957006 0.961703 0.965744 0.969233 0.972253 0.974877 0.977164 0.979163 0.980916 0.982458
0.983819 0.985024 0.986093 0.987045 0.987895 0.988656 0.989339 0.989954 0.990509 0.99101
0.991464 0.991877 0.992253 0.992596 0.992909 0.993196 0.993459 0.993701 0.993923 0.994128
0.994317 0.994492 0.994655 0.994805 0.994944 0.995074 0.995195 0.995307 0.995412 0.99551
0.995597 0.995675 0.995748 0.995816 0.99588 0.995941 0.995997 0.996051 0.996101 0.996148
0.996193 0.996235 0.996275 0.996312 0.996348 0.996381 0.996413 0.996443 0.996471 0.996498
0.996523 0.996547 0.99657 0.996591 0.996612 0.996631 0.996649 0.996667 0.996683 0.996699
0.996728 #selex for gender,fleet: 1 / 4
0.0458503 0.168306 0.231642 0.305371 0.388624 0.480165 0.578473 0.681886 0.788778
0.897715 1.00756 1.11747 1.22692 1.33558 1.44328 1.54993 1.65553 1.76007 1.86354 1.96594
2.06723 2.16738 2.26632 2.36398 2.46027 2.5551 2.64839 2.74004 2.82997 2.9181 3.00434
3.08863 3.17093 3.25117 3.32932 3.40534 3.47923 3.55097 3.62055 3.68798 3.75327 3.81643
3.87749 3.93648 3.99343 4.04836 4.10133 4.15238 4.20154 4.24886 4.29439 4.33817 4.38026
4.42071 4.45956 4.49687 4.53267 4.56703 4.59999 4.6316 4.6619 4.69094 4.71878 4.74544

4.77098 4.79543 4.81885 4.84126 4.86271 4.88324 4.90305 4.92218 4.94047 4.95796 4.97469
4.99068 5.00597 5.02058 5.03454 5.04789 5.06064 5.07282 5.08446 5.09558 5.1062 5.11635
5.12604 5.13529 5.14413 5.15257 5.16063 5.16832 5.17567 5.18268 5.18938 5.19577 5.20187
5.2077 5.21325 5.21856 5.22834 #bodywt for gender,fleet: 1 / 5
0 0.00497951 0.00812772 0.0129303 0.0200354 0.0302067 0.0442625 0.0629721 0.086926
0.116411 0.151331 0.191188 0.235142 0.282111 0.330901 0.380324 0.429299 0.476909 0.522437
0.565367 0.605371 0.642279 0.67605 0.706745 0.734491 0.759464 0.781866 0.801913 0.819821
0.835799 0.850049 0.862754 0.874085 0.884197 0.893229 0.901303 0.908532 0.915011 0.920828
0.926059 0.93077 0.935021 0.938862 0.94234 0.945494 0.948359 0.950967 0.953345 0.955515
0.957501 0.95932 0.960989 0.962523 0.963934 0.965235 0.966436 0.967546 0.968573 0.969524
0.970407 0.971227 0.971989 0.972699 0.97336 0.973977 0.974553 0.975091 0.975595 0.976066
0.976508 0.976906 0.977266 0.977603 0.977921 0.97822 0.978501 0.978766 0.979016 0.979252
0.979474 0.979684 0.979882 0.98007 0.980247 0.980414 0.980573 0.980723 0.980865 0.980999
0.981126 0.981247 0.981362 0.98147 0.981573 0.981671 0.981763 0.981851 0.981935 0.982014
0.982089 0.982227 #selex for gender,fleet: 1 / 5
0.047457 0.17645 0.243537 0.321908 0.410686 0.508516 0.613589 0.723785 0.836934 0.951109
1.06483 1.17713 1.28749 1.39572 1.50187 1.60609 1.70859 1.80956 1.90918 2.00759 2.10486
2.20106 2.29619 2.39022 2.48312 2.5748 2.66519 2.7542 2.84174 2.92771 3.01203 3.09461
3.17538 3.25429 3.33126 3.40625 3.47924 3.55019 3.61909 3.68593 3.7507 3.81342 3.87411
3.93277 3.98943 4.04413 4.0969 4.14777 4.19679 4.24398 4.28941 4.33311 4.37514 4.41552
4.45433 4.4916 4.52738 4.56171 4.59466 4.62625 4.65655 4.68559 4.71343 4.74009 4.76564
4.7901 4.81352 4.83595 4.85741 4.87795 4.89777 4.91689 4.93519 4.95268 4.96941 4.98541
5.0007 5.01531 5.02928 5.04263 5.05538 5.06757 5.07922 5.09034 5.10097 5.11112 5.12081
5.13007 5.13891 5.14735 5.15542 5.16311 5.17046 5.17748 5.18418 5.19057 5.19668 5.20251
5.20807 5.21338 5.22317 #bodywt for gender,fleet: 1 / 6
0 0.00140879 0.00257294 0.0045632 0.00785473 0.0131087 0.0211776 0.0330585 0.0497792
0.0722262 0.100961 0.136078 0.177153 0.223289 0.273245 0.325598 0.378907 0.431846
0.483294 0.532373 0.578462 0.62117 0.660309 0.695849 0.727877 0.756568 0.782144 0.80486
0.824981 0.842767 0.858471 0.872327 0.884551 0.895338 0.904864 0.913285 0.920737 0.927341
0.933203 0.938416 0.943059 0.947203 0.950909 0.95423 0.957211 0.959893 0.962311 0.964495
0.966471 0.968263 0.969891 0.971372 0.972723 0.973958 0.975087 0.976122 0.977072 0.977946
0.97875 0.979492 0.980177 0.980811 0.981398 0.981942 0.982447 0.982916 0.983353 0.983759
0.984139 0.984493 0.984808 0.985089 0.985353 0.9856 0.985832 0.986049 0.986254 0.986446
0.986628 0.986798 0.986959 0.98711 0.987253 0.987388 0.987515 0.987635 0.987749 0.987856
0.987958 0.988054 0.988145 0.988231 0.988312 0.98839 0.988463 0.988532 0.988598 0.98866
0.988702 0.988776 0.988879 #selex for gender,fleet: 1 / 6
0.0539259 0.185573 0.25267 0.328419 0.411174 0.499395 0.591863 0.687727 0.786456
0.887728 0.991338 1.09712 1.20489 1.31446 1.42557 1.53794 1.65126 1.7652 1.87941 1.99355
2.1073 2.22035 2.33241 2.44322 2.55253 2.66014 2.76586 2.86955 2.97105 3.07027 3.1671
3.26149 3.35337 3.44271 3.52948 3.61367 3.69528 3.77432 3.8508 3.92475 3.99621 4.06521
4.13179 4.19599 4.25787 4.31749 4.37488 4.43012 4.48325 4.53434 4.58344 4.63062 4.67593
4.71944 4.76119 4.80125 4.83969 4.87654 4.91187 4.94574 4.97819 5.00929 5.03907 5.06759
5.0949 5.12104 5.14607 5.17001 5.19293 5.21485 5.23595 5.25627 5.2757 5.29428 5.31205
5.32903 5.34526 5.36078 5.37561 5.38979 5.40333 5.41627 5.42863 5.44045 5.45173 5.46251
5.4728 5.48264 5.49203 5.501 5.50956 5.51774 5.52555 5.533 5.54012 5.54692 5.55341 5.5596
5.56551 5.57116 5.58159 #bodywt for gender,fleet: 2 / 1
0 0.0518398 0.079816 0.117909 0.166721 0.225504 0.292161 0.363647 0.436587 0.507864
0.575011 0.636368 0.691057 0.738838 0.779931 0.814846 0.844245 0.868839 0.889325 0.906346
0.920474 0.932201 0.941947 0.950061 0.956834 0.962504 0.967267 0.971282 0.974679 0.977566
0.980027 0.982135 0.983947 0.985511 0.986866 0.988045 0.989074 0.989975 0.990768 0.991468
0.992087 0.992636 0.993126 0.993564 0.993956 0.994308 0.994625 0.994912 0.995171 0.995406
0.99562 0.995816 0.995994 0.996157 0.996306 0.996443 0.996569 0.996686 0.996793 0.996892
0.996984 0.997069 0.997148 0.997221 0.997289 0.997353 0.997412 0.997468 0.997519 0.997568
0.997611 0.99765 0.997687 0.997721 0.997754 0.997784 0.997813 0.99784 0.997865 0.997889
0.997912 0.997933 0.997953 0.997972 0.99799 0.998008 0.998024 0.998039 0.998053 0.998067
0.99808 0.998092 0.998104 0.998115 0.998125 0.998135 0.998145 0.998154 0.998162 0.99817
0.998185 #selex for gender,fleet: 2 / 1
0.0552534 0.192681 0.263397 0.343528 0.43103 0.5238 0.620085 0.718683 0.818926 0.920536
1.02346 1.12775 1.23345 1.34057 1.44904 1.55872 1.66943 1.78089 1.89283 2.00493 2.11687
2.22834 2.33904 2.44867 2.557 2.66377 2.7688 2.8719 2.97292 3.07173 3.16823 3.26234
3.35399 3.44314 3.52976 3.61382 3.69532 3.77427 3.85069 3.92458 3.99599 4.06495 4.1315
4.19568 4.25754 4.31714 4.37452 4.42975 4.48287 4.53396 4.58306 4.63023 4.67554 4.71904
4.7608 4.80086 4.83929 4.87615 4.91149 4.94535 4.97781 5.0089 5.03869 5.06721 5.09452
5.12067 5.14569 5.16964 5.19256 5.21448 5.23559 5.25591 5.27534 5.29392 5.31169 5.32867
5.34491 5.36042 5.37526 5.38943 5.40297 5.41592 5.42828 5.44009 5.45138 5.46216 5.47245
5.48229 5.49168 5.50065 5.50921 5.51739 5.5252 5.53266 5.53977 5.54657 5.55306 5.55925
5.56517 5.57081 5.58124 #bodywt for gender,fleet: 2 / 2
0 0.0217085 0.0367487 0.0596831 0.0925919 0.136787 0.192233 0.257331 0.329197 0.404272
0.479017 0.550442 0.616385 0.675562 0.727455 0.772127 0.810028 0.841829 0.868293 0.890188
0.908235 0.923079 0.935281 0.945317 0.953582 0.960405 0.966052 0.970742 0.974651 0.977922
0.98067 0.982988 0.984953 0.986624 0.988052 0.989277 0.990333 0.991246 0.992039 0.992731

0.993336 0.993868 0.994337 0.994751 0.995119 0.995446 0.995738 0.996 0.996235 0.996446
0.996637 0.99681 0.996966 0.997109 0.997238 0.997357 0.997465 0.997564 0.997655 0.997739
0.997816 0.997887 0.997953 0.998014 0.99807 0.998123 0.998171 0.998216 0.998259 0.998298
0.998333 0.998364 0.998393 0.99842 0.998446 0.99847 0.998493 0.998514 0.998534 0.998553
0.998571 0.998587 0.998603 0.998618 0.998632 0.998645 0.998658 0.99867 0.998681 0.998691
0.998701 0.998711 0.99872 0.998728 0.998736 0.998744 0.998751 0.998758 0.998765 0.998771
0.998782 #selex for gender,fleet: 2 / 2
0.0601075 0.214219 0.290644 0.372767 0.456919 0.541321 0.625889 0.711421 0.798942
0.889352 0.983281 1.08104 1.18265 1.28787 1.39629 1.50736 1.62049 1.73505 1.85046 1.96618
2.08171 2.19662 2.31053 2.42313 2.53414 2.64333 2.7505 2.85551 2.95821 3.05851 3.15632
3.25159 3.34425 3.4343 3.5217 3.60646 3.68857 3.76807 3.84497 3.91929 3.99109 4.06039
4.12724 4.1917 4.25381 4.31363 4.37121 4.42662 4.47991 4.53115 4.58038 4.62768 4.6731
4.71671 4.75856 4.79871 4.83723 4.87416 4.90956 4.94349 4.97601 5.00716 5.03699 5.06556
5.09292 5.1191 5.14417 5.16815 5.1911 5.21306 5.23419 5.25452 5.27397 5.29257 5.31035
5.32735 5.3436 5.35913 5.37398 5.38816 5.40172 5.41467 5.42705 5.43887 5.45016 5.46095
5.47125 5.48109 5.49049 5.49947 5.50804 5.51623 5.52404 5.5315 5.53863 5.54543 5.55192
5.55812 5.56404 5.56969 5.58013 #bodywt for gender,fleet: 2 / 3
0 0.0173676 0.0382509 0.0767998 0.138612 0.224342 0.328234 0.44021 0.549681 0.648575
0.732478 0.80025 0.852958 0.892796 0.92228 0.94378 0.959307 0.970457 0.978446 0.984174
0.988291 0.991264 0.993423 0.995001 0.996164 0.997028 0.997674 0.998163 0.998535 0.99882
0.999042 0.999215 0.999351 0.99946 0.999546 0.999616 0.999673 0.999719 0.999757 0.999789
0.999815 0.999837 0.999856 0.999872 0.999885 0.999897 0.999907 0.999915 0.999923 0.999929
0.999935 0.99994 0.999945 0.999949 0.999952 0.999955 0.999958 0.99996 0.999963 0.999965
0.999966 0.999968 0.99997 0.999971 0.999972 0.999973 0.999974 0.999975 0.999976 0.999977
0.999978 0.999978 0.999979 0.999979 0.99998 0.99998 0.999981 0.999981 0.999982 0.999982
0.999982 0.999983 0.999983 0.999983 0.999983 0.999984 0.999984 0.999984 0.999984 0.999984
0.999985 0.999985 0.999985 0.999985 0.999985 0.999985 0.999986 0.999986 0.999986 0.999986
0.999986 #selex for gender,fleet: 2 / 3
0.0556789 0.195209 0.267577 0.35015 0.44094 0.537655 0.638145 0.74075 0.844425 0.948657
1.0533 1.15843 1.26416 1.37063 1.47791 1.58603 1.69489 1.80437 1.91426 2.02434 2.13434
2.24397 2.35297 2.46106 2.56799 2.67352 2.77744 2.87956 2.97971 3.07777 3.17361 3.26714
3.35829 3.447 3.53323 3.61695 3.69816 3.77685 3.85304 3.92673 3.99796 4.06676 4.13317
4.19723 4.25898 4.31848 4.37577 4.43092 4.48397 4.53499 4.58403 4.63115 4.67641 4.71987
4.76159 4.80161 4.84001 4.87684 4.91214 4.94599 4.97842 5.00949 5.03926 5.06776 5.09506
5.12119 5.1462 5.17013 5.19304 5.21495 5.23604 5.25635 5.27578 5.29435 5.31211 5.32909
5.34532 5.36083 5.37566 5.38983 5.40337 5.41631 5.42867 5.44048 5.45176 5.46253 5.47283
5.48266 5.49205 5.50101 5.50957 5.51775 5.52556 5.53301 5.54013 5.54692 5.55341 5.5596
5.56551 5.57116 5.58159 #bodywt for gender,fleet: 2 / 4
0 0.0116461 0.020415 0.0344617 0.0557967 0.0863221 0.127287 0.178795 0.239606 0.307321
0.37886 0.451034 0.521016 0.586629 0.646439 0.699711 0.746272 0.786357 0.820457 0.849204
0.873276 0.893338 0.910009 0.92384 0.935311 0.94483 0.952741 0.95933 0.964832 0.96944
0.973313 0.97658 0.979345 0.981696 0.983701 0.985419 0.986896 0.988172 0.989277 0.990239
0.991079 0.991814 0.992462 0.993033 0.993538 0.993987 0.994387 0.994744 0.995065 0.995352
0.995611 0.995845 0.996057 0.99625 0.996424 0.996584 0.996729 0.996862 0.996984 0.997096
0.997199 0.997294 0.997382 0.997463 0.997538 0.997607 0.997672 0.997732 0.997788 0.99784
0.997886 0.997927 0.997965 0.998001 0.998035 0.998066 0.998096 0.998124 0.99815 0.998175
0.998198 0.99822 0.99824 0.99826 0.998278 0.998295 0.998312 0.998327 0.998342 0.998356
0.998369 0.998381 0.998393 0.998404 0.998414 0.998424 0.998434 0.998443 0.998451 0.998459
0.998474 #selex for gender,fleet: 2 / 4
0.0547497 0.191323 0.26274 0.345176 0.437425 0.537908 0.644796 0.756201 0.870385 0.98592
1.10176 1.21722 1.33192 1.44568 1.55846 1.6703 1.78122 1.89128 2.00049 2.10884 2.21629
2.32278 2.42819 2.53244 2.63538 2.7369 2.83686 2.93515 3.03163 3.12621 3.21877 3.30925
3.39755 3.48363 3.56744 3.64893 3.72809 3.80491 3.87937 3.9515 4.02129 4.08877 4.15397
4.21692 4.27766 4.33623 4.39267 4.44703 4.49937 4.54972 4.59815 4.64471 4.68945 4.73243
4.7737 4.81332 4.85133 4.8878 4.92278 4.95632 4.98847 5.01927 5.04879 5.07706 5.10414
5.13007 5.15489 5.17865 5.20139 5.22314 5.24411 5.26433 5.28366 5.30215 5.31983 5.33674
5.3529 5.36834 5.3831 5.39721 5.4107 5.42358 5.43589 5.44765 5.45888 5.46962 5.47987
5.48966 5.49901 5.50794 5.51647 5.52461 5.53239 5.53981 5.5469 5.55367 5.56013 5.5663
5.57219 5.57781 5.5882 #bodywt for gender,fleet: 2 / 5
0 0.00506505 0.00846584 0.0137649 0.0217505 0.0333584 0.049588 0.0713603 0.0993433
0.133791 0.174451 0.220563 0.270956 0.324199 0.37878 0.433257 0.486373 0.537128 0.584791
0.628896 0.669207 0.705673 0.738382 0.767523 0.793343 0.816128 0.836171 0.853766 0.86919
0.882702 0.89454 0.904913 0.914012 0.922003 0.92903 0.93522 0.940683 0.945514 0.949795
0.953597 0.956981 0.960001 0.9627 0.965119 0.967293 0.969249 0.971013 0.972609 0.974054
0.975367 0.97656 0.977648 0.978642 0.979551 0.980383 0.981148 0.981851 0.982498 0.983095
0.983646 0.984156 0.984628 0.985066 0.985473 0.985851 0.986203 0.986531 0.986836 0.987122
0.987389 0.987628 0.987842 0.988044 0.988232 0.98841 0.988577 0.988733 0.988881 0.98902
0.989151 0.989275 0.989392 0.989502 0.989606 0.989704 0.989797 0.989884 0.989968 0.990046
0.990121 0.990191 0.990258 0.990321 0.990381 0.990438 0.990492 0.990543 0.990592 0.990638
0.990681 0.990762 #selex for gender,fleet: 2 / 5

0.0566297 0.200386 0.275902 0.363338 0.461434 0.568422 0.682087 0.799992 0.91981 1.03964
 1.15817 1.27469 1.38893 1.50094 1.61096 1.71927 1.82617 1.93192 2.03671 2.14067 2.24388
 2.34635 2.44803 2.54886 2.64872 2.74749 2.84503 2.9412 3.03586 3.12886 3.2201 3.30945
 3.39682 3.48212 3.56529 3.64626 3.725 3.80148 3.87569 3.94761 4.01724 4.08462 4.14974
 4.21264 4.27335 4.33191 4.38836 4.44274 4.4951 4.5455 4.59397 4.64057 4.68536 4.72838
 4.7697 4.80937 4.84744 4.88396 4.91898 4.95257 4.98476 5.01562 5.04518 5.07349 5.10061
 5.12658 5.15144 5.17524 5.19801 5.2198 5.2408 5.26103 5.28038 5.29889 5.31659 5.3335
 5.34968 5.36514 5.37991 5.39404 5.40753 5.42043 5.43275 5.44452 5.45576 5.46651 5.47677
 5.48657 5.49593 5.50487 5.5134 5.52155 5.52934 5.53677 5.54387 5.55064 5.55711 5.56328
 5.56918 5.57481 5.5852 #bodywt for gender,fleet: 2 / 6
 0 0.00144011 0.00270794 0.00493369 0.00870259 0.0148408 0.0244198 0.0386853 0.0588914
 0.0860613 0.120743 0.162841 0.211584 0.265626 0.323248 0.382589 0.441867 0.499532
 0.554361 0.605484 0.652368 0.69477 0.732677 0.766246 0.795745 0.821513 0.843915 0.863325
 0.880102 0.894582 0.90707 0.917841 0.927136 0.935165 0.942111 0.948129 0.953355 0.957902
 0.961869 0.965337 0.968378 0.971051 0.973407 0.97549 0.977335 0.978974 0.980435 0.981739
 0.982907 0.983956 0.984899 0.98575 0.98652 0.987217 0.98785 0.988426 0.988951 0.98943
 0.989869 0.990271 0.990641 0.990981 0.991294 0.991583 0.99185 0.992097 0.992326 0.992538
 0.992736 0.992919 0.993082 0.993225 0.993359 0.993485 0.993603 0.993713 0.993816 0.993913
 0.994004 0.99409 0.994171 0.994247 0.994318 0.994386 0.994449 0.994509 0.994566 0.994619
 0.99467 0.994717 0.994762 0.994805 0.994846 0.994884 0.99492 0.994954 0.994987 0.995018
 0.995047 0.995075 0.995125 #selex for gender,fleet: 2 / 6
 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
 0.0462379 0.0462379 0.0462379 #mean M for year Yinit: 2011 sex: 1
 52.6066 49.3344 46.1908 43.2277 40.518 37.7914 35.2322 32.7677 30.4021 28.1869 26.6381
 24.9759 24.6723 23.7748 24.1344 24.0124 24.0501 23.627 23.6423 23.5725 23.0647 21.7377
 20.6877 19.2273 17.6195 15.9364 14.5019 13.006 11.6721 10.5449 9.39019 8.27837 7.32203
 6.47157 5.67741 4.98814 4.38525 3.86876 3.42086 3.03746 2.70401 2.41476 2.17115 1.95474
 1.76833 1.60659 1.47067 1.3464 1.23825 1.14337 1.05871 0.98356 0.916282 0.855775 0.800677
 0.750177 0.703656 0.660664 0.620864 0.584319 0.550594 0.519118 0.489825 0.462879 0.437628
 0.415124 0.394307 0.373958 0.354816 0.336158 0.318489 0.301731 0.28579 0.270742 0.256492
 0.243007 0.230222 0.218135 0.206726 0.196004 0.18592 0.176452 0.167543 0.159138 0.15122
 0.143755 0.136709 0.130047 0.123748 0.117789 0.112148 0.106802 0.101733 0.0969308
 0.0923695 0.0880326 0.0839001 0.079973 0.0762397 0.0726893 1.52113 #numbers for year
 Yinit: 2011 sex: 1
 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
 0.045087 0.045087 #mean M for year Yinit: 2011 sex: 2
 52.6066 49.3912 46.2971 43.3768 40.7037 38.0065 35.4707 33.0233 30.6692 28.4609 26.9206
 25.2618 24.9744 24.0833 24.4625 24.3491 24.39 23.953 23.9473 23.8394 23.2722 21.8654
 20.7287 19.1775 17.484 15.7275 14.2319 12.694 11.3336 10.1919 9.04001 7.94401 7.00898
 6.18417 5.41966 4.75987 4.18558 3.6957 3.27249 2.91151 2.59848 2.32761 2.10015 1.89818
 1.72437 1.57356 1.44698 1.3308 1.22951 1.14044 1.06067 0.989601 0.925714 0.868 0.815176
 0.7665 0.721413 0.67952 0.640538 0.604586 0.571268 0.540039 0.510864 0.48395 0.458639
 0.436059 0.415118 0.394545 0.375124 0.356101 0.338018 0.3208 0.30436 0.288791 0.274004
 0.259979 0.246655 0.234042 0.222127 0.210922 0.20038 0.190476 0.181151 0.172346 0.164042
 0.156202 0.148791 0.141772 0.135123 0.128821 0.122844 0.11717 0.111778 0.10666 0.101791
 0.0971527 0.092725 0.0885102 0.0844965 0.0806734 1.736 #numbers for year Yinit: 2011 sex:
 2
 54.1634 50.9936 47.9496 44.9513 42.0732 39.3559 36.8657 34.3578 32.0015 29.7326 27.5565
 25.5209 24.0929 22.5667 22.2712 21.4425 21.7497 21.6244 21.6447 21.2521 21.2555 21.1835
 20.7193 19.5208 18.5724 17.2568 15.8101 14.2969 13.0076 11.6639 10.4662 9.45424 8.418
 7.42057 6.56278 5.80009 5.08803 4.4701 3.92968 3.46675 3.06534 2.72177 2.42299 2.16383
 1.94559 1.75171 1.58472 1.43984 1.3181 1.20678 1.1099 1.02491 0.949067 0.881742 0.821467

```

0.767253 0.717882 0.672628 0.630936 0.592403 0.55673 0.523971 0.493739 0.465522 0.43926
0.415102 0.392462 0.372285 0.353619 0.335373 0.318209 0.301478 0.285632 0.270604 0.256307
0.242812 0.230031 0.217936 0.206468 0.195667 0.185394 0.175776 0.166732 0.158239 0.150249
0.142711 0.135609 0.128914 0.122595 0.11662 0.110971 0.105627 0.100568 0.0957748
0.0912288 0.0869224 0.082832 0.0789428 0.075237 0.0717155 1.49763 #numbers for year
Ydeclare: 2013 sex: 1
54.1634 51.0523 48.0599 45.106 42.2653 39.5788 37.1138 34.6243 32.2811 30.0201 27.8476
25.8124 24.388 22.8611 22.579 21.7543 22.0794 21.9618 21.9852 21.5798 21.5647 21.459
20.9411 19.6693 18.6419 17.243 15.7171 14.1356 12.7894 11.4058 10.1823 9.15567 8.12021
7.13523 6.29504 5.55401 4.86724 4.2746 3.75881 3.31887 2.93883 2.6147 2.33364 2.09045
1.88624 1.70493 1.54889 1.41351 1.29988 1.19559 1.10466 1.02469 0.953065 0.889252
0.831882 0.780051 0.732607 0.688884 0.648382 0.610746 0.575722 0.543419 0.513481 0.485418
0.459199 0.435012 0.412265 0.391972 0.373151 0.354659 0.337203 0.320105 0.30385 0.288373
0.273594 0.259598 0.246304 0.233694 0.221715 0.210376 0.199663 0.189589 0.180112 0.171208
0.162825 0.15491 0.147445 0.140397 0.133735 0.127426 0.12145 0.115786 0.110413 0.105312
0.100466 0.0958667 0.09149 0.0873211 0.0833414 0.0795531 1.70878 #numbers for year
Ydeclare: 2013 sex: 2
#R0 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932
1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950
1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968
1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986
1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004
2005 2006 2007 2008 2009 2010 #years
228.199 228.199 228.166 228.122 228.071 228.038 228.003 227.968 227.935 227.9 227.86
227.803 227.737 227.663 227.578 227.462 227.341 227.238 227.14 227.061 226.964 226.847
226.693 226.543 226.396 226.285 226.112 225.898 225.629 224.966 224.299 223.184 222.249
221.888 221.465 221.191 220.897 220.532 220.22 219.99 219.692 219.308 218.834 218.279
217.679 217.14 216.651 216.251 215.77 215.4 215.155 214.069 213.646 213.144 212.617
211.353 210.501 209.319 207.77 206.266 204.52 202.876 200.874 198.754 194.927 190.919
187.556 182.49 175.465 170.295 166.016 160.484 157.121 152.945 147.979 141.01 136.72
128.709 119.802 111.758 106.713 100.33 95.2454 88.9269 87.5695 84.2707 85.5017 86.1407
88.5068 90.9232 93.2207 95.3794 97.5645 99.3524 101.342 103.338 105.213 #Recruits
1.02769e+009 1.02769e+009 1.02723e+009 1.0266e+009 1.02589e+009 1.02542e+009
1.02492e+009 1.02443e+009 1.02396e+009 1.02347e+009 1.02291e+009 1.0221e+009 1.02118e+009
1.02014e+009 1.01895e+009 1.01732e+009 1.01562e+009 1.01419e+009 1.01282e+009
1.01172e+009 1.01038e+009 1.00876e+009 1.00664e+009 1.00457e+009 1.00254e+009
1.00103e+009 9.98666e+008 9.95743e+008 9.92105e+008 9.83185e+008 9.74338e+008
9.59766e+008 9.47766e+008 9.4319e+008 9.37871e+008 9.34446e+008 9.30784e+008 9.26264e+008
9.22426e+008 9.19604e+008 9.15972e+008 9.11322e+008 9.05614e+008 8.99004e+008
8.91914e+008 8.8562e+008 8.79954e+008 8.75358e+008 8.69862e+008 8.65667e+008 8.62907e+008
8.508e+008 8.46141e+008 8.40657e+008 8.34945e+008 8.21452e+008 8.12511e+008 8.00317e+008
7.84671e+008 7.69837e+008 7.53059e+008 7.37659e+008 7.19426e+008 7.00704e+008
6.68345e+008 6.36313e+008 6.10778e+008 5.74454e+008 5.27919e+008 4.96218e+008
4.71449e+008 4.4124e+008 4.23796e+008 4.03031e+008 3.79555e+008 3.48642e+008 3.307e+008
2.99193e+008 2.66925e+008 2.40004e+008 2.24091e+008 2.0494e+008 1.90416e+008 1.73207e+008
1.69624e+008 1.61081e+008 1.64243e+008 1.65896e+008 1.72094e+008 1.78547e+008
1.84803e+008 1.90791e+008 1.96963e+008 2.02098e+008 2.07907e+008 2.13833e+008
2.19494e+008 #SpawnBio
0.44056 0.5 0 # spawn-recr steepness, sigmaR, autocorr
# values from cat100_hmle, catch at 100% and steepness at mle value. # this is state of
nature 5 out of 9 (in no particular order) # and parameter set number 3 out of 4 for this
state
0 0 28.3083 103.285 341.553 1014.2 2671.83 6204.22 12732.7 23330.1 38706.4 59025.3
83919.4 112652 144327 178069 213134 248951 285123 321394 357616 393710 429639 465389
500951 536316 571471 606397 641068 675453 709517 743223 776532 809406 841807 873699
905048 935824 965999 995548 1.02445e+006 1.05268e+006 1.08023e+006 1.10709e+006
1.13325e+006 1.15869e+006 1.18343e+006 1.20744e+006 1.23075e+006 1.25334e+006
1.27523e+006 1.29641e+006 1.31691e+006 1.33672e+006 1.35586e+006 1.37433e+006
1.39217e+006 1.40936e+006 1.42594e+006 1.4419e+006 1.45728e+006 1.47208e+006 1.48632e+006
1.50001e+006 1.51318e+006 1.52583e+006 1.53798e+006 1.54965e+006 1.56086e+006
1.57161e+006 1.58192e+006 1.59208e+006 1.60182e+006 1.61116e+006 1.62012e+006 1.6287e+006
1.63692e+006 1.6448e+006 1.65234e+006 1.65957e+006 1.66648e+006 1.6731e+006 1.67944e+006
1.6855e+006 1.6913e+006 1.69685e+006 1.70216e+006 1.70724e+006 1.71209e+006 1.71673e+006
1.72117e+006 1.72541e+006 1.72946e+006 1.73334e+006 1.73704e+006 1.74058e+006
1.74396e+006 1.74719e+006 1.75027e+006 1.75322e+006 1.75866e+006 #female fecundity:
weighted by N in year Y_init across morphs and areas
0.045147 0.163178 0.222696 0.290492 0.365223 0.445539 0.530285 0.618588 0.709839
0.803631 0.899683 0.997778 1.09772 1.19929 1.30227 1.4064 1.51143 1.61705 1.72297 1.82891
1.93457 2.03968 2.14398 2.24722 2.34919 2.44969 2.54855 2.6456 2.74072 2.8338 2.92474
3.01346 3.09991 3.18404 3.26582 3.34522 3.42225 3.4969 3.56919 3.63912 3.70673 3.77204
3.83509 3.89593 3.95458 4.0111 4.06554 4.11794 4.16836 4.21686 4.26348 4.30828 4.35131

```

4.39264 4.43231 4.47038 4.5069 4.54192 4.57551 4.6077 4.63855 4.6681 4.69641 4.72352
4.74949 4.77434 4.79812 4.82089 4.84267 4.86351 4.88357 4.9029 4.92139 4.93906 4.95596
4.97211 4.98755 5.0023 5.01641 5.02988 5.04276 5.05506 5.06681 5.07803 5.08876 5.099
5.10878 5.11812 5.12704 5.13555 5.14369 5.15145 5.15886 5.16594 5.1727 5.17914 5.1853
5.19117 5.19678 5.20214 5.212 #bodywt for gender,fleet: 1 / 1
0 0.0511233 0.0772332 0.112337 0.156989 0.21065 0.271667 0.337561 0.405497 0.472761
0.537103 0.596902 0.65118 0.699515 0.741909 0.778656 0.810226 0.837169 0.860061 0.879454
0.895857 0.909726 0.921458 0.931394 0.939825 0.946995 0.953108 0.958335 0.962819 0.966677
0.970009 0.972894 0.975403 0.977591 0.979505 0.981186 0.982667 0.983975 0.985135 0.986165
0.987085 0.987906 0.988643 0.989305 0.989902 0.990442 0.99093 0.991373 0.991776 0.992144
0.992479 0.992786 0.993068 0.993326 0.993564 0.993783 0.993985 0.994172 0.994345 0.994505
0.994654 0.994792 0.994921 0.995041 0.995152 0.995256 0.995354 0.995445 0.99553 0.995609
0.995681 0.995746 0.995807 0.995865 0.995919 0.995969 0.996017 0.996062 0.996105 0.996145
0.996183 0.996219 0.996253 0.996285 0.996315 0.996343 0.996371 0.996396 0.99642 0.996444
0.996465 0.996486 0.996506 0.996524 0.996542 0.996559 0.996575 0.99659 0.996604 0.996618
0.996643 #selex for gender,fleet: 1 / 1
0.0462809 0.169552 0.232356 0.304214 0.383486 0.468356 0.557183 0.648721 0.74217
0.837091 0.933287 1.03069 1.12928 1.22902 1.32986 1.43167 1.53431 1.63757 1.74123 1.84504
1.94873 2.05204 2.15472 2.25653 2.35722 2.4566 2.55447 2.65067 2.74505 2.83748 2.92786
3.0161 3.10213 3.1859 3.26737 3.34651 3.4233 3.49775 3.56986 3.63965 3.70713 3.77233
3.83528 3.89603 3.95461 4.01106 4.06544 4.1178 4.16818 4.21663 4.26322 4.30799 4.351
4.39231 4.43196 4.47001 4.50651 4.54152 4.5751 4.60728 4.63811 4.66766 4.69597 4.72307
4.74903 4.77387 4.79766 4.82042 4.84219 4.86303 4.88309 4.90242 4.9209 4.93857 4.95546
4.97162 4.98705 5.00181 5.01591 5.02938 5.04226 5.05456 5.06631 5.07753 5.08825 5.09849
5.10827 5.11761 5.12653 5.13505 5.14318 5.15094 5.15835 5.16543 5.17218 5.17863 5.18479
5.19066 5.19627 5.20162 5.21149 #bodywt for gender,fleet: 1 / 2
0 0.0213283 0.0352642 0.0561355 0.0857149 0.125189 0.174691 0.233098 0.298189 0.367085
0.436791 0.504638 0.56856 0.627179 0.679765 0.726107 0.766378 0.800993 0.830503 0.855511
0.876615 0.89438 0.909315 0.921869 0.932428 0.941321 0.948827 0.955176 0.960562 0.965145
0.969056 0.972406 0.975285 0.977769 0.979918 0.981784 0.983411 0.984833 0.986082 0.987181
0.988151 0.989011 0.989776 0.990457 0.991066 0.991611 0.992102 0.992544 0.992943 0.993304
0.993632 0.993931 0.994202 0.994451 0.994678 0.994886 0.995077 0.995253 0.995415 0.995564
0.995702 0.99583 0.995949 0.996059 0.996161 0.996256 0.996344 0.996426 0.996503 0.996575
0.99664 0.996697 0.996751 0.996801 0.996849 0.996894 0.996936 0.996975 0.997012 0.997047
0.99708 0.997112 0.997141 0.997169 0.997195 0.99722 0.997243 0.997266 0.997287 0.997306
0.997325 0.997343 0.99736 0.997376 0.997391 0.997406 0.997419 0.997432 0.997444 0.997456
0.997478 #selex for gender,fleet: 1 / 2
0.0504337 0.189018 0.257432 0.331995 0.409383 0.487655 0.566341 0.645863 0.726964
0.810375 0.896654 0.986129 1.07889 1.17484 1.2737 1.37507 1.4785 1.58348 1.68953 1.79614
1.90288 2.00933 2.11512 2.21995 2.32351 2.42558 2.52596 2.62445 2.72094 2.81528 2.9074
2.99721 3.08467 3.16972 3.25235 3.33253 3.41028 3.48558 3.55846 3.62895 3.69706 3.76284
3.82631 3.88754 3.94655 4.0034 4.05814 4.11083 4.16151 4.21025 4.25709 4.3021 4.34533
4.38683 4.42667 4.46489 4.50156 4.53672 4.57043 4.60273 4.63369 4.66335 4.69176 4.71896
4.745 4.76994 4.7938 4.81663 4.83848 4.85938 4.87949 4.89886 4.91738 4.93509 4.95202
4.96821 4.98368 4.99846 5.01259 5.02609 5.03899 5.05131 5.06309 5.07433 5.08507 5.09533
5.10513 5.11449 5.12342 5.13196 5.1401 5.14788 5.15531 5.1624 5.16916 5.17562 5.18179
5.18767 5.19329 5.19865 5.20854 #bodywt for gender,fleet: 1 / 3
0 0.0168565 0.0359177 0.0704144 0.125351 0.201915 0.296018 0.399604 0.503567 0.600364
0.685263 0.756326 0.813704 0.85879 0.893511 0.919871 0.93969 0.954505 0.965548 0.973775
0.979914 0.984509 0.987963 0.990573 0.992557 0.994075 0.995243 0.99615 0.996858 0.997415
0.997857 0.998209 0.998492 0.998722 0.998908 0.999062 0.999188 0.999293 0.99938 0.999454
0.999516 0.999569 0.999614 0.999653 0.999686 0.999715 0.99974 0.999762 0.999781 0.999798
0.999813 0.999826 0.999838 0.999848 0.999857 0.999866 0.999873 0.99988 0.999886 0.999892
0.999897 0.999902 0.999906 0.99991 0.999913 0.999916 0.999919 0.999922 0.999925 0.999927
0.999929 0.999931 0.999932 0.999934 0.999935 0.999937 0.999938 0.999939 0.99994 0.999941
0.999942 0.999943 0.999944 0.999945 0.999945 0.999946 0.999947 0.999947 0.999948 0.999948
0.999949 0.999949 0.99995 0.99995 0.999951 0.999951 0.999952 0.999952 0.999952 0.999952
0.999953 #selex for gender,fleet: 1 / 3
0.0466444 0.171812 0.236089 0.310135 0.392403 0.480968 0.573886 0.669515 0.76669
0.864713 0.963252 1.0622 1.16158 1.26144 1.36181 1.4627 1.56407 1.66582 1.7678 1.86984
1.97175 2.0733 2.17428 2.27446 2.37364 2.4716 2.56818 2.66318 2.75648 2.84792 2.93742
3.02485 3.11016 3.19328 3.27417 3.35278 3.4291 3.50313 3.57486 3.6443 3.71147 3.77639
3.83909 3.8996 3.95797 4.01424 4.06845 4.12065 4.17089 4.21921 4.26568 4.31034 4.35325
4.39447 4.43403 4.472 4.50844 4.54338 4.57689 4.60901 4.6398 4.6693 4.69756 4.72462
4.75054 4.77535 4.79909 4.82182 4.84357 4.86437 4.88442 4.90372 4.92219 4.93984 4.95672
4.97286 4.98828 5.00302 5.01711 5.03057 5.04343 5.05572 5.06746 5.07868 5.08939 5.09962
5.10939 5.11873 5.12764 5.13615 5.14427 5.15203 5.15943 5.16651 5.17325 5.1797 5.18585
5.19172 5.19732 5.20267 5.21253 #bodywt for gender,fleet: 1 / 4
0 0.011426 0.0195259 0.0322319 0.0512246 0.078121 0.11406 0.159308 0.213068 0.273565
0.338381 0.40488 0.470599 0.533513 0.592155 0.645622 0.693497 0.735745 0.772597 0.804456
0.831809 0.855178 0.875076 0.891982 0.906331 0.91851 0.928852 0.937647 0.945139 0.951534

0.957006 0.961703 0.965744 0.969233 0.972253 0.974877 0.977164 0.979163 0.980916 0.982458
0.983819 0.985024 0.986093 0.987045 0.987895 0.988656 0.989339 0.989954 0.990509 0.99101
0.991464 0.991877 0.992253 0.992596 0.992909 0.993196 0.993459 0.993701 0.993923 0.994128
0.994317 0.994492 0.994655 0.994805 0.994944 0.995074 0.995195 0.995307 0.995412 0.99551
0.995597 0.995675 0.995748 0.995816 0.99588 0.995941 0.995997 0.996051 0.996101 0.996148
0.996193 0.996235 0.996275 0.996312 0.996348 0.996381 0.996413 0.996443 0.996471 0.996498
0.996523 0.996547 0.99657 0.996591 0.996612 0.996631 0.996649 0.996667 0.996683 0.996699
0.996728 #selex for gender,fleet: 1 / 4
0.0458503 0.168306 0.231642 0.305371 0.388624 0.480165 0.578473 0.681886 0.788778
0.897715 1.00756 1.11747 1.22692 1.33558 1.44328 1.54993 1.65553 1.76007 1.86354 1.96594
2.06723 2.16738 2.26632 2.36398 2.46027 2.5551 2.64839 2.74004 2.82997 2.9181 3.00434
3.08863 3.17093 3.25117 3.32932 3.40534 3.47923 3.55097 3.62055 3.68798 3.75327 3.81643
3.87749 3.93648 3.99343 4.04836 4.10133 4.15238 4.20154 4.24886 4.29439 4.33817 4.38026
4.42071 4.45956 4.49687 4.53267 4.56703 4.59999 4.6316 4.6619 4.69094 4.71878 4.74544
4.77098 4.79543 4.81885 4.84126 4.86271 4.88324 4.90305 4.92218 4.94047 4.95796 4.97469
4.99068 5.00597 5.02058 5.03454 5.04789 5.06064 5.07282 5.08446 5.09558 5.1062 5.11635
5.12604 5.13529 5.14413 5.15257 5.16063 5.16832 5.17567 5.18268 5.18938 5.19577 5.20187
5.2077 5.21325 5.21856 5.22834 #bodywt for gender,fleet: 1 / 5
0.00497951 0.00812772 0.0129303 0.0200354 0.0302067 0.0442625 0.0629721 0.086926
0.116411 0.151331 0.191188 0.235142 0.282111 0.330901 0.380324 0.429299 0.476909 0.522437
0.565367 0.605371 0.642279 0.67605 0.706745 0.734491 0.759464 0.781866 0.801913 0.819821
0.835799 0.850049 0.862754 0.874085 0.884197 0.893229 0.901303 0.908532 0.915011 0.920828
0.926059 0.93077 0.935021 0.938862 0.94234 0.945494 0.948359 0.950967 0.953345 0.955515
0.957501 0.95932 0.960989 0.962523 0.963934 0.965235 0.966436 0.967546 0.968573 0.969524
0.970407 0.971227 0.971989 0.972699 0.97336 0.973977 0.974553 0.975091 0.975595 0.976066
0.976508 0.976906 0.977266 0.977603 0.977921 0.97822 0.978501 0.978766 0.979016 0.979252
0.979474 0.979684 0.979882 0.98007 0.980247 0.980414 0.980573 0.980723 0.980865 0.980999
0.981126 0.981247 0.981362 0.98147 0.981573 0.981671 0.981763 0.981851 0.981935 0.982014
0.982089 0.982227 #selex for gender,fleet: 1 / 5
0.047457 0.17645 0.243537 0.321908 0.410686 0.508516 0.613589 0.723785 0.836934 0.951109
1.06483 1.17713 1.28749 1.39572 1.50187 1.60609 1.70859 1.80956 1.90918 2.00759 2.10486
2.20106 2.29619 2.39022 2.48312 2.5748 2.66519 2.7542 2.84174 2.92771 3.01203 3.09461
3.17538 3.25429 3.33126 3.40625 3.47924 3.55019 3.61909 3.68593 3.7507 3.81342 3.87411
3.93277 3.98943 4.04413 4.0969 4.14777 4.19679 4.24398 4.28941 4.33311 4.37514 4.41552
4.45433 4.4916 4.52738 4.56171 4.59466 4.62625 4.65655 4.68559 4.71343 4.74009 4.76564
4.7901 4.81352 4.83595 4.85741 4.87795 4.89777 4.91689 4.93519 4.95268 4.96941 4.98541
5.0007 5.01531 5.02928 5.04263 5.05538 5.06757 5.07922 5.09034 5.10097 5.11112 5.12081
5.13007 5.13891 5.14735 5.15542 5.16311 5.17046 5.17748 5.18418 5.19057 5.19668 5.20251
5.20807 5.21338 5.22317 #bodywt for gender,fleet: 1 / 6
0.00140879 0.00257294 0.0045632 0.00785473 0.0131087 0.0211776 0.0330585 0.0497792
0.0722262 0.100961 0.136078 0.177153 0.223289 0.273245 0.325598 0.378907 0.431846
0.483294 0.532373 0.578462 0.62117 0.660309 0.695849 0.727877 0.756568 0.782144 0.80486
0.824981 0.842767 0.858471 0.872327 0.884551 0.895338 0.904864 0.913285 0.920737 0.927341
0.933203 0.938416 0.943059 0.947203 0.950909 0.95423 0.957211 0.959893 0.962311 0.964495
0.966471 0.968263 0.969891 0.971372 0.972723 0.973958 0.975087 0.976122 0.977072 0.977946
0.97875 0.979492 0.980177 0.980811 0.981398 0.981942 0.982447 0.982916 0.983353 0.983759
0.984139 0.984493 0.984808 0.985089 0.985353 0.9856 0.985832 0.986049 0.986254 0.986446
0.986628 0.986798 0.986959 0.98711 0.987253 0.987388 0.987515 0.987635 0.987749 0.987856
0.987958 0.988054 0.988145 0.988231 0.988312 0.98839 0.988463 0.988532 0.988598 0.98866
0.98872 0.988776 0.988879 #selex for gender,fleet: 1 / 6
0.0539259 0.185573 0.25267 0.328419 0.411174 0.499395 0.591863 0.687727 0.786456
0.887728 0.991338 1.09712 1.20489 1.31446 1.42557 1.53794 1.65126 1.7652 1.87941 1.99355
2.1073 2.22035 2.33241 2.44322 2.55253 2.66014 2.76586 2.86955 2.97105 3.07027 3.1671
3.26149 3.35337 3.44271 3.52948 3.61367 3.69528 3.77432 3.8508 3.92475 3.99621 4.06521
4.13179 4.19599 4.25787 4.31749 4.37488 4.43012 4.48325 4.53434 4.58344 4.63062 4.67593
4.71944 4.76119 4.80125 4.83969 4.87654 4.91187 4.94574 4.97819 5.00929 5.03907 5.06759
5.0949 5.12104 5.14607 5.17001 5.19293 5.21485 5.23595 5.25627 5.2757 5.29428 5.31205
5.32903 5.34526 5.36078 5.37561 5.38979 5.40333 5.41627 5.42863 5.44045 5.45173 5.46251
5.4728 5.48264 5.49203 5.501 5.50956 5.51774 5.52555 5.533 5.54012 5.54692 5.55341 5.5596
5.56551 5.57116 5.58159 #bodywt for gender,fleet: 2 / 1
0.0518398 0.079816 0.117909 0.166721 0.225504 0.292161 0.363647 0.436587 0.507864
0.575011 0.636368 0.691057 0.738838 0.779931 0.814846 0.844245 0.868839 0.889325 0.906346
0.920474 0.932201 0.941947 0.950061 0.956834 0.962504 0.967267 0.971282 0.974679 0.977566
0.980027 0.982135 0.983947 0.985511 0.986866 0.988045 0.989074 0.989975 0.990768 0.991468
0.992087 0.992636 0.993126 0.993564 0.993956 0.994308 0.994625 0.994912 0.995171 0.995406
0.99562 0.995816 0.995994 0.996157 0.996306 0.996443 0.996569 0.996686 0.996793 0.996892
0.996984 0.997069 0.997148 0.997221 0.997289 0.997353 0.997412 0.997468 0.997519 0.997568
0.997611 0.99765 0.997687 0.997721 0.997754 0.997784 0.997813 0.99784 0.997865 0.997889
0.997912 0.997933 0.997953 0.997972 0.99799 0.998008 0.998024 0.998039 0.998053 0.998067
0.99808 0.998092 0.998104 0.998115 0.998125 0.998135 0.998145 0.998154 0.998162 0.99817
0.998185 #selex for gender,fleet: 2 / 1

0.0552534 0.192681 0.263397 0.343528 0.43103 0.5238 0.620085 0.718683 0.818926 0.920536
1.02346 1.12775 1.23345 1.34057 1.44904 1.55872 1.66943 1.78089 1.89283 2.00493 2.11687
2.22834 2.33904 2.44867 2.557 2.66377 2.7688 2.8719 2.97292 3.07173 3.16823 3.26234
3.35399 3.44314 3.52976 3.61382 3.69532 3.77427 3.85069 3.92458 3.99599 4.06495 4.1315
4.19568 4.25754 4.31714 4.37452 4.42975 4.48287 4.53396 4.58306 4.63023 4.67554 4.71904
4.7608 4.80086 4.83929 4.87615 4.91149 4.94535 4.97781 5.0089 5.03869 5.06721 5.09452
5.12067 5.14569 5.16964 5.19256 5.21448 5.23559 5.25591 5.27534 5.29392 5.31169 5.32867
5.34491 5.36042 5.37526 5.38943 5.40297 5.41592 5.42828 5.44009 5.45138 5.46216 5.47245
5.48229 5.49168 5.50065 5.50921 5.51739 5.5252 5.53266 5.53977 5.54657 5.55306 5.55925
5.56517 5.57081 5.58124 #bodywt for gender,fleet: 2 / 2
0 0.0217085 0.0367487 0.0596831 0.0925919 0.136787 0.192233 0.257331 0.329197 0.404272
0.479017 0.550442 0.616385 0.675562 0.727455 0.772127 0.810028 0.841829 0.868293 0.890188
0.908235 0.923079 0.935281 0.945317 0.953582 0.960405 0.966052 0.970742 0.974651 0.977922
0.98067 0.982988 0.984953 0.986624 0.988052 0.989277 0.990333 0.991246 0.992039 0.992731
0.993336 0.993868 0.994337 0.994751 0.995119 0.995446 0.995738 0.996 0.996235 0.996446
0.996637 0.99681 0.996966 0.997109 0.997238 0.997357 0.997465 0.997564 0.997655 0.997739
0.997816 0.997887 0.997953 0.998014 0.99807 0.998123 0.998171 0.998216 0.998259 0.998298
0.998333 0.998364 0.998393 0.99842 0.998446 0.99847 0.998493 0.998514 0.998534 0.998553
0.998571 0.998587 0.998603 0.998618 0.998632 0.998645 0.998658 0.99867 0.998681 0.998691
0.998701 0.998711 0.99872 0.998728 0.998736 0.998744 0.998751 0.998758 0.998765 0.998771
0.998782 #selex for gender,fleet: 2 / 2
0.0601075 0.214219 0.290644 0.372767 0.456919 0.541321 0.625889 0.711421 0.798942
0.889352 0.983281 1.08104 1.18265 1.28787 1.39629 1.50736 1.62049 1.73505 1.85046 1.96618
2.08171 2.19662 2.31053 2.42313 2.53414 2.64333 2.7505 2.85551 2.95821 3.05851 3.15632
3.25159 3.34425 3.4343 3.5217 3.60646 3.68857 3.76807 3.84497 3.91929 3.99109 4.06039
4.12724 4.1917 4.25381 4.31363 4.37121 4.42662 4.47991 4.53115 4.58038 4.62768 4.6731
4.71671 4.75856 4.79871 4.83723 4.87416 4.90956 4.94349 4.97601 5.00716 5.03699 5.06556
5.09292 5.1191 5.14417 5.16815 5.1911 5.21306 5.23419 5.25452 5.27397 5.29257 5.31035
5.32735 5.3436 5.35913 5.37398 5.38816 5.40172 5.41467 5.42705 5.43887 5.45016 5.46095
5.47125 5.48109 5.49049 5.49947 5.50804 5.51623 5.52404 5.5315 5.53863 5.54543 5.55192
5.55812 5.56404 5.56969 5.58013 #bodywt for gender,fleet: 2 / 3
0 0.0173676 0.0382509 0.0767998 0.138612 0.224342 0.328234 0.44021 0.549681 0.648575
0.732478 0.80025 0.852958 0.892796 0.92228 0.94378 0.959307 0.970457 0.978446 0.984174
0.988291 0.991264 0.993423 0.995001 0.996164 0.997028 0.997674 0.998163 0.998535 0.99882
0.999042 0.999215 0.999351 0.99946 0.999546 0.999616 0.999673 0.999719 0.999757 0.999789
0.999815 0.999837 0.999856 0.999872 0.999885 0.999897 0.999907 0.999915 0.999923 0.999929
0.999935 0.99994 0.999945 0.999949 0.999952 0.999955 0.999958 0.99996 0.999963 0.999965
0.999966 0.999968 0.99997 0.999971 0.999972 0.999973 0.999974 0.999975 0.999976 0.999977
0.999978 0.999978 0.999979 0.999979 0.99998 0.99998 0.999981 0.999981 0.999982 0.999982
0.999982 0.999983 0.999983 0.999983 0.999983 0.999984 0.999984 0.999984 0.999984 0.999984
0.999985 0.999985 0.999985 0.999985 0.999985 0.999985 0.999985 0.999986 0.999986 0.999986
0.999986 #selex for gender,fleet: 2 / 3
0.0556789 0.195209 0.267577 0.35015 0.44094 0.537655 0.638145 0.74075 0.844425 0.948657
1.0533 1.15843 1.26416 1.37063 1.47791 1.58603 1.69489 1.80437 1.91426 2.02434 2.13434
2.24397 2.35297 2.46106 2.56799 2.67352 2.77744 2.87956 2.97971 3.07777 3.17361 3.26714
3.35829 3.447 3.53323 3.61695 3.69816 3.77685 3.85304 3.92673 3.99796 4.06676 4.13317
4.19723 4.25898 4.31848 4.37577 4.43092 4.48397 4.53499 4.58403 4.63115 4.67641 4.71987
4.76159 4.80161 4.84001 4.87684 4.91214 4.94599 4.97842 5.00949 5.03926 5.06776 5.09506
5.12119 5.1462 5.17013 5.19304 5.21495 5.23604 5.25635 5.27578 5.29435 5.31211 5.32909
5.34532 5.36083 5.37566 5.38983 5.40337 5.41631 5.42867 5.44048 5.45176 5.46253 5.47283
5.48266 5.49205 5.50101 5.50957 5.51775 5.52556 5.53301 5.54013 5.54692 5.55341 5.5596
5.56551 5.57116 5.58159 #bodywt for gender,fleet: 2 / 4
0 0.0116461 0.020415 0.0344617 0.0557967 0.0863221 0.127287 0.178795 0.239606 0.307321
0.37886 0.451034 0.521016 0.586629 0.646439 0.699711 0.746272 0.786357 0.820457 0.849204
0.873276 0.893338 0.910009 0.92384 0.935311 0.94483 0.952741 0.95933 0.964832 0.96944
0.973313 0.97658 0.979345 0.981696 0.983701 0.985419 0.986896 0.988172 0.989277 0.990239
0.991079 0.991814 0.992462 0.993033 0.993538 0.993987 0.994387 0.994744 0.995065 0.995352
0.995611 0.995845 0.996057 0.99625 0.996424 0.996584 0.996729 0.996862 0.996984 0.997096
0.997199 0.997294 0.997382 0.997463 0.997538 0.997607 0.997672 0.997732 0.997788 0.99784
0.997886 0.997927 0.997965 0.998001 0.998035 0.998066 0.998096 0.998124 0.99815 0.998175
0.998198 0.99822 0.99824 0.99826 0.998278 0.998295 0.998312 0.998327 0.998342 0.998356
0.998369 0.998381 0.998393 0.998404 0.998414 0.998424 0.998434 0.998443 0.998451 0.998459
0.998474 #selex for gender,fleet: 2 / 4
0.0547497 0.191323 0.26274 0.345176 0.437425 0.537908 0.644796 0.756201 0.870385 0.98592
1.10176 1.21722 1.33192 1.44568 1.55846 1.6703 1.78122 1.89128 2.00049 2.10884 2.21629
2.32278 2.42819 2.53244 2.63538 2.7369 2.83686 2.93515 3.03163 3.12621 3.21877 3.30925
3.39755 3.48363 3.56744 3.64893 3.72809 3.80491 3.87937 3.9515 4.02129 4.08877 4.15397
4.21692 4.27766 4.33623 4.39267 4.44703 4.49937 4.54972 4.59815 4.64471 4.68945 4.73243
4.7737 4.81332 4.85133 4.8878 4.92278 4.95632 4.98847 5.01927 5.04879 5.07706 5.10414
5.13007 5.15489 5.17865 5.20139 5.22314 5.24411 5.26433 5.28366 5.30215 5.31983 5.33674
5.3529 5.36834 5.3831 5.39721 5.4107 5.42358 5.43589 5.44765 5.45888 5.46962 5.47987

5.48966 5.49901 5.50794 5.51647 5.52461 5.53239 5.53981 5.5469 5.55367 5.56013 5.5663
5.57219 5.57781 5.5882 #bodywt for gender,fleet: 2 / 5
0 0.00506505 0.00846584 0.0137649 0.0217505 0.0333584 0.049588 0.0713603 0.0993433
0.133791 0.174451 0.220563 0.270956 0.324199 0.37878 0.433257 0.486373 0.537128 0.584791
0.628896 0.669207 0.705673 0.738382 0.767523 0.793343 0.816128 0.836171 0.853766 0.86919
0.882702 0.89454 0.904913 0.914012 0.922003 0.92903 0.93522 0.940683 0.945514 0.949795
0.953597 0.956981 0.960001 0.9627 0.965119 0.967293 0.969249 0.971013 0.972609 0.974054
0.975367 0.97656 0.977648 0.978642 0.979551 0.980383 0.981148 0.981851 0.982498 0.983095
0.983646 0.984156 0.984628 0.985066 0.985473 0.985851 0.986203 0.986531 0.986836 0.987122
0.987389 0.987628 0.987842 0.988044 0.988232 0.98841 0.988577 0.988733 0.988881 0.98902
0.989151 0.989275 0.989392 0.989502 0.989606 0.989704 0.989797 0.989884 0.989968 0.990046
0.990121 0.990191 0.990258 0.990321 0.990381 0.990438 0.990492 0.990543 0.990592 0.990638
0.990681 0.990762 #selex for gender,fleet: 2 / 5
0.0566297 0.200386 0.275902 0.363338 0.461434 0.568422 0.682087 0.799992 0.91981 1.03964
1.15817 1.27469 1.38893 1.50094 1.61096 1.71927 1.82617 1.93192 2.03671 2.14067 2.24388
2.34635 2.44803 2.54886 2.64872 2.74749 2.84503 2.9412 3.03586 3.12886 3.2201 3.30945
3.39682 3.48212 3.56529 3.64626 3.725 3.80148 3.87569 3.94761 4.01724 4.08462 4.14974
4.21264 4.27335 4.33191 4.38836 4.44274 4.4951 4.5455 4.59397 4.64057 4.68536 4.72838
4.7697 4.80937 4.84744 4.88396 4.91898 4.95257 4.98476 5.01562 5.04518 5.07349 5.10061
5.12658 5.15144 5.17524 5.19801 5.2198 5.2408 5.26103 5.28038 5.29889 5.31659 5.3335
5.34968 5.36514 5.37991 5.39404 5.40753 5.42043 5.43275 5.44452 5.45576 5.46651 5.47677
5.48657 5.49593 5.50487 5.5134 5.52155 5.52934 5.53677 5.54387 5.55064 5.55711 5.56328
5.56918 5.57481 5.5852 #bodywt for gender,fleet: 2 / 6
0 0.00144011 0.00270794 0.00493369 0.00870259 0.0148408 0.0244198 0.0386853 0.0588914
0.0860613 0.120743 0.162841 0.211584 0.265626 0.323248 0.382589 0.441867 0.499532
0.554361 0.605484 0.652368 0.69477 0.732677 0.766246 0.795745 0.821513 0.843915 0.863325
0.880102 0.894582 0.90707 0.917841 0.927136 0.935165 0.942111 0.948129 0.953355 0.957902
0.961869 0.965337 0.968378 0.971051 0.973407 0.97549 0.977335 0.978974 0.980435 0.981739
0.982907 0.983956 0.984899 0.98575 0.98652 0.987217 0.98785 0.988426 0.988951 0.98943
0.989869 0.990271 0.990641 0.990981 0.991294 0.991583 0.99185 0.992097 0.992326 0.992538
0.992736 0.992919 0.993082 0.993225 0.993359 0.993485 0.993603 0.993713 0.993816 0.993913
0.994004 0.99409 0.994171 0.994247 0.994318 0.994386 0.994449 0.994509 0.994566 0.994619
0.99467 0.994717 0.994762 0.994805 0.994846 0.994884 0.99492 0.994954 0.994987 0.995018
0.995047 0.995075 0.995125 #selex for gender,fleet: 2 / 6
0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379 0.0462379
0.0462379 0.0462379 0.0462379 #mean M for year Yinit: 2011 sex: 1
52.6066 49.3344 46.1908 43.2277 40.518 37.7914 35.2322 32.7677 30.4021 28.1869 26.6381
24.9759 24.6723 23.7748 24.1344 24.0124 24.0501 23.627 23.6423 23.5725 23.0647 21.7377
20.6877 19.2273 17.6195 15.9364 14.5019 13.006 11.6721 10.5449 9.39019 8.27837 7.32203
6.47157 5.67741 4.98814 4.38525 3.86876 3.42086 3.03746 2.70401 2.41476 2.17115 1.95474
1.76833 1.60659 1.47067 1.3464 1.23825 1.14337 1.05871 0.98356 0.916282 0.855775 0.800677
0.750177 0.703656 0.660664 0.620864 0.584319 0.550594 0.519118 0.489825 0.462879 0.437628
0.415124 0.394307 0.373958 0.354816 0.336158 0.318489 0.301731 0.28579 0.270742 0.256492
0.243007 0.230222 0.218135 0.206726 0.196004 0.18592 0.176452 0.167543 0.159138 0.15122
0.143755 0.136709 0.130047 0.123748 0.117789 0.112148 0.106802 0.101733 0.0969308
0.0923695 0.0880326 0.0839001 0.079973 0.0762397 0.0726893 1.52113 #numbers for year
Yinit: 2011 sex: 1
0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087 0.045087
0.045087 0.045087 0.045087 #mean M for year Yinit: 2011 sex: 2
52.6066 49.3912 46.2971 43.3768 40.7037 38.0065 35.4707 33.0233 30.6692 28.4609 26.9206
25.2618 24.9744 24.0833 24.4625 24.3491 24.39 23.953 23.9473 23.8394 23.2722 21.8654
20.7287 19.1775 17.484 15.7275 14.2319 12.694 11.3336 10.1919 9.04001 7.94401 7.00898

```

6.18417 5.41966 4.75987 4.18558 3.6957 3.27249 2.91151 2.59848 2.32761 2.10015 1.89818
1.72437 1.57356 1.44698 1.3308 1.22951 1.14044 1.06067 0.989601 0.925714 0.868 0.815176
0.7665 0.721413 0.67952 0.640538 0.604586 0.571268 0.540039 0.510864 0.48395 0.458639
0.436059 0.415118 0.394545 0.375124 0.356101 0.338018 0.3208 0.30436 0.288791 0.274004
0.259979 0.246655 0.234042 0.222127 0.210922 0.20038 0.190476 0.181151 0.172346 0.164042
0.156202 0.148791 0.141772 0.135123 0.128821 0.122844 0.11717 0.111778 0.10666 0.101791
0.0971527 0.092725 0.0885102 0.0844965 0.0806734 1.736 #numbers for year Yinit: 2011 sex:
2
54.1634 50.9936 47.9496 44.9513 42.0732 39.3559 36.8657 34.3578 32.0015 29.7326 27.5565
25.5209 24.0929 22.5667 22.2712 21.4425 21.7497 21.6244 21.6447 21.2521 21.2555 21.1835
20.7193 19.5208 18.5724 17.2568 15.8101 14.2969 13.0076 11.6639 10.4662 9.45424 8.418
7.42057 6.56278 5.80009 5.08803 4.4701 3.92968 3.46675 3.06534 2.72177 2.42299 2.16383
1.94559 1.75171 1.58472 1.43984 1.3181 1.20678 1.1099 1.02491 0.949067 0.881742 0.821467
0.767253 0.717882 0.672628 0.630936 0.592403 0.55673 0.523971 0.493739 0.465522 0.43926
0.415102 0.392462 0.372285 0.353619 0.335373 0.318209 0.301478 0.285632 0.270604 0.256307
0.242812 0.230031 0.217936 0.206468 0.195627 0.185394 0.175776 0.166732 0.158239 0.150249
0.142711 0.135609 0.128914 0.122595 0.11662 0.110971 0.105627 0.100568 0.0957748
0.0912288 0.0869224 0.082832 0.0789428 0.075237 0.0717155 1.49763 #numbers for year
Ydeclare: 2013 sex: 1
54.1634 51.0523 48.0599 45.106 42.2653 39.5788 37.1138 34.6243 32.2811 30.0201 27.8476
25.8124 24.388 22.8611 22.579 21.7543 22.0794 21.9618 21.9852 21.5798 21.5647 21.459
20.9411 19.6693 18.6419 17.243 15.7171 14.1356 12.7894 11.4058 10.1823 9.15567 8.12021
7.13523 6.29504 5.55401 4.86724 4.2746 3.75881 3.31887 2.93883 2.6147 2.33364 2.09045
1.88624 1.70493 1.54889 1.41351 1.29988 1.19559 1.10466 1.02469 0.953065 0.889252
0.831882 0.780051 0.732607 0.688884 0.648382 0.610746 0.575722 0.543419 0.513481 0.485418
0.459199 0.435012 0.412265 0.391972 0.373151 0.354659 0.337203 0.320105 0.30385 0.288373
0.273594 0.259598 0.246304 0.233694 0.221715 0.210376 0.199663 0.189589 0.180112 0.171208
0.162825 0.15491 0.147445 0.140397 0.133735 0.127426 0.12145 0.115786 0.110413 0.105312
0.100466 0.0958667 0.09149 0.0873211 0.0833414 0.0795531 1.70878 #numbers for year
Ydeclare: 2013 sex: 2
#R0 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932
1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950
1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968
1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986
1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004
2005 2006 2007 2008 2009 2010 #years
228.199 228.199 228.166 228.122 228.071 228.038 228.003 227.968 227.935 227.9 227.86
227.803 227.737 227.663 227.578 227.462 227.341 227.238 227.14 227.061 226.964 226.847
226.693 226.543 226.396 226.285 226.112 225.898 225.629 224.966 224.299 223.184 222.249
221.888 221.465 221.191 220.897 220.532 220.22 219.99 219.692 219.308 218.834 218.279
217.679 217.14 216.651 216.251 215.77 215.4 215.155 214.069 213.646 213.144 212.617
211.353 210.501 209.319 207.77 206.266 204.52 202.876 200.874 198.754 194.927 190.919
187.556 182.49 175.465 170.295 166.016 160.484 157.121 152.945 147.979 141.01 136.72
128.709 119.802 111.758 106.713 100.33 95.2454 88.9269 87.5695 84.2707 85.5017 86.1407
88.5068 90.9232 93.2207 95.3794 97.5645 99.3524 101.342 103.338 105.213 #Recruits
1.02769e+009 1.02769e+009 1.02723e+009 1.0266e+009 1.02589e+009 1.02542e+009
1.02492e+009 1.02443e+009 1.02396e+009 1.02347e+009 1.02291e+009 1.0221e+009 1.02118e+009
1.02014e+009 1.01895e+009 1.01732e+009 1.01562e+009 1.01419e+009 1.01282e+009
1.01172e+009 1.01038e+009 1.00876e+009 1.00664e+009 1.00457e+009 1.00254e+009
1.00103e+009 9.98666e+008 9.95743e+008 9.92105e+008 9.83185e+008 9.74338e+008
9.59766e+008 9.47766e+008 9.4319e+008 9.37871e+008 9.34446e+008 9.30784e+008 9.26264e+008
9.22426e+008 9.19604e+008 9.15972e+008 9.11322e+008 9.05614e+008 8.99004e+008
8.91914e+008 8.8562e+008 8.79954e+008 8.75358e+008 8.69862e+008 8.65667e+008 8.62907e+008
8.508e+008 8.46141e+008 8.40657e+008 8.34945e+008 8.21452e+008 8.12511e+008 8.00317e+008
7.84671e+008 7.69837e+008 7.53059e+008 7.37659e+008 7.19426e+008 7.00704e+008
6.68345e+008 6.36313e+008 6.10778e+008 5.74454e+008 5.27919e+008 4.96218e+008
4.71449e+008 4.4124e+008 4.23796e+008 4.03031e+008 3.79555e+008 3.48642e+008 3.307e+008
2.99193e+008 2.66925e+008 2.40004e+008 2.24091e+008 2.0494e+008 1.90416e+008 1.73207e+008
1.69624e+008 1.61081e+008 1.64243e+008 1.65896e+008 1.72094e+008 1.78547e+008
1.84803e+008 1.90791e+008 1.96963e+008 2.02098e+008 2.07907e+008 2.13833e+008
2.19494e+008 #SpawnBio
0.44056 0.5 0 # spawn-recr steepness, sigmaR, autocorr
# values from cat100_hmle, catch at 100% and steepness at mle value. # this is state of
nature 5 out of 9 (in no particular order) # and parameter set number 4 out of 4 for this
state
0 0 28.3083 103.285 341.553 1014.2 2671.83 6204.22 12732.7 23330.1 38706.4 59025.3
83919.4 112652 144327 178069 213134 248951 285123 321394 357616 393710 429639 465389
500951 536316 571471 606397 641068 675453 709517 743223 776532 809406 841807 873699
905048 935824 965999 995548 1.02445e+006 1.05268e+006 1.08023e+006 1.10709e+006
1.13325e+006 1.15869e+006 1.18343e+006 1.20744e+006 1.23075e+006 1.25334e+006
1.27523e+006 1.29641e+006 1.31691e+006 1.33672e+006 1.35586e+006 1.37433e+006

```

1.39217e+006 1.40936e+006 1.42594e+006 1.4419e+006 1.45728e+006 1.47208e+006 1.48632e+006
1.50001e+006 1.51318e+006 1.52583e+006 1.53798e+006 1.54965e+006 1.56086e+006
1.57161e+006 1.58192e+006 1.59208e+006 1.60182e+006 1.61116e+006 1.62012e+006 1.6287e+006
1.63692e+006 1.6448e+006 1.65234e+006 1.65957e+006 1.66648e+006 1.6731e+006 1.67944e+006
1.6855e+006 1.6913e+006 1.69685e+006 1.70216e+006 1.70724e+006 1.71209e+006 1.71673e+006
1.72117e+006 1.72541e+006 1.72946e+006 1.73334e+006 1.73704e+006 1.74058e+006
1.74396e+006 1.74719e+006 1.75027e+006 1.75322e+006 1.75866e+006 #female fecundity;
weighted by N in year Y_init across morphs and areas
0.045147 0.163178 0.222696 0.290492 0.365223 0.445539 0.530285 0.618588 0.709839
0.803631 0.899683 0.997778 1.09772 1.19929 1.30227 1.4064 1.51143 1.61705 1.72297 1.82891
1.93457 2.03968 2.14398 2.24722 2.34919 2.44969 2.54855 2.6456 2.74072 2.8338 2.92474
3.01346 3.09991 3.18404 3.26582 3.34522 3.42225 3.4969 3.56919 3.63912 3.70673 3.77204
3.83509 3.89593 3.95458 4.0111 4.06554 4.11794 4.16836 4.21686 4.26348 4.30828 4.35131
4.39264 4.43231 4.47038 4.5069 4.54192 4.57551 4.6077 4.63855 4.6681 4.69641 4.72352
4.74949 4.77434 4.79812 4.82089 4.84267 4.86351 4.88357 4.9029 4.92139 4.93906 4.95596
4.97211 4.98755 5.0023 5.01641 5.02988 5.04276 5.05506 5.06681 5.07803 5.08876 5.099
5.10878 5.11812 5.12704 5.13555 5.14369 5.15145 5.15886 5.16594 5.1727 5.17914 5.1853
5.19117 5.19678 5.20214 5.212 #bodywt for gender,fleet: 1 / 1
0 0.0511233 0.0772332 0.112337 0.156989 0.21065 0.271667 0.337561 0.405497 0.472761
0.537103 0.596902 0.65118 0.699515 0.741909 0.778656 0.810226 0.837169 0.860061 0.879454
0.895857 0.909726 0.921458 0.931394 0.939825 0.946995 0.953108 0.958335 0.962819 0.966677
0.970009 0.972894 0.975403 0.977591 0.979505 0.981186 0.982667 0.983975 0.985135 0.986165
0.987085 0.987906 0.988643 0.989305 0.989902 0.990442 0.99093 0.991373 0.991776 0.992144
0.992479 0.992786 0.993068 0.993326 0.993564 0.993783 0.993985 0.994172 0.994345 0.994505
0.994654 0.994792 0.994921 0.995041 0.995152 0.995256 0.995354 0.995445 0.99553 0.995609
0.995681 0.995746 0.995807 0.995865 0.995919 0.995969 0.996017 0.996062 0.996105 0.996145
0.996183 0.996219 0.996253 0.996285 0.996315 0.996343 0.996371 0.996396 0.99642 0.996444
0.996465 0.996486 0.996506 0.996524 0.996542 0.996559 0.996575 0.99659 0.996604 0.996618
0.996643 #selex for gender,fleet: 1 / 1
0.0462809 0.169552 0.232356 0.304214 0.383486 0.468356 0.557183 0.648721 0.74217
0.837091 0.933287 1.03069 1.12928 1.22902 1.32986 1.43167 1.53431 1.63757 1.74123 1.84504
1.94873 2.05204 2.15472 2.25653 2.35722 2.4566 2.55447 2.65067 2.74505 2.83748 2.92786
3.0161 3.10213 3.1859 3.26737 3.34651 3.4233 3.49775 3.56986 3.63965 3.70713 3.77233
3.83528 3.89603 3.95461 4.01106 4.06544 4.1178 4.16818 4.21663 4.26322 4.30799 4.351
4.39231 4.43196 4.47001 4.50651 4.54152 4.5751 4.60728 4.63811 4.66766 4.69597 4.72307
4.74903 4.77387 4.79766 4.82042 4.84219 4.86303 4.88309 4.90242 4.9209 4.93857 4.95546
4.97162 4.98705 5.00181 5.01591 5.02938 5.04226 5.05456 5.06631 5.07753 5.08825 5.09849
5.10827 5.11761 5.12653 5.13505 5.14318 5.15094 5.15835 5.16543 5.17218 5.17863 5.18479
5.19066 5.19627 5.20162 5.21149 #bodywt for gender,fleet: 1 / 2
0 0.0213283 0.0352642 0.0561355 0.0857149 0.125189 0.174691 0.233098 0.298189 0.367085
0.436791 0.504638 0.56856 0.627179 0.679765 0.726107 0.766378 0.800993 0.830503 0.855511
0.876615 0.89438 0.909315 0.921869 0.932428 0.941321 0.948827 0.955176 0.960562 0.965145
0.969056 0.972406 0.975285 0.977769 0.979918 0.981784 0.983411 0.984833 0.986082 0.987181
0.988151 0.989011 0.989776 0.990457 0.991066 0.991611 0.992102 0.992544 0.992943 0.993304
0.993632 0.993931 0.994202 0.994451 0.994678 0.994886 0.995077 0.995253 0.995415 0.995564
0.995702 0.99583 0.995949 0.996059 0.996161 0.996256 0.996344 0.996426 0.996503 0.996575
0.99664 0.996697 0.996751 0.996801 0.996849 0.996894 0.996936 0.996975 0.997012 0.997047
0.99708 0.997112 0.997141 0.997169 0.997195 0.99722 0.997243 0.997266 0.997287 0.997306
0.997325 0.997343 0.99736 0.997376 0.997391 0.997406 0.997419 0.997432 0.997444 0.997456
0.997478 #selex for gender,fleet: 1 / 2
0.0504337 0.189018 0.257432 0.331995 0.409383 0.487655 0.566341 0.645863 0.726964
0.810375 0.896654 0.986129 1.07889 1.17484 1.2737 1.37507 1.4785 1.58348 1.68953 1.79614
1.90288 2.00933 2.11512 2.21995 2.32351 2.42558 2.52596 2.62445 2.72094 2.81528 2.9074
2.99721 3.08467 3.16972 3.25235 3.33253 3.41028 3.48558 3.55846 3.62895 3.69706 3.76284
3.82631 3.88754 3.94655 4.0034 4.05814 4.11083 4.16151 4.21025 4.25709 4.3021 4.34533
4.38683 4.42667 4.46489 4.50156 4.53672 4.57043 4.60273 4.63369 4.66335 4.69176 4.71896
4.745 4.76994 4.7938 4.81663 4.83848 4.85938 4.87949 4.89886 4.91738 4.93509 4.95202
4.96821 4.98368 4.99846 5.01259 5.02609 5.03899 5.05131 5.06309 5.07433 5.08507 5.09533
5.10513 5.11449 5.12342 5.13196 5.1401 5.14788 5.15531 5.1624 5.16916 5.17562 5.18179
5.18767 5.19329 5.19865 5.20854 #bodywt for gender,fleet: 1 / 3
0 0.0168565 0.0359177 0.0704144 0.125351 0.201915 0.296018 0.399604 0.503567 0.600364
0.685263 0.756326 0.813704 0.85879 0.893511 0.919871 0.93969 0.954505 0.965548 0.973775
0.979914 0.984509 0.987963 0.990573 0.992557 0.994075 0.995243 0.99615 0.996858 0.997415
0.997857 0.998209 0.998492 0.998722 0.998908 0.999062 0.999188 0.999293 0.99938 0.999454
0.999516 0.999569 0.999614 0.999653 0.999686 0.999715 0.99974 0.999762 0.999781 0.999798
0.999813 0.999826 0.999838 0.999848 0.999857 0.999866 0.999873 0.99988 0.999886 0.999892
0.999897 0.999902 0.999906 0.99991 0.999913 0.999916 0.999919 0.999922 0.999925 0.999927
0.999929 0.999931 0.999932 0.999934 0.999935 0.999937 0.999938 0.999939 0.99994 0.999941
0.999942 0.999943 0.999944 0.999945 0.999945 0.999946 0.999947 0.999947 0.999948 0.999948
0.999949 0.999949 0.99995 0.99995 0.999951 0.999951 0.999952 0.999952 0.999952 0.999952
0.999953 #selex for gender,fleet: 1 / 3

0.0466444 0.171812 0.236089 0.310135 0.392403 0.480968 0.573886 0.669515 0.76669
0.864713 0.963252 1.0622 1.16158 1.26144 1.36181 1.4627 1.56407 1.66582 1.7678 1.86984
1.97175 2.0733 2.17428 2.27446 2.37364 2.4716 2.56818 2.66318 2.75648 2.84792 2.93742
3.02485 3.11016 3.19328 3.27417 3.35278 3.4291 3.50313 3.57486 3.6443 3.71147 3.77639
3.83909 3.8996 3.95797 4.01424 4.06845 4.12065 4.17089 4.21921 4.26568 4.31034 4.35325
4.39447 4.43403 4.472 4.50844 4.54338 4.57689 4.60901 4.6398 4.6693 4.69756 4.72462
4.75054 4.77535 4.79909 4.82182 4.84357 4.86437 4.88442 4.90372 4.92219 4.93984 4.95672
4.97286 4.98828 5.00302 5.01711 5.03057 5.04343 5.05572 5.06746 5.07868 5.08939 5.09962
5.10939 5.11873 5.12764 5.13615 5.14427 5.15203 5.15943 5.16651 5.17325 5.1797 5.18585
5.19172 5.19732 5.20267 5.21253 #bodywt for gender,fleet: 1 / 4
0 0.011426 0.0195259 0.0322319 0.0512246 0.078121 0.11406 0.159308 0.213068 0.273565
0.338381 0.40488 0.470599 0.533513 0.592155 0.645622 0.693497 0.735745 0.772597 0.804456
0.831809 0.855178 0.875076 0.891982 0.906331 0.91851 0.928852 0.937647 0.945139 0.951534
0.957006 0.961703 0.965744 0.969233 0.972253 0.974877 0.977164 0.979163 0.980916 0.982458
0.983819 0.985024 0.986093 0.987045 0.987895 0.988656 0.989339 0.989954 0.990509 0.99101
0.991464 0.991877 0.992253 0.992596 0.992909 0.993196 0.993459 0.993701 0.993923 0.994128
0.994317 0.994492 0.994655 0.994805 0.994944 0.995074 0.995195 0.995307 0.995412 0.99551
0.995597 0.995675 0.995748 0.995816 0.99588 0.995941 0.995997 0.996051 0.996101 0.996148
0.996193 0.996235 0.996275 0.996312 0.996348 0.996381 0.996413 0.996443 0.996471 0.996498
0.996523 0.996547 0.99657 0.996591 0.996612 0.996631 0.996649 0.996667 0.996683 0.996699
0.996728 #selex for gender,fleet: 1 / 4
0.0458503 0.168306 0.231642 0.305371 0.388624 0.480165 0.578473 0.681886 0.788778
0.897715 1.00756 1.11747 1.22692 1.33558 1.44328 1.54993 1.65553 1.76007 1.86354 1.96594
2.06723 2.16738 2.26632 2.36398 2.46027 2.5551 2.64839 2.74004 2.82997 2.9181 3.00434
3.08863 3.17093 3.25117 3.32932 3.40534 3.47923 3.55097 3.62055 3.68798 3.75327 3.81643
3.87749 3.93648 3.99343 4.04836 4.10133 4.15238 4.20154 4.24886 4.29439 4.33817 4.38026
4.42071 4.45956 4.49687 4.53267 4.56703 4.59999 4.6316 4.6619 4.69094 4.71878 4.74544
4.77098 4.79543 4.81885 4.84126 4.86271 4.88324 4.90305 4.92218 4.94047 4.95796 4.97469
4.99068 5.00597 5.02058 5.03454 5.04789 5.06064 5.07282 5.08446 5.09558 5.1062 5.11635
5.12604 5.13529 5.14413 5.15257 5.16063 5.16832 5.17567 5.18268 5.18938 5.19577 5.20187
5.2077 5.21325 5.21856 5.22834 #bodywt for gender,fleet: 1 / 5
0 0.00497951 0.00812772 0.0129303 0.0200354 0.0302067 0.0442625 0.0629721 0.086926
0.116411 0.151331 0.191188 0.235142 0.282111 0.330901 0.380324 0.429299 0.476909 0.522437
0.565367 0.605371 0.642279 0.67605 0.706745 0.734491 0.759464 0.781866 0.801913 0.819821
0.835799 0.850049 0.862754 0.874085 0.884197 0.893229 0.901303 0.908532 0.915011 0.920828
0.926059 0.93077 0.935021 0.938862 0.94234 0.945494 0.948359 0.950967 0.953345 0.955515
0.957501 0.95932 0.960989 0.962523 0.963934 0.965235 0.966436 0.967546 0.968573 0.969524
0.970407 0.971227 0.971989 0.972699 0.97336 0.973977 0.974553 0.975091 0.975595 0.976066
0.976508 0.976906 0.977266 0.977603 0.977921 0.97822 0.978501 0.978766 0.979016 0.979252
0.979474 0.979684 0.979882 0.98007 0.980247 0.980414 0.980573 0.980723 0.980865 0.980999
0.981126 0.981247 0.981362 0.98147 0.981573 0.981671 0.981763 0.981851 0.981935 0.982014
0.982089 0.982227 #selex for gender,fleet: 1 / 5
0.047457 0.17645 0.243537 0.321908 0.410686 0.508516 0.613589 0.723785 0.836934 0.951109
1.06483 1.17713 1.28749 1.39572 1.50187 1.60609 1.70859 1.80956 1.90918 2.00759 2.10486
2.20106 2.29619 2.39022 2.48312 2.5748 2.66519 2.7542 2.84174 2.92771 3.01203 3.09461
3.17538 3.25429 3.33126 3.40625 3.47924 3.55019 3.61909 3.68593 3.7507 3.81342 3.87411
3.93277 3.98943 4.04413 4.0969 4.14777 4.19679 4.24398 4.28941 4.33311 4.37514 4.41552
4.45433 4.4916 4.52738 4.56171 4.59466 4.62625 4.65655 4.68559 4.71343 4.74009 4.76564
4.7901 4.81352 4.83595 4.85741 4.87795 4.89777 4.91689 4.93519 4.95268 4.96941 4.98541
5.0007 5.01531 5.02928 5.04263 5.05538 5.06757 5.07922 5.09034 5.10097 5.11112 5.12081
5.13007 5.13891 5.14735 5.15542 5.16311 5.17046 5.17748 5.18418 5.19057 5.19668 5.20251
5.20807 5.21338 5.22317 #bodywt for gender,fleet: 1 / 6
0 0.00140879 0.00257294 0.0045632 0.00785473 0.0131087 0.0211776 0.0330585 0.0497792
0.0722262 0.100961 0.136078 0.177153 0.223289 0.273245 0.325598 0.378907 0.431846
0.483294 0.532373 0.578462 0.62117 0.660309 0.695849 0.727877 0.756568 0.782144 0.80486
0.824981 0.842767 0.858471 0.872327 0.884551 0.895338 0.904864 0.913285 0.920737 0.927341
0.933203 0.938416 0.943059 0.947203 0.950909 0.95423 0.957211 0.959893 0.962311 0.964495
0.966471 0.968263 0.969891 0.971372 0.972723 0.973958 0.975087 0.976122 0.977072 0.977946
0.97875 0.979492 0.980177 0.980811 0.981398 0.981942 0.982447 0.982916 0.983353 0.983759
0.984139 0.984493 0.984808 0.985089 0.985353 0.9856 0.985832 0.986049 0.986254 0.986446
0.986628 0.986798 0.986959 0.98711 0.987253 0.987388 0.987515 0.987635 0.987749 0.987856
0.987958 0.988054 0.988145 0.988231 0.988312 0.98839 0.988463 0.988532 0.988598 0.98866
0.98872 0.988776 0.988879 #selex for gender,fleet: 1 / 6
0.0539259 0.185573 0.25267 0.328419 0.411174 0.499395 0.591863 0.687727 0.786456
0.887728 0.991338 1.09712 1.20489 1.31446 1.42557 1.53794 1.65126 1.7652 1.87941 1.99355
2.1073 2.22035 2.33241 2.44322 2.55253 2.66014 2.76586 2.86955 2.97105 3.07027 3.1671
3.26149 3.35337 3.44271 3.52948 3.61367 3.69528 3.77432 3.8508 3.92475 3.99621 4.06521
4.13179 4.19599 4.25787 4.31749 4.37488 4.43012 4.48325 4.53434 4.58344 4.63062 4.67593
4.71944 4.76119 4.80125 4.83969 4.87654 4.91187 4.94574 4.97819 5.00929 5.03907 5.06759
5.0949 5.12104 5.14607 5.17001 5.19293 5.21485 5.23595 5.25627 5.2757 5.29428 5.31205
5.32903 5.34526 5.36078 5.37561 5.38979 5.40333 5.41627 5.42863 5.44045 5.45173 5.46251

5.4728 5.48264 5.49203 5.501 5.50956 5.51774 5.52555 5.533 5.54012 5.54692 5.55341 5.5596
5.56551 5.57116 5.58159 #bodywt for gender,fleet: 2 / 1
0 0.0518398 0.079816 0.117909 0.166721 0.225504 0.292161 0.363647 0.436587 0.507864
0.575011 0.636368 0.691057 0.738838 0.779931 0.814846 0.844245 0.868839 0.889325 0.906346
0.920474 0.932201 0.941947 0.950061 0.956834 0.962504 0.967267 0.971282 0.974679 0.977566
0.980027 0.982135 0.983947 0.985511 0.986866 0.988045 0.989074 0.989975 0.990768 0.991468
0.992087 0.992636 0.993126 0.993564 0.993956 0.994308 0.994625 0.994912 0.995171 0.995406
0.99562 0.995816 0.995994 0.996157 0.996306 0.996443 0.996569 0.996686 0.996793 0.996892
0.996984 0.997069 0.997148 0.997221 0.997289 0.997353 0.997412 0.997468 0.997519 0.997568
0.997611 0.99765 0.997687 0.997721 0.997754 0.997784 0.997813 0.99784 0.997865 0.997889
0.997912 0.997933 0.997953 0.997972 0.99799 0.998008 0.998024 0.998039 0.998053 0.998067
0.99808 0.998092 0.998104 0.998115 0.998125 0.998135 0.998145 0.998154 0.998162 0.99817
0.998185 #selex for gender,fleet: 2 / 1
0 0.0552534 0.192681 0.263397 0.343528 0.43103 0.5238 0.620085 0.718683 0.818926 0.920536
1.02346 1.12775 1.23345 1.34057 1.44904 1.55872 1.66943 1.78089 1.89283 2.00493 2.11687
2.22834 2.33904 2.44867 2.557 2.66377 2.7688 2.8719 2.97292 3.07173 3.16823 3.26234
3.35399 3.44314 3.52976 3.61382 3.69532 3.77427 3.85069 3.92458 3.99599 4.06495 4.1315
4.19568 4.25754 4.31714 4.37452 4.42975 4.48287 4.53396 4.58306 4.63023 4.67554 4.71904
4.7608 4.80086 4.83929 4.87615 4.91149 4.94535 4.97781 5.0089 5.03869 5.06721 5.09452
5.12067 5.14569 5.16964 5.19256 5.21448 5.23559 5.25591 5.27534 5.29392 5.31169 5.32867
5.34491 5.36042 5.37526 5.38943 5.40297 5.41592 5.42828 5.44009 5.45138 5.46216 5.47245
5.48229 5.49168 5.50065 5.50921 5.51739 5.5252 5.53266 5.53977 5.54657 5.55306 5.55925
5.56517 5.57081 5.58124 #bodywt for gender,fleet: 2 / 2
0 0.0217085 0.0367487 0.0596831 0.0925919 0.136787 0.192233 0.257331 0.329197 0.404272
0.479017 0.550442 0.616385 0.675562 0.727455 0.772127 0.810028 0.841829 0.868293 0.890188
0.908235 0.923079 0.935281 0.945317 0.953582 0.960405 0.966052 0.970742 0.974651 0.977922
0.98067 0.982988 0.984953 0.986624 0.988052 0.989277 0.990333 0.991246 0.992039 0.992731
0.993336 0.993868 0.994337 0.994751 0.995119 0.995446 0.995738 0.996 0.996235 0.996446
0.996637 0.99681 0.996966 0.997109 0.997238 0.997357 0.997465 0.997564 0.997655 0.997739
0.997816 0.997887 0.997953 0.998014 0.99807 0.998123 0.998171 0.998216 0.998259 0.998298
0.998333 0.998364 0.998393 0.99842 0.998446 0.99847 0.998493 0.998514 0.998534 0.998553
0.998571 0.998587 0.998603 0.998618 0.998632 0.998645 0.998658 0.99867 0.998681 0.998691
0.998701 0.998711 0.99872 0.998728 0.998736 0.998744 0.998751 0.998758 0.998765 0.998771
0.998782 #selex for gender,fleet: 2 / 2
0 0.0601075 0.214219 0.290644 0.372767 0.456919 0.541321 0.625889 0.711421 0.798942
0.889352 0.983281 1.08104 1.18265 1.28787 1.39629 1.50736 1.62049 1.73505 1.85046 1.96618
2.08171 2.19662 2.31053 2.42313 2.53414 2.64333 2.7505 2.85551 2.95821 3.05851 3.15632
3.25159 3.34425 3.4343 3.5217 3.60646 3.68857 3.76807 3.84497 3.91929 3.99109 4.06039
4.12724 4.1917 4.25381 4.31363 4.37121 4.42662 4.47991 4.53115 4.58038 4.62768 4.6731
4.71671 4.75856 4.79871 4.83723 4.87416 4.90956 4.94349 4.97601 5.00716 5.03699 5.06556
5.09292 5.1191 5.14417 5.16815 5.1911 5.21306 5.23419 5.25452 5.27397 5.29257 5.31035
5.32735 5.3436 5.35913 5.37398 5.38816 5.40172 5.41467 5.42705 5.43887 5.45016 5.46095
5.47125 5.48109 5.49049 5.49947 5.50804 5.51623 5.52404 5.5315 5.53863 5.54543 5.55192
5.55812 5.56404 5.56969 5.58013 #bodywt for gender,fleet: 2 / 3
0 0.0173676 0.0382509 0.0767998 0.138612 0.224342 0.328234 0.44021 0.549681 0.648575
0.732478 0.80025 0.852958 0.892796 0.92228 0.94378 0.959307 0.970457 0.978446 0.984174
0.988291 0.991264 0.993423 0.995001 0.996164 0.997028 0.997674 0.998163 0.998535 0.99882
0.999042 0.999215 0.999351 0.99946 0.999556 0.999616 0.999673 0.999719 0.999757 0.999789
0.999815 0.999837 0.999856 0.999872 0.999885 0.999897 0.999907 0.999915 0.999923 0.999929
0.999935 0.99994 0.999945 0.999949 0.999952 0.999955 0.999958 0.99996 0.999963 0.999965
0.999966 0.999968 0.99997 0.999971 0.999972 0.999973 0.999974 0.999975 0.999976 0.999977
0.999978 0.999978 0.999979 0.999979 0.99998 0.99998 0.999981 0.999981 0.999982 0.999982
0.999982 0.999983 0.999983 0.999983 0.999983 0.999984 0.999984 0.999984 0.999984 0.999984
0.999985 0.999985 0.999985 0.999985 0.999985 0.999985 0.999985 0.999986 0.999986 0.999986
0.999986 #selex for gender,fleet: 2 / 3
0 0.0556789 0.195209 0.267577 0.35015 0.44094 0.537655 0.638145 0.74075 0.844425 0.948657
1.0533 1.15843 1.26416 1.37063 1.47791 1.58603 1.69489 1.80437 1.91426 2.02434 2.13434
2.24397 2.35297 2.46106 2.56799 2.67352 2.77744 2.87956 2.97971 3.07777 3.17361 3.26714
3.35829 3.447 3.53323 3.61695 3.69816 3.77685 3.85304 3.92673 3.99796 4.06676 4.13317
4.19723 4.25898 4.31848 4.37577 4.43092 4.48397 4.53499 4.58403 4.63115 4.67641 4.71987
4.76159 4.80161 4.84001 4.87684 4.91214 4.94599 4.97842 5.00949 5.03926 5.06776 5.09506
5.12119 5.1462 5.17013 5.19304 5.21495 5.23604 5.25635 5.27578 5.29435 5.31211 5.32909
5.34532 5.36083 5.37566 5.38983 5.40337 5.41631 5.42867 5.44048 5.45176 5.46253 5.47283
5.48266 5.49205 5.50101 5.50957 5.51775 5.52556 5.53301 5.54013 5.54692 5.55341 5.5596
5.56551 5.57116 5.58159 #bodywt for gender,fleet: 2 / 4
0 0.0116461 0.020415 0.0344617 0.0557967 0.0863221 0.127287 0.178795 0.239606 0.307321
0.37886 0.451034 0.521016 0.586629 0.646439 0.699711 0.746272 0.786357 0.820457 0.849204
0.873276 0.893338 0.910009 0.92384 0.935311 0.94483 0.952741 0.95933 0.964832 0.96944
0.973313 0.97658 0.979345 0.981696 0.983701 0.985419 0.986896 0.988172 0.989277 0.990239
0.991079 0.991814 0.992462 0.993033 0.993538 0.993987 0.994387 0.994744 0.995065 0.995352
0.995611 0.995845 0.996057 0.99625 0.996424 0.996584 0.996729 0.996862 0.996984 0.997096

2.99193e+008 2.66925e+008 2.40004e+008 2.24091e+008 2.0494e+008 1.90416e+008 1.73207e+008
 1.69624e+008 1.61081e+008 1.64243e+008 1.65896e+008 1.72094e+008 1.78547e+008
 1.84803e+008 1.90791e+008 1.96963e+008 2.02098e+008 2.07907e+008 2.13833e+008
 2.19494e+008 #SpawnBio
 0.44056 0.5 0 # spawn-recr steepness, sigmaR, autocorr
 # values from cat150_hmle, catch at 150% and steepness at mle value. # this is state of
 nature 6 out of 9 (in no particular order) # and parameter set number 1 out of 2 for this
 state
 0 0 29.3832 106.748 351.507 1039.21 2725.77 6303.48 12889.6 23546.3 38970.3 59315.1
 84209.1 112917 144548 178233 213232 248981 285083 321285 357438 393464 429326 465007
 500501 535798 570884 605742 640344 674660 708657 742296 775540 808350 840688 872520
 903811 934531 964652 994149 1.023e+006 1.05119e+006 1.0787e+006 1.10551e+006 1.13163e+006
 1.15704e+006 1.18174e+006 1.20573e+006 1.229e+006 1.25157e+006 1.27343e+006 1.29459e+006
 1.31507e+006 1.33486e+006 1.35399e+006 1.37245e+006 1.39027e+006 1.40745e+006
 1.42402e+006 1.43998e+006 1.45535e+006 1.47015e+006 1.48438e+006 1.49808e+006
 1.51124e+006 1.52389e+006 1.53604e+006 1.54771e+006 1.55892e+006 1.56967e+006
 1.57999e+006 1.59016e+006 1.5999e+006 1.60925e+006 1.61821e+006 1.6268e+006 1.63503e+006
 1.64291e+006 1.65046e+006 1.65769e+006 1.66462e+006 1.67125e+006 1.67759e+006
 1.68366e+006 1.68947e+006 1.69503e+006 1.70035e+006 1.70543e+006 1.71029e+006
 1.71494e+006 1.71939e+006 1.72363e+006 1.7277e+006 1.73158e+006 1.73529e+006 1.73883e+006
 1.74222e+006 1.74546e+006 1.74855e+006 1.7515e+006 1.75696e+006 #female fecundity;
 weighted by N in year Y_init across morphs and areas
 0.0454676 0.16465 0.224291 0.292145 0.366874 0.447141 0.531806 0.620006 0.711142
 0.804812 0.900735 0.998695 1.09849 1.19991 1.30273 1.4067 1.51155 1.61699 1.72273 1.82848
 1.93395 2.03886 2.14297 2.24602 2.3478 2.44812 2.5468 2.64368 2.73864 2.83156 2.92234
 3.01092 3.09724 3.18124 3.26289 3.34219 3.41911 3.49367 3.56586 3.63571 3.70325 3.76849
 3.83148 3.89225 3.95086 4.00733 4.06173 4.1141 4.16449 4.21296 4.25956 4.30434 4.34737
 4.38868 4.42834 4.46641 4.50293 4.53795 4.57154 4.60373 4.63459 4.66415 4.69248 4.7196
 4.74557 4.77044 4.79424 4.81702 4.83882 4.85968 4.87976 4.89911 4.91762 4.93531 4.95223
 4.9684 4.98386 4.99864 5.01276 5.02626 5.03916 5.05148 5.06325 5.0745 5.08524 5.0955
 5.1053 5.11466 5.1236 5.13214 5.14029 5.14807 5.1555 5.1626 5.16937 5.17583 5.18201
 5.1879 5.19352 5.19889 5.2088 #bodywt for gender,fleet: 1 / 1
 0 0.0521777 0.0786115 0.114039 0.158966 0.212811 0.273893 0.339728 0.4075 0.474526
 0.53859 0.598103 0.652108 0.700197 0.742381 0.778954 0.810385 0.837222 0.860032 0.879365
 0.895727 0.909567 0.921281 0.931208 0.939634 0.946803 0.952919 0.958151 0.962641 0.966506
 0.969845 0.972738 0.975254 0.977449 0.97937 0.981058 0.982544 0.983859 0.985024 0.98606
 0.986984 0.98781 0.988551 0.989217 0.989818 0.99036 0.990852 0.991298 0.991704 0.992074
 0.992412 0.992721 0.993005 0.993265 0.993505 0.993726 0.993929 0.994118 0.994292 0.994454
 0.994604 0.994743 0.994873 0.994993 0.995106 0.995211 0.995309 0.995401 0.995487 0.995567
 0.99564 0.995706 0.995767 0.995825 0.995879 0.995931 0.995979 0.996025 0.996067 0.996108
 0.996146 0.996182 0.996217 0.996249 0.996279 0.996308 0.996336 0.996362 0.996386 0.99641
 0.996432 0.996452 0.996472 0.996491 0.996509 0.996526 0.996542 0.996557 0.996572 0.996585
 0.996611 #selex for gender,fleet: 1 / 1
 0.046615 0.171129 0.234088 0.30603 0.385315 0.470137 0.558873 0.650296 0.743617 0.838405
 0.934465 1.03173 1.13017 1.22977 1.33044 1.43209 1.53456 1.63764 1.74111 1.84472 1.94822
 2.05133 2.15382 2.25542 2.35592 2.45511 2.5528 2.64882 2.74303 2.8353 2.92552 3.01361
 3.09951 3.18314 3.26449 3.34351 3.4202 3.49455 3.56657 3.63627 3.70367 3.7688 3.83169
 3.89237 3.9509 4.00731 4.06165 4.11397 4.16432 4.21275 4.25931 4.30407 4.34706 4.38836
 4.428 4.46605 4.50255 4.53756 4.57113 4.60332 4.63417 4.66372 4.69204 4.71915 4.74512
 4.76998 4.79378 4.81656 4.83835 4.8592 4.87929 4.89863 4.91713 4.93482 4.95174 4.96791
 4.98337 4.99815 5.01227 5.02576 5.03866 5.05098 5.06275 5.074 5.08474 5.095 5.1048
 5.11416 5.12309 5.13163 5.13978 5.14756 5.15499 5.16209 5.16886 5.17532 5.1815 5.18739
 5.19301 5.19838 5.20828 #bodywt for gender,fleet: 1 / 2
 0 0.0217781 0.035912 0.0570166 0.0868386 0.126525 0.176172 0.234626 0.299659 0.368408
 0.437902 0.505505 0.569179 0.627569 0.679954 0.726132 0.766274 0.800795 0.830239 0.855204
 0.876285 0.89404 0.908975 0.921536 0.932107 0.941016 0.948538 0.954904 0.960307 0.964906
 0.968834 0.972199 0.975093 0.977589 0.97975 0.981627 0.983264 0.984696 0.985953 0.98706
 0.988038 0.988904 0.989675 0.990361 0.990975 0.991526 0.99202 0.992466 0.992869 0.993234
 0.993565 0.993866 0.99414 0.994391 0.99462 0.99483 0.995023 0.995201 0.995364 0.995515
 0.995655 0.995784 0.995904 0.996015 0.996118 0.996214 0.996303 0.996387 0.996464 0.996537
 0.996602 0.99666 0.996715 0.996766 0.996814 0.996859 0.996901 0.996941 0.996979 0.997015
 0.997048 0.99708 0.997109 0.997137 0.997164 0.997189 0.997213 0.997235 0.997257 0.997277
 0.997296 0.997314 0.997331 0.997347 0.997362 0.997377 0.997391 0.997404 0.997416 0.997428
 0.99745 #selex for gender,fleet: 1 / 2
 0.0507971 0.190731 0.259211 0.333715 0.41097 0.489095 0.567655 0.647075 0.728093
 0.811431 0.897634 0.987023 1.07969 1.17551 1.27423 1.37544 1.47869 1.58349 1.68934
 1.79575 1.90228 2.00852 2.11411 2.21873 2.3221 2.42398 2.52417 2.62249 2.7188 2.81299
 2.90495 2.99462 3.08194 3.16686 3.24937 3.32944 3.40708 3.48229 3.55508 3.62549 3.69352
 3.75923 3.82265 3.88381 3.94278 3.99959 4.05429 4.10694 4.1576 4.20631 4.25313 4.29813
 4.34134 4.38284 4.42267 4.46089 4.49755 4.53271 4.56642 4.59874 4.6297 4.65937 4.68779
 4.715 4.74106 4.76601 4.78988 4.81273 4.8346 4.85552 4.87565 4.89504 4.91358 4.93131

4.94826 4.96447 4.97996 4.99477 5.00892 5.02244 5.03536 5.04771 5.0595 5.07077 5.08153
 5.09181 5.10163 5.11101 5.11996 5.12851 5.13668 5.14447 5.15192 5.15903 5.16581 5.17229
 5.17847 5.18437 5.19001 5.19538 5.20531 #bodywt for gender,fleet: 1 / 3
 0 0.0174342 0.0369567 0.0720661 0.127638 0.204671 0.298944 0.40238 0.505959 0.602257
 0.686652 0.757273 0.8143 0.859126 0.893669 0.919914 0.939663 0.954439 0.965464 0.973685
 0.979826 0.984427 0.987889 0.990507 0.992499 0.994023 0.995199 0.996111 0.996824 0.997386
 0.997831 0.998187 0.998473 0.998705 0.998893 0.999048 0.999176 0.999282 0.999371 0.999446
 0.999509 0.999562 0.999608 0.999647 0.999681 0.99971 0.999735 0.999758 0.999777 0.999794
 0.999809 0.999823 0.999835 0.999845 0.999855 0.999863 0.999871 0.999878 0.999884 0.99989
 0.999895 0.9999 0.999904 0.999908 0.999912 0.999915 0.999918 0.999921 0.999923 0.999926
 0.999928 0.99993 0.999931 0.999933 0.999934 0.999935 0.999937 0.999938 0.999939 0.99994
 0.999941 0.999942 0.999943 0.999944 0.999944 0.999945 0.999946 0.999946 0.999947 0.999947
 0.999948 0.999948 0.999949 0.999949 0.99995 0.99995 0.999951 0.999951 0.999951 0.999952
 0.999952 #selex for gender,fleet: 1 / 3
 0.0469175 0.173105 0.237423 0.311436 0.393613 0.482063 0.574874 0.670433 0.767581
 0.865617 0.964195 1.0632 1.16262 1.26251 1.36289 1.46376 1.56508 1.66674 1.76861 1.87052
 1.97226 2.07364 2.17442 2.2744 2.37337 2.47112 2.56748 2.66228 2.75537 2.84662 2.93591
 3.02317 3.1083 3.19125 3.27198 3.35045 3.42664 3.50053 3.57214 3.64147 3.70854 3.77337
 3.83598 3.89642 3.95472 4.01093 4.06508 4.11723 4.16742 4.21571 4.26214 4.30677 4.34966
 4.39085 4.4304 4.46836 4.50478 4.53972 4.57322 4.60534 4.63613 4.66563 4.6939 4.72097
 4.74689 4.77171 4.79547 4.81821 4.83997 4.86079 4.88085 4.90017 4.91865 4.93632 4.95322
 4.96938 4.98482 4.99958 5.01369 5.02717 5.04005 5.05236 5.06412 5.07536 5.08609 5.09634
 5.10613 5.11548 5.12441 5.13294 5.14108 5.14886 5.15628 5.16337 5.17014 5.17659 5.18276
 5.18865 5.19427 5.19963 5.20953 #bodywt for gender,fleet: 1 / 4
 0 0.0118732 0.0201495 0.0330429 0.0521932 0.0791608 0.115027 0.160022 0.213346 0.27326
 0.337409 0.403228 0.468318 0.5307 0.588934 0.642121 0.689837 0.732032 0.768918 0.800876
 0.828375 0.851921 0.872012 0.889119 0.903669 0.916043 0.926572 0.935541 0.943196 0.949741
 0.955352 0.960174 0.96433 0.967922 0.971038 0.973747 0.976111 0.97818 0.979997 0.981596
 0.983009 0.984261 0.985374 0.986365 0.987251 0.988045 0.988758 0.9894 0.989979 0.990504
 0.990979 0.991411 0.991805 0.992164 0.992493 0.992794 0.99307 0.993324 0.993557 0.993773
 0.993972 0.994156 0.994326 0.994485 0.994631 0.994768 0.994895 0.995013 0.995124 0.995227
 0.995319 0.995401 0.995478 0.99555 0.995618 0.995682 0.995742 0.995798 0.995852 0.995902
 0.995949 0.995993 0.996035 0.996075 0.996112 0.996148 0.996181 0.996213 0.996243 0.996271
 0.996298 0.996323 0.996347 0.99637 0.996392 0.996412 0.996432 0.99645 0.996467 0.996484
 0.996515 #selex for gender,fleet: 1 / 4
 0.046087 0.169426 0.232753 0.306396 0.389502 0.480864 0.579 0.682294 0.789151 0.898157
 1.00817 1.11834 1.2281 1.3371 1.44514 1.55213 1.65802 1.76281 1.86649 1.96904 2.07042
 2.17061 2.26955 2.36715 2.46335 2.55806 2.6512 2.74268 2.83242 2.92035 3.00638 3.09046
 3.17254 3.25256 3.3305 3.40632 3.48 3.55154 3.62094 3.68819 3.7533 3.81631 3.87722
 3.93606 3.99287 4.04769 4.10054 4.15148 4.20054 4.24777 4.29321 4.33692 4.37894 4.41932
 4.45812 4.49537 4.53113 4.56544 4.59836 4.62993 4.66021 4.68923 4.71703 4.74368 4.7692
 4.79364 4.81704 4.83945 4.86089 4.88141 4.90123 4.92036 4.93866 4.95616 4.97289 4.98889
 5.00419 5.01881 5.03279 5.04614 5.05891 5.0711 5.08276 5.09389 5.10452 5.11468 5.12439
 5.13365 5.1425 5.15096 5.15903 5.16674 5.1741 5.18112 5.18783 5.19423 5.20035 5.20618
 5.21176 5.21707 5.22689 #bodywt for gender,fleet: 1 / 5
 0 0.00514089 0.0083198 0.0131297 0.020192 0.030234 0.0440312 0.0623113 0.0856349
 0.114282 0.148174 0.18686 0.229564 0.275277 0.322873 0.371223 0.419286 0.466171 0.511167
 0.553752 0.593583 0.630469 0.664347 0.69525 0.723286 0.748607 0.771399 0.791861 0.810198
 0.826608 0.841285 0.854409 0.866144 0.876643 0.886043 0.894466 0.902023 0.908811 0.914918
 0.920419 0.925383 0.929869 0.933393 0.937612 0.940956 0.943999 0.946771 0.949302 0.951616
 0.953734 0.955677 0.957462 0.959103 0.960615 0.96201 0.963299 0.964491 0.965594 0.966618
 0.967568 0.968451 0.969272 0.970038 0.970751 0.971417 0.972039 0.972621 0.973165 0.973674
 0.974152 0.974584 0.974974 0.97534 0.975685 0.976009 0.976315 0.976603 0.976874 0.97713
 0.977372 0.9776 0.977816 0.978019 0.978212 0.978394 0.978567 0.97873 0.978884 0.979031
 0.97917 0.979301 0.979426 0.979544 0.979656 0.979763 0.979864 0.979959 0.980051 0.980137
 0.980219 0.98037 #selex for gender,fleet: 1 / 5
 0.0478087 0.178167 0.245476 0.324019 0.412907 0.510779 0.615821 0.725919 0.838917
 0.952904 1.06642 1.1785 1.28865 1.39668 1.50263 1.60666 1.70897 1.80976 1.9092 2.00743
 2.10453 2.20054 2.29549 2.38935 2.48206 2.57357 2.66379 2.75263 2.84 2.92581 3.00997
 3.0924 3.17303 3.2518 3.32864 3.40352 3.47639 3.54723 3.61603 3.68277 3.74746 3.81011
 3.87072 3.92932 3.98592 4.04057 4.09329 4.14412 4.19309 4.24026 4.28566 4.32934 4.37134
 4.41172 4.45051 4.48777 4.52354 4.55787 4.59082 4.62241 4.65272 4.68176 4.7096 4.73628
 4.76183 4.78631 4.80974 4.83218 4.85366 4.87421 4.89405 4.9132 4.93151 4.94902 4.96577
 4.98179 4.9971 5.01173 5.02572 5.03909 5.05187 5.06407 5.07574 5.08688 5.09753 5.1077
 5.11741 5.12669 5.13555 5.14401 5.15209 5.15981 5.16718 5.17421 5.18093 5.18734 5.19346
 5.1993 5.20488 5.2102 5.22003 #bodywt for gender,fleet: 1 / 6
 0 0.00144016 0.00262441 0.00464459 0.00797846 0.0132888 0.0214275 0.0333874 0.0501875
 0.0727026 0.101481 0.136607 0.17765 0.223714 0.273564 0.325787 0.378953 0.431747 0.483056
 0.532011 0.577994 0.620617 0.65969 0.695183 0.727183 0.755858 0.781432 0.804156 0.824291
 0.842097 0.857825 0.871707 0.883959 0.894775 0.90433 0.912778 0.920257 0.926887 0.932774
 0.93801 0.942675 0.94684 0.950565 0.953904 0.956901 0.959599 0.962031 0.964228 0.966217

0.96802 0.969659 0.971151 0.972511 0.973754 0.974891 0.975934 0.976891 0.977771 0.978581
0.979329 0.980019 0.980658 0.981249 0.981798 0.982307 0.98278 0.98322 0.98363 0.984013
0.98437 0.984688 0.984971 0.985237 0.985486 0.98572 0.98594 0.986146 0.98634 0.986523
0.986695 0.986857 0.98701 0.987154 0.98729 0.987418 0.987539 0.987654 0.987762 0.987865
0.987962 0.988054 0.988141 0.988223 0.988301 0.988375 0.988445 0.988511 0.988574 0.988634
0.988691 0.988795 #selex for gender,fleet: 1 / 6
0.054296 0.187189 0.254426 0.330243 0.413003 0.501183 0.593579 0.689356 0.787989
0.889161 0.992665 1.09833 1.20599 1.31544 1.42641 1.53864 1.65181 1.76559 1.87964 1.99361
2.1072 2.22008 2.33196 2.4426 2.55174 2.65919 2.76476 2.86829 2.96964 3.06872 3.16542
3.25968 3.35144 3.44066 3.52732 3.61141 3.69293 3.77188 3.84828 3.92216 3.99355 4.06248
4.12901 4.19316 4.255 4.31457 4.37193 4.42713 4.48023 4.5313 4.58038 4.62754 4.67284
4.71633 4.75808 4.79813 4.83656 4.87342 4.90875 4.94262 4.97508 5.00618 5.03597 5.0645
5.09182 5.11797 5.14301 5.16697 5.18989 5.21183 5.23295 5.25328 5.27273 5.29133 5.30911
5.32611 5.34236 5.3579 5.37275 5.38694 5.4005 5.41346 5.42584 5.43767 5.44897 5.45976
5.47008 5.47993 5.48933 5.49832 5.5069 5.51509 5.52292 5.53039 5.53752 5.54433 5.55084
5.55704 5.56297 5.56863 5.57909 #bodywt for gender,fleet: 2 / 1
0 0.052912 0.0812448 0.119698 0.168817 0.227804 0.294529 0.365945 0.4387 0.509715
0.576562 0.637616 0.692022 0.739554 0.780438 0.815184 0.844451 0.868944 0.889356 0.906323
0.92041 0.932115 0.941845 0.94995 0.956719 0.962388 0.967152 0.97117 0.974572 0.977462
0.979929 0.982041 0.983858 0.985427 0.986787 0.98797 0.989003 0.989908 0.990704 0.991407
0.992029 0.992582 0.993074 0.993514 0.993908 0.994263 0.994582 0.99487 0.995131 0.995368
0.995584 0.99578 0.995959 0.996123 0.996274 0.996412 0.996539 0.996656 0.996764 0.996864
0.996957 0.997043 0.997122 0.997196 0.997265 0.997329 0.997389 0.997445 0.997497 0.997545
0.997589 0.997629 0.997666 0.9977 0.997733 0.997764 0.997793 0.99782 0.997846 0.99787
0.997893 0.997914 0.997935 0.997954 0.997972 0.997989 0.998005 0.998021 0.998035 0.998049
0.998062 0.998075 0.998086 0.998098 0.998108 0.998118 0.998128 0.998137 0.998145 0.998153
0.998168 #selex for gender,fleet: 2 / 1
0.0556397 0.194416 0.265306 0.345532 0.433051 0.525776 0.621976 0.720467 0.820596
0.92209 1.0249 1.12907 1.23465 1.34164 1.44997 1.55951 1.67006 1.78137 1.89314 2.00507
2.11684 2.22813 2.33865 2.44811 2.55626 2.66287 2.76773 2.87067 2.97154 3.07021 3.16657
3.26055 3.35208 3.44111 3.52762 3.61158 3.69299 3.77185 3.84818 3.922 3.99334 4.06224
4.12873 4.19285 4.25467 4.31422 4.37157 4.42676 4.47986 4.53092 4.58 4.62715 4.67245
4.71594 4.75769 4.79774 4.83617 4.87303 4.90836 4.94223 4.97469 5.00579 5.03559 5.06412
5.09144 5.1176 5.14263 5.1666 5.18953 5.21146 5.23259 5.25292 5.27237 5.29096 5.30875
5.32575 5.342 5.35754 5.37239 5.38658 5.40014 5.4131 5.42548 5.43731 5.44862 5.45941
5.46973 5.47958 5.48898 5.49797 5.50655 5.51474 5.52257 5.53004 5.53717 5.54398 5.55049
5.5567 5.56262 5.56828 5.57874 #bodywt for gender,fleet: 2 / 2
0 0.0221689 0.0374292 0.0606283 0.0938159 0.138258 0.19387 0.259023 0.330824 0.405737
0.480253 0.551419 0.617105 0.676048 0.727744 0.772257 0.810038 0.841753 0.868158 0.890016
0.908042 0.922877 0.935079 0.945119 0.953393 0.960225 0.965884 0.970586 0.974507 0.977788
0.980547 0.982875 0.984848 0.986527 0.987962 0.989194 0.990256 0.991175 0.991973 0.992669
0.993279 0.993814 0.994286 0.994703 0.995074 0.995404 0.995698 0.995962 0.996199 0.996412
0.996604 0.996779 0.996936 0.99708 0.997211 0.99733 0.99744 0.99754 0.997632 0.997716
0.997794 0.997866 0.997932 0.997994 0.998051 0.998103 0.998153 0.998198 0.998241 0.99828
0.998316 0.998347 0.998377 0.998404 0.99843 0.998454 0.998477 0.998499 0.998519 0.998538
0.998556 0.998573 0.998589 0.998604 0.998618 0.998631 0.998644 0.998656 0.998667 0.998678
0.998688 0.998698 0.998707 0.998715 0.998724 0.998731 0.998739 0.998746 0.998752 0.998759
0.99877 #selex for gender,fleet: 2 / 2
0.0605288 0.216102 0.292593 0.374645 0.458657 0.542916 0.627371 0.712824 0.800289
0.890655 0.984536 1.08224 1.18377 1.2889 1.3972 1.50813 1.6211 1.7355 1.85075 1.96628
2.08163 2.19636 2.31009 2.42252 2.53335 2.64237 2.74939 2.85424 2.95679 3.05695 3.15462
3.24975 3.3423 3.43223 3.51952 3.60418 3.6862 3.76561 3.84243 3.91668 3.98841 4.05765
4.12445 4.18885 4.25092 4.31069 4.36824 4.42362 4.47688 4.52809 4.57731 4.62459 4.67
4.71359 4.75544 4.79558 4.83409 4.87102 4.90643 4.94036 4.97288 5.00404 5.03388 5.06246
5.08982 5.11602 5.1411 5.1651 5.18806 5.21003 5.23117 5.25153 5.27099 5.28961 5.30741
5.32442 5.34069 5.35624 5.3711 5.38531 5.39888 5.41185 5.42424 5.43608 5.44739 5.4582
5.46852 5.47838 5.48779 5.49678 5.50537 5.51357 5.5214 5.52888 5.53602 5.54284 5.54934
5.55556 5.56149 5.56715 5.57762 #bodywt for gender,fleet: 2 / 3
0 0.017966 0.0393616 0.0785984 0.141116 0.227345 0.331382 0.443145 0.55216 0.6505
0.733868 0.801189 0.853553 0.893146 0.922467 0.943863 0.959328 0.970444 0.978416 0.984137
0.988253 0.991228 0.99339 0.994972 0.996139 0.997006 0.997656 0.998147 0.998521 0.998809
0.999032 0.999206 0.999344 0.999453 0.999541 0.999611 0.999668 0.999715 0.999754 0.999786
0.999813 0.999835 0.999854 0.99987 0.999884 0.999895 0.999905 0.999914 0.999922 0.999928
0.999934 0.999939 0.999944 0.999948 0.999951 0.999954 0.999957 0.99996 0.999962 0.999964
0.999966 0.999968 0.999969 0.99997 0.999972 0.999973 0.999974 0.999975 0.999976 0.999977
0.999977 0.999978 0.999979 0.999979 0.99998 0.99998 0.99998 0.999981 0.999981 0.999982
0.999982 0.999982 0.999983 0.999983 0.999983 0.999983 0.999983 0.999984 0.999984 0.999984
0.999984 0.999984 0.999985 0.999985 0.999985 0.999985 0.999985 0.999985 0.999985 0.999985
0.999986 #selex for gender,fleet: 2 / 3
0.0559939 0.196629 0.269049 0.351598 0.442309 0.538928 0.639343 0.741917 0.845608
0.949895 1.05462 1.15982 1.26561 1.37212 1.47942 1.58751 1.69631 1.80569 1.91546 2.02538

2.1352 2.24465 2.35345 2.46133 2.56805 2.67337 2.77709 2.87901 2.97897 3.07684 3.17251
3.26587 3.35686 3.44542 3.53151 3.61511 3.69619 3.77477 3.85085 3.92445 3.9956 4.06432
4.13065 4.19464 4.25634 4.31578 4.37303 4.42813 4.48114 4.53213 4.58114 4.62824 4.67348
4.71692 4.75862 4.79864 4.83703 4.87385 4.90915 4.943 4.97543 5.0065 5.03627 5.06478
5.09208 5.11822 5.14324 5.16719 5.1901 5.21203 5.23314 5.25346 5.2729 5.29149 5.30927
5.32626 5.34251 5.35804 5.37289 5.38707 5.40063 5.41358 5.42596 5.43779 5.44908 5.45988
5.47019 5.48003 5.48944 5.49842 5.507 5.51519 5.52301 5.53048 5.53761 5.54442 5.55092
5.55713 5.56305 5.56871 5.57917 #bodywt for gender,fleet: 2 / 4
0 0.0121011 0.0210626 0.0353163 0.0568248 0.0874233 0.128295 0.179505 0.239821 0.306894
0.377725 0.449209 0.518585 0.583721 0.643203 0.696291 0.742793 0.782921 0.817142 0.846062
0.870338 0.89062 0.907514 0.921562 0.93324 0.942952 0.951041 0.957791 0.963439 0.968178
0.972168 0.975538 0.978396 0.980829 0.982908 0.984691 0.986226 0.987554 0.988705 0.989708
0.990585 0.991354 0.992031 0.992629 0.993159 0.99363 0.994049 0.994425 0.994761 0.995064
0.995337 0.995583 0.995806 0.996009 0.996193 0.996361 0.996515 0.996655 0.996784 0.996903
0.997012 0.997112 0.997205 0.997291 0.99737 0.997444 0.997512 0.997576 0.997635 0.99769
0.997739 0.997782 0.997823 0.997861 0.997897 0.997931 0.997962 0.997992 0.99802 0.998046
0.99807 0.998094 0.998116 0.998136 0.998156 0.998174 0.998192 0.998208 0.998224 0.998238
0.998252 0.998265 0.998278 0.99829 0.998301 0.998312 0.998322 0.998331 0.99834 0.998349
0.998365 #selex for gender,fleet: 2 / 4
0.0550219 0.192551 0.263967 0.346327 0.438442 0.538771 0.64553 0.756877 0.871102
0.986786 1.10287 1.21865 1.3337 1.44783 1.56097 1.67311 1.78429 1.89455 2.00389 2.11231
2.21977 2.32621 2.43153 2.53563 2.6384 2.73971 2.83946 2.9375 3.03374 3.12806 3.22037
3.3106 3.39866 3.4845 3.56808 3.64935 3.72833 3.80492 3.8792 3.95115 4.02078 4.08811
4.15317 4.21599 4.27661 4.33507 4.39141 4.44568 4.49793 4.5482 4.59656 4.64306 4.688774
4.73067 4.77189 4.81146 4.84944 4.88588 4.92083 4.95434 4.98647 5.01726 5.04676 5.07502
5.10208 5.128 5.15282 5.17657 5.19931 5.22106 5.24204 5.26226 5.28161 5.30011 5.31779
5.33471 5.35088 5.36633 5.38111 5.39523 5.40873 5.42162 5.43394 5.44572 5.45696 5.46771
5.47797 5.48778 5.49714 5.50608 5.51463 5.52278 5.53057 5.53801 5.54511 5.55189 5.55837
5.56455 5.57045 5.57608 5.58649 #bodywt for gender,fleet: 2 / 5
0 0.00522843 0.0086626 0.0139688 0.0219036 0.0333589 0.0492827 0.0705481 0.0977921
0.131268 0.170756 0.215563 0.264601 0.31653 0.369918 0.423384 0.475709 0.525907 0.573243
0.617231 0.657607 0.694287 0.727327 0.756883 0.783179 0.806472 0.827041 0.845163 0.861104
0.875116 0.88743 0.898255 0.907777 0.916162 0.923555 0.930083 0.935858 0.940977 0.945523
0.949568 0.953175 0.956399 0.959286 0.961878 0.964209 0.966311 0.96821 0.969928 0.971487
0.972904 0.974195 0.975372 0.976448 0.977434 0.978337 0.979167 0.979931 0.980635 0.981285
0.981886 0.982442 0.982957 0.983435 0.983879 0.984292 0.984676 0.985035 0.985369 0.985681
0.985973 0.986236 0.986471 0.986692 0.986899 0.987094 0.987277 0.98745 0.987612 0.987765
0.987909 0.988045 0.988174 0.988295 0.988409 0.988517 0.988619 0.988716 0.988808 0.988894
0.988976 0.989054 0.989127 0.989197 0.989263 0.989326 0.989385 0.989442 0.989495 0.989546
0.989595 0.989683 #selex for gender,fleet: 2 / 5
0.0570367 0.20228 0.278047 0.365677 0.463899 0.570936 0.68457 0.802372 0.922031 1.04167
1.15999 1.2763 1.39033 1.50215 1.61198 1.72012 1.82684 1.93242 2.03704 2.14084 2.24389
2.34619 2.44771 2.54837 2.64807 2.74668 2.84406 2.94007 3.03458 3.12744 3.21853 3.30775
3.39499 3.48018 3.56323 3.64409 3.72274 3.79912 3.87324 3.94508 4.01465 4.08195 4.14701
4.20986 4.27052 4.32904 4.38545 4.43979 4.49212 4.54249 4.59093 4.63752 4.68229 4.7253
4.76661 4.80627 4.84434 4.88085 4.91588 4.94947 4.98166 5.01252 5.04209 5.07042 5.09754
5.12352 5.14839 5.1722 5.19499 5.21679 5.23781 5.25805 5.27742 5.29595 5.31366 5.33059
5.34678 5.36226 5.37706 5.3912 5.40471 5.41762 5.42996 5.44175 5.45301 5.46377 5.47405
5.48386 5.49324 5.50219 5.51075 5.51891 5.52671 5.53416 5.54127 5.54806 5.55454 5.56073
5.56664 5.57228 5.58271 #bodywt for gender,fleet: 2 / 6
0 0.00147247 0.00276294 0.00502358 0.00884344 0.0150515 0.0247191 0.039087 0.0593985
0.0866616 0.121408 0.16353 0.21225 0.266224 0.323741 0.382952 0.44209 0.499616 0.554316
0.605328 0.65212 0.694452 0.732309 0.765845 0.795328 0.821089 0.843495 0.862916 0.879708
0.894207 0.906716 0.917508 0.926824 0.934874 0.941839 0.947876 0.95312 0.957683 0.961665
0.965148 0.968202 0.970887 0.973254 0.975346 0.9772 0.978848 0.980316 0.981627 0.982802
0.983856 0.984805 0.985661 0.986435 0.987136 0.987773 0.988352 0.98888 0.989363 0.989804
0.990209 0.990581 0.990923 0.991238 0.991529 0.991798 0.992047 0.992277 0.992491 0.99269
0.992874 0.993038 0.993183 0.993318 0.993444 0.993563 0.993674 0.993778 0.993875 0.993967
0.994054 0.994135 0.994211 0.994283 0.994351 0.994415 0.994476 0.994533 0.994586 0.994637
0.994685 0.994731 0.994774 0.994815 0.994853 0.99489 0.994924 0.994957 0.994988 0.995017
0.995045 0.995097 #selex for gender,fleet: 2 / 6
0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862
0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862
0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862
0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862
0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862
0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862
0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862
0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862
0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862
0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862

0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862 0.0459862
0.0459862 0.0459862 #mean M for year Yinit: 2011 sex: 1
78.5455 73.6174 68.89 64.4118 60.2536 56.1473 52.2757 48.5671 45.0265 41.7057 39.1206
36.4953 36.1734 34.9479 35.6311 35.5824 35.7761 35.2636 35.4159 35.4318 34.7685 32.8374
31.3196 29.1594 26.7607 24.2351 22.0819 19.8246 17.8086 16.1036 14.3496 12.6564 11.1984
9.90007 8.6859 7.63143 6.70858 5.91773 5.23172 4.64441 4.13352 3.69031 3.31703 2.98539
2.69975 2.45195 2.24376 2.05346 1.8879 1.74273 1.61325 1.49839 1.39561 1.30323 1.21915
1.14213 1.07121 1.00571 0.945092 0.889459 0.838138 0.790255 0.745703 0.704734 0.666346
0.632149 0.600518 0.569594 0.540504 0.512146 0.485292 0.459824 0.435598 0.412733 0.391081
0.370594 0.351167 0.332801 0.315464 0.299167 0.283839 0.269442 0.255893 0.243108 0.231061
0.219699 0.208974 0.198832 0.18924 0.180165 0.171573 0.16343 0.155706 0.148388 0.141436
0.134825 0.128525 0.122536 0.116842 0.111426 2.34425 #numbers for year Yinit: 2011 sex: 1
0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368
0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368
0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368
0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368
0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368
0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368
0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368
0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368
0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368
0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368
0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368 0.0448368
0.0448368 #mean M for year Yinit: 2011 sex: 2
78.5455 73.7021 69.0484 64.6338 60.53 56.468 52.6318 48.95 45.4284 42.12 39.5475 36.9282
36.6357 35.4246 36.1443 36.115 36.3203 35.7922 35.9181 35.8806 35.129 33.0753 31.4238
29.1218 26.588 23.9454 21.6941 19.3677 17.3065 15.5751 13.8215 12.1491 10.7209 9.45954
8.28909 7.27857 6.39874 5.64819 4.99977 4.44675 3.96721 3.5523 3.20394 2.89465 2.62854
2.39771 2.20405 2.02637 1.87155 1.73548 1.61369 1.50526 1.40785 1.31991 1.23947 1.16538
1.0968 1.03309 0.973844 0.919222 0.86862 0.8212 0.776909 0.73606 0.697648 0.663394
0.631627 0.600408 0.57094 0.542068 0.514621 0.488489 0.463538 0.439911 0.417471 0.396187
0.375966 0.356823 0.338736 0.321723 0.305713 0.290669 0.276501 0.263119 0.250495 0.238574
0.227304 0.216627 0.206512 0.196923 0.187827 0.17919 0.170981 0.16319 0.155775 0.14871
0.141965 0.135543 0.129426 0.123599 2.67443 #numbers for year Yinit: 2011 sex: 2
81.5947 76.5041 71.6437 67.1486 62.8365 58.7517 54.9587 51.213 47.6812 44.298 41.068
38.0384 35.6797 33.2843 32.9895 31.8706 32.4923 32.4464 32.6216 32.1528 32.2902 32.3033
31.697 29.9352 28.5502 26.5797 24.392 22.0889 20.1254 18.0672 16.2291 14.6747 13.0757
11.5323 10.2034 9.02009 7.91359 6.95268 6.11176 5.39115 4.7661 4.23099 3.76554 3.36176
3.0217 2.71958 2.45938 2.23365 2.04402 1.87067 1.71987 1.58764 1.4697 1.36507 1.27146
1.18731 1.11072 1.04056 0.975961 0.916288 0.86107 0.810389 0.763635 0.720013 0.679424
0.6421 0.607126 0.57597 0.547152 0.518977 0.492474 0.466636 0.442169 0.418964 0.396891
0.376057 0.356329 0.33766 0.31996 0.303225 0.287428 0.272578 0.258611 0.245494 0.233148
0.221499 0.210522 0.20017 0.190398 0.181157 0.172418 0.16415 0.156321 0.148902 0.141865
0.135197 0.128863 0.12284 0.117099 0.111643 2.34384 #numbers for year Ydeclare: 2013 sex:
1
81.5947 76.5921 71.8085 67.3805 63.1259 59.0898 55.3377 51.6239 48.1163 44.7498 41.5296
38.5042 36.1513 33.7557 33.487 32.3785 33.0347 33.0063 33.1923 32.7081 32.8215 32.7857
32.0973 30.2195 28.7092 26.6048 24.2888 21.8737 19.8161 17.6903 15.8069 14.2249 12.6228
11.095 9.79037 8.63829 7.56926 6.64635 5.84284 5.15742 4.56529 4.06029 3.6224 3.24354
2.92546 2.64306 2.4001 2.18935 2.01254 1.85032 1.70897 1.58474 1.47355 1.37456 1.28562
1.20533 1.13188 1.06424 1.00161 0.943444 0.889341 0.839464 0.793257 0.749955 0.709509
0.672206 0.637128 0.605846 0.576837 0.548327 0.521415 0.495047 0.469981 0.446116 0.423328
0.401749 0.381255 0.361816 0.343348 0.325865 0.309346 0.293808 0.279186 0.265446 0.252507
0.240286 0.228757 0.21787 0.207577 0.197827 0.18859 0.179833 0.171526 0.163638 0.156142
0.149027 0.142255 0.135804 0.129644 0.123779 2.67338 #numbers for year Ydeclare: 2013
sex: 2
#R0 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932
1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950
1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968
1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986
1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004
2005 2006 2007 2008 2009 2010 #years
337.692 337.692 337.644 337.578 337.503 337.454 337.401 337.35 337.3 337.249 337.19
337.105 337.007 336.897 336.771 336.598 336.418 336.265 336.119 336.002 335.858 335.684
335.456 335.233 335.013 334.849 334.592 334.273 333.874 332.888 331.898 330.242 328.852
328.315 327.687 327.28 326.842 326.298 325.834 325.491 325.047 324.476 323.769 322.944
322.05 321.249 320.521 319.925 319.208 318.656 318.291 316.675 316.044 315.296 314.511
312.629 311.36 309.601 307.295 305.054 302.455 300.005 297.022 293.864 288.162 282.189
277.173 269.617 259.136 251.417 245.022 236.753 231.719 225.466 218.03 207.593 201.158
189.145 175.78 163.699 156.104 146.495 138.827 129.299 127.217 122.22 124.814 126.841
130.582 134.362 137.999 141.463 144.909 147.913 151.063 154.164 157.091 #Recruits

```

1.53737e+009 1.53737e+009 1.53668e+009 1.53573e+009 1.53466e+009 1.53396e+009
1.53321e+009 1.53247e+009 1.53176e+009 1.53103e+009 1.53018e+009 1.52897e+009
1.52759e+009 1.52602e+009 1.52424e+009 1.52179e+009 1.51925e+009 1.51709e+009
1.51503e+009 1.51338e+009 1.51136e+009 1.50893e+009 1.50575e+009 1.50264e+009 1.4996e+009
1.49733e+009 1.49377e+009 1.48938e+009 1.48392e+009 1.47052e+009 1.45724e+009
1.43536e+009 1.41735e+009 1.41047e+009 1.40248e+009 1.39733e+009 1.39182e+009
1.38503e+009 1.37925e+009 1.37501e+009 1.36954e+009 1.36255e+009 1.35397e+009
1.34403e+009 1.33337e+009 1.32391e+009 1.31539e+009 1.30847e+009 1.30021e+009
1.29389e+009 1.28973e+009 1.27154e+009 1.26453e+009 1.25628e+009 1.24768e+009
1.22741e+009 1.21397e+009 1.19564e+009 1.17214e+009 1.14985e+009 1.12464e+009
1.10149e+009 1.0741e+009 1.04596e+009 9.9736e+008 9.49244e+008 9.10878e+008 8.5631e+008
7.86413e+008 7.38783e+008 7.01553e+008 6.56154e+008 6.29913e+008 5.98683e+008
5.63379e+008 5.16917e+008 4.89914e+008 4.42549e+008 3.94047e+008 3.53571e+008
3.29607e+008 3.00782e+008 2.78897e+008 2.52985e+008 2.47501e+008 2.34589e+008
2.41248e+008 2.46516e+008 2.56396e+008 2.66584e+008 2.7659e+008 2.86314e+008 2.96179e+008
3.04937e+008 3.14285e+008 3.23656e+008 3.3266e+008 #SpawnBio
0.44056 0.5 0 # spawn-recr steepness, sigmaR, autocorr
# values from cat150_hmle, catch at 150% and steepness at mle value. # this is state of
nature 6 out of 9 (in no particular order) # and parameter set number 2 out of 2 for this
state
0 0 29.3832 106.748 351.507 1039.21 2725.77 6303.48 12889.6 23546.3 38970.3 59315.1
84209.1 112917 144548 178233 213232 248981 285083 321285 357438 393464 429326 465007
500501 535798 570884 605742 640344 674660 708657 742296 775540 808350 840688 872520
903811 934531 964652 994149 1.023e+006 1.05119e+006 1.0787e+006 1.10551e+006 1.13163e+006
1.15704e+006 1.18174e+006 1.20573e+006 1.229e+006 1.25157e+006 1.27343e+006 1.29459e+006
1.31507e+006 1.33486e+006 1.35399e+006 1.37245e+006 1.39027e+006 1.40745e+006
1.42402e+006 1.43998e+006 1.45535e+006 1.47015e+006 1.48438e+006 1.49808e+006
1.51124e+006 1.52389e+006 1.53604e+006 1.54771e+006 1.55892e+006 1.56967e+006
1.57999e+006 1.59016e+006 1.5999e+006 1.60925e+006 1.61821e+006 1.6268e+006 1.63503e+006
1.64291e+006 1.65046e+006 1.65769e+006 1.66462e+006 1.67125e+006 1.67759e+006
1.68366e+006 1.68947e+006 1.69503e+006 1.70035e+006 1.70543e+006 1.71029e+006
1.71494e+006 1.71939e+006 1.72363e+006 1.7277e+006 1.73158e+006 1.73529e+006 1.73883e+006
1.74222e+006 1.74546e+006 1.74855e+006 1.7515e+006 1.75696e+006 #female fecundity;
weighted by N in year Y_init across morphs and areas
0.0454676 0.16465 0.224291 0.292145 0.366874 0.447141 0.531806 0.620006 0.711142
0.804812 0.900735 0.998695 1.09849 1.19991 1.30273 1.4067 1.51155 1.61699 1.72273 1.82848
1.93395 2.03886 2.14297 2.24602 2.3478 2.44812 2.5468 2.64368 2.73864 2.83156 2.92234
3.01092 3.09724 3.18124 3.26289 3.34219 3.41911 3.49367 3.56586 3.63571 3.70325 3.76849
3.83148 3.89225 3.95086 4.00733 4.06173 4.1141 4.16449 4.21296 4.25956 4.30434 4.34737
4.38868 4.42834 4.46641 4.50293 4.53795 4.57154 4.60373 4.63459 4.66415 4.69248 4.7196
4.74557 4.77044 4.79424 4.81702 4.83882 4.85968 4.87976 4.89911 4.91762 4.93531 4.95223
4.9684 4.98386 4.99864 5.01276 5.02626 5.03916 5.05148 5.06325 5.0745 5.08524 5.0955
5.1053 5.11466 5.1236 5.13214 5.14029 5.14807 5.1555 5.1626 5.16937 5.17583 5.18201
5.1879 5.19352 5.19889 5.2088 #bodywt for gender,fleet: 1 / 1
0 0.0521777 0.0786115 0.114039 0.158966 0.212811 0.273893 0.339728 0.4075 0.474526
0.53859 0.598103 0.652108 0.700197 0.742381 0.778954 0.810385 0.837222 0.860032 0.879365
0.895727 0.909567 0.921281 0.931208 0.939634 0.946803 0.952919 0.958151 0.962641 0.966506
0.969845 0.972738 0.975254 0.977449 0.97937 0.981058 0.982544 0.983859 0.985024 0.98606
0.986984 0.98781 0.988551 0.989217 0.989818 0.99036 0.990852 0.991298 0.991704 0.992074
0.992412 0.992721 0.993005 0.993265 0.993505 0.993726 0.993929 0.994118 0.994292 0.994454
0.994604 0.994743 0.994873 0.994993 0.995106 0.995211 0.995309 0.995401 0.995487 0.995567
0.99564 0.995706 0.995767 0.995825 0.995879 0.995931 0.995979 0.996025 0.996067 0.996108
0.996146 0.996182 0.996217 0.996249 0.996279 0.996308 0.996336 0.996362 0.996386 0.99641
0.996432 0.996452 0.996472 0.996491 0.996509 0.996526 0.996542 0.996557 0.996572 0.996585
0.996611 #selex for gender,fleet: 1 / 1
0.046615 0.171129 0.234088 0.30603 0.385315 0.470137 0.558873 0.650296 0.743617 0.838405
0.934465 1.03173 1.13017 1.22977 1.33044 1.43209 1.53456 1.63764 1.74111 1.84472 1.94822
2.05133 2.15382 2.25542 2.35592 2.45511 2.5528 2.64882 2.74303 2.8353 2.92552 3.01361
3.09951 3.18314 3.26449 3.34351 3.4202 3.49455 3.56657 3.63627 3.70367 3.7688 3.83169
3.89237 3.9509 4.00731 4.06165 4.11397 4.16432 4.21275 4.25931 4.30407 4.34706 4.38836
4.428 4.46605 4.50255 4.53756 4.57113 4.60332 4.63417 4.66372 4.69204 4.71915 4.74512
4.76998 4.79378 4.81656 4.83835 4.8592 4.87929 4.89863 4.91713 4.93482 4.95174 4.96791
4.98337 4.99815 5.01227 5.02576 5.03866 5.05098 5.06275 5.074 5.08474 5.095 5.1048
5.11416 5.12309 5.13163 5.13978 5.14756 5.15499 5.16209 5.16886 5.17532 5.1815 5.18739
5.19301 5.19838 5.20828 #bodywt for gender,fleet: 1 / 2
0 0.0217781 0.035912 0.0570166 0.0868386 0.126525 0.176172 0.234626 0.299659 0.368408
0.437902 0.505505 0.569179 0.627569 0.679954 0.726132 0.766274 0.800795 0.830239 0.855204
0.876285 0.89404 0.908975 0.921536 0.932107 0.941016 0.948538 0.954904 0.960307 0.964906
0.968834 0.972199 0.975093 0.977589 0.97975 0.981627 0.983264 0.984696 0.985953 0.98706
0.988038 0.988904 0.989675 0.990361 0.990975 0.991526 0.99202 0.992466 0.992869 0.993234
0.993565 0.993866 0.99414 0.994391 0.99462 0.99483 0.995023 0.995201 0.995364 0.995515

```

0.995655 0.995784 0.995904 0.996015 0.996118 0.996214 0.996303 0.996387 0.996464 0.996537
0.996602 0.996666 0.996715 0.996766 0.996814 0.996859 0.996901 0.996941 0.996979 0.997015
0.997048 0.99708 0.997109 0.997137 0.997164 0.997189 0.997213 0.997235 0.997257 0.997277
0.997296 0.997314 0.997331 0.997347 0.997362 0.997377 0.997391 0.997404 0.997416 0.997428
0.99745 #selex for gender,fleet: 1 / 2
0.0507971 0.190731 0.259211 0.333715 0.41097 0.489095 0.567655 0.647075 0.728093
0.811431 0.897634 0.987023 1.07969 1.17551 1.27423 1.37544 1.47869 1.58349 1.68934
1.79575 1.90228 2.00852 2.11411 2.21873 2.3221 2.42398 2.52417 2.62249 2.7188 2.81299
2.90495 2.99462 3.08194 3.16686 3.24937 3.32944 3.40708 3.48229 3.55508 3.62549 3.69352
3.75923 3.82265 3.88381 3.94278 3.99959 4.05429 4.10694 4.1576 4.20631 4.25313 4.29813
4.34134 4.38284 4.42267 4.46089 4.49755 4.53271 4.56642 4.59874 4.6297 4.65937 4.68779
4.715 4.74106 4.76601 4.78988 4.81273 4.8346 4.85552 4.87565 4.89504 4.91358 4.93131
4.94826 4.96447 4.97996 4.99477 5.00892 5.02244 5.03536 5.04771 5.0595 5.07077 5.08153
5.09181 5.10163 5.11101 5.11996 5.12851 5.13668 5.14447 5.15192 5.15903 5.16581 5.17229
5.17847 5.18437 5.19001 5.19538 5.20531 #bodywt for gender,fleet: 1 / 3
0 0.0174342 0.0369567 0.0720661 0.127638 0.204671 0.298944 0.40238 0.505959 0.602257
0.686652 0.757273 0.8143 0.859126 0.893669 0.919914 0.939663 0.954439 0.965464 0.973685
0.979826 0.984427 0.987889 0.990507 0.992499 0.994023 0.995199 0.996111 0.996824 0.997386
0.99781 0.998187 0.998473 0.998705 0.998893 0.999048 0.999176 0.999282 0.999371 0.999446
0.999509 0.999562 0.999608 0.999647 0.999681 0.99971 0.999735 0.999758 0.999777 0.999794
0.999809 0.999823 0.999835 0.999845 0.999855 0.999863 0.999871 0.999878 0.999884 0.99989
0.999895 0.9999 0.999904 0.999908 0.999912 0.999915 0.999918 0.999921 0.999923 0.999926
0.999928 0.99993 0.999931 0.999933 0.999934 0.999935 0.999937 0.999938 0.999939 0.99994
0.999941 0.999942 0.999943 0.999944 0.999944 0.999945 0.999946 0.999946 0.999947 0.999947
0.999948 0.999948 0.999949 0.999949 0.99995 0.99995 0.999951 0.999951 0.999951 0.999952
0.999952 #selex for gender,fleet: 1 / 3
0.0469175 0.173105 0.237423 0.311436 0.393613 0.482063 0.574874 0.670433 0.767581
0.865617 0.964195 1.0632 1.16262 1.26251 1.36289 1.46376 1.56508 1.66674 1.76861 1.87052
1.97226 2.07364 2.17442 2.2744 2.37337 2.47112 2.56748 2.66228 2.75537 2.84662 2.93591
3.02317 3.1083 3.19125 3.27198 3.35045 3.42664 3.50053 3.57214 3.64147 3.70854 3.77337
3.83598 3.89642 3.95472 4.01093 4.06508 4.11723 4.16742 4.21571 4.26214 4.30677 4.34966
4.39085 4.4304 4.46836 4.50478 4.53972 4.57322 4.60534 4.63613 4.66563 4.6939 4.72097
4.74689 4.77171 4.79547 4.81821 4.83997 4.86079 4.88085 4.90017 4.91865 4.93632 4.95322
4.96938 4.98482 4.99958 5.01369 5.02717 5.04005 5.05236 5.06412 5.07536 5.08609 5.09634
5.10613 5.11548 5.12441 5.13294 5.14108 5.14886 5.15628 5.16337 5.17014 5.17659 5.18276
5.18865 5.19427 5.19963 5.20953 #bodywt for gender,fleet: 1 / 4
0 0.0118732 0.0201495 0.0330429 0.0521932 0.0791608 0.115027 0.160022 0.213346 0.27326
0.337409 0.403228 0.468318 0.5307 0.588934 0.642121 0.689837 0.732032 0.768918 0.800876
0.828375 0.851921 0.872012 0.889119 0.903669 0.916043 0.926572 0.935541 0.943196 0.949741
0.955352 0.960174 0.96433 0.967922 0.971038 0.973747 0.976111 0.97818 0.979997 0.981596
0.983009 0.984261 0.985374 0.986365 0.987251 0.988045 0.988758 0.9894 0.989979 0.990504
0.990979 0.991411 0.991805 0.992164 0.992493 0.992794 0.99307 0.993324 0.993557 0.993773
0.993972 0.994156 0.994326 0.994485 0.994631 0.994768 0.994895 0.995013 0.995124 0.995227
0.995319 0.995401 0.995478 0.99555 0.995618 0.995682 0.995742 0.995798 0.995852 0.995902
0.995949 0.995993 0.996035 0.996075 0.996112 0.996148 0.996181 0.996213 0.996243 0.996271
0.996298 0.996323 0.996347 0.99637 0.996392 0.996412 0.996432 0.99645 0.996467 0.996484
0.996515 #selex for gender,fleet: 1 / 4
0.046087 0.169426 0.232753 0.306396 0.389502 0.480864 0.579 0.682294 0.789151 0.898157
1.00817 1.11834 1.2281 1.3371 1.44514 1.55213 1.65802 1.76281 1.86649 1.96904 2.07042
2.17061 2.26955 2.36715 2.46335 2.55806 2.6512 2.74268 2.83242 2.92035 3.00638 3.09046
3.17254 3.25256 3.3305 3.40632 3.48 3.55154 3.62094 3.68819 3.7533 3.81631 3.87722
3.93606 3.99287 4.04769 4.10054 4.15148 4.20054 4.24777 4.29321 4.33692 4.37894 4.41932
4.45812 4.49537 4.53113 4.56544 4.59836 4.62993 4.66021 4.68923 4.71703 4.74368 4.7692
4.79364 4.81704 4.83945 4.86089 4.88141 4.90123 4.92036 4.93866 4.95616 4.97289 4.98889
5.00419 5.01881 5.03279 5.04614 5.05891 5.0711 5.08276 5.09389 5.10452 5.11468 5.12439
5.13365 5.1425 5.15096 5.15903 5.16674 5.1741 5.18112 5.18783 5.19423 5.20035 5.20618
5.21176 5.21707 5.22689 #bodywt for gender,fleet: 1 / 5
0 0.00514089 0.0083198 0.0131297 0.020192 0.030234 0.0440312 0.0623113 0.0856349
0.114282 0.148174 0.18686 0.229564 0.275277 0.322873 0.371223 0.419286 0.466171 0.511167
0.553752 0.593583 0.630469 0.664347 0.69525 0.723286 0.748607 0.771399 0.791861 0.810198
0.826608 0.841285 0.854409 0.866144 0.876643 0.886043 0.894466 0.902023 0.908811 0.914918
0.920419 0.925383 0.929869 0.93393 0.937612 0.940956 0.943999 0.946771 0.949302 0.951616
0.953734 0.955677 0.957462 0.959103 0.960615 0.96201 0.963299 0.964491 0.965594 0.966618
0.967568 0.968451 0.969272 0.970038 0.970751 0.971417 0.972039 0.972621 0.973165 0.973674
0.974152 0.974584 0.974974 0.97534 0.975685 0.976009 0.976315 0.976603 0.976874 0.97713
0.977372 0.9776 0.977816 0.978019 0.978212 0.978394 0.978567 0.97873 0.978884 0.979031
0.97917 0.979301 0.979426 0.979544 0.979656 0.979763 0.979864 0.979959 0.980051 0.980137
0.980219 0.98037 #selex for gender,fleet: 1 / 5
0.0478087 0.178167 0.245476 0.324019 0.412907 0.510779 0.615821 0.725919 0.838917
0.952904 1.06642 1.1785 1.28865 1.39668 1.50263 1.60666 1.70897 1.80976 1.9092 2.00743
2.10453 2.20054 2.29549 2.38935 2.48206 2.57357 2.66379 2.75263 2.84 2.92581 3.00997

3.0924 3.17303 3.2518 3.32864 3.40352 3.47639 3.54723 3.61603 3.68277 3.74746 3.81011
3.87072 3.92932 3.98592 4.04057 4.09329 4.14412 4.19309 4.24026 4.28566 4.32934 4.37134
4.41172 4.45051 4.48777 4.52354 4.55787 4.59082 4.62241 4.65272 4.68176 4.7096 4.73628
4.76183 4.78631 4.80974 4.83218 4.85366 4.87421 4.89405 4.9132 4.93151 4.94902 4.96577
4.98179 4.9971 5.01173 5.02572 5.03909 5.05187 5.06407 5.07574 5.08688 5.09753 5.1077
5.11741 5.12669 5.13555 5.14401 5.15209 5.15981 5.16718 5.17421 5.18093 5.18734 5.19346
5.1993 5.20488 5.2102 5.22003 #bodywt for gender,fleet: 1 / 6
0 0.00144016 0.00262441 0.00464459 0.00797846 0.0132888 0.0214275 0.0333874 0.0501875
0.0727026 0.101481 0.136607 0.17765 0.223714 0.273564 0.325787 0.378953 0.431747 0.483056
0.532011 0.577994 0.620617 0.65969 0.695183 0.727183 0.755858 0.781432 0.804156 0.824291
0.842097 0.857825 0.871707 0.883959 0.894775 0.90433 0.912778 0.920257 0.926887 0.932774
0.93801 0.942675 0.94684 0.950565 0.953904 0.956901 0.959599 0.962031 0.964228 0.966217
0.96802 0.969659 0.971151 0.972511 0.973754 0.974891 0.975934 0.976891 0.977771 0.978581
0.979329 0.980019 0.980658 0.981249 0.981798 0.982307 0.98278 0.98322 0.98363 0.984013
0.98437 0.984688 0.984971 0.985237 0.985486 0.98572 0.98594 0.986146 0.98634 0.986523
0.986695 0.986857 0.98701 0.987154 0.98729 0.987418 0.987539 0.987654 0.987762 0.987865
0.987962 0.988054 0.988141 0.988223 0.988301 0.988375 0.988445 0.988511 0.988574 0.988634
0.988691 0.988795 #selex for gender,fleet: 1 / 6
0.054296 0.187189 0.254426 0.330243 0.413003 0.501183 0.593579 0.689356 0.787989
0.889161 0.992665 1.09833 1.20599 1.31544 1.42641 1.53864 1.65181 1.76559 1.87964 1.99361
2.1072 2.22008 2.33196 2.4426 2.55174 2.65919 2.76476 2.86829 2.96964 3.06872 3.16542
3.25968 3.35144 3.44066 3.52732 3.61141 3.69293 3.77188 3.84828 3.92216 3.99355 4.06248
4.12901 4.19316 4.255 4.31457 4.37193 4.42713 4.48023 4.5313 4.58038 4.62754 4.67284
4.71633 4.75808 4.79813 4.83656 4.87342 4.90875 4.94262 4.97508 5.00618 5.03597 5.0645
5.09182 5.11797 5.14301 5.16697 5.18989 5.21183 5.23295 5.25328 5.27273 5.29133 5.30911
5.32611 5.34236 5.3579 5.37275 5.38694 5.4005 5.41346 5.42584 5.43767 5.44897 5.45976
5.47008 5.47993 5.48933 5.49832 5.5069 5.51509 5.52292 5.53039 5.53752 5.54433 5.55084
5.55704 5.56297 5.56863 5.57909 #bodywt for gender,fleet: 2 / 1
0 0.052912 0.0812448 0.119698 0.168817 0.227804 0.294529 0.365945 0.4387 0.509715
0.576562 0.637616 0.692022 0.739554 0.780438 0.815184 0.844451 0.868944 0.889356 0.906323
0.920413 0.932115 0.941845 0.94995 0.956719 0.962388 0.967152 0.97117 0.974572 0.977462
0.979929 0.982041 0.983858 0.985427 0.986787 0.98797 0.989003 0.989908 0.990704 0.991407
0.992029 0.992582 0.993074 0.993514 0.993908 0.994263 0.994582 0.99487 0.995131 0.995368
0.995584 0.99578 0.995959 0.996123 0.996274 0.996412 0.996539 0.996656 0.996764 0.996864
0.996957 0.997043 0.997122 0.997196 0.997265 0.997329 0.997389 0.997445 0.997497 0.997545
0.997589 0.997629 0.997666 0.9977 0.997733 0.997764 0.997793 0.99782 0.997846 0.99787
0.997893 0.997914 0.997935 0.997954 0.997972 0.997989 0.998005 0.998021 0.998035 0.998049
0.998062 0.998075 0.998086 0.998098 0.998108 0.998118 0.998128 0.998137 0.998145 0.998153
0.998168 #selex for gender,fleet: 2 / 1
0.0556397 0.194416 0.265306 0.345532 0.433051 0.525776 0.621976 0.720467 0.820596
0.92209 1.0249 1.12907 1.23465 1.34164 1.44997 1.55951 1.67006 1.78137 1.89314 2.00507
2.11684 2.22813 2.33865 2.44811 2.55626 2.66287 2.76773 2.87067 2.97154 3.07021 3.16657
3.26055 3.35208 3.44111 3.52762 3.61158 3.69299 3.77185 3.84818 3.922 3.99334 4.06224
4.12873 4.19285 4.25467 4.31422 4.37157 4.42676 4.47986 4.53092 4.58 4.62715 4.67245
4.71594 4.75769 4.79774 4.83617 4.87303 4.90836 4.94223 4.97469 5.00579 5.03559 5.06412
5.09144 5.1176 5.14263 5.1666 5.18953 5.21146 5.23259 5.25292 5.27237 5.29096 5.30875
5.32575 5.342 5.35754 5.37239 5.38658 5.40014 5.4131 5.42548 5.43731 5.44862 5.45941
5.46973 5.47958 5.48898 5.49797 5.50655 5.51474 5.52257 5.53004 5.53717 5.54398 5.55049
5.5567 5.56262 5.56828 5.57874 #bodywt for gender,fleet: 2 / 2
0 0.0221689 0.0374292 0.0606283 0.0938159 0.138258 0.19387 0.259023 0.330824 0.405737
0.480253 0.551419 0.617105 0.676048 0.727744 0.772257 0.810038 0.841753 0.868158 0.890016
0.908042 0.922877 0.935079 0.945119 0.953393 0.960225 0.965884 0.970586 0.974507 0.977788
0.980547 0.982875 0.984848 0.986527 0.987962 0.989194 0.990256 0.991175 0.991973 0.992669
0.993279 0.993814 0.994286 0.994703 0.995074 0.995404 0.995698 0.995962 0.996199 0.996412
0.996604 0.996779 0.996936 0.99708 0.997211 0.99733 0.99744 0.99754 0.997632 0.997716
0.997794 0.997866 0.997932 0.997994 0.998051 0.998103 0.998153 0.998198 0.998241 0.99828
0.998316 0.998347 0.998377 0.998404 0.99843 0.998454 0.998477 0.998499 0.998519 0.998538
0.998556 0.998573 0.998589 0.998604 0.998618 0.998631 0.998644 0.998656 0.998667 0.998678
0.998688 0.998698 0.998707 0.998715 0.998724 0.998731 0.998739 0.998746 0.998752 0.998759
0.99877 #selex for gender,fleet: 2 / 2
0.0605288 0.216102 0.292593 0.374645 0.458657 0.542916 0.627371 0.712824 0.800289
0.890655 0.984536 1.08224 1.18377 1.2889 1.3972 1.50813 1.6211 1.7355 1.85075 1.96628
2.08163 2.19636 2.31009 2.42252 2.53335 2.64237 2.74939 2.85424 2.95679 3.05695 3.15462
3.24975 3.3423 3.43223 3.51952 3.60418 3.6862 3.76561 3.84243 3.91668 3.98841 4.05765
4.12445 4.18885 4.25092 4.31069 4.36824 4.42362 4.47688 4.52809 4.57731 4.62459 4.67
4.71359 4.75544 4.79558 4.83409 4.87102 4.90643 4.94036 4.97288 5.00404 5.03388 5.06246
5.08982 5.11602 5.1411 5.1651 5.18806 5.21003 5.23117 5.25153 5.27099 5.28961 5.30741
5.32442 5.34069 5.35624 5.3711 5.38531 5.39888 5.41185 5.42424 5.43608 5.44739 5.4582
5.46852 5.47838 5.48779 5.49678 5.50537 5.51357 5.5214 5.52888 5.53602 5.54284 5.54934
5.55556 5.56149 5.56715 5.57762 #bodywt for gender,fleet: 2 / 3

0 0.017966 0.0393616 0.0785984 0.141116 0.227345 0.331382 0.443145 0.55216 0.6505
 0.733868 0.801189 0.853553 0.893146 0.922467 0.943863 0.959328 0.970444 0.978416 0.984137
 0.988253 0.991228 0.99339 0.994972 0.996139 0.997006 0.997656 0.998147 0.998521 0.998809
 0.999032 0.999206 0.999344 0.999453 0.999541 0.999611 0.999668 0.999715 0.999754 0.999786
 0.999813 0.999835 0.999854 0.99987 0.999884 0.999895 0.999905 0.999914 0.999922 0.999928
 0.999934 0.999939 0.999944 0.999948 0.999951 0.999954 0.999957 0.99996 0.999962 0.999964
 0.999966 0.999968 0.999969 0.99997 0.999972 0.999973 0.999974 0.999975 0.999976 0.999977
 0.999977 0.999978 0.999979 0.999979 0.99998 0.99998 0.99998 0.999981 0.999981 0.999982
 0.999982 0.999982 0.999983 0.999983 0.999983 0.999983 0.999983 0.999984 0.999984 0.999984
 0.999984 0.999984 0.999985 0.999985 0.999985 0.999985 0.999985 0.999985 0.999985 0.999985
 0.999986 #selex for gender,fleet: 2 / 3
 0.0559939 0.196629 0.269049 0.351598 0.442309 0.538928 0.639343 0.741917 0.845608
 0.949895 1.05462 1.15982 1.26561 1.37212 1.47942 1.58751 1.69631 1.80569 1.91546 2.02538
 2.1352 2.24465 2.35345 2.46133 2.56805 2.67337 2.77709 2.87901 2.97897 3.07684 3.17251
 3.26587 3.35686 3.44542 3.53151 3.61511 3.69619 3.77477 3.85085 3.92445 3.9956 4.06432
 4.13065 4.19464 4.25634 4.31578 4.37303 4.42813 4.48114 4.53213 4.58114 4.62824 4.67348
 4.71692 4.75862 4.79864 4.83703 4.87385 4.90915 4.943 4.97543 5.0065 5.03627 5.06478
 5.09208 5.11822 5.14324 5.16719 5.1901 5.21203 5.23314 5.25346 5.2729 5.29149 5.30927
 5.32626 5.34251 5.35804 5.37289 5.38707 5.40063 5.41358 5.42596 5.43779 5.44908 5.45988
 5.47019 5.48003 5.48944 5.49842 5.507 5.51519 5.52301 5.53048 5.53761 5.54442 5.55092
 5.55713 5.56305 5.56871 5.57917 #bodywt for gender,fleet: 2 / 4
 0 0.0121011 0.0210626 0.0353163 0.0568248 0.0874233 0.128295 0.179505 0.239821 0.306894
 0.377725 0.449209 0.518585 0.583721 0.643203 0.696291 0.742793 0.782921 0.817142 0.846062
 0.870338 0.89062 0.907514 0.921562 0.93324 0.942952 0.951041 0.957791 0.963439 0.968178
 0.972168 0.975538 0.978396 0.980829 0.982908 0.984691 0.986226 0.987554 0.988705 0.989708
 0.990585 0.991354 0.992031 0.992629 0.993159 0.99363 0.994049 0.994425 0.994761 0.995064
 0.995337 0.995583 0.995806 0.996009 0.996193 0.996361 0.996515 0.996655 0.996784 0.996903
 0.997012 0.997112 0.997205 0.997291 0.99737 0.997444 0.997512 0.997576 0.997635 0.99769
 0.997739 0.997782 0.997823 0.997861 0.997897 0.997931 0.997962 0.997992 0.99802 0.998046
 0.99807 0.998094 0.998116 0.998136 0.998156 0.998174 0.998192 0.998208 0.998224 0.998238
 0.998252 0.998265 0.998278 0.99829 0.998301 0.998312 0.998322 0.998331 0.99834 0.998349
 0.998365 #selex for gender,fleet: 2 / 4
 0.0550219 0.192551 0.263967 0.346327 0.438442 0.538771 0.64553 0.756877 0.871102
 0.986786 1.10287 1.21865 1.3337 1.44783 1.56097 1.67311 1.78429 1.89455 2.00389 2.11231
 2.21977 2.32621 2.43153 2.53563 2.6384 2.73971 2.83946 2.9375 3.03374 3.12806 3.22037
 3.3106 3.39866 3.4845 3.56808 3.64935 3.72831 3.80492 3.8792 3.95115 4.02078 4.08811
 4.15317 4.21599 4.27661 4.33507 4.39141 4.44568 4.49793 4.5482 4.59656 4.64306 4.68774
 4.73067 4.77189 4.81146 4.84944 4.88588 4.92083 4.95434 4.98647 5.01726 5.04676 5.07502
 5.10208 5.128 5.15282 5.17657 5.19931 5.22106 5.24204 5.26226 5.28161 5.30011 5.31779
 5.33471 5.35088 5.36633 5.38111 5.39523 5.40873 5.42162 5.43394 5.44572 5.45696 5.46771
 5.47797 5.48778 5.49714 5.50608 5.51463 5.52278 5.53057 5.53801 5.54511 5.55189 5.55837
 5.56455 5.57045 5.57608 5.58649 #bodywt for gender,fleet: 2 / 5
 0 0.00522843 0.0086626 0.0139688 0.0219036 0.0333589 0.0492827 0.0705481 0.0977921
 0.131268 0.170756 0.215563 0.264601 0.31653 0.369918 0.423384 0.475709 0.525907 0.573243
 0.617231 0.657607 0.694287 0.727327 0.756883 0.783179 0.806472 0.827041 0.845163 0.861104
 0.875116 0.88743 0.898255 0.907777 0.916162 0.923555 0.930083 0.935858 0.940977 0.945523
 0.949568 0.953175 0.956399 0.959286 0.961878 0.964209 0.966311 0.96821 0.969928 0.971487
 0.972904 0.974195 0.975372 0.976448 0.977434 0.978337 0.979167 0.979931 0.980635 0.981285
 0.981886 0.982442 0.982957 0.983435 0.983879 0.984292 0.984676 0.985035 0.985369 0.985681
 0.985973 0.986236 0.986471 0.986692 0.986899 0.987094 0.987277 0.98745 0.987612 0.987765
 0.987909 0.988045 0.988174 0.988295 0.988409 0.988517 0.988619 0.988716 0.988808 0.988894
 0.988976 0.989054 0.989127 0.989197 0.989263 0.989326 0.989385 0.989442 0.989495 0.989546
 0.989595 0.989683 #selex for gender,fleet: 2 / 5
 0.0570367 0.20228 0.278047 0.365677 0.463899 0.570936 0.68457 0.802372 0.922031 1.04167
 1.15999 1.2763 1.39033 1.50215 1.61198 1.72012 1.82684 1.93242 2.03704 2.14084 2.24389
 2.34619 2.44771 2.54837 2.64807 2.74668 2.84406 2.94007 3.03458 3.12744 3.21853 3.30775
 3.39499 3.48018 3.56323 3.64409 3.72274 3.79912 3.87324 3.94508 4.01465 4.08195 4.14701
 4.20986 4.27052 4.32904 4.38545 4.43979 4.49212 4.54249 4.59093 4.63752 4.68229 4.7253
 4.76661 4.80627 4.84434 4.88085 4.91588 4.94947 4.98166 5.01252 5.04209 5.07042 5.09754
 5.12352 5.14839 5.1722 5.19499 5.21679 5.23781 5.25805 5.27742 5.29595 5.31366 5.33059
 5.34678 5.36226 5.37706 5.3912 5.40471 5.41762 5.42996 5.44175 5.45301 5.46377 5.47405
 5.48386 5.49324 5.50219 5.51075 5.51891 5.52671 5.53416 5.54127 5.54806 5.55454 5.56073
 5.56664 5.57228 5.58271 #bodywt for gender,fleet: 2 / 6
 0 0.00147247 0.00276294 0.00502358 0.00884344 0.0150515 0.0247191 0.039087 0.0593985
 0.0866616 0.121408 0.16353 0.21225 0.266224 0.323741 0.382952 0.44209 0.499616 0.554316
 0.605328 0.65212 0.694452 0.732309 0.765845 0.795328 0.821089 0.843495 0.862916 0.879708
 0.894207 0.906716 0.917508 0.926824 0.934874 0.941839 0.947876 0.95312 0.957683 0.961665
 0.965148 0.968202 0.970887 0.973254 0.975346 0.9772 0.978848 0.980316 0.981627 0.982802
 0.983856 0.984805 0.985661 0.986435 0.987136 0.987773 0.988352 0.98888 0.989363 0.989804
 0.990209 0.990581 0.990923 0.991238 0.991529 0.991798 0.992047 0.992277 0.992491 0.99269
 0.992874 0.993038 0.993183 0.993318 0.993444 0.993563 0.993674 0.993778 0.993875 0.993967


```

1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968
1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986
1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004
2005 2006 2007 2008 2009 2010 #years
337.692 337.692 337.644 337.578 337.503 337.454 337.401 337.35 337.3 337.249 337.19
337.105 337.007 336.897 336.771 336.598 336.418 336.265 336.119 336.002 335.858 335.684
335.456 335.233 335.013 334.849 334.592 334.273 333.874 332.888 331.898 330.242 328.852
328.315 327.687 327.28 326.842 326.298 325.834 325.491 325.047 324.476 323.769 322.944
322.05 321.249 320.521 319.925 319.208 318.656 318.291 316.675 316.044 315.296 314.511
312.629 311.36 309.601 307.295 305.054 302.455 300.005 297.022 293.864 288.162 282.189
277.173 269.617 259.136 251.417 245.022 236.753 231.719 225.466 218.03 207.593 201.158
189.145 175.78 163.699 156.104 146.495 138.827 129.299 127.217 122.22 124.814 126.841
130.582 134.362 137.999 141.463 144.909 147.913 151.063 154.164 157.091 #Recruits
1.53737e+009 1.53737e+009 1.53668e+009 1.53573e+009 1.53466e+009 1.53396e+009
1.53321e+009 1.53247e+009 1.53176e+009 1.53103e+009 1.53018e+009 1.52897e+009
1.52759e+009 1.52602e+009 1.52424e+009 1.52179e+009 1.51925e+009 1.51709e+009
1.51503e+009 1.51338e+009 1.51136e+009 1.50893e+009 1.50575e+009 1.50264e+009 1.4996e+009
1.49733e+009 1.49377e+009 1.48938e+009 1.48392e+009 1.47052e+009 1.45724e+009
1.43536e+009 1.41735e+009 1.41047e+009 1.40248e+009 1.39733e+009 1.39182e+009
1.38503e+009 1.37925e+009 1.37501e+009 1.36954e+009 1.36255e+009 1.35397e+009
1.34403e+009 1.33337e+009 1.32391e+009 1.31539e+009 1.30847e+009 1.30021e+009
1.29389e+009 1.28973e+009 1.27154e+009 1.26453e+009 1.25628e+009 1.24768e+009
1.22741e+009 1.21397e+009 1.19564e+009 1.17214e+009 1.14985e+009 1.12464e+009
1.10149e+009 1.0741e+009 1.04596e+009 9.9736e+008 9.49244e+008 9.10878e+008 8.5631e+008
7.86413e+008 7.38783e+008 7.01553e+008 6.56154e+008 6.29913e+008 5.98683e+008
5.63379e+008 5.16917e+008 4.89914e+008 4.42549e+008 3.94047e+008 3.53571e+008
3.29607e+008 3.00782e+008 2.78897e+008 2.52985e+008 2.47501e+008 2.34589e+008
2.41248e+008 2.46516e+008 2.56396e+008 2.66584e+008 2.7659e+008 2.86314e+008 2.96179e+008
3.04937e+008 3.14285e+008 3.23656e+008 3.3266e+008 #SpawnBio
0.44056 0.5 0 # spawn-recr steepness, sigmaR, autocorr
# values from cat75_hhigh, catch at 75% and steepness at high value. # this is state of
nature 7 out of 9 (in no particular order) # and parameter set number 1 out of 1 for this
state
0 0 24.7149 91.5954 307.555 927.511 2481.44 5846.18 12152 22505.1 37660.3 57819.7
82635.6 111371 143117 176979 212194 248177 284520 320963 357354 393612 429702 465607
501321 536833 572132 607196 642000 676512 710697 744517 777932 810904 843395 875368
906789 937628 967856 997449 1.02638e+006 1.05464e+006 1.08221e+006 1.10908e+006
1.13524e+006 1.16068e+006 1.18539e+006 1.20939e+006 1.23266e+006 1.25522e+006
1.27706e+006 1.2982e+006 1.31864e+006 1.3384e+006 1.35748e+006 1.37589e+006 1.39365e+006
1.41077e+006 1.42727e+006 1.44316e+006 1.45846e+006 1.47318e+006 1.48733e+006
1.50094e+006 1.51402e+006 1.52658e+006 1.53865e+006 1.55023e+006 1.56135e+006
1.57201e+006 1.58224e+006 1.5923e+006 1.60195e+006 1.6112e+006 1.62007e+006 1.62856e+006
1.6367e+006 1.64449e+006 1.65195e+006 1.65909e+006 1.66592e+006 1.67246e+006 1.67872e+006
1.6847e+006 1.69043e+006 1.6959e+006 1.70113e+006 1.70614e+006 1.71092e+006 1.71549e+006
1.71986e+006 1.72404e+006 1.72803e+006 1.73184e+006 1.73548e+006 1.73896e+006
1.74229e+006 1.74546e+006 1.74849e+006 1.75138e+006 1.75671e+006 #female fecundity;
weighted by N in year Y_init across morphs and areas
0.0440349 0.158108 0.217283 0.284996 0.359873 0.440499 0.525644 0.614373 0.706039
0.800218 0.896625 0.995048 1.0953 1.19717 1.30046 1.40491 1.51026 1.61622 1.7225 1.82879
1.93482 2.0403 2.14496 2.24857 2.35089 2.45173 2.55091 2.64827 2.74368 2.83702 2.9282
3.01714 3.10378 3.18808 3.27 3.34953 3.42666 3.50138 3.57372 3.64369 3.71131 3.77661
3.83964 3.90043 3.95902 4.01547 4.06982 4.12213 4.17244 4.22082 4.26731 4.31197 4.35486
4.39603 4.43554 4.47345 4.5098 4.54465 4.57806 4.61007 4.64074 4.67012 4.69824 4.72517
4.75095 4.77562 4.79922 4.82181 4.84341 4.86406 4.88395 4.9031 4.92141 4.93891 4.95563
4.97162 4.98689 5.00148 5.01542 5.02874 5.04146 5.05361 5.06522 5.0763 5.08688 5.09698
5.10663 5.11584 5.12463 5.13302 5.14103 5.14868 5.15598 5.16294 5.16959 5.17593 5.18199
5.18776 5.19327 5.19853 5.2082 #bodywt for gender,fleet: 1 / 1
0 0.0457211 0.0700116 0.103196 0.146064 0.198329 0.258526 0.324249 0.392625 0.460812
0.526398 0.587602 0.643311 0.693008 0.736638 0.774465 0.806953 0.834659 0.858174 0.878067
0.894869 0.909051 0.921026 0.931151 0.939726 0.947004 0.953199 0.958487 0.963014 0.966904
0.970256 0.973156 0.975672 0.977864 0.979779 0.981458 0.982935 0.984238 0.985392 0.986417
0.98733 0.988145 0.988875 0.989531 0.990121 0.990654 0.991136 0.991573 0.991971 0.992333
0.992663 0.992965 0.993242 0.993496 0.99373 0.993945 0.994143 0.994326 0.994496 0.994653
0.994798 0.994934 0.99506 0.995177 0.995286 0.995387 0.995482 0.995571 0.995654 0.995732
0.995802 0.995866 0.995925 0.995981 0.996033 0.996083 0.996129 0.996173 0.996215 0.996254
0.99629 0.996325 0.996358 0.996389 0.996419 0.996446 0.996473 0.996498 0.996521 0.996543
0.996565 0.996585 0.996604 0.996622 0.996639 0.996655 0.99667 0.996685 0.996699 0.996712
0.996736 #selex for gender,fleet: 1 / 1
0.0451195 0.164091 0.226426 0.298092 0.377445 0.46261 0.551861 0.643873 0.737788 0.83314
0.929724 1.02748 1.12639 1.22645 1.32759 1.42973 1.53269 1.6363 1.74032 1.84449 1.94856
2.05226 2.15532 2.25751 2.35857 2.45831 2.55653 2.65305 2.74774 2.84045 2.93109 3.01957

```

3.10581 3.18976 3.27138 3.35066 3.42756 3.5021 3.57427 3.6441 3.71159 3.77679 3.83973
3.90044 3.95897 4.01536 4.06966 4.12192 4.17219 4.22053 4.26699 4.31163 4.3545 4.39565
4.43515 4.47303 4.50937 4.54422 4.57761 4.60962 4.64028 4.66964 4.69777 4.72469 4.75046
4.77513 4.79873 4.82131 4.84291 4.86356 4.88345 4.9026 4.9209 4.9384 4.95512 4.9711
4.98637 5.00097 5.01491 5.02822 5.04094 5.05309 5.0647 5.07578 5.08636 5.09646 5.1061
5.11531 5.1241 5.1325 5.14051 5.14815 5.15545 5.16241 5.16906 5.1754 5.18146 5.18723
5.19274 5.198 5.20767 #bodywt for gender,fleet: 1 / 2
0 0.0191442 0.0320573 0.0516755 0.0798764 0.118024 0.166458 0.224222 0.289176 0.358421
0.428864 0.497703 0.562736 0.622474 0.676105 0.723374 0.764431 0.799691 0.829715 0.85512
0.876524 0.894511 0.909604 0.922267 0.932897 0.941834 0.949362 0.955719 0.961101 0.965673
0.969569 0.9729 0.97558 0.97822 0.980348 0.982193 0.983799 0.985202 0.986432 0.987513
0.988467 0.989312 0.990061 0.990729 0.991325 0.991859 0.992339 0.992771 0.993161 0.993513
0.993833 0.994124 0.994388 0.99463 0.994851 0.995053 0.995239 0.99541 0.995567 0.995712
0.995846 0.99597 0.996085 0.996191 0.99629 0.996382 0.996468 0.996548 0.996622 0.996692
0.996754 0.996809 0.996861 0.99691 0.996956 0.996999 0.99704 0.997078 0.997114 0.997147
0.997179 0.997209 0.997238 0.997265 0.99729 0.997314 0.997336 0.997358 0.997378 0.997397
0.997415 0.997432 0.997448 0.997464 0.997478 0.997492 0.997505 0.997518 0.99753 0.997541
0.997561 #selex for gender,fleet: 1 / 2
0.0490832 0.182677 0.250848 0.325751 0.403865 0.48297 0.562404 0.642508 0.724028
0.807725 0.8942 0.983822 1.07672 1.17282 1.27185 1.37345 1.47714 1.58242 1.6888 1.79578
1.9029 2.00974 2.11594 2.22115 2.3251 2.42754 2.52827 2.6271 2.72388 2.81851 2.91089
3.00093 3.08859 3.17383 3.2566 3.33692 3.41476 3.49015 3.56309 3.6336 3.70173 3.7675
3.83095 3.89213 3.95109 4.00787 4.06252 4.11511 4.16569 4.2143 4.26101 4.30588 4.34896
4.39031 4.42999 4.46805 4.50454 4.53953 4.57306 4.60519 4.63596 4.66544 4.69366 4.72068
4.74654 4.77129 4.79497 4.81762 4.83928 4.86 4.87994 4.89913 4.91747 4.93501 4.95177
4.96778 4.98308 4.99771 5.01167 5.02502 5.03776 5.04993 5.06156 5.07266 5.08326 5.09338
5.10305 5.11227 5.12108 5.12949 5.13751 5.14517 5.15248 5.15946 5.16612 5.17247 5.17854
5.18432 5.18984 5.19511 5.20479 #bodywt for gender,fleet: 1 / 3
0 0.014584 0.0315767 0.0630315 0.114345 0.187533 0.279357 0.382192 0.486852 0.585372
0.672517 0.745927 0.805482 0.852436 0.888682 0.916241 0.93698 0.952488 0.964047 0.972656
0.979076 0.983879 0.987486 0.990209 0.992277 0.993857 0.995073 0.996015 0.996751 0.997329
0.997787 0.998152 0.998445 0.998682 0.998875 0.999033 0.999164 0.999272 0.999362 0.999438
0.999502 0.999557 0.999603 0.999643 0.999677 0.999707 0.999732 0.999755 0.999775 0.999792
0.999807 0.999821 0.999833 0.999844 0.999853 0.999862 0.99987 0.999877 0.999883 0.999889
0.999894 0.999899 0.999903 0.999907 0.99991 0.999914 0.999917 0.99992 0.999922 0.999925
0.999927 0.999928 0.99993 0.999932 0.999933 0.999934 0.999936 0.999937 0.999938 0.999939
0.99994 0.999941 0.999942 0.999943 0.999943 0.999944 0.999945 0.999945 0.999946 0.999947
0.999947 0.999948 0.999948 0.999948 0.999949 0.999949 0.99995 0.99995 0.99995 0.999951
0.999951 #selex for gender,fleet: 1 / 3
0.0456032 0.166877 0.230911 0.30502 0.387629 0.476727 0.570245 0.666427 0.764036
0.862354 0.961057 1.06007 1.15946 1.2593 1.35966 1.46057 1.56199 1.66384 1.76598 1.86823
1.97039 2.07223 2.17352 2.27405 2.37357 2.4719 2.56882 2.66418 2.75781 2.84957 2.93936
3.02708 3.11264 3.19599 3.27708 3.35587 3.43234 3.5065 3.57833 3.64784 3.71507 3.78002
3.84274 3.90325 3.9616 4.01782 4.07198 4.1241 4.17426 4.22249 4.26885 4.31339 4.35618
4.39725 4.43668 4.4745 4.51078 4.54557 4.57892 4.61087 4.64149 4.67082 4.69891 4.7258
4.75154 4.77617 4.79975 4.8223 4.84387 4.86451 4.88438 4.90351 4.9218 4.93928 4.95599
4.97196 4.98722 5.0018 5.01574 5.02904 5.04175 5.0539 5.06549 5.07656 5.08714 5.09723
5.10687 5.11608 5.12486 5.13325 5.14125 5.14889 5.15619 5.16315 5.16979 5.17613 5.18218
5.18795 5.19346 5.19871 5.20837 #bodywt for gender,fleet: 1 / 4
0 0.00970341 0.0169507 0.0285819 0.0463545 0.0720447 0.107007 0.15172 0.205519 0.266651
0.332604 0.400579 0.467927 0.532456 0.592573 0.647296 0.696176 0.739175 0.776549 0.808729
0.836243 0.859646 0.879483 0.896262 0.910439 0.922418 0.932547 0.941123 0.948397 0.954582
0.959854 0.964361 0.968226 0.97155 0.974419 0.976904 0.979062 0.980943 0.982588 0.984031
0.985302 0.986424 0.987418 0.9883 0.989087 0.98979 0.990419 0.990985 0.991494 0.991954
0.99237 0.992747 0.99309 0.993403 0.993688 0.993949 0.994187 0.994407 0.994608 0.994794
0.994965 0.995123 0.99527 0.995405 0.995531 0.995648 0.995756 0.995857 0.995951 0.996039
0.996117 0.996187 0.996252 0.996313 0.996371 0.996425 0.996475 0.996523 0.996568 0.99661
0.99665 0.996687 0.996723 0.996756 0.996787 0.996817 0.996845 0.996872 0.996897 0.996921
0.996943 0.996964 0.996985 0.997004 0.997022 0.997039 0.997055 0.997071 0.997085 0.997099
0.997124 #selex for gender,fleet: 1 / 4
0.0447984 0.163293 0.226258 0.299865 0.383255 0.475175 0.574053 0.678151 0.785755
0.895355 1.00576 1.11611 1.22587 1.33472 1.44253 1.54924 1.65485 1.75938 1.86285 1.96526
2.06659 2.16679 2.26581 2.36358 2.46 2.55498 2.64844 2.74027 2.83038 2.91869 3.00512
3.08959 3.17206 3.25246 3.33076 3.40693 3.48094 3.55278 3.62245 3.68995 3.75529 3.81849
3.87957 3.93856 3.9955 4.05041 4.10334 4.15433 4.20342 4.25066 4.2961 4.33979 4.38177
4.4221 4.46083 4.498 4.53367 4.56789 4.6007 4.63216 4.66231 4.6912 4.71887 4.74538
4.77075 4.79505 4.8183 4.84055 4.86184 4.88221 4.90186 4.92081 4.93894 4.95627 4.97283
4.98866 5.00379 5.01824 5.03205 5.04525 5.05785 5.06989 5.08139 5.09237 5.10286 5.11287
5.12244 5.13156 5.14028 5.1486 5.15654 5.16412 5.17136 5.17826 5.18485 5.19114 5.19714
5.20287 5.20834 5.21355 5.22314 #bodywt for gender,fleet: 1 / 5

0 0.00426517 0.00708885 0.0114749 0.0180771 0.0276862 0.0411724 0.0593801 0.0829864
 0.112359 0.147456 0.187798 0.232523 0.280493 0.330438 0.381088 0.431283 0.480045 0.526609
 0.570432 0.611171 0.648655 0.682855 0.713841 0.74176 0.766807 0.7892 0.809172 0.826953
 0.842767 0.856825 0.86932 0.880429 0.890314 0.899117 0.906966 0.913974 0.920239 0.92585
 0.930883 0.935407 0.939479 0.943151 0.946469 0.949473 0.952197 0.954672 0.956924 0.958977
 0.960852 0.962567 0.964139 0.965582 0.966908 0.968128 0.969254 0.970292 0.971253 0.972141
 0.972965 0.97373 0.97444 0.9751 0.975715 0.976288 0.976823 0.977322 0.977789 0.978226
 0.978635 0.979003 0.979335 0.979647 0.979939 0.980215 0.980474 0.980718 0.980948 0.981165
 0.981369 0.981562 0.981744 0.981916 0.982079 0.982232 0.982378 0.982515 0.982645 0.982768
 0.982885 0.982996 0.9831 0.9832 0.983294 0.983383 0.983468 0.983548 0.983624 0.983697
 0.983765 0.983891 #selex for gender,fleet: 1 / 5
 0.0462489 0.170565 0.23697 0.314875 0.403443 0.501353 0.606808 0.717662 0.831682 0.94685
 1.0616 1.17489 1.28615 1.39519 1.50204 1.60686 1.70986 1.81127 1.91127 2.01 2.10757
 2.20403 2.2994 2.39366 2.48676 2.57863 2.6692 2.75838 2.84607 2.93218 3.01662 3.09932
 3.18019 3.25918 3.33622 3.41126 3.48429 3.55526 3.62416 3.69098 3.75573 3.81842 3.87904
 3.93764 3.99422 4.04883 4.10149 4.15224 4.20113 4.2482 4.29349 4.33704 4.3789 4.41913
 4.45777 4.49487 4.53047 4.56463 4.59739 4.62881 4.65892 4.68778 4.71543 4.74191 4.76726
 4.79154 4.81478 4.83702 4.8583 4.87866 4.8983 4.91724 4.93536 4.95268 4.96924 4.98506
 5.00018 5.01463 5.02844 5.04163 5.05423 5.06627 5.07776 5.08874 5.09923 5.10924 5.1188
 5.12793 5.13664 5.14496 5.1529 5.16048 5.16772 5.17462 5.18121 5.1875 5.1935 5.19923
 5.2047 5.20991 5.2195 #bodywt for gender,fleet: 1 / 6
 0 0.00121961 0.00225358 0.00404188 0.00703329 0.0118624 0.0193627 0.0305301 0.0464177
 0.0679668 0.0958152 0.130141 0.170591 0.21632 0.266102 0.318508 0.372065 0.425406
 0.477362 0.527012 0.573695 0.616993 0.656695 0.692756 0.725257 0.754367 0.780311 0.803346
 0.823738 0.841756 0.857655 0.871675 0.884035 0.894936 0.904556 0.913053 0.920568 0.927224
 0.933128 0.938375 0.943046 0.947212 0.950936 0.95427 0.957262 0.959953 0.962377 0.964565
 0.966545 0.968339 0.969968 0.971451 0.972802 0.974036 0.975164 0.976198 0.977147 0.978019
 0.978822 0.979562 0.980245 0.980877 0.981462 0.982004 0.982507 0.982975 0.983409 0.983814
 0.984192 0.984544 0.984858 0.985138 0.9854 0.985645 0.985876 0.986092 0.986295 0.986486
 0.986666 0.986835 0.986995 0.987145 0.987286 0.98742 0.987546 0.987665 0.987778 0.987884
 0.987985 0.98808 0.98817 0.988256 0.988336 0.988413 0.988485 0.988554 0.988619 0.988681
 0.988739 0.988795 0.988896 #selex for gender,fleet: 1 / 6
 0.052543 0.179632 0.246312 0.32195 0.404861 0.493424 0.586331 0.682664 0.781852 0.883556
 0.987571 1.09374 1.2019 1.31185 1.42335 1.53614 1.64988 1.76426 1.87891 1.99351 2.10772
 2.2212 2.33372 2.44494 2.55466 2.66265 2.76874 2.87275 2.97455 3.07403 3.17111 3.2657
 3.35775 3.44724 3.53412 3.6184 3.70006 3.77913 3.85562 3.92956 4.00097 4.06991 4.13641
 4.20051 4.26228 4.32176 4.379 4.43408 4.48704 4.53795 4.58686 4.63383 4.67894 4.72222
 4.76376 4.8036 4.8418 4.87842 4.91352 4.94715 4.97937 5.01022 5.03977 5.06805 5.09512
 5.12103 5.14582 5.16954 5.19222 5.21392 5.23479 5.25488 5.27409 5.29245 5.31 5.32677
 5.34279 5.35811 5.37274 5.38672 5.40007 5.41282 5.425 5.43664 5.44775 5.45836 5.46849
 5.47816 5.48739 5.49621 5.50462 5.51266 5.52032 5.52764 5.53463 5.5413 5.54766 5.55373
 5.55953 5.56506 5.57524 #bodywt for gender,fleet: 2 / 1
 0 0.0463141 0.072331 0.108367 0.155316 0.212731 0.278723 0.350303 0.424008 0.496539
 0.565218 0.628194 0.684445 0.73364 0.775953 0.811884 0.842103 0.867345 0.888331 0.905733
 0.920144 0.93208 0.941976 0.950196 0.957042 0.962761 0.967554 0.971586 0.974991 0.977878
 0.980335 0.982436 0.984239 0.985792 0.987136 0.988304 0.989322 0.990212 0.990994 0.991683
 0.992293 0.992833 0.993314 0.993744 0.994128 0.994473 0.994784 0.995064 0.995317 0.995547
 0.995756 0.995946 0.99612 0.996279 0.996424 0.996558 0.996681 0.996794 0.996898 0.996994
 0.997083 0.997166 0.997242 0.997314 0.99738 0.997441 0.997499 0.997552 0.997602 0.997649
 0.997691 0.997729 0.997764 0.997798 0.997829 0.997858 0.997886 0.997912 0.997937 0.99796
 0.997982 0.998002 0.998022 0.99804 0.998058 0.998074 0.998089 0.998104 0.998118 0.998131
 0.998144 0.998155 0.998167 0.998177 0.998187 0.998197 0.998206 0.998215 0.998223 0.99823
 0.998245 #selex for gender,fleet: 2 / 1
 0.0537984 0.186226 0.256351 0.336223 0.423792 0.516884 0.613642 0.712771 0.81354
 0.915643 1.01903 1.12374 1.22985 1.33738 1.44626 1.55638 1.66753 1.77947 1.89188 2.00447
 2.11689 2.22884 2.34001 2.4501 2.55885 2.66604 2.77144 2.87489 2.97623 3.07533 3.17209
 3.26642 3.35826 3.44757 3.53431 3.61846 3.70004 3.77903 3.85545 3.92934 4.00071 4.06961
 4.13608 4.20016 4.26191 4.32138 4.37862 4.43369 4.48664 4.53754 4.58645 4.63343 4.67853
 4.72182 4.76335 4.80319 4.8414 4.87802 4.91312 4.94675 4.97897 5.00983 5.03938 5.06766
 5.09474 5.12065 5.14544 5.16916 5.19185 5.21355 5.23443 5.25452 5.27372 5.29208 5.30963
 5.3264 5.34243 5.35775 5.37238 5.38636 5.39971 5.41246 5.42465 5.43628 5.44739 5.458
 5.46813 5.4778 5.48704 5.49585 5.50427 5.5123 5.51997 5.52729 5.53428 5.54095 5.54731
 5.55339 5.55918 5.56471 5.5749 #bodywt for gender,fleet: 2 / 2
 0 0.0194511 0.0333675 0.0549159 0.0863136 0.129103 0.183503 0.248107 0.320093 0.395835
 0.471638 0.544328 0.611577 0.671981 0.724946 0.770505 0.809107 0.841438 0.868288 0.890451
 0.908676 0.92363 0.935892 0.945952 0.954218 0.961025 0.966647 0.971306 0.975182 0.978418
 0.981132 0.983417 0.985351 0.986993 0.988394 0.989595 0.990628 0.991521 0.992295 0.99297
 0.993559 0.994077 0.994533 0.994935 0.995292 0.99561 0.995893 0.996146 0.996374 0.996578
 0.996763 0.99693 0.997081 0.997218 0.997344 0.997458 0.997562 0.997658 0.997745 0.997826
 0.9979 0.997969 0.998032 0.998091 0.998145 0.998195 0.998242 0.998285 0.998326 0.998363
 0.998397 0.998427 0.998455 0.998481 0.998506 0.998529 0.99855 0.998571 0.99859 0.998608

0.998625 0.998641 0.998656 0.99867 0.998684 0.998696 0.998708 0.99872 0.99873 0.998741
 0.99875 0.998759 0.998768 0.998776 0.998784 0.998791 0.998798 0.998804 0.998811 0.998817
 0.998827 #selex for gender,fleet: 2 / 2
 0.058378 0.206581 0.282691 0.36522 0.450229 0.535584 0.620983 0.707154 0.795135 0.885875
 0.980055 1.07804 1.17988 1.28536 1.39409 1.50551 1.61903 1.73403 1.8499 1.96608 2.08209
 2.19747 2.31185 2.42489 2.53632 2.6459 2.75345 2.85879 2.9618 3.06237 3.16042 3.25589
 3.34873 3.43891 3.52643 3.61127 3.69345 3.77297 3.84987 3.92418 3.99593 4.06516 4.13193
 4.19629 4.25828 4.31796 4.3754 4.43064 4.48376 4.53481 4.58385 4.63094 4.67616 4.71955
 4.76118 4.8011 4.83938 4.87608 4.91125 4.94494 4.97722 5.00813 5.03772 5.06606 5.09317
 5.11913 5.14395 5.16771 5.19043 5.21215 5.23306 5.25317 5.27239 5.29077 5.30833 5.32512
 5.34116 5.35649 5.37113 5.38512 5.39848 5.41125 5.42344 5.43509 5.4462 5.45682 5.46696
 5.47664 5.48588 5.49471 5.50313 5.51117 5.51884 5.52617 5.53316 5.53983 5.5462 5.55228
 5.55808 5.56361 5.57381 #bodywt for gender,fleet: 2 / 3
 0 0.0149626 0.0335245 0.0686587 0.126526 0.20885 0.310837 0.422746 0.533687 0.63496
 0.721533 0.791828 0.846687 0.888236 0.919018 0.94147 0.957679 0.969311 0.977638 0.983601
 0.987882 0.990969 0.993208 0.994843 0.996047 0.996939 0.997607 0.99811 0.998494 0.998788
 0.999016 0.999194 0.999334 0.999445 0.999534 0.999606 0.999664 0.999712 0.999751 0.999783
 0.99981 0.999833 0.999852 0.999868 0.999882 0.999894 0.999904 0.999913 0.999921 0.999927
 0.999933 0.999938 0.999943 0.999947 0.999951 0.999954 0.999957 0.999959 0.999961 0.999963
 0.999965 0.999967 0.999969 0.99997 0.999971 0.999972 0.999974 0.999974 0.999975 0.999976
 0.999977 0.999978 0.999978 0.999979 0.999979 0.99998 0.99998 0.99998 0.99998 0.999981 0.999981
 0.999982 0.999982 0.999982 0.999982 0.999983 0.999983 0.999983 0.999983 0.999984 0.999984
 0.999984 0.999984 0.999984 0.999984 0.999985 0.999985 0.999985 0.999985 0.999985 0.999985
 0.999985 #selex for gender,fleet: 2 / 3
 0.054358 0.189299 0.261295 0.343842 0.434925 0.532152 0.633232 0.736381 0.840484
 0.945011 1.04984 1.15507 1.26088 1.36743 1.47483 1.5831 1.69219 1.80195 1.91218 2.02265
 2.13307 2.24316 2.35263 2.46119 2.56859 2.67457 2.77892 2.88145 2.98199 3.08039 3.17655
 3.27036 3.36175 3.45066 3.53707 3.62093 3.70225 3.78101 3.85725 3.93096 4.00219 4.07096
 4.13731 4.20129 4.26295 4.32234 4.37951 4.43451 4.48741 4.53826 4.58712 4.63406 4.67912
 4.72238 4.76388 4.80369 4.84187 4.87847 4.91355 4.94717 4.97937 5.01021 5.03974 5.06802
 5.09508 5.12098 5.14576 5.16947 5.19215 5.21384 5.23471 5.25479 5.27399 5.29235 5.30989
 5.32666 5.34269 5.358 5.37262 5.3866 5.39995 5.4127 5.42488 5.43651 5.44762 5.45823
 5.46835 5.47803 5.48726 5.49607 5.50449 5.51252 5.52019 5.5275 5.53449 5.54116 5.54752
 5.55359 5.55939 5.56492 5.5751 #bodywt for gender,fleet: 2 / 4
 0 0.00987319 0.0177084 0.030565 0.0505523 0.0797788 0.119768 0.170875 0.232 0.30072
 0.373798 0.447808 0.519681 0.587046 0.648343 0.702776 0.750166 0.790779 0.825154 0.853978
 0.877979 0.897869 0.914302 0.927859 0.93904 0.948269 0.955898 0.96222 0.967473 0.971853
 0.975517 0.978594 0.981188 0.983385 0.985252 0.986846 0.988212 0.989387 0.990403 0.991285
 0.992052 0.992723 0.993312 0.99383 0.994288 0.994693 0.995054 0.995376 0.995663 0.995921
 0.996153 0.996363 0.996552 0.996723 0.996879 0.997021 0.99715 0.997268 0.997376 0.997475
 0.997567 0.997651 0.997728 0.997799 0.997865 0.997927 0.997983 0.998036 0.998085 0.998131
 0.998171 0.998207 0.998241 0.998272 0.998302 0.998329 0.998355 0.998379 0.998402 0.998424
 0.998444 0.998463 0.998481 0.998498 0.998514 0.998529 0.998543 0.998557 0.99857 0.998582
 0.998593 0.998604 0.998614 0.998623 0.998633 0.998641 0.998649 0.998657 0.998665 0.998672
 0.998684 #selex for gender,fleet: 2 / 4
 0.0534269 0.185367 0.256271 0.338464 0.430754 0.531545 0.638954 0.751009 0.865877
 0.982051 1.09843 1.21432 1.32934 1.44333 1.55629 1.66825 1.77929 1.88947 1.99882 2.10734
 2.21499 2.32171 2.42738 2.5319 2.63515 2.73698 2.83726 2.93585 3.03264 3.12751 3.22036
 3.31109 3.39963 3.48592 3.56991 3.65156 3.73086 3.80777 3.88232 3.95449 4.02431 4.0918
 4.15698 4.21989 4.28057 4.33906 4.3954 4.44965 4.50186 4.55207 4.60035 4.64675 4.69132
 4.73411 4.77519 4.81462 4.85243 4.8887 4.92346 4.95679 4.98872 5.01931 5.04861 5.07666
 5.10352 5.12923 5.15383 5.17737 5.1999 5.22144 5.24219 5.26219 5.28131 5.29958 5.31705
 5.33375 5.3497 5.36495 5.37952 5.39343 5.40673 5.41943 5.43156 5.44315 5.45421 5.46478
 5.47487 5.4845 5.4937 5.50248 5.51086 5.51886 5.5265 5.53379 5.54075 5.54739 5.55373
 5.55978 5.56556 5.57107 5.58121 #bodywt for gender,fleet: 2 / 5
 0 0.00433198 0.00737788 0.0122142 0.0196363 0.0306144 0.0462161 0.0674606 0.095127
 0.129568 0.170588 0.217433 0.268882 0.323416 0.379411 0.435317 0.489783 0.541736 0.590406
 0.635306 0.676201 0.713055 0.745979 0.775188 0.800959 0.823602 0.843436 0.860774 0.875909
 0.889115 0.900639 0.9107 0.919492 0.927185 0.933929 0.93985 0.945059 0.949653 0.953712
 0.957307 0.9605 0.963341 0.965875 0.968141 0.970173 0.971998 0.973641 0.975124 0.976466
 0.977682 0.978786 0.979791 0.980708 0.981545 0.982312 0.983014 0.983659 0.984253 0.9848
 0.985304 0.985771 0.986202 0.986602 0.986973 0.987317 0.987638 0.987936 0.988214 0.988473
 0.988715 0.988932 0.989127 0.989309 0.98948 0.98964 0.989791 0.989933 0.990066 0.990192
 0.99031 0.990422 0.990527 0.990626 0.99072 0.990808 0.990892 0.990971 0.991045 0.991116
 0.991183 0.991246 0.991306 0.991363 0.991417 0.991468 0.991516 0.991562 0.991606 0.991647
 0.991686 0.991758 #selex for gender,fleet: 2 / 5
 0.0551047 0.193364 0.267988 0.354766 0.452497 0.559461 0.673468 0.79205 0.912799 1.0337
 1.15335 1.27094 1.38616 1.49904 1.60982 1.7188 1.82627 1.93253 2.03777 2.14215 2.24573
 2.34855 2.45056 2.5517 2.65185 2.7509 2.84869 2.9451 3.03997 3.13317 3.22458 3.31408
 3.40158 3.48698 3.57023 3.65126 3.73003 3.80652 3.88071 3.9526 4.02218 4.08948 4.15451
 4.2173 4.27789 4.33631 4.39261 4.44682 4.49901 4.54921 4.59748 4.64388 4.68846 4.73127


```

0.0800495 0.0762692 0.0726859 0.0692819 0.0660454 0.0629627 0.0600324 1.26075 #numbers
for year Ydeclare: 2013 sex: 1
 49.5369 46.5485 43.6934 41.102 38.6105 36.2626 34.121 31.9536 29.917 27.9467 26.045
24.2568 23.0486 21.7197 21.2109 20.3199 20.2839 19.9316 19.686 19.1379 18.8672 18.5269
17.8945 16.7456 15.7638 14.5334 13.2241 11.8879 10.7224 9.54916 8.5028 7.60831 6.73103
5.91076 5.20676 4.58722 4.02135 3.53255 3.10758 2.74403 2.43006 2.1617 1.92946 1.72887
1.55956 1.4103 1.28178 1.17029 1.07591 0.990186 0.915264 0.849234 0.790129 0.737367
0.689867 0.646887 0.607555 0.571338 0.537821 0.506703 0.477757 0.451 0.426163 0.402899
0.38116 0.361039 0.342135 0.325069 0.309189 0.293751 0.279184 0.265036 0.251597 0.238809
0.226607 0.215035 0.204037 0.193598 0.183683 0.174296 0.16543 0.157087 0.149238 0.141863
0.134921 0.128372 0.122197 0.116369 0.110862 0.105648 0.10071 0.096028 0.0915868
0.0873697 0.0833621 0.0795566 0.0759352 0.0724861 0.0691953 0.066062 1.42421 #numbers for
year Ydeclare: 2013 sex: 2
#R0 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932
1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950
1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968
1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986
1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004
2005 2006 2007 2008 2009 2010 #years
170.591 170.591 170.572 170.547 170.518 170.499 170.479 170.46 170.441 170.421 170.398
170.366 170.329 170.286 170.238 170.172 170.103 170.045 169.989 169.944 169.889 169.822
169.735 169.65 169.566 169.503 169.405 169.283 169.13 168.751 168.371 167.732 167.196
166.989 166.747 166.59 166.422 166.213 166.034 165.903 165.733 165.514 165.243 164.925
164.581 164.272 163.993 163.766 163.492 163.283 163.147 162.521 162.282 161.997 161.697
160.967 160.478 159.795 158.895 158.019 157.156 156.037 154.861 153.61 151.329 148.923
146.894 143.808 139.472 136.253 133.572 130.071 127.943 125.278 122.082 117.533 114.738
109.412 103.4 97.9113 94.4904 90.1055 86.6323 82.2575 81.4927 79.333 80.1082 80.3079
82.1948 84.1327 85.9641 87.6763 89.4289 90.8296 92.4373 94.0681 95.6045 #Recruits
7.77013e+008 7.77013e+008 7.76667e+008 7.7619e+008 7.75654e+008 7.753e+008 7.74924e+008
7.74553e+008 7.742e+008 7.73831e+008 7.73408e+008 7.728e+008 7.72106e+008 7.7132e+008
7.70424e+008 7.69196e+008 7.67921e+008 7.66842e+008 7.6581e+008 7.64985e+008 7.63974e+008
7.62758e+008 7.61165e+008 7.5961e+008 7.58088e+008 7.56955e+008 7.55178e+008 7.52983e+008
7.50251e+008 7.43541e+008 7.36886e+008 7.25919e+008 7.16891e+008 7.13457e+008
7.09466e+008 7.06903e+008 7.04164e+008 7.00781e+008 6.97916e+008 6.9582e+008 6.93117e+008
6.89653e+008 6.85397e+008 6.80467e+008 6.75183e+008 6.70504e+008 6.66305e+008
6.62919e+008 6.58861e+008 6.55789e+008 6.53805e+008 6.44789e+008 6.41386e+008
6.37369e+008 6.33186e+008 6.23151e+008 6.1655e+008 6.07505e+008 5.95869e+008 5.84849e+008
5.72372e+008 5.60939e+008 5.47379e+008 5.33457e+008 5.09282e+008 4.85357e+008
4.66326e+008 4.3919e+008 4.04379e+008 3.8073e+008 3.62309e+008 3.39809e+008 3.2693e+008
3.11573e+008 2.94202e+008 2.71263e+008 2.58105e+008 2.34791e+008 2.10929e+008
1.91112e+008 1.79604e+008 1.65705e+008 1.55322e+008 1.42961e+008 1.40878e+008
1.35112e+008 1.37162e+008 1.37693e+008 1.42789e+008 1.48165e+008 1.53383e+008
1.58388e+008 1.63641e+008 1.67938e+008 1.72982e+008 1.78225e+008 1.83285e+008 #SpawnBio
0.508 0.5 0 # spawn-recr steepness, sigmaR, autocorr
# values from cat100_hhigh, catch at 100% and steepness at high value. # this is state of
nature 8 out of 9 (in no particular order) # and parameter set number 1 out of 2 for this
state
0 0 25.6574 94.65 316.389 949.858 2529.97 5935.96 12294.3 22700.9 37897.9 58077.6 82888
111594 143291 177091 212236 248146 284415 320783 357099 393283 429298 465129 500768
536205 571428 606417 641146 675583 709694 743441 776785 809688 842111 874019 905377
936156 966326 995864 1.02475e+006 1.05296e+006 1.08048e+006 1.10731e+006 1.13342e+006
1.15882e+006 1.1835e+006 1.20747e+006 1.23071e+006 1.25324e+006 1.27506e+006 1.29618e+006
1.3166e+006 1.33633e+006 1.3554e+006 1.37379e+006 1.39154e+006 1.40866e+006 1.42515e+006
1.44103e+006 1.45632e+006 1.47104e+006 1.48519e+006 1.4988e+006 1.51187e+006 1.52444e+006
1.5365e+006 1.54809e+006 1.55921e+006 1.56987e+006 1.58011e+006 1.59018e+006 1.59983e+006
1.60909e+006 1.61796e+006 1.62646e+006 1.63461e+006 1.6424e+006 1.64987e+006 1.65702e+006
1.66386e+006 1.67041e+006 1.67668e+006 1.68267e+006 1.6884e+006 1.69389e+006 1.69913e+006
1.70414e+006 1.70894e+006 1.71352e+006 1.7179e+006 1.72208e+006 1.72608e+006 1.7299e+006
1.73355e+006 1.73704e+006 1.74037e+006 1.74355e+006 1.74659e+006 1.74949e+006
1.75483e+006 #female fecundity; weighted by N in year Y_init across morphs and areas
0.0443489 0.159549 0.218836 0.286597 0.361462 0.442032 0.527092 0.615719 0.707275
0.801335 0.897618 0.995908 1.09602 1.19774 1.30086 1.40514 1.51031 1.61607 1.72215
1.82824 1.93406 2.03933 2.14378 2.24718 2.3493 2.44994 2.54893 2.6461 2.74133 2.8345
2.92552 3.0143 3.1008 3.18496 3.26675 3.34616 3.42317 3.4978 3.57004 3.63992 3.70746
3.77269 3.83566 3.89639 3.95493 4.01133 4.06565 4.11792 4.1682 4.21655 4.26302 4.30767
4.35054 4.39171 4.43121 4.46911 4.50547 4.54032 4.57374 4.60576 4.63643 4.66582 4.69396
4.7209 4.7467 4.77138 4.79501 4.81761 4.83923 4.85991 4.87982 4.89899 4.91732 4.93484
4.95159 4.96759 4.98289 4.99751 5.01147 5.02481 5.03756 5.04973 5.06136 5.07246 5.08307
5.09319 5.10286 5.11209 5.12091 5.12932 5.13735 5.14502 5.15233 5.15932 5.16598 5.17235
5.17842 5.18421 5.18974 5.19502 5.20472 #bodywt for gender,fleet: 1 / 1

```

0 0.0466755 0.071249 0.104705 0.147786 0.200165 0.260352 0.325944 0.394091 0.461989
 0.527262 0.588162 0.643597 0.693062 0.736506 0.774192 0.806577 0.834216 0.857688 0.877561
 0.894358 0.908546 0.920535 0.930679 0.939276 0.946578 0.952796 0.958108 0.962658 0.966569
 0.969943 0.972861 0.975396 0.977604 0.979535 0.981228 0.982718 0.984034 0.985199 0.986234
 0.987156 0.98798 0.988718 0.989381 0.989978 0.990517 0.991005 0.991447 0.99185 0.992216
 0.992551 0.992857 0.993137 0.993394 0.993631 0.993849 0.99405 0.994236 0.994408 0.994567
 0.994715 0.994852 0.99498 0.995098 0.995209 0.995312 0.995409 0.995499 0.995583 0.995662
 0.995734 0.995798 0.995858 0.995915 0.995968 0.996018 0.996066 0.99611 0.996152 0.996192
 0.996229 0.996265 0.996298 0.99633 0.99636 0.996388 0.996415 0.99644 0.996464 0.996486
 0.996508 0.996528 0.996548 0.996566 0.996583 0.9966 0.996616 0.99663 0.996645 0.996658
 0.996682 #selex for gender,fleet: 1 / 1
 0.0454464 0.165628 0.228103 0.299837 0.379186 0.464291 0.553445 0.64534 0.739131
 0.834355 0.930809 1.02843 1.1272 1.22711 1.32809 1.43005 1.53284 1.63625 1.74007 1.84404
 1.9479 2.05138 2.15423 2.2562 2.35706 2.45659 2.55461 2.65094 2.74544 2.83798 2.92845
 3.01676 3.10286 3.18667 3.26816 3.34731 3.4241 3.49853 3.57061 3.64034 3.70776 3.77289
 3.83576 3.89641 3.95488 4.01123 4.06548 4.11771 4.16795 4.21627 4.26271 4.30733 4.35018
 4.39133 4.43081 4.4687 4.50504 4.53988 4.57329 4.6053 4.63597 4.66534 4.69348 4.72042
 4.74621 4.77089 4.79451 4.81711 4.83872 4.8594 4.87931 4.89848 4.9168 4.93432 4.95107
 4.96708 4.98237 4.99699 5.01095 5.02429 5.03703 5.04921 5.06083 5.07194 5.08254 5.09266
 5.10233 5.11156 5.12037 5.12879 5.13682 5.14448 5.1518 5.15879 5.16545 5.17181 5.17788
 5.18368 5.18921 5.19448 5.20419 #bodywt for gender,fleet: 1 / 2
 0 0.0195579 0.0326491 0.0524719 0.0808761 0.119187 0.167704 0.22545 0.29028 0.359317
 0.4295 0.498061 0.562829 0.622335 0.675778 0.722904 0.763862 0.799061 0.829053 0.854451
 0.875866 0.893874 0.908998 0.921695 0.932362 0.941335 0.948899 0.95529 0.960705 0.965307
 0.969231 0.972588 0.97547 0.977953 0.9801 0.981963 0.983585 0.985002 0.986245 0.987338
 0.988303 0.989157 0.989916 0.990592 0.991196 0.991736 0.992222 0.99266 0.993055 0.993412
 0.993736 0.994031 0.994299 0.994544 0.994768 0.994974 0.995162 0.995335 0.995495 0.995642
 0.995778 0.995904 0.996021 0.996129 0.996229 0.996323 0.99641 0.996491 0.996566 0.996637
 0.9967 0.996757 0.996809 0.996859 0.996906 0.996949 0.996991 0.997029 0.997066 0.9971
 0.997133 0.997163 0.997192 0.997219 0.997245 0.997269 0.997292 0.997314 0.997335 0.997354
 0.997372 0.99739 0.997406 0.997422 0.997437 0.997451 0.997464 0.997477 0.997489 0.9975
 0.997521 #selex for gender,fleet: 1 / 2
 0.0494376 0.184351 0.252586 0.327425 0.4054 0.484352 0.563651 0.643649 0.725081 0.808699
 0.895091 0.984618 1.07741 1.17337 1.27225 1.37367 1.47716 1.58225 1.68841 1.79517 1.90207
 2.00869 2.11466 2.21966 2.3234 2.42564 2.52616 2.6248 2.72141 2.81587 2.90808 2.99797
 3.08549 3.17059 3.25324 3.33343 3.41117 3.48645 3.5593 3.62974 3.69779 3.76349 3.82688
 3.888 3.94691 4.00365 4.05826 4.11082 4.16136 4.20996 4.25665 4.3015 4.34458 4.38592
 4.42559 4.46365 4.50014 4.53513 4.56867 4.60081 4.6316 4.66109 4.68932 4.71636 4.74223
 4.767 4.7907 4.81337 4.83505 4.85579 4.87575 4.89497 4.91333 4.93089 4.94767 4.96371
 4.97904 4.99368 5.00767 5.02104 5.03381 5.04601 5.05766 5.06878 5.0794 5.08955 5.09923
 5.10848 5.11731 5.12574 5.13378 5.14146 5.14879 5.15579 5.16247 5.16884 5.17492 5.18073
 5.18627 5.19155 5.20127 #bodywt for gender,fleet: 1 / 3
 0 0.0150931 0.0325022 0.0645218 0.116434 0.19008 0.282078 0.384778 0.489069 0.587107
 0.673762 0.746744 0.805962 0.852672 0.888753 0.91621 0.936891 0.95237 0.96392 0.972531
 0.978959 0.983773 0.987391 0.990126 0.992205 0.993795 0.995019 0.995969 0.996711 0.997294
 0.997756 0.998125 0.998422 0.998662 0.998857 0.999017 0.99915 0.999259 0.999351 0.999428
 0.999493 0.999548 0.999596 0.999636 0.999671 0.999701 0.999727 0.99975 0.99977 0.999788
 0.999803 0.999817 0.999829 0.99984 0.99985 0.99985 0.999867 0.99987 0.999874 0.99988 0.999886
 0.999892 0.999896 0.999901 0.999905 0.999909 0.999912 0.999915 0.999918 0.999921 0.999923
 0.999925 0.999927 0.999929 0.99993 0.999932 0.999933 0.999934 0.999936 0.999937 0.999938
 0.999939 0.99994 0.999941 0.999941 0.999942 0.999943 0.999944 0.999944 0.999945 0.999945
 0.999946 0.999946 0.999947 0.999947 0.999948 0.999948 0.999949 0.999949 0.999949 0.99995
 0.99995 #selex for gender,fleet: 1 / 3
 0.045866 0.168117 0.232163 0.306202 0.388683 0.477635 0.57103 0.667142 0.764741 0.863099
 0.961875 1.06098 1.16044 1.26034 1.36073 1.46163 1.56301 1.66477 1.76679 1.86889 1.97087
 2.07251 2.17359 2.27389 2.37318 2.47127 2.56796 2.66309 2.75649 2.84804 2.93762 3.02513
 3.1105 3.19367 3.27459 3.35322 3.42955 3.50357 3.57527 3.64467 3.71179 3.77664 3.83927
 3.8997 3.95797 4.01414 4.06823 4.12031 4.17042 4.21861 4.26493 4.30945 4.35221 4.39327
 4.43268 4.47049 4.50676 4.54154 4.57489 4.60684 4.63746 4.6668 4.69489 4.72179 4.74754
 4.77219 4.79578 4.81834 4.83993 4.86058 4.88047 4.89962 4.91793 4.93544 4.95217 4.96816
 4.98345 4.99805 5.012 5.02533 5.03806 5.05023 5.06184 5.07294 5.08353 5.09365 5.10331
 5.11253 5.12134 5.12975 5.13777 5.14543 5.15274 5.15972 5.16638 5.17274 5.17881 5.1846
 5.19012 5.19539 5.20509 #bodywt for gender,fleet: 1 / 4
 0 0.0101109 0.0175232 0.0293269 0.0472347 0.0729595 0.107791 0.152167 0.205422 0.26585
 0.331015 0.398204 0.464842 0.528787 0.588474 0.642925 0.691676 0.734671 0.772135 0.804478
 0.832203 0.855846 0.875937 0.892972 0.907401 0.919621 0.929976 0.938762 0.946231 0.952594
 0.958027 0.962681 0.966678 0.970122 0.973099 0.97568 0.977926 0.979886 0.981602 0.98311
 0.984438 0.985613 0.986654 0.98758 0.988406 0.989144 0.989806 0.990402 0.990938 0.991423
 0.991862 0.99226 0.992622 0.992953 0.993254 0.99353 0.993783 0.994015 0.994229 0.994425
 0.994607 0.994775 0.99493 0.995074 0.995207 0.995331 0.995447 0.995554 0.995654 0.995748
 0.995831 0.995905 0.995975 0.99604 0.996101 0.996159 0.996213 0.996263 0.996311 0.996356

0.996399 0.996439 0.996476 0.996512 0.996546 0.996577 0.996607 0.996636 0.996662 0.996688
0.996712 0.996735 0.996756 0.996777 0.996796 0.996814 0.996832 0.996848 0.996864 0.996879
0.996906 #selex for gender,fleet: 1 / 4
0.0450186 0.164329 0.227237 0.300698 0.38387 0.475535 0.574174 0.678101 0.785647
0.895321 1.00593 1.11659 1.22673 1.33601 1.44425 1.55137 1.65735 1.7622 1.86593 1.96853
2.06998 2.17025 2.26928 2.36699 2.46332 2.55818 2.65147 2.74311 2.83302 2.92111 3.0073
3.09154 3.17377 3.25393 3.332 3.40793 3.48172 3.55335 3.62281 3.69011 3.75527 3.81829
3.87921 3.93805 3.99483 4.04961 4.10241 4.15329 4.20227 4.24942 4.29477 4.33837 4.38028
4.42054 4.4592 4.49632 4.53194 4.56611 4.59888 4.63031 4.66042 4.68929 4.71694 4.74342
4.76878 4.79306 4.8163 4.83854 4.85982 4.88019 4.89984 4.9188 4.93693 4.95427 4.97084
4.98668 5.00182 5.01629 5.03011 5.04332 5.05594 5.06799 5.0795 5.0905 5.101 5.11103
5.12061 5.12975 5.13848 5.14681 5.15477 5.16236 5.16961 5.17653 5.18314 5.18944 5.19546
5.2012 5.20668 5.2119 5.22152 #bodywt for gender,fleet: 1 / 5
0 0.00443084 0.0072905 0.0116897 0.0182529 0.0277292 0.0409381 0.0586733 0.0815736
0.109994 0.143913 0.182906 0.226184 0.272699 0.321263 0.370677 0.41983 0.467771 0.513744
0.557197 0.597767 0.63526 0.669614 0.700873 0.729154 0.754627 0.77749 0.797958 0.816248
0.83257 0.847128 0.860109 0.871686 0.882017 0.891242 0.89949 0.906871 0.913487 0.919426
0.924765 0.929572 0.933908 0.937826 0.941373 0.944588 0.947509 0.950166 0.952588 0.954799
0.956821 0.958673 0.960372 0.961933 0.963369 0.964692 0.965913 0.967042 0.968086 0.969053
0.96995 0.970783 0.971557 0.972278 0.972949 0.973576 0.97416 0.974707 0.975217 0.975696
0.976143 0.976548 0.976912 0.977255 0.977576 0.977879 0.978164 0.978433 0.978686 0.978925
0.97915 0.979362 0.979563 0.979753 0.979932 0.980101 0.980261 0.980413 0.980557 0.980693
0.980821 0.980943 0.981059 0.981169 0.981273 0.981371 0.981465 0.981554 0.981638 0.981718
0.981794 0.981933 #selex for gender,fleet: 1 / 5
0.0465871 0.172205 0.238796 0.316828 0.405458 0.50336 0.608742 0.719473 0.833337
0.948335 1.06292 1.17604 1.28716 1.39606 1.50277 1.60746 1.71034 1.81161 1.91147 2.01005
2.10746 2.20375 2.29894 2.39302 2.48593 2.57762 2.668 2.75699 2.84449 2.93042 3.01469
3.09722 3.17792 3.25675 3.33364 3.40855 3.48143 3.55228 3.62106 3.68778 3.75243 3.81502
3.87556 3.93408 3.99059 4.04513 4.09774 4.14845 4.19729 4.24432 4.28957 4.33309 4.37494
4.41514 4.45377 4.49085 4.52645 4.5606 4.59336 4.62478 4.65489 4.68375 4.71141 4.73789
4.76326 4.78755 4.8108 4.83306 4.85435 4.87473 4.89439 4.91335 4.93149 4.94883 4.9654
4.98125 4.99639 5.01087 5.02469 5.03791 5.05053 5.06259 5.07411 5.08511 5.09561 5.10565
5.11523 5.12437 5.13311 5.14145 5.14941 5.15701 5.16426 5.17118 5.17779 5.1841 5.19012
5.19586 5.20134 5.20658 5.2162 #bodywt for gender,fleet: 1 / 6
0 0.00124726 0.00229766 0.00410903 0.00713043 0.0119948 0.0195307 0.030725 0.046618
0.0681368 0.0959074 0.130101 0.170369 0.215873 0.265405 0.317553 0.370862 0.423979
0.475745 0.525246 0.571822 0.615053 0.654723 0.690784 0.723311 0.752468 0.778474 0.801581
0.822053 0.840154 0.856137 0.870241 0.882683 0.893663 0.903358 0.911926 0.919508 0.926227
0.932189 0.937491 0.942212 0.946425 0.950192 0.953566 0.956595 0.959319 0.961775 0.963992
0.965998 0.967817 0.969469 0.970972 0.972343 0.973595 0.97474 0.97579 0.97673 0.977638
0.978454 0.979205 0.9799 0.980542 0.981136 0.981687 0.982198 0.982673 0.983115 0.983527
0.983911 0.984269 0.984589 0.984873 0.985139 0.985389 0.985624 0.985844 0.986051 0.986245
0.986428 0.9866 0.986763 0.986916 0.98706 0.987196 0.987324 0.987446 0.98756 0.987669
0.987771 0.987868 0.98796 0.988047 0.988129 0.988207 0.988281 0.988351 0.988417 0.98848
0.98854 0.988596 0.9887 #selex for gender,fleet: 1 / 6
0.0529166 0.181257 0.24807 0.323768 0.406674 0.495185 0.58801 0.684247 0.783328 0.88492
0.988815 1.09485 1.20287 1.31267 1.42401 1.53662 1.65018 1.76436 1.87882 1.99322 2.10722
2.22051 2.33281 2.44383 2.55335 2.66116 2.76706 2.87089 2.97253 3.07185 3.16878 3.26323
3.35515 3.44451 3.53128 3.61545 3.69702 3.776 3.85241 3.92627 3.99762 4.0665 4.13294
4.197 4.25872 4.31817 4.37539 4.43044 4.48338 4.53427 4.58317 4.63014 4.67523 4.71852
4.76006 4.7999 4.83811 4.87474 4.90985 4.9435 4.97573 5.0066 5.03616 5.06447 5.09156
5.11749 5.1423 5.16604 5.18875 5.21047 5.23137 5.25149 5.27072 5.28911 5.30668 5.32348
5.33953 5.35487 5.36953 5.38353 5.39691 5.40969 5.4219 5.43355 5.44469 5.45532 5.46548
5.47517 5.48443 5.49327 5.5017 5.50976 5.51745 5.52479 5.5318 5.53848 5.54487 5.55096
5.55677 5.56232 5.57254 #bodywt for gender,fleet: 2 / 1
0 0.0472887 0.0736166 0.109953 0.157136 0.214668 0.280634 0.352052 0.425492 0.497699
0.566039 0.628698 0.684674 0.733646 0.77579 0.8116 0.841739 0.866933 0.887896 0.905292
0.919711 0.931662 0.941579 0.949823 0.956693 0.962436 0.967252 0.971307 0.974733 0.977639
0.980114 0.982231 0.984049 0.985616 0.986973 0.988151 0.989179 0.990079 0.990869 0.991566
0.992182 0.992729 0.993216 0.99365 0.994039 0.994389 0.994703 0.994987 0.995244 0.995477
0.995689 0.995882 0.996058 0.996219 0.996366 0.996502 0.996626 0.996741 0.996847 0.996944
0.997035 0.997119 0.997196 0.997269 0.997336 0.997398 0.997457 0.997511 0.997562 0.997609
0.997652 0.997691 0.997727 0.99776 0.997792 0.997822 0.99785 0.997877 0.997902 0.997925
0.997947 0.997968 0.997988 0.998007 0.998025 0.998041 0.998057 0.998072 0.998086 0.998099
0.998112 0.998124 0.998136 0.998146 0.998157 0.998166 0.998176 0.998184 0.998193 0.9982
0.998215 #selex for gender,fleet: 2 / 1
0.0541888 0.187967 0.258259 0.338215 0.425788 0.518823 0.615485 0.714497 0.815143
0.91712 1.02037 1.12495 1.23092 1.3383 1.44702 1.55696 1.66792 1.77966 1.89187 2.00425
2.11646 2.2282 2.33915 2.44904 2.55759 2.66458 2.7698 2.87307 2.97424 3.07317 3.16978
3.26396 3.35567 3.44485 3.53147 3.61553 3.697 3.7759 3.85224 3.92605 3.99736 4.0662
4.13261 4.19665 4.25836 4.31779 4.375 4.43004 4.48298 4.53386 4.58276 4.62973 4.67482

4.71811 4.75965 4.79949 4.8377 4.87434 4.90945 4.9431 4.97533 5.00621 5.03577 5.06408
5.09117 5.11711 5.14192 5.16566 5.18837 5.2101 5.231 5.25112 5.27035 5.28874 5.30631
5.32311 5.33916 5.35451 5.36916 5.38317 5.39655 5.40933 5.42153 5.43319 5.44433 5.45496
5.46512 5.47481 5.48407 5.49291 5.50135 5.5094 5.51709 5.52443 5.53144 5.53813 5.54451
5.5506 5.55642 5.56197 5.57219 #bodywt for gender,fleet: 2 / 2
0 0.019877 0.0339918 0.055772 0.087402 0.130376 0.184865 0.249437 0.32127 0.39677
0.472282 0.544673 0.611651 0.671828 0.72462 0.770058 0.808584 0.840878 0.867718 0.889893
0.908142 0.923128 0.935426 0.945523 0.953826 0.960668 0.966323 0.971013 0.974915 0.978176
0.980913 0.983218 0.985169 0.986827 0.988243 0.989456 0.9905 0.991403 0.992186 0.992869
0.993466 0.99399 0.994451 0.994859 0.99522 0.995542 0.995829 0.996086 0.996317 0.996524
0.996711 0.996881 0.997034 0.997174 0.997301 0.997416 0.997522 0.997619 0.997709 0.99779
0.997866 0.997935 0.998 0.998059 0.998114 0.998165 0.998213 0.998257 0.998298 0.998336
0.99837 0.998401 0.998429 0.998456 0.998481 0.998504 0.998526 0.998547 0.998567 0.998585
0.998602 0.998618 0.998634 0.998648 0.998662 0.998675 0.998687 0.998699 0.998709 0.99872
0.998729 0.998739 0.998747 0.998756 0.998764 0.998771 0.998778 0.998785 0.998791 0.998797
0.998808 #selex for gender,fleet: 2 / 2
0.0588068 0.208496 0.284683 0.367142 0.452 0.537194 0.62246 0.708529 0.79643 0.887096
0.981197 1.07908 1.18081 1.28616 1.39472 1.50597 1.6193 1.73409 1.84975 1.96572 2.08151
2.19668 2.31085 2.42369 2.53492 2.64431 2.75168 2.85684 2.95969 3.0601 3.15801 3.25334
3.34605 3.43612 3.52352 3.60826 3.69034 3.76978 3.8466 3.92084 3.99252 4.0617 4.12842
4.19273 4.25468 4.31433 4.37174 4.42696 4.48006 4.53109 4.58012 4.62721 4.67242 4.71581
4.75745 4.79738 4.83567 4.87238 4.90756 4.94126 4.97356 5.00448 5.0341 5.06245 5.08959
5.11556 5.14041 5.16419 5.18693 5.20869 5.22962 5.24975 5.269 5.2874 5.305 5.32181
5.33788 5.35323 5.3679 5.38192 5.39531 5.4081 5.42032 5.43198 5.44313 5.45377 5.46393
5.47364 5.4829 5.49175 5.50019 5.50825 5.51595 5.5233 5.53031 5.537 5.54339 5.54949
5.5553 5.56086 5.57109 #bodywt for gender,fleet: 2 / 3
0 0.015494 0.0345221 0.0702949 0.128827 0.211624 0.313736 0.425415 0.535887 0.636602
0.722648 0.792513 0.847057 0.888394 0.919045 0.941424 0.957597 0.969217 0.977544 0.983514
0.987805 0.990903 0.993152 0.994796 0.996007 0.996906 0.997579 0.998087 0.998474 0.998772
0.999002 0.999182 0.999324 0.999437 0.999527 0.999599 0.999658 0.999707 0.999747 0.999779
0.999807 0.99983 0.999849 0.999866 0.99988 0.999892 0.999902 0.999911 0.999919 0.999926
0.999932 0.999937 0.999942 0.999946 0.999949 0.999953 0.999956 0.999958 0.999961 0.999963
0.999965 0.999966 0.999968 0.999969 0.999971 0.999972 0.999973 0.999974 0.999975 0.999976
0.999976 0.999977 0.999978 0.999978 0.999979 0.999979 0.99998 0.99998 0.99998 0.999981
0.999981 0.999981 0.999982 0.999982 0.999982 0.999982 0.999983 0.999983 0.999983 0.999983
0.999984 0.999984 0.999984 0.999984 0.999984 0.999984 0.999984 0.999985 0.999985 0.999985
0.999985 #selex for gender,fleet: 2 / 3
0.0546749 0.190718 0.262747 0.345242 0.436215 0.53332 0.634308 0.737423 0.841551
0.946148 1.05107 1.15639 1.26227 1.36886 1.47626 1.58449 1.69348 1.80312 1.91319 2.02346
2.13366 2.24352 2.35275 2.46106 2.56821 2.67395 2.77806 2.88036 2.98068 3.07887 3.17483
3.26845 3.35967 3.44842 3.53468 3.6184 3.69959 3.77824 3.85437 3.92799 3.99913 4.06782
4.13411 4.19803 4.25963 4.31897 4.3761 4.43107 4.48394 4.53476 4.58361 4.63052 4.67558
4.71883 4.76033 4.80014 4.83832 4.87493 4.91002 4.94364 4.97585 5.00671 5.03625 5.06454
5.09162 5.11754 5.14234 5.16607 5.18877 5.21049 5.23138 5.25149 5.27072 5.2891 5.30667
5.32346 5.33951 5.35485 5.3695 5.3835 5.39688 5.40965 5.42186 5.43351 5.44464 5.45528
5.46543 5.47512 5.48438 5.49321 5.50165 5.5097 5.51739 5.52473 5.53173 5.53842 5.5448
5.55089 5.55671 5.56225 5.57247 #bodywt for gender,fleet: 2 / 4
0 0.0102894 0.0183051 0.0313522 0.0514868 0.080741 0.120562 0.171263 0.231753 0.299679
0.371902 0.445098 0.516282 0.583129 0.644097 0.698379 0.745771 0.786503 0.821083 0.850164
0.874453 0.89464 0.911366 0.925203 0.936646 0.946115 0.953962 0.96048 0.965908 0.970443
0.974245 0.977444 0.980146 0.982437 0.984389 0.986057 0.987489 0.988723 0.989791 0.990718
0.991527 0.992235 0.992856 0.993404 0.993888 0.994318 0.9947 0.995041 0.995347 0.995621
0.995867 0.99609 0.996291 0.996474 0.99664 0.996791 0.996929 0.997055 0.99717 0.997276
0.997374 0.997464 0.997546 0.997623 0.997694 0.997759 0.99782 0.997877 0.997929 0.997978
0.998021 0.99806 0.998096 0.99813 0.998161 0.998191 0.998219 0.998245 0.99827 0.998293
0.998315 0.998335 0.998354 0.998373 0.99839 0.998406 0.998421 0.998436 0.99845 0.998462
0.998475 0.998486 0.998497 0.998508 0.998517 0.998527 0.998536 0.998544 0.998552 0.998559
0.998573 #selex for gender,fleet: 2 / 4
0.0536932 0.186556 0.257419 0.339482 0.431575 0.532145 0.639365 0.751317 0.866208
0.982541 1.0992 1.21546 1.3309 1.44533 1.55869 1.67101 1.78236 1.89277 2.00227 2.11087
2.21852 2.32517 2.43073 2.53508 2.63812 2.73971 2.83973 2.93805 3.03455 3.12913 3.22169
3.31213 3.4004 3.48643 3.57016 3.65157 3.73064 3.80734 3.88168 3.95367 4.02332 4.09064
4.15567 4.21845 4.279 4.33738 4.39362 4.44778 4.4999 4.55005 4.59826 4.64459 4.68911
4.73186 4.7729 4.81229 4.85007 4.88631 4.92106 4.95436 4.98628 5.01686 5.04615 5.0742
5.10106 5.12677 5.15138 5.17492 5.19745 5.219 5.23977 5.25978 5.27892 5.29721 5.3147
5.33141 5.34739 5.36265 5.37724 5.39118 5.40449 5.41721 5.42936 5.44097 5.45205 5.46264
5.47275 5.4824 5.49161 5.50041 5.50882 5.51684 5.52449 5.5318 5.53878 5.54544 5.55179
5.55786 5.56365 5.56917 5.57936 #bodywt for gender,fleet: 2 / 5
0 0.00450033 0.00758533 0.0124351 0.0198097 0.0306288 0.0458985 0.0665778 0.0934045
0.126725 0.166382 0.211698 0.261556 0.314546 0.369144 0.423874 0.477431 0.528759 0.577079
0.62188 0.662891 0.700034 0.73338 0.763108 0.789461 0.812721 0.833185 0.851149 0.866896

0.880688 0.892768 0.903352 0.912632 0.920779 0.92794 0.934247 0.939811 0.944729 0.949086
0.952954 0.956396 0.959465 0.962208 0.964666 0.966873 0.968858 0.970649 0.972268 0.973734
0.975065 0.976275 0.977378 0.978384 0.979305 0.980148 0.980922 0.981633 0.982288 0.982892
0.98345 0.983966 0.984443 0.984886 0.985297 0.985679 0.986035 0.986366 0.986675 0.986963
0.987232 0.987474 0.98769 0.987893 0.988084 0.988263 0.988431 0.98859 0.988739 0.988879
0.989011 0.989136 0.989253 0.989364 0.989469 0.989568 0.989661 0.98975 0.989834 0.989913
0.989988 0.990058 0.990126 0.990189 0.99025 0.990307 0.990361 0.990412 0.990461 0.990508
0.990551 0.990632 #selex for gender,fleet: 2 / 5
0.0555101 0.19523 0.27008 0.357021 0.454843 0.561821 0.67577 0.794236 0.91483 1.03556
1.15504 1.27246 1.38752 1.50026 1.6109 1.71973 1.82705 1.93315 2.03823 2.14243 2.24583
2.34846 2.45028 2.55121 2.65116 2.75 2.8476 2.94381 3.03849 3.13151 3.22274 3.31208
3.39941 3.48467 3.56777 3.64867 3.72733 3.80371 3.87779 3.94959 4.01909 4.08631 4.15127
4.21401 4.27454 4.33291 4.38917 4.44335 4.4955 4.54568 4.59394 4.64032 4.68489 4.72769
4.76878 4.80822 4.84606 4.88235 4.91715 4.95051 4.98248 5.01311 5.04244 5.07054 5.09744
5.12319 5.14784 5.17142 5.19399 5.21557 5.23637 5.2564 5.27555 5.29386 5.31136 5.32809
5.34408 5.35936 5.37397 5.38792 5.40124 5.41398 5.42614 5.43776 5.44885 5.45945 5.46956
5.47923 5.48845 5.49726 5.50567 5.5137 5.52136 5.52868 5.53566 5.54233 5.54869 5.55476
5.56056 5.56609 5.57628 #bodywt for gender,fleet: 2 / 6
0 0.00127207 0.00241339 0.00443523 0.00788996 0.0135687 0.0225153 0.0359694 0.0552126
0.0813339 0.114975 0.156145 0.20416 0.25773 0.315157 0.374566 0.434134 0.492259 0.547659
0.599415 0.64695 0.689989 0.728497 0.762617 0.792612 0.818816 0.8416 0.861339 0.878398
0.893118 0.905811 0.916754 0.926195 0.934347 0.941397 0.947504 0.952804 0.957415 0.961435
0.96495 0.96803 0.970737 0.973122 0.975229 0.977096 0.978754 0.980231 0.98155 0.982731
0.98379 0.984744 0.985603 0.98638 0.987084 0.987723 0.988304 0.988834 0.989318 0.989761
0.990167 0.990539 0.990882 0.991198 0.991489 0.991758 0.992007 0.992238 0.992452 0.992651
0.992836 0.993 0.993145 0.99328 0.993406 0.993525 0.993636 0.99374 0.993838 0.993929
0.994016 0.994097 0.994173 0.994245 0.994313 0.994377 0.994437 0.994494 0.994548 0.994599
0.994647 0.994692 0.994735 0.994775 0.994814 0.99485 0.994885 0.994917 0.994948 0.994978
0.995005 0.995056 #selex for gender,fleet: 2 / 6
0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896
0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896
0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896
0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896
0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896
0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896
0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896
0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896
0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896 0.0456896
0.0456896 0.0456896 0.0456896 #mean M for year Yinit: 2011 sex: 1
62.9517 59.1354 55.4743 52.0138 48.8207 45.6438 42.6523 39.7765 37.0186 34.4268 32.5073
30.5015 29.86 28.6584 28.7118 28.3045 28.0596 27.3764 27.1096 26.7493 25.9659 24.4205
23.1228 21.4473 19.6393 17.7699 16.1344 14.4599 12.9517 11.6513 10.3536 9.12367 8.05833
7.11226 6.2409 5.48371 4.82205 4.25356 3.76075 3.33806 2.97119 2.6535 2.3846 2.14735
1.9429 1.76556 1.61536 1.47943 1.3609 1.25677 1.16395 1.08145 1.00755 0.941019 0.880487
0.825075 0.774097 0.727039 0.683509 0.643467 0.606468 0.571968 0.539856 0.510229 0.48249
0.457493 0.434297 0.411841 0.39072 0.370294 0.350962 0.332635 0.315212 0.298744 0.283138
0.268359 0.254345 0.241094 0.228583 0.216814 0.205741 0.195336 0.185545 0.176312 0.167613
0.159411 0.151669 0.144349 0.137427 0.130876 0.124671 0.11879 0.11321 0.10792 0.102894
0.0981136 0.0935597 0.08923 0.0851116 0.0811931 1.72001 #numbers for year Yinit: 2011
sex: 1
0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299
0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299
0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299
0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299
0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299
0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299
0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299
0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299
0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299
0.0446299 0.0446299 0.0446299 #mean M for year Yinit: 2011 sex: 2
62.9517 59.1981 55.5919 52.179 49.0268 45.8834 42.9187 40.0629 37.3189 34.7359 32.8259
30.8242 30.1979 29.002 29.0727 28.6719 28.4272 27.7272 27.4348 27.0311 26.1825 24.5515
23.1602 21.3868 19.4856 17.5355 15.8327 14.1112 12.5732 11.2572 9.9622 8.74894 7.70681
6.78887 5.94973 5.22475 4.59442 4.05525 3.5897 3.19188 2.84768 2.55045 2.29963 2.07856
1.88827 1.72327 1.58365 1.45619 1.34619 1.24869 1.16148 1.08368 1.0137 0.950417 0.89255
0.839297 0.790044 0.744337 0.701842 0.662578 0.626145 0.592028 0.560155 0.530661 0.502954
0.47795 0.454684 0.432061 0.410712 0.389973 0.370273 0.351526 0.333639 0.316677 0.300556

```

0.285254 0.270718 0.256956 0.243952 0.231715 0.220198 0.209372 0.19918 0.189562 0.180491
0.171928 0.163834 0.156169 0.148908 0.142023 0.13549 0.129286 0.12339 0.117789 0.112458
0.10738 0.102534 0.0979183 0.0935212 0.089331 1.9425 #numbers for year Yinit: 2011 sex: 2
64.7552 61.0226 57.4444 53.9466 50.593 47.4184 44.4837 41.5609 38.8058 36.1569 33.618
31.2341 29.4645 27.6213 27.0174 25.9098 25.9396 25.5553 25.3197 24.6906 24.4391 24.1048
23.3907 21.9919 20.8177 19.3046 17.6735 15.9882 14.5143 13.0059 11.6478 10.4771 9.30915
8.20258 7.24422 6.3933 5.60971 4.92888 4.334 3.82295 3.37997 3.00006 2.67034 2.38484
2.14321 1.93003 1.74633 1.587 1.45205 1.32992 1.22343 1.12987 1.04647 0.97234 0.905929
0.846145 0.791744 0.741941 0.69612 0.65382 0.614688 0.57869 0.545426 0.514406 0.485533
0.458894 0.43395 0.411473 0.390614 0.37042 0.351425 0.333055 0.315669 0.299185 0.283515
0.268702 0.254665 0.241371 0.228765 0.216845 0.205591 0.195004 0.185043 0.175684 0.166877
0.158572 0.150747 0.14337 0.136406 0.129823 0.123597 0.117705 0.112124 0.106835 0.101817
0.0970588 0.0925383 0.0882393 0.0841437 0.0802497 1.69648 #numbers for year Ydeclare:
2013 sex: 1
64.7552 61.0873 57.5661 54.1177 50.806 47.6662 44.7601 41.8586 39.1191 36.4801 33.9463
31.5639 29.7982 27.9545 27.3625 26.258 26.3032 25.9242 25.6887 25.044 24.7695 24.3961
23.6228 22.1452 20.8852 19.282 17.5647 15.8042 14.2675 12.7146 11.3276 10.141 8.97371
7.88032 6.94129 6.11427 5.35834 4.70532 4.1376 3.65202 3.23278 2.87454 2.56462 2.297
2.07118 1.87215 1.70084 1.5523 1.4266 1.31249 1.21282 1.12504 1.04652 0.976465 0.913444
0.856457 0.804339 0.756373 0.712005 0.670829 0.632544 0.597168 0.56434 0.533598 0.504877
0.478299 0.45333 0.430796 0.409829 0.38944 0.370199 0.351506 0.33375 0.316853 0.300729
0.28544 0.270907 0.257112 0.244008 0.231602 0.219879 0.208847 0.198465 0.188706 0.179519
0.170849 0.162673 0.154954 0.147659 0.14075 0.134205 0.128 0.122112 0.116521 0.111206
0.106159 0.101354 0.0967772 0.0924094 0.0882497 1.9155 #numbers for year Ydeclare: 2013
sex: 2
#R0 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932
1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950
1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968
1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986
1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004
2005 2006 2007 2008 2009 2010 #years
223.727 223.727 223.703 223.669 223.632 223.607 223.581 223.554 223.53 223.504 223.474
223.431 223.382 223.326 223.263 223.175 223.085 223.008 222.934 222.875 222.802 222.714
222.599 222.487 222.376 222.294 222.164 222.003 221.802 221.303 220.801 219.96 219.252
218.98 218.66 218.454 218.231 217.955 217.72 217.546 217.321 217.032 216.673 216.254
215.799 215.392 215.023 214.722 214.36 214.083 213.902 213.076 212.759 212.382 211.986
211.022 210.375 209.472 208.282 207.125 205.776 204.504 202.947 201.292 198.274 195.09
192.403 188.313 182.565 178.293 174.732 170.078 167.244 163.695 159.436 153.373 149.639
142.526 134.49 127.14 122.545 116.654 111.976 106.083 105.023 102.093 103.611 104.57
107.205 109.881 112.436 114.853 117.285 119.342 121.574 123.8 125.903 #Recruits
1.0328e+009 1.0328e+009 1.03234e+009 1.0317e+009 1.03098e+009 1.03051e+009 1.03001e+009
1.02951e+009 1.02904e+009 1.02855e+009 1.02799e+009 1.02717e+009 1.02625e+009 1.0252e+009
1.024e+009 1.02236e+009 1.02066e+009 1.01922e+009 1.01784e+009 1.01674e+009 1.01539e+009
1.01376e+009 1.01163e+009 1.00956e+009 1.00752e+009 1.00601e+009 1.00363e+009 1.0007e+009
9.97052e+008 9.88094e+008 9.79207e+008 9.64566e+008 9.52512e+008 9.47924e+008
9.42591e+008 9.39163e+008 9.35499e+008 9.30975e+008 9.27142e+008 9.24333e+008
9.20715e+008 9.16081e+008 9.10388e+008 9.03797e+008 8.96731e+008 8.90474e+008
8.84856e+008 8.80323e+008 8.74893e+008 8.70779e+008 8.68116e+008 8.56067e+008
8.51509e+008 8.46132e+008 8.40532e+008 8.27122e+008 8.18294e+008 8.06204e+008
7.90654e+008 7.75926e+008 7.59252e+008 7.43969e+008 7.25846e+008 7.07241e+008
6.74947e+008 6.42986e+008 6.17555e+008 5.81301e+008 5.348e+008 5.032e+008 4.78572e+008
4.48498e+008 4.31261e+008 4.10715e+008 3.87479e+008 3.56812e+008 3.39194e+008 3.0802e+008
2.76118e+008 2.49614e+008 2.3419e+008 2.15575e+008 2.01647e+008 1.85083e+008 1.82213e+008
1.7444e+008 1.78439e+008 1.80995e+008 1.88156e+008 1.95638e+008 2.02986e+008 2.10128e+008
2.1751e+008 2.23914e+008 2.31036e+008 2.3832e+008 2.45381e+008 #SpawnBio
0.508 0.5 0 # spawn-recr steepness, sigmaR, autocorr
# values from cat100_hhigh, catch at 100% and steepness at high value. # this is state of
nature 8 out of 9 (in no particular order) # and parameter set number 2 out of 2 for this
state
0 0 25.6574 94.65 316.389 949.858 2529.97 5935.96 12294.3 22700.9 37897.9 58077.6 82888
111594 143291 177091 212236 248146 284415 320783 357099 393283 429298 465129 500768
536205 571428 606417 641146 675583 709694 743441 776785 809688 842111 874019 905377
936156 966326 995864 1.02475e+006 1.05296e+006 1.08048e+006 1.10731e+006 1.13342e+006
1.15882e+006 1.1835e+006 1.20747e+006 1.23071e+006 1.25324e+006 1.27506e+006 1.29618e+006
1.3166e+006 1.33633e+006 1.3554e+006 1.37379e+006 1.39154e+006 1.40866e+006 1.42515e+006
1.44103e+006 1.45632e+006 1.47104e+006 1.48519e+006 1.4988e+006 1.51187e+006 1.52444e+006
1.5365e+006 1.54809e+006 1.55921e+006 1.56987e+006 1.58011e+006 1.59018e+006 1.59983e+006
1.60909e+006 1.61796e+006 1.62646e+006 1.63461e+006 1.6424e+006 1.64987e+006 1.65702e+006
1.66386e+006 1.67041e+006 1.67668e+006 1.68267e+006 1.6884e+006 1.69389e+006 1.69913e+006
1.70414e+006 1.70894e+006 1.71352e+006 1.7179e+006 1.72208e+006 1.72608e+006 1.7299e+006

```

1.73355e+006 1.73704e+006 1.74037e+006 1.74355e+006 1.74659e+006 1.74949e+006
1.75483e+006 #female fecundity; weighted by N in year Y_init across morphs and areas
0.0443489 0.159549 0.218836 0.286597 0.361462 0.442032 0.527092 0.615719 0.707275
0.801335 0.897618 0.995908 1.09602 1.19774 1.30086 1.40514 1.51031 1.61607 1.72215
1.82824 1.93406 2.03933 2.14378 2.24718 2.3493 2.44994 2.54893 2.6461 2.74133 2.8345
2.92552 3.0143 3.1008 3.18496 3.26675 3.34616 3.42317 3.4978 3.57004 3.63992 3.70746
3.77269 3.83566 3.89639 3.95493 4.01133 4.06565 4.11792 4.1682 4.21655 4.26302 4.30767
4.35054 4.39171 4.43121 4.46911 4.50547 4.54032 4.57374 4.60576 4.63643 4.66582 4.69396
4.7209 4.7467 4.77138 4.79501 4.81761 4.83923 4.85991 4.87982 4.89899 4.91732 4.93484
4.95159 4.96759 4.98289 4.99751 5.01147 5.02481 5.03756 5.04973 5.06136 5.07246 5.08307
5.09319 5.10286 5.11209 5.12091 5.12932 5.13735 5.14502 5.15233 5.15932 5.16598 5.17235
5.17842 5.18421 5.18974 5.19502 5.20472 #bodywt for gender,fleet: 1 / 1
0 0.0466755 0.071249 0.104705 0.147786 0.200165 0.260352 0.325944 0.394091 0.461989
0.527262 0.588162 0.643597 0.693062 0.736506 0.774192 0.806577 0.834216 0.857688 0.877561
0.894358 0.908546 0.920535 0.930679 0.939276 0.946578 0.952796 0.958108 0.962658 0.966569
0.969943 0.972861 0.975396 0.977604 0.979535 0.981228 0.982718 0.984034 0.985199 0.986234
0.987156 0.98798 0.988718 0.989381 0.989978 0.990517 0.991005 0.991447 0.99185 0.992216
0.992551 0.992857 0.993137 0.993394 0.993631 0.993849 0.99405 0.994236 0.994408 0.994567
0.994715 0.994852 0.99498 0.995098 0.995209 0.995312 0.995409 0.995499 0.995583 0.995662
0.995734 0.995798 0.995858 0.995915 0.995968 0.996018 0.996066 0.99611 0.996152 0.996192
0.996229 0.996265 0.996298 0.99633 0.99636 0.996388 0.996415 0.99644 0.996464 0.996486
0.996508 0.996528 0.996548 0.996566 0.996583 0.9966 0.996616 0.99663 0.996645 0.996658
0.996682 #selex for gender,fleet: 1 / 1
0.0454464 0.165628 0.228103 0.299837 0.379186 0.464291 0.553445 0.64534 0.739131
0.834355 0.930809 1.02843 1.1272 1.22711 1.32809 1.43005 1.53284 1.63625 1.74007 1.84404
1.9479 2.05138 2.15423 2.2562 2.35706 2.45659 2.55461 2.65094 2.74544 2.83798 2.92845
3.01676 3.10286 3.18667 3.26816 3.34731 3.4241 3.49853 3.57061 3.64034 3.70776 3.77289
3.83576 3.89641 3.95488 4.01123 4.06548 4.11771 4.16795 4.21627 4.26271 4.30733 4.35018
4.39133 4.43081 4.4687 4.50504 4.53988 4.57329 4.6053 4.63597 4.66534 4.69348 4.72042
4.74621 4.77089 4.79451 4.81711 4.83872 4.8594 4.87931 4.89848 4.9168 4.93432 4.95107
4.96708 4.98237 4.99699 5.01095 5.02429 5.03703 5.04921 5.06083 5.07194 5.08254 5.09266
5.10233 5.11156 5.12037 5.12879 5.13682 5.14448 5.1518 5.15879 5.16545 5.17181 5.17788
5.18368 5.18921 5.19448 5.20419 #bodywt for gender,fleet: 1 / 2
0 0.0195579 0.0326491 0.0524719 0.0808761 0.119187 0.167704 0.22545 0.29028 0.359317
0.4295 0.498061 0.562829 0.622335 0.675778 0.722904 0.763862 0.799061 0.829053 0.854451
0.875866 0.893874 0.908998 0.921695 0.932362 0.941335 0.948899 0.95529 0.960705 0.965307
0.969231 0.972588 0.97547 0.977953 0.9801 0.981963 0.983585 0.985002 0.986245 0.987338
0.988303 0.989157 0.989916 0.990592 0.991196 0.991736 0.992222 0.99266 0.993055 0.993412
0.993736 0.994031 0.994299 0.994544 0.994768 0.994974 0.995162 0.995335 0.995495 0.995642
0.995778 0.995904 0.996021 0.996129 0.996229 0.996323 0.99641 0.996491 0.996566 0.996637
0.9967 0.996757 0.996809 0.996859 0.996906 0.996949 0.996991 0.997029 0.997066 0.9971
0.997133 0.997163 0.997192 0.997219 0.997245 0.997269 0.997292 0.997314 0.997335 0.997354
0.997372 0.99739 0.997406 0.997422 0.997437 0.997451 0.997464 0.997477 0.997489 0.9975
0.997521 #selex for gender,fleet: 1 / 2
0.0494376 0.184351 0.252586 0.327425 0.4054 0.484352 0.563651 0.643649 0.725081 0.808699
0.895091 0.984618 1.07741 1.17337 1.27225 1.37367 1.47716 1.58225 1.68841 1.79517 1.90207
2.00869 2.11466 2.21966 2.3234 2.42564 2.52616 2.6248 2.72141 2.81587 2.90808 2.99797
3.08549 3.17059 3.25324 3.33343 3.41117 3.48645 3.5593 3.62974 3.69779 3.76349 3.82688
3.888 3.94691 4.00365 4.05826 4.11082 4.16136 4.20996 4.25665 4.3015 4.34458 4.38592
4.42559 4.46365 4.50014 4.53513 4.56867 4.60081 4.6316 4.66109 4.68932 4.71636 4.74223
4.767 4.7907 4.81337 4.83505 4.85579 4.87575 4.89497 4.91333 4.93089 4.94767 4.96371
4.97904 4.99368 5.00767 5.02104 5.03381 5.04601 5.05766 5.06878 5.0794 5.08955 5.09923
5.10848 5.11731 5.12574 5.13378 5.14146 5.14879 5.15579 5.16247 5.16884 5.17492 5.18073
5.18627 5.19155 5.20127 #bodywt for gender,fleet: 1 / 3
0 0.0150931 0.0325022 0.0645218 0.116434 0.19008 0.282078 0.384778 0.489069 0.587107
0.673762 0.746744 0.805962 0.852672 0.888753 0.91621 0.936891 0.95237 0.96392 0.972531
0.978959 0.983773 0.987391 0.990126 0.992205 0.993795 0.995019 0.995969 0.996711 0.997294
0.997756 0.998125 0.998422 0.998662 0.998857 0.999017 0.99915 0.999259 0.999351 0.999428
0.999493 0.999548 0.999596 0.999636 0.999671 0.999701 0.999727 0.99975 0.99977 0.999788
0.999803 0.999817 0.999829 0.99984 0.99985 0.999859 0.999867 0.999874 0.99988 0.999886
0.999892 0.999896 0.999901 0.999905 0.999909 0.999912 0.999915 0.999918 0.999921 0.999923
0.999925 0.999927 0.999929 0.99993 0.999932 0.999933 0.999934 0.999936 0.999937 0.999938
0.999939 0.99994 0.999941 0.999941 0.999942 0.999943 0.999944 0.999944 0.999945 0.999945
0.999946 0.999946 0.999947 0.999947 0.999948 0.999948 0.999949 0.999949 0.999949 0.99995
0.99995 #selex for gender,fleet: 1 / 3
0.045866 0.168117 0.232163 0.306202 0.388683 0.477635 0.57103 0.667142 0.764741 0.863099
0.961875 1.06098 1.16044 1.26034 1.36073 1.46163 1.56301 1.66477 1.76679 1.86889 1.97087
2.07251 2.17359 2.27389 2.37318 2.47127 2.56796 2.66309 2.75649 2.84804 2.93762 3.02513
3.1105 3.19367 3.27459 3.35322 3.42955 3.50357 3.57527 3.64467 3.71179 3.77664 3.83927
3.8997 3.95797 4.01414 4.06823 4.12031 4.17042 4.21861 4.26493 4.30945 4.35221 4.39327
4.43268 4.47049 4.50676 4.54154 4.57489 4.60684 4.63746 4.6668 4.69489 4.72179 4.74754

4.77219 4.79578 4.81834 4.83993 4.86058 4.88047 4.89962 4.91793 4.93544 4.95217 4.96816
4.98345 4.99805 5.012 5.02533 5.03806 5.05023 5.06184 5.07294 5.08353 5.09365 5.10331
5.11253 5.12134 5.12975 5.13777 5.14543 5.15274 5.15972 5.16638 5.17274 5.17881 5.1846
5.19012 5.19539 5.20509 #bodywt for gender,fleet: 1 / 4
0 0.0101109 0.0175232 0.0293269 0.0472347 0.0729595 0.107791 0.152167 0.205422 0.26585
0.331015 0.398204 0.464842 0.528787 0.588474 0.642925 0.691676 0.734671 0.772135 0.804478
0.832203 0.855846 0.875937 0.892972 0.907401 0.919621 0.929976 0.938762 0.946231 0.952594
0.958027 0.962681 0.966678 0.970122 0.973099 0.97568 0.977926 0.979886 0.981602 0.98311
0.984438 0.985613 0.986654 0.98758 0.988406 0.989144 0.989806 0.990402 0.990938 0.991423
0.991862 0.99226 0.992622 0.992953 0.993254 0.99353 0.993783 0.994015 0.994229 0.994425
0.994607 0.994775 0.99493 0.995074 0.995207 0.995331 0.995447 0.995554 0.995654 0.995748
0.995831 0.995905 0.995975 0.99604 0.996101 0.996159 0.996213 0.996263 0.996311 0.996356
0.996399 0.996439 0.996476 0.996512 0.996546 0.996577 0.996607 0.996636 0.996662 0.996688
0.996712 0.996735 0.996756 0.996777 0.996796 0.996814 0.996832 0.996848 0.996864 0.996879
0.996906 #selex for gender,fleet: 1 / 4
0.0450186 0.164329 0.227237 0.300698 0.38387 0.475535 0.574174 0.678101 0.785647
0.895321 1.00593 1.11659 1.22673 1.33601 1.44425 1.55137 1.65735 1.7622 1.86593 1.96853
2.06998 2.17025 2.26928 2.36699 2.46332 2.55818 2.65147 2.74311 2.83302 2.92111 3.0073
3.09154 3.17377 3.25393 3.332 3.40793 3.48172 3.55335 3.62281 3.69011 3.75527 3.81829
3.87921 3.93805 3.99483 4.04961 4.10241 4.15329 4.20227 4.24942 4.29477 4.33837 4.38028
4.42054 4.4592 4.49632 4.53194 4.56611 4.59888 4.63031 4.66042 4.68929 4.71694 4.74342
4.76878 4.79306 4.8163 4.83854 4.85982 4.88019 4.89984 4.9188 4.93693 4.95427 4.97084
4.98668 5.00182 5.01629 5.03011 5.04332 5.05594 5.06799 5.0795 5.0905 5.101 5.11103
5.12061 5.12975 5.13848 5.14681 5.15477 5.16236 5.16961 5.17653 5.18314 5.18944 5.19546
5.2012 5.20668 5.2119 5.22152 #bodywt for gender,fleet: 1 / 5
0 0.00443084 0.0072905 0.0116897 0.0182529 0.0277292 0.0409381 0.0586733 0.0815736
0.109994 0.143913 0.182906 0.226184 0.272699 0.321263 0.370677 0.41983 0.467771 0.513744
0.557197 0.597767 0.63526 0.669614 0.700873 0.729154 0.754627 0.77749 0.797958 0.816248
0.83257 0.847128 0.860109 0.871686 0.882017 0.891242 0.89949 0.906871 0.913487 0.919426
0.924765 0.929572 0.933908 0.937826 0.941373 0.944588 0.947509 0.950166 0.952588 0.954799
0.956821 0.958673 0.960372 0.961933 0.963369 0.964692 0.965913 0.967042 0.968086 0.969053
0.96995 0.970783 0.971557 0.972278 0.972949 0.973576 0.97416 0.974707 0.975217 0.975696
0.976143 0.976548 0.976912 0.977255 0.977576 0.977879 0.978164 0.978433 0.978686 0.978925
0.97915 0.979362 0.979563 0.979753 0.979932 0.980101 0.980261 0.980413 0.980557 0.980693
0.980821 0.980943 0.981059 0.981169 0.981273 0.981371 0.981465 0.981554 0.981638 0.981718
0.981794 0.981933 #selex for gender,fleet: 1 / 5
0.0465871 0.172205 0.238796 0.316828 0.405458 0.50336 0.608742 0.719473 0.833337
0.948335 1.06292 1.17604 1.28716 1.39606 1.50277 1.60746 1.71034 1.81161 1.91147 2.01005
2.10746 2.20375 2.29894 2.39302 2.48593 2.57762 2.668 2.75699 2.84449 2.93042 3.01469
3.09722 3.17792 3.25675 3.33364 3.40855 3.48143 3.55228 3.62106 3.68778 3.75243 3.81502
3.87556 3.93408 3.99059 4.04513 4.09774 4.14845 4.19729 4.24432 4.28957 4.33309 4.37494
4.41514 4.45377 4.49085 4.52645 4.5606 4.59336 4.62478 4.65489 4.68375 4.71141 4.73789
4.76326 4.78755 4.8108 4.83306 4.85435 4.87473 4.89439 4.91335 4.93149 4.94883 4.9654
4.98125 4.99639 5.01087 5.02469 5.03791 5.05053 5.06259 5.07411 5.08511 5.09561 5.10565
5.11523 5.12437 5.13311 5.14145 5.14941 5.15701 5.16426 5.17118 5.17779 5.1841 5.19012
5.19586 5.20134 5.20658 5.2162 #bodywt for gender,fleet: 1 / 6
0 0.00124726 0.00229766 0.00410903 0.00713043 0.0119948 0.0195307 0.030725 0.046618
0.0681368 0.0959074 0.130101 0.170369 0.215873 0.265405 0.317553 0.370862 0.423979
0.475745 0.525246 0.571822 0.615053 0.654723 0.690784 0.723311 0.752468 0.778474 0.801581
0.822053 0.840154 0.856137 0.870241 0.882683 0.893663 0.903358 0.911926 0.919508 0.926227
0.932189 0.937491 0.942212 0.946425 0.950192 0.953566 0.956595 0.959319 0.961775 0.963992
0.965998 0.967817 0.969469 0.970972 0.972343 0.973595 0.97474 0.97579 0.976753 0.977638
0.978454 0.979205 0.9799 0.980542 0.981136 0.981687 0.982198 0.982673 0.983115 0.983527
0.983911 0.984269 0.984589 0.984873 0.985139 0.985389 0.985624 0.985844 0.986051 0.986245
0.986428 0.9866 0.986763 0.986916 0.98706 0.987196 0.987324 0.987446 0.98756 0.987669
0.987771 0.987868 0.98796 0.988047 0.988129 0.988207 0.988281 0.988351 0.988417 0.98848
0.98854 0.988596 0.9887 #selex for gender,fleet: 1 / 6
0.0529166 0.181257 0.24807 0.323768 0.406674 0.495185 0.58801 0.684247 0.783328 0.88492
0.988815 1.09485 1.20287 1.31267 1.42401 1.53662 1.65018 1.76436 1.87882 1.99322 2.10722
2.22051 2.33281 2.44383 2.55335 2.66116 2.776706 2.87089 2.97253 3.07185 3.16878 3.26323
3.35515 3.44451 3.53128 3.61545 3.69702 3.776 3.85241 3.92627 3.99762 4.0665 4.13294
4.197 4.25872 4.31817 4.37539 4.43044 4.48338 4.53427 4.58317 4.63014 4.67523 4.71852
4.76006 4.7999 4.83811 4.87474 4.90985 4.9435 4.97573 5.0066 5.03616 5.06447 5.09156
5.11749 5.1423 5.16604 5.18875 5.21047 5.23137 5.25149 5.27072 5.28911 5.30668 5.32348
5.33953 5.35487 5.36953 5.38353 5.39691 5.40969 5.4219 5.43355 5.44469 5.45532 5.46548
5.47517 5.48443 5.49327 5.5017 5.50976 5.51745 5.52479 5.5318 5.53848 5.54487 5.55096
5.55677 5.56232 5.57254 #bodywt for gender,fleet: 2 / 1
0 0.0472887 0.0736166 0.109953 0.157136 0.214668 0.280634 0.352052 0.425492 0.497699
0.566039 0.628698 0.684674 0.733646 0.77579 0.8116 0.841739 0.866933 0.887896 0.905292
0.919711 0.931662 0.941579 0.949823 0.956693 0.962436 0.967252 0.971307 0.974733 0.977639
0.980114 0.982231 0.984049 0.985616 0.986973 0.988151 0.989179 0.990079 0.990869 0.991566

0.992182 0.992729 0.993216 0.99365 0.994039 0.994389 0.994703 0.994987 0.995244 0.995477
0.995689 0.995882 0.996058 0.996219 0.996366 0.996502 0.996626 0.996741 0.996847 0.996944
0.997035 0.997119 0.997196 0.997269 0.997336 0.997398 0.997457 0.997511 0.997562 0.997609
0.997652 0.997691 0.997727 0.99776 0.997792 0.997822 0.99785 0.997877 0.997902 0.997925
0.997947 0.997968 0.997988 0.998007 0.998025 0.998041 0.998057 0.998072 0.998086 0.998099
0.998112 0.998124 0.998136 0.998146 0.998157 0.998166 0.998176 0.998184 0.998193 0.9982
0.998215 #selex for gender,fleet: 2 / 1
0.0541888 0.187967 0.258259 0.338215 0.425788 0.518823 0.615485 0.714497 0.815143
0.91712 1.02037 1.12495 1.23092 1.3383 1.44702 1.55696 1.66792 1.77966 1.89187 2.00425
2.11646 2.2282 2.33915 2.44904 2.55759 2.66458 2.7698 2.87307 2.97424 3.07317 3.16978
3.26396 3.35567 3.44485 3.53147 3.61553 3.697 3.7759 3.85224 3.92605 3.99736 4.0662
4.13261 4.19665 4.25836 4.31779 4.375 4.43004 4.48298 4.53386 4.58276 4.62973 4.67482
4.71811 4.75965 4.79949 4.8377 4.87434 4.90945 4.9431 4.97533 5.00621 5.03577 5.06408
5.09117 5.11711 5.14192 5.16566 5.18837 5.2101 5.231 5.25112 5.27035 5.28874 5.30631
5.32311 5.33916 5.35451 5.36916 5.38317 5.39655 5.40933 5.42153 5.43319 5.44433 5.45496
5.46512 5.47481 5.48407 5.49291 5.50135 5.5094 5.51709 5.52443 5.53144 5.53813 5.54451
5.5506 5.55642 5.56197 5.57219 #bodywt for gender,fleet: 2 / 2
0 0.019877 0.0339918 0.055772 0.087402 0.130376 0.184865 0.249437 0.32127 0.39677
0.472282 0.544673 0.611651 0.671828 0.72462 0.770058 0.808584 0.840878 0.867718 0.889893
0.908142 0.923128 0.935426 0.945523 0.953826 0.960668 0.966323 0.971013 0.974915 0.978176
0.980913 0.983218 0.985169 0.986827 0.988243 0.989456 0.9905 0.991403 0.992186 0.992869
0.993466 0.99399 0.994451 0.994859 0.99522 0.995542 0.995829 0.996086 0.996317 0.996524
0.996711 0.996881 0.997034 0.997174 0.997301 0.997416 0.997522 0.997619 0.997709 0.99779
0.997866 0.997935 0.998 0.998059 0.998114 0.998165 0.998213 0.998257 0.998298 0.998336
0.99837 0.998401 0.998429 0.998456 0.998481 0.998504 0.998526 0.998547 0.998567 0.998585
0.998602 0.998618 0.998634 0.998648 0.998662 0.998675 0.998687 0.998699 0.998709 0.99872
0.998729 0.998739 0.998747 0.998756 0.998764 0.998771 0.998778 0.998785 0.998791 0.998797
0.998808 #selex for gender,fleet: 2 / 2
0.0588068 0.208496 0.284683 0.367142 0.452 0.537194 0.62246 0.708529 0.79643 0.887096
0.981197 1.07908 1.18081 1.28616 1.39472 1.50597 1.6193 1.73409 1.84975 1.96572 2.08151
2.19668 2.31085 2.42369 2.53492 2.64431 2.75168 2.85684 2.95969 3.0601 3.15801 3.25334
3.34605 3.43612 3.52352 3.60826 3.69034 3.76978 3.8466 3.92084 3.99252 4.0617 4.12842
4.19273 4.25468 4.31433 4.37174 4.42696 4.48006 4.53109 4.58012 4.62721 4.67242 4.71581
4.75745 4.79738 4.83567 4.87238 4.90756 4.94126 4.97356 5.00448 5.0341 5.06245 5.08959
5.11556 5.14041 5.16419 5.18693 5.20869 5.22962 5.24975 5.269 5.2874 5.305 5.32181
5.33788 5.35323 5.3679 5.38192 5.39531 5.4081 5.42032 5.43198 5.44313 5.45377 5.46393
5.47364 5.4829 5.49175 5.50019 5.50825 5.51595 5.5233 5.53031 5.537 5.54339 5.54949
5.5553 5.56086 5.57109 #bodywt for gender,fleet: 2 / 3
0 0.015494 0.0345221 0.0702949 0.128827 0.211624 0.313736 0.425415 0.535887 0.636602
0.722648 0.792513 0.847057 0.888394 0.919045 0.941424 0.957597 0.969217 0.977544 0.983514
0.987805 0.990903 0.993152 0.994796 0.996007 0.996906 0.997579 0.998087 0.998474 0.998772
0.999002 0.999182 0.999324 0.999437 0.999527 0.999599 0.999658 0.999707 0.999747 0.999779
0.999807 0.99983 0.999849 0.999866 0.99988 0.999892 0.999902 0.999911 0.999919 0.999926
0.999932 0.999937 0.999942 0.999946 0.999949 0.999953 0.999956 0.999958 0.999961 0.999963
0.999965 0.999966 0.999968 0.999969 0.999971 0.999972 0.999973 0.999974 0.999975 0.999976
0.999976 0.999977 0.999978 0.999978 0.999979 0.999979 0.99998 0.99998 0.99998 0.999981
0.999981 0.999981 0.999982 0.999982 0.999982 0.999982 0.999983 0.999983 0.999983 0.999983
0.999984 0.999984 0.999984 0.999984 0.999984 0.999984 0.999984 0.999985 0.999985 0.999985
0.999985 #selex for gender,fleet: 2 / 3
0.0546749 0.190718 0.262747 0.345242 0.436215 0.53332 0.634308 0.737423 0.841551
0.946148 1.05107 1.15639 1.26227 1.36886 1.47626 1.58449 1.69348 1.80312 1.91319 2.02346
2.13366 2.24352 2.35275 2.46106 2.56821 2.67395 2.77806 2.88036 2.98068 3.07887 3.17483
3.26845 3.35967 3.44842 3.53468 3.6184 3.69959 3.77824 3.85437 3.92799 3.99913 4.06782
4.13411 4.19803 4.25963 4.31897 4.3761 4.43107 4.48394 4.53476 4.58361 4.63052 4.67558
4.71883 4.76033 4.80014 4.83832 4.87493 4.91002 4.94364 4.97585 5.00671 5.03625 5.06454
5.09162 5.11754 5.14234 5.16607 5.18877 5.21049 5.23138 5.25149 5.27072 5.2891 5.30667
5.32346 5.33951 5.35485 5.3695 5.3835 5.39688 5.40965 5.42186 5.43351 5.44464 5.45528
5.46543 5.47512 5.48438 5.49321 5.50165 5.5097 5.51739 5.52473 5.53173 5.53842 5.5448
5.55089 5.55671 5.56225 5.57247 #bodywt for gender,fleet: 2 / 4
0 0.0102894 0.0183051 0.0313522 0.0514868 0.080741 0.120562 0.171263 0.231753 0.299679
0.371902 0.445098 0.516282 0.583129 0.644097 0.698379 0.745771 0.786503 0.821083 0.850164
0.874453 0.89464 0.911366 0.925203 0.936646 0.946115 0.953962 0.96048 0.965908 0.970443
0.974245 0.977444 0.980146 0.982437 0.984389 0.986057 0.987489 0.988723 0.989791 0.990718
0.991527 0.992235 0.992856 0.993404 0.993888 0.994318 0.9947 0.995041 0.995347 0.995621
0.995867 0.99609 0.996291 0.996474 0.99664 0.996791 0.996929 0.997055 0.99717 0.997276
0.997374 0.997464 0.997546 0.997623 0.997694 0.997759 0.99782 0.997877 0.997929 0.997978
0.998021 0.99806 0.998096 0.99813 0.998161 0.998191 0.998219 0.998245 0.99827 0.998293
0.998315 0.998335 0.998354 0.998373 0.99839 0.998406 0.998421 0.998436 0.99845 0.998462
0.998475 0.998486 0.998497 0.998508 0.998517 0.998527 0.998536 0.998544 0.998552 0.998559
0.998573 #selex for gender,fleet: 2 / 4

0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299
0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299
0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299
0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299
0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299 0.0446299
0.0446299 0.0446299 0.0446299 #mean M for year Yinit: 2011 sex: 2
62.9517 59.1981 55.5919 52.179 49.0268 45.8834 42.9187 40.0629 37.3189 34.7359 32.8259
30.8242 30.1979 29.002 29.0727 28.6719 28.4272 27.7272 27.4348 27.0311 26.1825 24.5515
23.1602 21.3868 19.4856 17.5355 15.8327 14.1112 12.5732 11.2572 9.9622 8.74894 7.70681
6.78887 5.94973 5.22475 4.59442 4.05525 3.5897 3.19188 2.84768 2.55045 2.29963 2.07856
1.88827 1.72327 1.58365 1.4569 1.34619 1.24869 1.16148 1.08368 1.0137 0.950417 0.89255
0.839297 0.790044 0.744337 0.701842 0.662578 0.626145 0.592028 0.560155 0.530661 0.502954
0.47795 0.454684 0.432061 0.410712 0.389973 0.370273 0.351526 0.333639 0.316677 0.300556
0.285254 0.270718 0.256956 0.243952 0.231715 0.220198 0.209372 0.19918 0.189562 0.180491
0.171928 0.163834 0.156169 0.148908 0.142023 0.13549 0.129286 0.12339 0.117789 0.112458
0.10738 0.102534 0.0979183 0.0935212 0.089331 1.9425 #numbers for year Yinit: 2011 sex: 2
64.7552 61.0226 57.4444 53.9466 50.593 47.4184 44.4837 41.5609 38.8058 36.1569 33.618
31.2341 29.4645 27.6213 27.0174 25.9098 25.9396 25.5553 25.3197 24.6906 24.4391 24.1048
23.3907 21.9919 20.8177 19.3046 17.6735 15.9882 14.5143 13.0059 11.6478 10.4771 9.30915
8.20258 7.24422 6.3933 5.60971 4.92888 4.334 3.82295 3.37997 3.00006 2.67034 2.38484
2.14321 1.93003 1.74633 1.587 1.45205 1.32992 1.22343 1.12987 1.04647 0.97234 0.905929
0.846145 0.791744 0.741941 0.69612 0.65382 0.614688 0.57869 0.545426 0.514406 0.485533
0.458894 0.43395 0.411473 0.390614 0.37042 0.351425 0.333055 0.315669 0.299185 0.283515
0.268702 0.254665 0.241371 0.228765 0.216845 0.205591 0.195004 0.185043 0.175684 0.166877
0.158572 0.150747 0.14337 0.136406 0.129823 0.123597 0.117705 0.112124 0.106835 0.101817
0.0970588 0.0925383 0.0882393 0.0841437 0.0802497 1.69648 #numbers for year Ydeclare:
2013 sex: 1
64.7552 61.0873 57.5661 54.1177 50.806 47.6662 44.7601 41.8586 39.1191 36.4801 33.9463
31.5639 29.7982 27.9545 27.3625 26.258 26.3032 25.9242 25.6887 25.044 24.7695 24.3961
23.6228 22.1452 20.8852 19.282 17.5647 15.8042 14.2675 12.7146 11.3276 10.141 8.97371
7.88032 6.94129 6.11427 5.35834 4.70532 4.1376 3.65202 3.23278 2.87454 2.56462 2.297
2.07118 1.87215 1.70084 1.5523 1.4266 1.31249 1.21282 1.12504 1.04652 0.976465 0.913444
0.856457 0.804339 0.756373 0.712005 0.670829 0.632544 0.597168 0.56434 0.533598 0.504877
0.478299 0.45333 0.430796 0.409829 0.38944 0.370199 0.351506 0.33375 0.316853 0.300729
0.28544 0.270907 0.257112 0.244008 0.231602 0.219879 0.208847 0.198465 0.188706 0.179519
0.170849 0.162673 0.154954 0.147659 0.14075 0.134205 0.128 0.122112 0.116521 0.111206
0.106159 0.101354 0.0967772 0.0924094 0.0882497 1.9155 #numbers for year Ydeclare: 2013
sex: 2
#R0 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932
1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950
1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968
1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986
1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004
2005 2006 2007 2008 2009 2010 #years
223.727 223.727 223.703 223.669 223.632 223.607 223.581 223.554 223.53 223.504 223.474
223.431 223.382 223.326 223.263 223.175 223.085 223.008 222.934 222.875 222.802 222.714
222.599 222.487 222.376 222.294 222.164 222.003 221.802 221.303 220.801 219.96 219.252
218.98 218.66 218.454 218.231 217.955 217.72 217.546 217.321 217.032 216.673 216.254
215.799 215.392 215.023 214.722 214.36 214.083 213.902 213.076 212.759 212.382 211.986
211.022 210.375 209.472 208.282 207.125 205.776 204.504 202.947 201.292 198.274 195.09
192.403 188.313 182.565 178.293 174.732 170.078 167.244 163.695 159.436 153.373 149.639
142.526 134.49 127.14 122.545 116.654 111.976 106.083 105.023 102.093 103.611 104.57
107.205 109.881 112.436 114.853 117.285 119.342 121.574 123.8 125.903 #Recruits
1.0328e+009 1.0328e+009 1.03234e+009 1.0317e+009 1.03098e+009 1.03051e+009 1.03001e+009
1.02951e+009 1.02904e+009 1.02855e+009 1.02799e+009 1.02717e+009 1.02625e+009 1.0252e+009
1.024e+009 1.02236e+009 1.02066e+009 1.01922e+009 1.01784e+009 1.01674e+009 1.01539e+009
1.01376e+009 1.01163e+009 1.00956e+009 1.00752e+009 1.00601e+009 1.00363e+009 1.0007e+009
9.97052e+008 9.88094e+008 9.79207e+008 9.64566e+008 9.52512e+008 9.47924e+008
9.42591e+008 9.39163e+008 9.35499e+008 9.30975e+008 9.27142e+008 9.24333e+008
9.20715e+008 9.16081e+008 9.10388e+008 9.03797e+008 8.96731e+008 8.90474e+008
8.84856e+008 8.80323e+008 8.74893e+008 8.70779e+008 8.68116e+008 8.56067e+008
8.51509e+008 8.46132e+008 8.40532e+008 8.27122e+008 8.18294e+008 8.06204e+008
7.90654e+008 7.75926e+008 7.59252e+008 7.43969e+008 7.25846e+008 7.07241e+008
6.74947e+008 6.42986e+008 6.17555e+008 5.81301e+008 5.348e+008 5.032e+008 4.78572e+008
4.48498e+008 4.31261e+008 4.10715e+008 3.87479e+008 3.56812e+008 3.39194e+008 3.0802e+008
2.76118e+008 2.49614e+008 2.3419e+008 2.15575e+008 2.01647e+008 1.85083e+008 1.82213e+008
1.7444e+008 1.78439e+008 1.80995e+008 1.88156e+008 1.95638e+008 2.02986e+008 2.10128e+008
2.1751e+008 2.23914e+008 2.31036e+008 2.3832e+008 2.45381e+008 #SpawnBio
0.508 0.5 0 # spawn-recr steepness, sigmaR, autocorr

```

# values from cat150_hhigh, catch at 150% and steepness at high value. # this is state of
nature 9 out of 9 (in no particular order) # and parameter set number 1 out of 1 for this
state
0 0 26.5484 97.5464 324.797 971.22 2576.59 6022.76 12433 22893.9 38135.7 58340.9 83153.3
111839 143497 177246 212332 248179 284383 320687 356938 393058 429009 464775 500349
535721 570879 605802 640464 674836 708882 742565 775845 808686 841048 872897 904198
934921 965039 994525 1.02336e+006 1.05152e+006 1.079e+006 1.10579e+006 1.13186e+006
1.15723e+006 1.18187e+006 1.2058e+006 1.22902e+006 1.25152e+006 1.27331e+006 1.29441e+006
1.3148e+006 1.33452e+006 1.35356e+006 1.37195e+006 1.38968e+006 1.40678e+006 1.42326e+006
1.43913e+006 1.45441e+006 1.46912e+006 1.48327e+006 1.49687e+006 1.50994e+006 1.5225e+006
1.53457e+006 1.54615e+006 1.55727e+006 1.56793e+006 1.57816e+006 1.58824e+006 1.5979e+006
1.60716e+006 1.61603e+006 1.62453e+006 1.63268e+006 1.64048e+006 1.64795e+006
1.65511e+006 1.66196e+006 1.66851e+006 1.67478e+006 1.68078e+006 1.68652e+006
1.69201e+006 1.69725e+006 1.70227e+006 1.70707e+006 1.71166e+006 1.71604e+006
1.72023e+006 1.72424e+006 1.72807e+006 1.73172e+006 1.73521e+006 1.73855e+006
1.74174e+006 1.74478e+006 1.7479e+006 1.75305e+006 #female fecundity; weighted by N in
year Y_init across morphs and areas
0.0446371 0.160874 0.220275 0.288091 0.362958 0.443486 0.528477 0.617018 0.708476
0.802434 0.898607 0.996782 1.09677 1.19836 1.30134 1.40547 1.51048 1.61608 1.72198 1.8279
1.93354 2.03862 2.14289 2.24611 2.34805 2.44852 2.54733 2.64434 2.73941 2.83243 2.92329
3.01194 3.0983 3.18233 3.26401 3.3433 3.42021 3.49474 3.56689 3.63668 3.70415 3.76931
3.8322 3.89288 3.95136 4.00772 4.06198 4.11422 4.16446 4.21278 4.25922 4.30385 4.3467
4.38785 4.42734 4.46523 4.50158 4.53643 4.56983 4.60185 4.63253 4.66192 4.69006 4.71701
4.74281 4.7675 4.79114 4.81375 4.83538 4.85607 4.87599 4.89517 4.91352 4.93105 4.94782
4.96384 4.97915 4.99378 5.00776 5.02112 5.03388 5.04607 5.05771 5.06883 5.07945 5.08959
5.09928 5.10852 5.11735 5.12578 5.13383 5.14151 5.14884 5.15584 5.16252 5.16889 5.17498
5.18078 5.18633 5.19161 5.20135 #bodywt for gender,fleet: 1 / 1
0 0.0475654 0.0724155 0.106146 0.14946 0.201988 0.262214 0.327734 0.395713 0.463379
0.528388 0.589018 0.644202 0.693445 0.736703 0.774241 0.806511 0.834065 0.857477 0.87731
0.894081 0.908256 0.920241 0.930387 0.93899 0.946301 0.952531 0.957854 0.962417 0.966341
0.969726 0.972657 0.975202 0.977421 0.979362 0.981064 0.982563 0.983887 0.985059 0.986101
0.987029 0.987859 0.988603 0.989271 0.989873 0.990416 0.990908 0.991354 0.99176 0.99213
0.992467 0.992776 0.993059 0.993319 0.993558 0.993778 0.993981 0.994169 0.994342 0.994503
0.994652 0.994791 0.99492 0.99504 0.995152 0.995256 0.995354 0.995445 0.99553 0.99561
0.995682 0.995747 0.995808 0.995865 0.995919 0.99597 0.996018 0.996063 0.996105 0.996146
0.996183 0.996219 0.996253 0.996285 0.996315 0.996344 0.996371 0.996396 0.996421 0.996444
0.996465 0.996486 0.996506 0.996524 0.996542 0.996559 0.996574 0.996589 0.996604 0.996617
0.996642 #selex for gender,fleet: 1 / 1
0.0457466 0.167044 0.229659 0.30147 0.380831 0.465895 0.554971 0.646767 0.740449 0.83556
0.931898 1.0294 1.12805 1.22782 1.32867 1.43048 1.53311 1.63636 1.74 1.84379 1.94747
2.05077 2.15343 2.25521 2.35589 2.45524 2.55308 2.64924 2.74358 2.83596 2.92627 3.01444
3.1004 3.18408 3.26545 3.34448 3.42117 3.4955 3.56748 3.63713 3.70446 3.76952 3.83232
3.89291 3.95133 4.00762 4.06183 4.11402 4.16422 4.21251 4.25892 4.30351 4.34635 4.38747
4.42695 4.46482 4.50115 4.53599 4.56939 4.60139 4.63206 4.66144 4.68958 4.71653 4.74232
4.76701 4.79064 4.81325 4.83487 4.85556 4.87548 4.89466 4.913 4.93054 4.9473 4.96332
4.97863 4.99326 5.00724 5.0206 5.03336 5.04554 5.05719 5.0683 5.07892 5.08906 5.09875
5.10799 5.11682 5.12525 5.13329 5.14097 5.1483 5.1553 5.16198 5.16836 5.17444 5.18025
5.18579 5.19108 5.20081 #bodywt for gender,fleet: 1 / 2
0 0.0199402 0.0332012 0.053224 0.0818351 0.120324 0.168957 0.226728 0.291487 0.360372
0.430347 0.498675 0.563209 0.622502 0.675764 0.722745 0.763594 0.798716 0.82866 0.854031
0.875435 0.893446 0.90858 0.921294 0.931981 0.940976 0.948563 0.954976 0.960413 0.965035
0.968978 0.972353 0.975252 0.97775 0.979911 0.981787 0.983421 0.984849 0.986101 0.987203
0.988176 0.989038 0.989803 0.990485 0.991094 0.99164 0.992131 0.992573 0.992972 0.993333
0.99366 0.993958 0.994229 0.994477 0.994703 0.994911 0.995101 0.995277 0.995438 0.995587
0.995725 0.995852 0.99597 0.996079 0.996181 0.996276 0.996364 0.996446 0.996522 0.996594
0.996658 0.996715 0.996768 0.996818 0.996866 0.99691 0.996952 0.996991 0.997028 0.997063
0.997096 0.997127 0.997156 0.997183 0.997209 0.997234 0.997257 0.997279 0.9973 0.99732
0.997338 0.997356 0.997373 0.997389 0.997404 0.997418 0.997432 0.997444 0.997457 0.997468
0.997489 #selex for gender,fleet: 1 / 2
0.0497616 0.185883 0.254185 0.328975 0.406834 0.485655 0.564841 0.64475 0.726112
0.809667 0.895996 0.985449 1.07815 1.174 1.27275 1.37403 1.47736 1.58227 1.68826 1.79483
1.90153 2.00796 2.11374 2.21854 2.32209 2.42415 2.5245 2.62297 2.71941 2.81372 2.90578
2.99553 3.08291 3.16788 3.25042 3.3305 3.40813 3.48332 3.55608 3.62643 3.6944 3.76003
3.82336 3.88443 3.94328 3.99997 4.05454 4.10706 4.15757 4.20613 4.2528 4.29763 4.34068
4.38201 4.42167 4.45972 4.4962 4.53119 4.56472 4.59686 4.62765 4.65714 4.68538 4.71242
4.73831 4.76308 4.78679 4.80947 4.83116 4.85192 4.87189 4.89111 4.90949 4.92707 4.94386
4.95992 4.97526 4.98992 5.00393 5.01731 5.0301 5.04231 5.05397 5.06511 5.07575 5.08591
5.09561 5.10488 5.11372 5.12216 5.13022 5.13792 5.14526 5.15227 5.15897 5.16535 5.17145
5.17726 5.18282 5.18811 5.19786 #bodywt for gender,fleet: 1 / 3
0 0.015574 0.0333763 0.0659297 0.118411 0.192496 0.284672 0.387261 0.49122 0.588813
0.675011 0.747588 0.806483 0.852954 0.888872 0.916223 0.936841 0.952287 0.963822 0.97243

```

0.978863 0.983683 0.987311 0.990055 0.992142 0.99374 0.994972 0.995928 0.996675 0.997263
0.997729 0.998102 0.998401 0.998644 0.998881 0.999003 0.999137 0.999248 0.999341 0.999419
0.999485 0.999541 0.999589 0.99963 0.999665 0.999696 0.999722 0.999746 0.999766 0.999784
0.9998 0.999814 0.999826 0.999837 0.999847 0.999856 0.999864 0.999872 0.999878 0.999884
0.999889 0.999894 0.999899 0.999903 0.999907 0.99991 0.999913 0.999916 0.999919 0.999921
0.999924 0.999926 0.999927 0.999929 0.99993 0.999932 0.999933 0.999934 0.999935 0.999937
0.999938 0.999939 0.999939 0.99994 0.999941 0.999942 0.999942 0.999943 0.999944 0.999944
0.999945 0.999945 0.999946 0.999946 0.999947 0.999947 0.999948 0.999948 0.999948 0.999949
0.999949 #selex for gender,fleet: 1 / 3
0.0461062 0.169254 0.233323 0.307315 0.389698 0.478533 0.57183 0.667887 0.765483
0.863881 0.962726 1.06191 1.16145 1.26141 1.36183 1.46273 1.56408 1.66578 1.7677 1.86967
1.9715 2.07298 2.17387 2.27397 2.37307 2.47095 2.56743 2.66235 2.75555 2.8469 2.93629
3.02362 3.10882 3.19182 3.27258 3.35106 3.42725 3.50114 3.57272 3.64201 3.70902 3.77378
3.83632 3.89667 3.95487 4.01096 4.06499 4.11701 4.16707 4.21522 4.2615 4.30598 4.34871
4.38974 4.42913 4.46692 4.50317 4.53794 4.57128 4.60322 4.63384 4.66317 4.69126 4.71816
4.74391 4.76856 4.79215 4.81473 4.83632 4.85698 4.87688 4.89604 4.91436 4.93188 4.94862
4.96463 4.97992 4.99454 5.00851 5.02185 5.0346 5.04678 5.05841 5.06952 5.08013 5.09026
5.09993 5.10917 5.11799 5.12641 5.13445 5.14212 5.14945 5.15644 5.16311 5.16948 5.17556
5.18136 5.1869 5.19219 5.20191 #bodywt for gender,fleet: 1 / 4
0.01010494 0.0180606 0.0300272 0.0480673 0.0738383 0.108573 0.152671 0.205466 0.265288
0.329767 0.396263 0.462265 0.525681 0.584968 0.639154 0.687768 0.730733 0.768256 0.800723
0.828617 0.852458 0.872763 0.890018 0.904663 0.917091 0.927644 0.936615 0.944255 0.950775
0.956352 0.961137 0.965252 0.968804 0.971878 0.974547 0.976871 0.978903 0.980684 0.98225
0.983632 0.984855 0.98594 0.986905 0.987767 0.988538 0.989231 0.989853 0.990415 0.990922
0.991382 0.9918 0.99218 0.992527 0.992844 0.993134 0.9934 0.993644 0.993869 0.994076
0.994267 0.994444 0.994607 0.994759 0.9949 0.995031 0.995152 0.995266 0.995371 0.99547
0.995558 0.995637 0.99571 0.995779 0.995844 0.995905 0.995962 0.996016 0.996066 0.996114
0.996159 0.996201 0.996241 0.996279 0.996314 0.996348 0.99638 0.99641 0.996438 0.996465
0.996491 0.996515 0.996538 0.996559 0.99658 0.996599 0.996618 0.996635 0.996652 0.996668
0.996696 #selex for gender,fleet: 1 / 4
0.0452245 0.1653 0.228181 0.301539 0.384548 0.476018 0.574472 0.678267 0.785771 0.895513
1.00629 1.11723 1.2277 1.33735 1.44596 1.55344 1.65975 1.76489 1.86885 1.97163 2.07321
2.17354 2.27258 2.37027 2.46653 2.56128 2.65444 2.74592 2.83565 2.92355 3.00954 3.09357
3.17559 3.25554 3.33339 3.40912 3.48271 3.55414 3.62341 3.69054 3.75552 3.81838 3.87914
3.93783 3.99448 4.04913 4.10181 4.15257 4.20145 4.24849 4.29375 4.33727 4.3791 4.41929
4.45789 4.49495 4.53051 4.56464 4.59736 4.62874 4.65882 4.68765 4.71527 4.74173 4.76706
4.79132 4.81454 4.83677 4.85804 4.87839 4.89803 4.91699 4.93513 4.95246 4.96904 4.98488
5.00003 5.0145 5.02833 5.04154 5.05417 5.06623 5.07775 5.08875 5.09926 5.10929 5.11888
5.12803 5.13677 5.14511 5.15308 5.16068 5.16794 5.17487 5.18148 5.18779 5.19382 5.19957
5.20506 5.21029 5.21993 #bodywt for gender,fleet: 1 / 5
0.00457469 0.00746308 0.0118701 0.0183953 0.0277528 0.0407199 0.058048 0.0803441
0.107952 0.140865 0.178701 0.220734 0.265988 0.313344 0.361664 0.409881 0.457069 0.502483
0.545566 0.585942 0.623394 0.657839 0.689295 0.717856 0.743672 0.766921 0.787802 0.80652
0.823275 0.838263 0.851664 0.863647 0.874368 0.883965 0.892565 0.900278 0.907207 0.913437
0.91905 0.924113 0.928687 0.932827 0.93658 0.939988 0.943088 0.945912 0.948489 0.950844
0.953001 0.954978 0.956794 0.958464 0.960002 0.96142 0.96273 0.963941 0.965063 0.966102
0.967068 0.967964 0.968799 0.969575 0.9703 0.970975 0.971607 0.972197 0.972749 0.973265
0.97375 0.974188 0.974583 0.974954 0.975303 0.975632 0.975941 0.976233 0.976508 0.976767
0.977012 0.977243 0.977461 0.977667 0.977862 0.978046 0.978221 0.978386 0.978542 0.97869
0.97883 0.978963 0.979089 0.979208 0.979321 0.979429 0.979531 0.979628 0.979719 0.979807
0.979889 0.980041 #selex for gender,fleet: 1 / 5
0.0469015 0.173735 0.240521 0.318699 0.407418 0.505347 0.610693 0.721328 0.835052
0.949882 1.06428 1.17722 1.28816 1.39689 1.50344 1.60797 1.7107 1.81181 1.91152 2.00994
2.1072 2.20333 2.29836 2.39228 2.48503 2.57655 2.66677 2.7556 2.84295 2.92872 3.01284
3.09522 3.17579 3.25448 3.33124 3.40603 3.4788 3.54954 3.61822 3.68484 3.7494 3.81191
3.87237 3.93082 3.98727 4.04176 4.09431 4.14497 4.19377 4.24075 4.28597 4.32947 4.37128
4.41147 4.45007 4.48714 4.52272 4.55686 4.58962 4.62102 4.65114 4.68 4.70765 4.73414
4.75951 4.7838 4.80706 4.82932 4.85063 4.87101 4.89068 4.90966 4.9278 4.94516 4.96175
4.97761 4.99276 5.00725 5.02109 5.03432 5.04696 5.05903 5.07056 5.08158 5.0921 5.10215
5.11174 5.12091 5.12965 5.13801 5.14598 5.15359 5.16086 5.1678 5.17442 5.18074 5.18677
5.19253 5.19802 5.20327 5.21292 #bodywt for gender,fleet: 1 / 6
0.00127393 0.00234148 0.00417832 0.00723559 0.0121474 0.0197412 0.0309996 0.0469546
0.068522 0.0963159 0.130499 0.170716 0.216131 0.265543 0.317549 0.370707 0.423674 0.4753
0.524677 0.57115 0.614299 0.65391 0.689932 0.722437 0.751587 0.777599 0.800721 0.821216
0.839346 0.85536 0.869498 0.881975 0.892989 0.902718 0.911321 0.918935 0.925684 0.931676
0.937005 0.941752 0.945989 0.949778 0.953173 0.956222 0.958964 0.961437 0.96367 0.96569
0.967523 0.969187 0.970702 0.972084 0.973346 0.9745 0.975558 0.97653 0.977423 0.978245
0.979004 0.979704 0.980352 0.980951 0.981507 0.982023 0.982503 0.982949 0.983365 0.983752
0.984114 0.984436 0.984723 0.984993 0.985245 0.985482 0.985704 0.985913 0.986109 0.986294
0.986468 0.986632 0.986787 0.986932 0.98707 0.9872 0.987322 0.987438 0.987548 0.987651

0.987749 0.987842 0.98793 0.988013 0.988092 0.988166 0.988237 0.988304 0.988368 0.988428
0.988485 0.98859 #selex for gender,fleet: 1 / 6
0.0532535 0.182729 0.249673 0.325438 0.408353 0.496831 0.589596 0.685757 0.784755
0.886259 0.990061 1.096 1.20391 1.3136 1.42481 1.53729 1.6507 1.76473 1.87903 1.99327
2.1071 2.22023 2.33236 2.44322 2.55258 2.66022 2.76596 2.86965 2.97114 3.07032 3.16711
3.26144 3.35324 3.44249 3.52915 3.61322 3.69469 3.77359 3.84991 3.9237 3.99498 4.06379
4.13018 4.19418 4.25586 4.31526 4.37244 4.42745 4.48036 4.53122 4.5801 4.62704 4.67212
4.7154 4.75692 4.79675 4.83496 4.87158 4.90669 4.94033 4.97256 5.00344 5.033 5.06131
5.08841 5.11435 5.13917 5.16292 5.18563 5.20736 5.22828 5.24841 5.26765 5.28605 5.30364
5.32045 5.33652 5.35187 5.36654 5.38056 5.39395 5.40674 5.41897 5.43064 5.44179 5.45243
5.4626 5.47231 5.48158 5.49043 5.49888 5.50695 5.51465 5.52201 5.52903 5.53573 5.54212
5.54822 5.55405 5.55961 5.56986 #bodywt for gender,fleet: 2 / 1
0 0.0481953 0.0748279 0.111471 0.158914 0.216609 0.282613 0.353944 0.427193 0.499143
0.567197 0.629573 0.685291 0.734043 0.776008 0.811679 0.841714 0.866834 0.887747 0.905111
0.919511 0.931455 0.94137 0.949618 0.956495 0.962246 0.967072 0.971137 0.974573 0.977489
0.979974 0.9821 0.983926 0.985501 0.986865 0.98805 0.989084 0.989989 0.990785 0.991486
0.992107 0.992658 0.993148 0.993586 0.993978 0.99433 0.994647 0.994934 0.995193 0.995428
0.995641 0.995836 0.996014 0.996176 0.996325 0.996462 0.996587 0.996703 0.99681 0.996909
0.997 0.997085 0.997164 0.997237 0.997304 0.997368 0.997427 0.997482 0.997533 0.997581
0.997624 0.997663 0.997699 0.997734 0.997766 0.997796 0.997824 0.997851 0.997877 0.9979
0.997923 0.997944 0.997964 0.997983 0.998001 0.998018 0.998034 0.998049 0.998063 0.998077
0.998089 0.998102 0.998113 0.998124 0.998134 0.998144 0.998154 0.998162 0.998171 0.998179
0.998193 #selex for gender,fleet: 2 / 1
0.0545404 0.189544 0.259997 0.340044 0.427637 0.520635 0.617222 0.716142 0.816688
0.918563 1.02171 1.12619 1.23205 1.3393 1.44789 1.5577 1.66852 1.7801 1.89215 2.00436
2.11641 2.22797 2.33876 2.44847 2.55686 2.66368 2.76874 2.87186 2.97287 3.07167 3.16813
3.26219 3.35378 3.44284 3.52936 3.6133 3.69468 3.77349 3.84975 3.92348 3.99472 4.0635
4.12985 4.19384 4.25549 4.31488 4.37205 4.42705 4.47996 4.53082 4.57969 4.62663 4.67171
4.71499 4.75651 4.79635 4.83455 4.87118 4.90629 4.93993 4.97217 5.00304 5.03261 5.06092
5.08802 5.11396 5.13879 5.16254 5.18526 5.20699 5.2279 5.24803 5.26728 5.28568 5.30327
5.32008 5.33615 5.3515 5.36617 5.38019 5.39359 5.40638 5.4186 5.43028 5.44143 5.45207
5.46224 5.47195 5.48122 5.49007 5.49853 5.50659 5.5143 5.52165 5.52867 5.53537 5.54177
5.54787 5.5537 5.55926 5.56951 #bodywt for gender,fleet: 2 / 2
0 0.020269 0.0345729 0.0565807 0.0884491 0.13163 0.186251 0.25085 0.322602 0.39793
0.473214 0.545356 0.612093 0.672057 0.724675 0.769979 0.80841 0.84064 0.867442 0.889598
0.907843 0.922834 0.935144 0.945258 0.953578 0.960439 0.966112 0.970818 0.974737 0.978013
0.980763 0.983081 0.985044 0.986712 0.988137 0.989358 0.99041 0.991319 0.992109 0.992797
0.993398 0.993927 0.994392 0.994804 0.995168 0.995493 0.995783 0.996042 0.996275 0.996484
0.996674 0.996845 0.997 0.99714 0.997269 0.997386 0.997493 0.997591 0.997681 0.997764
0.99784 0.997911 0.997976 0.998036 0.998091 0.998143 0.998191 0.998236 0.998277 0.998316
0.99835 0.998381 0.99841 0.998437 0.998462 0.998486 0.998508 0.998529 0.998549 0.998568
0.998585 0.998602 0.998617 0.998632 0.998646 0.998659 0.998671 0.998683 0.998694 0.998704
0.998714 0.998723 0.998732 0.99874 0.998748 0.998756 0.998763 0.99877 0.998776 0.998782
0.998794 #selex for gender,fleet: 2 / 2
0.059189 0.210209 0.286471 0.368876 0.453608 0.538671 0.623833 0.709829 0.797678
0.888302 0.982357 1.08019 1.18184 1.28709 1.39554 1.50666 1.61984 1.73447 1.84997 1.96577
2.08139 2.19638 2.31037 2.42304 2.53411 2.64334 2.75054 2.85556 2.95826 3.05853 3.15631
3.25151 3.3441 3.43406 3.52136 3.60599 3.68798 3.76733 3.84408 3.91824 3.98985 4.05897
4.12563 4.18989 4.25179 4.3114 4.36876 4.42395 4.47702 4.52803 4.57703 4.6241 4.6693
4.71267 4.75429 4.79421 4.8325 4.8692 4.90438 4.93808 4.97038 5.00131 5.03093 5.05928
5.08643 5.11241 5.13727 5.16105 5.18381 5.20557 5.22651 5.24666 5.26592 5.28434 5.30194
5.31877 5.33485 5.35022 5.3649 5.37893 5.39234 5.40514 5.41737 5.42906 5.44022 5.45087
5.46105 5.47076 5.48004 5.4889 5.49736 5.50544 5.51314 5.5205 5.52753 5.53423 5.54063
5.54674 5.55257 5.55814 5.56839 #bodywt for gender,fleet: 2 / 3
0 0.0159929 0.0354592 0.071835 0.131004 0.214268 0.316532 0.428036 0.538099 0.63831
0.723866 0.793318 0.847548 0.888665 0.919171 0.941461 0.957584 0.969177 0.977494 0.983462
0.987755 0.990858 0.993112 0.994761 0.995977 0.996881 0.997557 0.998069 0.998459 0.998758
0.998991 0.999172 0.999316 0.999429 0.999521 0.999594 0.999654 0.999703 0.999743 0.999776
0.999804 0.999827 0.999847 0.999864 0.999878 0.99989 0.999901 0.99991 0.999918 0.999925
0.999931 0.999936 0.999941 0.999945 0.999949 0.999952 0.999955 0.999957 0.99996 0.999962
0.999964 0.999966 0.999967 0.999969 0.99997 0.999971 0.999972 0.999973 0.999974 0.999975
0.999976 0.999977 0.999977 0.999978 0.999978 0.999979 0.999979 0.99998 0.99998 0.99998
0.999981 0.999981 0.999981 0.999982 0.999982 0.999982 0.999982 0.999983 0.999983 0.999983
0.999983 0.999983 0.999984 0.999984 0.999984 0.999984 0.999984 0.999984 0.999985
0.999985 #selex for gender,fleet: 2 / 3
0.0549573 0.191988 0.264057 0.346518 0.437408 0.534418 0.635339 0.738438 0.842601
0.947274 1.05229 1.15771 1.26368 1.37033 1.47775 1.58596 1.6949 1.80444 1.91439 2.02451
2.13455 2.24422 2.35324 2.46135 2.56829 2.67382 2.77773 2.87982 2.97995 3.07796 3.17374
3.2672 3.35826 3.44686 3.53297 3.61657 3.69762 3.77618 3.8522 3.92573 3.99678 4.06539
4.1316 4.19545 4.25699 4.31628 4.37335 4.42828 4.4811 4.53189 4.58071 4.6276 4.67263
4.71585 4.75734 4.79713 4.8353 4.8719 4.90698 4.9406 4.97281 5.00366 5.03321 5.0615

1.50118e+009 1.49677e+009 1.49129e+009 1.47783e+009 1.46449e+009 1.4425e+009 1.4244e+009
1.4175e+009 1.40949e+009 1.40433e+009 1.39882e+009 1.39202e+009 1.38625e+009 1.38202e+009
1.37657e+009 1.3696e+009 1.36104e+009 1.35112e+009 1.3405e+009 1.33109e+009 1.32263e+009
1.31581e+009 1.30764e+009 1.30144e+009 1.29743e+009 1.27932e+009 1.27245e+009
1.26436e+009 1.25593e+009 1.23577e+009 1.2225e+009 1.20432e+009 1.18095e+009 1.15881e+009
1.13375e+009 1.11077e+009 1.08353e+009 1.05556e+009 1.00704e+009 9.5902e+008 9.20798e+008
8.66321e+008 7.96455e+008 7.48961e+008 7.11931e+008 6.66721e+008 6.40778e+008
6.09867e+008 5.74911e+008 5.28802e+008 5.02275e+008 4.55394e+008 4.07426e+008
3.67561e+008 3.44319e+008 3.16284e+008 2.95281e+008 2.70322e+008 2.65894e+008
2.54124e+008 2.62026e+008 2.68635e+008 2.7995e+008 2.91668e+008 3.03301e+008 3.14742e+008
3.26409e+008 3.37054e+008 3.48358e+008 3.5975e+008 3.70839e+008 #SpawnBio
0.508 0.5 0 # spawn-recr steepness, sigmaR, autocorr