**Table XXX.** Prior Table 1:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Model Component** | **Parameter** | **Region** | **Distribution** | **1st term** | **2nd term** |
| Species Composition | scomp | all | uniform | 0 | 10 |
| Proportion Harvested (pH) | spH | by logbook species complex | uniform | 0 | 5 |
| Harvest trend spline | ml | by region | normal | 1 | 0.1 |
| sl | by region | uniform | 0 | 20 |
| sHa | by area | normal | 0.25 | 1 |
| b0H | by area | normal | 0 | 0.000001 |
| SWHS harvest bias | mHb | by area | normal | 0 | 0.001 |
| sHb | by area | gamma | 2 | 2 |
| SWHS release bias | mRb | by area | normal | 0 | 0.001 |
| sRb | by area | gamma | 2 | 2 |
| Proportion Guided | l1a | by area | uniform | 1 | 50 |
| l2a | by area | uniform | 1 | 50 |

**Table XXX.** Priors used for the logistic curve fit to the species composition of the proportion pelagic in all rockfish, including the hyper priors and area specific priors derived from the hyper priors and the distribution (dist.) and terms defining the distributions. t is related to the standard deviation (SD) as t = 1 / SD / SD. Y represents the terminal year of the time series.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **Hyperprior m** | | | **Hyper prior t or standard deviation (SD)** | | | **Area specific priors** | | | |
| **Param.** | **Definition** | **Reg.** | **Dist.** | **1st term** | **2nd term** | **Dist.** | **1st term** | **2nd term** | **Dist.** | **1st term** | **2nd term** | **Area notes** |
| b0 | Intercept | All | norm | 0 | 0.1 | SD unif | 0.1 | 5 | norm | m | t |  |
| b1 | Scaler | SC | lognorm | log(0.5) | 0.1 | SD unif | 0.1 | 5 | lognorm | log(m) | t | CI & NG Fixed at 0 |
| Kod | fixed | 0 |  | SD unif | 0.1 | 5 | norm | m | t |  |
| SE | lognorm | log(1) | 0.01 | SD unif | 0.1 | 5 | lognorm | log(m) | t |  |
| b2 | Slope | SC | lognorm | log(0.5) | 0.1 | SD unif | 0.1 | 4 | norm | m | t | CI & NG Fixed at 0 |
| Kod | fixed | 0 |  | SD unif | 0.1 | 1 | norm | m | t |  |
| SE | lognorm | log(1) | 0.05 | SD unif | 0.1 | 15 | norm | m | t |  |
| b3 | Inflection Point | SC | unif | 19 | Y -2 | SD unif | 0.1 | 4 | lognorm | log(m) | t |  |
| Kod | unif | 19 | Y -2 | SD unif | 0.1 | 4 | lognorm | log(m) | t |  |
| SE | unif | 20 | Y -2 | SD unif | 0.1 | 4 | lognorm | log(m) | t |  |
| b4 | User effect | All | norm | 0 | 0.1 | **t** gamma | 0.1 | 0.1 | norm | m | t |  |

**Table XXX.** Priors used for the logistic curve fit to the species composition of the proportion black in pelagic rockfish, including the hyper priors and area specific priors derived from the hyper priors and the distribution (dist.) and terms defining the distributions. t is related to the standard deviation (SD) as t = 1 / SD / SD. Y represents the terminal year of the time series.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **Hyperprior m** | | | **Hyper prior t or standard deviation (SD)** | | | **Area specific priors** | | | |
| **Param.** | **Definition** | **Reg.** | **Dist.** | **1st term** | **2nd term** | **Dist.** | **1st term** | **2nd term** | **Dist.** | **1st term** | **2nd term** | **Area notes** |
| b0 | Intercept | All | norm | 0 | 0.1 | SD unif | 0.1 | 5 | norm | m | t |  |
| b1 | Scaler | SC | lognorm | log(0.0001) | 0.1 | SD unif | 0.1 | 10 | fixed | 0 |  | lognorm(m,t) for CI |
| Kod | fixed | 0 |  | SD unif | 0.1 | 10 | fixed | 0 |  |  |
| SE | lognorm | log(0.0001) | 0.5 | SD unif | 0.1 | 10 | fixed | 0 |  | lognorm(m,t) for NSEI |
| b2 | Slope | SC | lognorm | log(0.5) | 0.5 | SD unif | 0.25 | 5 | fixed | 0 |  | lognorm(m,t) for CI |
| Kod | fixed | 0 |  | SD unif | 0.25 | 5 | fixed | 0 |  |  |
| SE | norm | -1 | 1 | SD unif | 0.25 | 5 | fixed | 0 |  | norm(m,t) for NSEI |
| b3 | Inflection Point | SC | unif | 25 | Y -2 | SD unif | 0.1 | 4 | fixed | 25 |  | lognorm(m,t) for CI |
| Kod | unif | 19 | Y -2 | SD unif | 0.1 | 4 | fixed | 25 |  |  |
| SE | unif | 29 | Y -2 | SD unif | 0.1 | 4 | fixed | 0 |  | lognorm(m,t) for NSEI |
| b4 | User effect | All | norm | 0 | 0.1 | **t** gamma | 0.1 | 0.1 | norm | m | t |  |

**Table XXX.** Priors used for the logistic curve fit to the species composition of the proportion yelloweye rockfish in non-pelagic (Southcentral and Kodiak) or demersal shelf rockfish (Southeast region), including the hyper priors and area specific priors derived from the hyper priors and the distribution (dist.) and terms defining the distributions. t is related to the standard deviation (SD) as t = 1 / SD / SD. Y represents the terminal year of the time series.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **Hyperprior m** | | | **Hyper prior t or standard deviation (SD)** | | | **Area specific priors** | | | |
| **Param.** | **Definition** | **Reg.** | **Dist.** | **1st term** | **2nd term** | **Dist.** | **1st term** | **2nd term** | **Dist.** | **1st term** | **2nd term** | **Area notes** |
| b0 | Intercept | All | norm | 0 | 0.5 | SD unif | 0.1 | 5 | norm | m | t |  |
| b1 | Scaler | SC | lognorm | log(0.25) | 0.1 | SD unif | 0.1 | 5 | lognorm | log(m) | t |  |
| Kod | fixed | 0 |  | SD unif | 0.1 | 5 | fixed | 0 |  |  |
| SE | lognorm | log(0.0001) | 0.1 | SD unif | 0.1 | 5 | lognorm | log(m) | t |  |
| b2 | Slope | SC | norm | -0.5 | 0.05 | SD unif | 0.1 | 5 | norm | m | t |  |
| Kod | fixed | 0 |  | SD unif | 0.1 | 5 | fixed | 0 |  |  |
| SE | norm | -0.5 | 0.05 | SD unif | 0.1 | 4 | norm | m | t |  |
| b3 | Inflection Point | SC | unif | 19 | Y -2 | SD unif | 0.1 | 4 | lognorm | log(m) | t |  |
| Kod | unif | 19 | Y -2 | SD unif | 0.1 | 4 | fixed | 25 |  |  |
| SE | unif | 35 | Y -2 | SD unif | 0.1 | 4 | lognorm | log(m) | t |  |
| b4 | User effect | All | norm | 0 | 0.1 | **t** gamma | 0.1 | 0.1 | norm | m | t |  |

**Table XXX.** Priors used for the logistic curve fit to the species composition of the proportion demersal shelf and slope rockfish in non-pelagic rockfish in Southeast region, including the hyper priors and area specific priors derived from the hyper priors and the distribution (dist.) and terms defining the distributions. t is related to the standard deviation (SD) as t = 1 / SD / SD. Y represents the terminal year of the time series.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **Hyperprior m** | | | **Hyper prior t or standard deviation (SD)** | | | **Area specific priors** | | | |
| **Species Complex** | **Param.** | **Definition** | **Dist.** | **1st term** | **2nd term** | **Dist.** | **1st term** | **2nd term** | **Dist.** | **1st term** | **2nd term** | **Area notes** |
| DSR | b0 | Intercept | norm | 0 | 0.1 | SD unif | 0.1 | 5 | norm | m | t |  |
| b1 | Scaler | lognorm | log(0.0001) | 0.1 | SD unif | 0.1 | 5 | lognorm | log(m) | t |  |
| b2 | Slope | norm | -0.5 | 0.1 | SD unif | 0.1 | 4 | norm | m | t |  |
| b3 | Inflection Point | unif | 29 | Y - 3 | SD unif | 0.1 | 5 | lognorm | log(m) | t |  |
| b4 | User effect | norm | 0 | 0.1 | gamma | 0.1 | 0.1 | norm | m | t |  |
| Slope | b0 | Intercept | norm | 0 | 0.1 | SD unif | 0 | 5 | norm | m | t |  |
| b1 | Scaler | lognorm | log(0.0001) | 0.1 | SD unif | 0 | 5 | lognorm | log(m) | t |  |
| b2 | Slope | norm | 0.1 | 0.1 | SD unif | 0.01 | 4 | norm | m | t |  |
| b3 | Inflection Point | unif | 29 | Y -3 | SD unif | 0 | 5 | lognorm | log(m) | t |  |
| b4 | User effect | norm | 0 | 0.1 | **t** gamma | 0.1 | 0.1 | norm | m | t |  |
| b5 | Release offset | fixed | 0.1 |  | fixed | 0.01 |  | Norm | 0.1 | 0.01 |  |

**Table XXX.** Priors used for the logistic curve fit to the retention probability, *pH*, for pelagic rockfish including the hyper priors and area specific priors derived from the hyper priors and the distribution (dist.) and terms defining the distributions. t is related to the standard deviation (SD) as t = 1 / SD / SD. Y represents the terminal year of the time series.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **Hyperprior m** | | | **Hyper prior standard deviation (SD)** | | | **Area specific priors** | | | |
| **Param.** | **Definition** | **Reg.** | **Dist.** | **1st term** | **2nd term** | **Dist.** | **1st term** | **2nd term** | **Dist.** | **1st term** | **2nd term** | **Area notes** |
| b0 | Intercept | All | norm | 0 | 0.01 | unif | 0.1 | 5 | norm | m | t |  |
| b1 | Scaler | SC | lognorm | log(0.00001) | 0.01 | unif | 0.1 | 4 | lognorm | log(m) | t |  |
| Kod | lognorm | log(0.00001) | 0.01 | unif | 0.1 | 4 | lognorm | log(m) | t |  |
| SE | lognorm | log(0.00001) | 0.01 | unif | 0.1 | 4 | lognorm | log(m) | t |  |
| b2 | Slope | SC | norm | 0 | 0.01 | unif | 0.1 | 5 | norm | m | t |  |
| Kod | lognorm | log(0.00001) | 0.01 | unif | 0.1 | 5 | norm | m | t | Lognorm for WKMA |
| SE | norm | 0 | 0.01 | unif | 0.1 | 5 | norm | m | t |  |
| b3 | Inflection Point | SC | unif | 19 | Y -3 | unif | 0.1 | 5 | lognorm | log(m) | t |  |
| Kod | unif | 19 | Y -3 | unif | 0.1 | 5 | lognorm | log(m) | t |  |
| SE | unif | 19 | Y -3 | unif | 0.1 | 5 | lognorm | log(m) | t |  |
| b4 | User effect | All | norm | 0 | 1 | unif | 0.1 | 4 | norm | m | t |  |

**Table XXX.** Priors used for the logistic curve fit to the retention probability, *pH*, for yelloweye rockfish including the hyper priors and area specific priors derived from the hyper priors and the distribution (dist.) and terms defining the distributions. t is related to the standard deviation (SD) as t = 1 / SD / SD. Y represents the terminal year of the time series.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **Hyperprior m** | | | **Hyper prior t or standard deviation (SD)** | | | **Area specific priors** | | | |
| **Param.** | **Definition** | **Reg.** | **Dist.** | **1st term** | **2nd term** | **Dist.** | **1st term** | **2nd term** | **Dist.** | **1st term** | **2nd term** | **Area notes** |
| b0 | Intercept | All | norm | 0 | 0.01 | unif | 0.1 | 5 | norm | m | t |  |
| b1 | Scaler | SC | lognorm | log(0.00001) | 0.01 | unif | 0.1 | 3 | lognorm | log(m) | t | fixed at 0 for NGC, PWSI, PWSO |
| Kod | lognorm | log(0.00001) | 0.01 | unif | 0.1 | 4 | lognorm | log(m) | t |  |
| SE | lognorm | log(0.00001) | 0.01 | unif | 0.1 | 4 | lognorm | log(m) | t |  |
| b2 | Slope | SC | norm | -0.5 | 0.5 | unif | 0.1 | 4 | norm | m | t | fixed at 0 for NGC, PWSI, PWSO |
| Kod | lognorm | 0 | 0.01 | unif | 0.1 | 4 | fixed | 0 |  |  |
| SE | norm | 5 | 0.01 | unif | 0.1 | 4 | norm | m | t |  |
| b3 | Inflection Point | SC | unif | 19 | Y -3 | unif | 0.1 | 5 | lognorm | log(m) | t |  |
| Kod | unif | 19 | Y -3 | unif | 0.1 | 5 | lognorm | log(m) | t |  |
| SE | unif | 19 | Y -3 | unif | 0.1 | 5 | lognorm | log(m) | t |  |
| b4 | User effect | All | norm | 0 | 1 | unif | 0.1 | 4 | norm | m | t |  |

**Table XXX.** Priors used for the logistic curve fit to the retention probability, *pH*, for “other” (non-pelagic, non-yelloweye) rockfish including the hyper priors and area specific priors derived from the hyper priors and the distribution (dist.) and terms defining the distributions. t is related to the standard deviation (SD) as t = 1 / SD / SD. Y represents the terminal year of the time series.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **Hyperprior m** | | | **Hyper prior t or standard deviation (SD)** | | | **Area specific priors** | | | |
| **Param.** | **Definition** | **Reg.** | **Dist.** | **1st term** | **2nd term** | **Dist.** | **1st term** | **2nd term** | **Dist.** | **1st term** | **2nd term** | **Area notes** |
| b0 | Intercept | All | norm | 0 | 0.01 | unif | 0.1 | 5 | norm | m | t |  |
| b1 | Scaler | SC | lognorm | log(0.00001) | 0.5 | unif | 0.1 | 5 | lognorm | log(m) | t | fixed at 0 for NGC, PWSI, PWSO |
| Kod | lognorm | log(0.5) | 0.05 | unif | 0.1 | 5 | lognorm | log(m) | t |  |
| SE | lognorm | log(0.00001) | 0.01 | unif | 0.1 | 5 | lognorm | log(m) | t |  |
| b2 | Slope | SC | lognorm | log(0.00001) | 0.5 | unif | 0.1 | 5 | norm | m | t | fixed at 0 for NGC, PWSI, PWSO |
| Kod | norm | 0 | 0.01 | unif | 0.1 | 5 | norm | m | m |  |
| SE | norm | 0 | 0.01 | unif | 0.1 | 5 | norm | m | t |  |
| b3 | Inflection Point | SC | unif | 19 | Y -3 | unif | 0.1 | 5 | lognorm | log(m) | t |  |
| Kod | unif | 19 | Y -3 | unif | 0.1 | 5 | lognorm | log(m) | t |  |
| SE | unif | 31 | Y -3 | unif | 0.1 | 5 | lognorm | log(m) | t |  |
| b4 | User effect | All | norm | 0 | 1 | unif | 0.1 | 4 | norm | m | t |  |