

Sensitivity analyses models.					
	Object	Model name	Description	path	
	SS 3.24	13.sq	2013 Assessment SS3.24	model/2013_SST	
0. Transition					
Item 0.0	SS 3.30.21	23.sq.fixQ	2023 Assessment SS3.30-fixed catchability	model/2013_SST_SSV3_30_21	
Item 0.1	All Param fixed	23.sq.fix	13.sq assessment (SS V3.30.32) - All param fixed	model/Sensitivity_Anal/0.1_Bridging_models/23.sq.fix	
Item 0.1	Floating Q	23.sq.floatQ	13.sq assessment (SS V3.30.21) - Param estimated as before but Q floating	model/Sensitivity_Anal/0.1_Bridging_models/23.sq.floatQ	
Item 0.1	All Param estimated	23.sq.est	13.sq assessment (SS V3.30.21) - All param estimated	model/Sensitivity_Anal/0.1_Bridging_models/23.sq.est	
Item 0.2	Update landings	23.land.update	23.sq.floatQ + landings updated	model/Sensitivity_Anal/0.2_Update_Data/1_23.land.update	
Item 0.2	Updates discard rates	23.disc.update	23.land.update + discards updated	model/Sensitivity_Anal/0.2_Update_Data/2_23.disc.update	
Item 0.2	Update survey geostat indices	23.surv_geo.update	23.disc.update + geo Indices	model/Sensitivity_Anal/0.2_Update_Data/3_23.surv_geo.update	
Item 0.2	Update survey length comps	23.lcs_survey.update	23.surv_geo.update + Surv Lcs	model/Sensitivity_Anal/0.2_Update_Data/4_23.lcs_survey.update	
Item 0.2	Update fisheries length comps	23.lcs_fisheries.update	23.lcs_survey.update + Fisheries Lcs	model/Sensitivity_Anal/0.2_Update_Data/5_23.lcs_fisheries.update	
Item 0.2	Update discard mean weights	23.disc_weight.update	23.lcs_fisheries.update + Discard weight updated	model/Sensitivity_Anal/0.2_Update_Data/6_23.disc_weight.update	
Item 0.2	Update growth	23.growth.update	23.disc_weight.update + growth updated	model/Sensitivity_Anal/0.2_Update_Data/7_23.growth.update	
Item 0.2	Update maturity	23.maturity.update	23.growth.update + maturity updated	model/Sensitivity_Anal/0.2_Update_Data/8_23.maturity.update	
Item 0.2	Update fecundity	23.fecundity.update	23.maturity.update + fecundity updated	model/Sensitivity_Anal/0.2_Update_Data/9_23.fecundity.update	
Item 0.2	Update natural mortality	23.mortality.update	23.fecundity.update + mortality updated	model/Sensitivity_Anal/0.2_Update_Data/10_23.mortality.update	
1. Landings					
Item 1.1	Imputed historical landings	23.land.hist_impute	Use imputed historical landings	model/Sensitivity_Anal/1.1_Landings_Sensitivity/1_23.land.hist_impute	
Item 1.1	2013 assessment landings	23.land.2013	Use 2013 assessment landings	model/Sensitivity_Anal/1.1_Landings_Sensitivity/2_23.land.2013	
Item 1.2	ASHOP Catches	23.landings.ashop	23.model.francis_2 + ASHOP catches	model/Sensitivity_Anal/1.2_Landings_ashop/1_23.landings.ashop	
Item 1.3	23.landings.4fleet	23.landings.4fleet	Base Model + 4 commercial fleets	model/Sensitivity_Anal/1.3_Landings_4fleet/1_23.landings.4fleet	
3. Surveys					
Item 3.1	gamma vs ln error	23.surveys.gamvln	23.model.francis_2 with lognormal error structure in geostatistical abundance indices	model/Sensitivity_Anal/3.1_surveys_Sensitivity/1_23.surveys.gamvln	
Item 3.2	MB vs DB indices	23.surveys.db	base model w/ design-based indices	model/Sensitivity_Anal/3.2_surveys2_Sensitivity/1_23.surveys.db	
Item 3.3	No Triennial Survey	23.surveys.notriennial	3 fleet 1 survey model structure	model/Sensitivity_Anal/3.3_surveys3_Sensitivity/3_23.surveys.notriennial	
Item 3.3	extra SD on WCGBTS	23.surveys.extaSDwcgbts	base model with an additional SD paramter estimated for WCGBTS	model/Sensitivity_Anal/3.3_surveys3_Sensitivity/2_23.surveys.extaSDwcgbts	
Item 3.3	2 survey vs 4 survey structure	23.surveys.useslope	3 fleet 4 survey model structure	model/Sensitivity_Anal/3.3_surveys3_Sensitivity/1_23.surveys.useslope	
4. Biological Info					
Item 4.1	Growth Sensitivity Low	23.growth.low	23.model.francis_2 + low growth	model/Sensitivity_Anal/4.1_Growth_Sensitivity/2_23.growth.low	
Item 4.1	Growth Sensitivity High	23.growth.high	23.model.francis_2 + high growth	model/Sensitivity_Anal/4.1_Growth_Sensitivity/1_23.growth.high	
Item 4.2	Intermediate maturity curve	23.maturity.mix_curve	23.model.francis_2 + intermediate maturity curve	model/Sensitivity_Anal/4.2_Maturity_Sensitivity/2_23.maturity.mix_curve	
Item 4.2	PG maturity	23.maturity.pgcurve	23.model.francis_2 + PG maturity	model/Sensitivity_Anal/4.2_Maturity_Sensitivity/1_23.maturity.pgcurve	
Item 4.3	Sensitivity to fecundity	23.biology.no_fecundity	Remove the length-fecundity relationship from base model	model/Sensitivity_Anal/4.3_Fecundity_Sensitivity/1_23.biology.no_fecundity	
Item 4.4	Sensitivity to weight-length relationship	23.WL.sensitivity	new params, remove fish <=16cm	model/Sensitivity_Anal/STAR_Panel/4.4_WL_Sensitivity/1_23.WL.sensitivity	
Item 4.5	Sensitivity to sigmaR	23.SigmaR.sensitivity	sigmaR 0.76	model/Sensitivity_Anal/STAR_Panel/4.5_SigmaR_Sensitivity/1_23.SigmaR.sensitivity	
5. Model					
Item 5.1	S-R Steepness	23.model.recdevs_steep	23.model.recdevs_initYear + h=0.72	model/Sensitivity_Anal/5.1_Explore_RecDevs/3_23.model.recdevs_steep	
Item 5.1	Bias Adjustment Years	23.model.recdevs_bias	23.model.recdevs_steep + biaspars updated	model/Sensitivity_Anal/5.1_Explore_RecDevs/4_23.model.recdevs_bias	
Item 5.1	Update Initial RecDev Year	23.model.recdevs_initYear	23.model.recdevs_termYear + inityear change	model/Sensitivity_Anal/5.1_Explore_RecDevs/2_23.model.recdevs_initYear	
Item 5.1	Update Terminal RecDev Year	23.model.recdevs_termYear	23.mortality.update + termyear change	model/Sensitivity_Anal/5.1_Explore_RecDevs/1_23.model.recdevs_termYear	
Item 5.3	Francis Reweighting	23.model.francis	23.model.fleetstruct_5 + new Francis weights	model/Sensitivity_Anal/5.3_Francis_Reweighting/1_23.model.francis	
Item 5.4	Survey Timing	23.model.survey_timing	survey timing = -1	model/Sensitivity_Anal/5.4_SS_Model_Warnings/1_23.model.survey_timing	
Item 5.4	Settlement Events	23.model.settlement_events	simple settlement event	model/Sensitivity_Anal/5.4_SS_Model_Warnings/2_23.model.settlement_events	
Item 5.5	Remove small sample size LCs	23.model.sample_sizes	remove small sample sizes	model/Sensitivity_Anal/5.5_Improve_LC_Fits/1_23.model.sample_sizes	
Item 5.5	Improve Trawl_N LC Fit	23.model.improve_trawln	change Trawl_N selectivity pars	model/Sensitivity_Anal/5.5_Improve_LC_Fits/3_23.model.improve_trawln	
Item 5.5	Improve Other LC Fits	23.model.improve_other	change other fleet selectivity pars	model/Sensitivity_Anal/5.5_Improve_LC_Fits/4_23.model.improve_other	
Item 5.5	Sex-Specific Survey Selectivity	23.model.sexed_survey_selectivity	sex-specific survey selectivity	model/Sensitivity_Anal/5.5_Improve_LC_Fits/2_23.model.sexed_survey_selectivity	
Item 5.6	Modify recdev init year	23.model.recdevs_inityear_1996	update recdevs 1996	model/Sensitivity_Anal/5.6_Update_Recdevs_Inityear/1_23.model.recdevs_inityear_1996	
Item 5.7	Fix warnings	23.fix_warnings	Fix warnings	model/Sensitivity_Anal/5.7_Fix_Warnings/1_23.fix_warnings	
Item 5.8	Francis Reweighting 2	23.model.francis_2	francis weighting part 2	model/Sensitivity_Anal/5.8_Francis_Reweighting_2/1_23.model.francis_2	
Item 5.9	blk Trawl 89	23.blkret.T1	blk Trawl 89	model/Sensitivity_Anal/5.9_Retention_Selectivity_Sensitivity/1_23.blkret.T1	
Item 5.9	blk Trawl mid10	23.blkret.T2	blk Trawl mid10	model/Sensitivity_Anal/5.9_Retention_Selectivity_Sensitivity/2_23.blkret.T2	
Item 5.9	blk Trawl 89-mid10	23.blkret.T3	blk Trawl 89-mid10	model/Sensitivity_Anal/5.9_Retention_Selectivity_Sensitivity/3_23.blkret.T3	
Item 5.9	blk Trawl 89-mid10-19	23.blkret.T4	blk Trawl 89-mid10-19	model/Sensitivity_Anal/5.9_Retention_Selectivity_Sensitivity/4_23.blkret.T4	
Item 5.9	blk Trawl 89-mid10 NonTrawl 05-13	23.blkret.T3.NT1	blk Trawl 89-mid10 NonTrawl 05-13	model/Sensitivity_Anal/5.9_Retention_Selectivity_Sensitivity/5_23.blkret.T3.NT1	
Item 5.9	blk Trawl 89-mid10 NonTrawl 05-13-17	23.blkret.T3.NT2	blk Trawl 89-mid10 NonTrawl 05-13-17	model/Sensitivity_Anal/5.9_Retention_Selectivity_Sensitivity/6_23.blkret.T3.NT2	
Item 5.10	Prior on Selectivity - 3 Blks	23.slx.Prior.3Blk	23.blkret.T3 + 3 Time Blocks	model/Sensitivity_Anal/5.10_Prior_Selectivity_Sensitivity/3_23.slx.Prior.3Blk	
Item 5.10	Prior on Selectivity - 1 Blk	23.slx.Prior.1Blk	23.blkret.T3 + 1 Time Block	model/Sensitivity_Anal/5.10_Prior_Selectivity_Sensitivity/1_23.slx.Prior.1Blk	
Item 5.10	Prior on Selectivity - 2 Blks	23.slx.Prior.2Blk	23.blkret.T3 + 2 Time Blocks	model/Sensitivity_Anal/5.10_Prior_Selectivity_Sensitivity/2_23.slx.Prior.2Blk	
Item 5.11	base blksel 2003	23.blksel.T1	base blksel 2003	model/Sensitivity_Anal/5.11_Selectivity_Sensitivity/1_23.blksel.T1	
Item 5.11	base blksel 2011	23.blksel.T2	base blksel 2011	model/Sensitivity_Anal/5.11_Selectivity_Sensitivity/2_23.blksel.T2	
Item 5.11	base blksel 2003+2011	23.blksel.T3	base blksel 2003+2011	model/Sensitivity_Anal/5.11_Selectivity_Sensitivity/3_23.blksel.T3	
Item 5.11	base blksel 2003+2011+2019	23.blksel.T4	base blksel 2003+2011+2019	model/Sensitivity_Anal/5.11_Selectivity_Sensitivity/4_23.blksel.T4	
Item 5.11	blkretT3 blksel 2003	23.blkret.T3.blksel.T1	blkretT3 blksel 2003	model/Sensitivity_Anal/5.11_Selectivity_Sensitivity/5_23.blkret.T3.blksel.T1	
Item 5.11	blkretT3 blksel 2011	23.blkret.T3.blksel.T2	blkretT3 blksel 2011	model/Sensitivity_Anal/5.11_Selectivity_Sensitivity/6_23.blkret.T3.blksel.T2	
Item 5.11	blkretT3 blksel 2003+2011	23.blkret.T3.blksel.T3	blkretT3 blksel 2003+2011	model/Sensitivity_Anal/5.11_Selectivity_Sensitivity/7_23.blkret.T3.blksel.T3	
Item 5.11	blkretT3 blksel 2003+2011+2019	23.blkret.T3.blksel.T4	blkretT3 blksel 2003+2011+2019	model/Sensitivity_Anal/5.11_Selectivity_Sensitivity/8_23.blkret.T3.blksel.T4	
Item 5.12	Dirichlet Multinomial Length Comps	23.dmn	DMN length comps	model/Sensitivity_Anal/5.12_Dirichlet_Multinomial/1_23.dmn	
Item 5.13	Fix M at 0.045	23.STAR.Panel.M.045	23.model.francis_2 + M fixed at 0.045	model/Sensitivity_Anal/STAR_Panel/5.13_Request_3/1_23.STAR.Panel.M.045	
Item 5.13	Fix M at 0.05	23.STAR.Panel.M.05	23.model.francis_2 + M fixed at 0.05	model/Sensitivity_Anal/STAR_Panel/5.13_Request_3/2_23.STAR.Panel.M.05	
Item 5.14	Estimate Maximum Retention	23.est.max.ret	23.blkret.T3.blksel.T3 + Max ret estimated	model/Sensitivity_Anal/STAR_Panel/5.14_Request_4/1_23.est.max.ret	
Item 5.14	Day2 Base Update	23.base.day2.update	BAsE model after day 1 requests	model/Sensitivity_Anal/STAR_Panel/5.14_Day2_Base_Update/1_23.base.day2.update	
Item 5.15	Length Comp Re-weight	23.length.comp.reweight	explore alternative length comp re-weighting (Variance Adjustment Factors)	model/Sensitivity_Anal/5.15_Length_Comp_Reweight/1_23.length.comp.reweight	
Item 5.16	lenght comp combo only	23.lencomp.Combo.Only	base model with variance adjustment parameter specified for combo survey only	model/Sensitivity_Anal/5.16_LenComp_Reweight_by_Fleet/1_23.lencomp.Combo.Only	
Item 5.16	lenght comp add triennial	23.lencomp.AddTriennial	base model with variance adjustment parameter specified for combo + triennial survey	model/Sensitivity_Anal/5.16_LenComp_Reweight_by_Fleet/2_23.lencomp.AddTriennial	
Item 5.16	lenght comp add NonTrawl	23.lencomp.AddNonTrawl	base model with variance adjustment parameter specified for combo + triennial + Non trawl	model/Sensitivity_Anal/5.16_LenComp_Reweight_by_Fleet/3_23.lencomp.AddNonTrawl	
Item 5.16	lenght comp add SouthTrawl	23.lencomp.AddSouthTrawl	base model with variance adjustment parameter specified for combo + triennial + Non trawl + South Trawl	model/Sensitivity_Anal/5.16_LenComp_Reweight_by_Fleet/4_23.lencomp.AddSouthTrawl	
Item 5.16	lenght comp add NorthTrawl	23.lencomp.AddNorthTrawl	base model with variance adjustment parameter specified for combo + triennial + Non trawl + South Trawl + North Trawl	model/Sensitivity_Anal/5.16_LenComp_Reweight_by_Fleet/5_23.lencomp.AddNorthTrawl	
Item 5.17	Recuritment Bias Adjustment	23.model.rec_biasadj	Updated recruitment bias adjustment to use maximum of 0.3.	model/Sensitivity_Anal/STAR_Panel/5.17_Recruitment_Requests/1_23.model.rec_biasadj	
Item 5.17	New Recruitment Main Period	23.model.rec_main_period	Shifting main period deviates to end in 2012.	model/Sensitivity_Anal/STAR_Panel/5.17_Recruitment_Requests/2_23.model.rec_main_period	
Item 5.18	New Recruitment Main Period Full	23.model.rec_long_main_period	Extend main period recdevs.	model/Sensitivity_Anal/STAR_Panel/5.18_Recruitment_Requests_2/1_23.model.rec_long_main_period	