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| **SlotName** | **Type** | **Example** | **Description** |
| **Stock subclass** | | | |
| Name | character | "Tile fish" | Name of the Stock object |
| maxage | integer | 23 | Maximum age of individuals [positive integer] |
| R0 | numeric | 1000 | The magnitude of unfished recruitment (a scalar and usually not important in MSE) |
| M | numeric vector | c(0.12, 18) | Natural morality rate (bounds on) [positive real number] |
| Msd | numeric vector | c(0.02, 0.05) | Interannual variability in natural mortality rate (log-normal standard deviation)[positive real number] |
| Mgrad | numeric vector | c(-0.5, 0.5) | Mean slope in natural mortality rate (% per year) [real number] |
| H | numeric vector | c(0.3, 0.8) | Recruitment compensation (steepness) [real number bounded between 0.2 and 1) |
| SRrel | Integer | 1 | Type of stock-recruitment relationship: (1) Beverton Holt (2) Ricker |
| Linf | numeric vector | c(187, 199) | Maximum length of individuals (von Bertalanffy *L∞*) [positive real number] |
| K | numeric vector | c(0.08, 0.14) | Maximum growth rate of individuals (von Bertalanffy κ) [positive real number] |
| t0 | numeric vector | c(-0.5, -0.1) | Theoretical length at age zero (von Bertalanffy *t0*) [positive real number] |
| Ksd | numeric vector | c(0.05, 0.15) | Interannual variability in K parameter (% per year) [positive real number] |
| Kgrad | numeric vector | c(-0.5, 0.5) | Mean slope in K parameter (% per year) [real number] |
| Linfsd | numeric vector | c(0.05, 0.15) | Interannual variability in Linf parameter (% per year) [positive real number] |
| Linfgrad | numeric vector | c(-0.5, 0.5) | Mean slope in Linf parameter (% per year) [real number] |
| recgrad | numeric vector | c(-0.5, 0.5) | Mean slope in recruitment deviations (% per year) [real number] |
| AC | numeric vector | c(0.5, 0.95) | Autocorrelation in recruitment deviations [real number] |
| A | numeric | 1.04E-06 | a parameter of the length-weight relationship *W=aLb* [positive real number] |
| B | numeric | 3.051 | b parameter of the length-weight relationship *W=aLb* [positive real number] |
| L50 | numeric vector | c(145,155) | Length at which individuals are 50% mature |
| L50\_95 | numeric vector | c(5,10) | Length increment from 50% to 95% maturity |
| D | numeric vector | c(0.05, 0.6) | Current level of stock depletion (biomass relative to unfished) [positive real number] |
| Perr | numeric vector | c(0.2, 0.4) | Process error, the standard deviation of log normal recruitment deviations [positive real number] |
| Size\_area\_1 | numeric vector | c(0.1,0.1) | Relative size of area 1 [fraction] |
| Frac\_area\_1 | numeric vector | c(0.05,0.2) | Fraction of the unfished biomass ('habitat') in area 1 [fraction] |
| Prob\_staying | numeric vector | c(0.9, 0.99) | Probability that individuals in area 1 stay in area 1 between years [fraction] |
| Source | character | "www.url.org" | Primary source of the inputs listed above |
| **Fleet subclass** | | | |
| Name | character | "Mostly seining" | Name of the Fleet object |
| nyears | Integer | 50 | Number of years of historical exploitation (number of historical simulated years) |
| Spat\_targ | numeric vector | c(1, 1.5) | Fishing in relation to vulnerable biomass (proportional to *vulnerablebiomassSpat\_targ*) [positive real number] |
| LFS | numeric vector | c(0.75,1.1) | Length at full selectivity (expressed as a fraction of length at 50% maturity) |
| L5 | numeric vector | c(1.5, 2) | Length at 5% selectivity (expressed as a fraction of length at 50% maturity) |
| Vmaxlen | numeric vector | c(0.5, 1) | The selectivity of the longest length class (controls extent of dome-shaped double normal selectivity) [fraction] |
| Esd | numeric vector | c(0.1, 0.2) | Interannual variability in historical fishing mortality rate (log normal standard deviation) [positive real number] |
| Fgrad | numeric vector | c(-5, 5) | Final historical slope (last five years) in historical fishing mortality rate (% per year) [real number] |
| qinc | numeric vector | c(-2, 2) | Mean percentage change in fishing efficiency ('catchability', forward projection and input controls) [real number] |
| qcv | numeric vector | c(0.1, 0.2) | Interannual variability in fishing efficiency ('catchability', forward projection and input controls) [positive real number] |
| LR5 | numeric vector | c(NA,NA) | the smallest length at 5% retention |
| LFR | numeric vector | c(NA,NA) | the smallest length at full selection |
| Rmaxlen | numeric vector | c(NA,NA) | the retention of the largest size class (defined as expected length at maximum age Stock@maxage) |
| DR | Numeric vector | c(NA,NA) | general discard rate (e.g., 0.1 = 10% discard for each age). |
| **Observation subclass** | | | |
| Name | character | "Imprecise" | Name of the observation object |
| LenMcv | numeric | 0.2 | Controls the range of biases for L50 (length at 50% maturity, lognormal standard deviation) [positive real number] |
| Cobs | numeric vector | c(0.2, 0.6) | Catch observation error (log normal standard deviation) [positive real number] |
| Cbiascv | numeric | 0.3 | Controls the range of biases for annual catch observations (lognormal standard deviation) [positive real number] |
| CAA\_nsamp | integer vector | c(50, 100) | Total number of catch-at-age observations per year [positive integer] |
| CAA\_ESS | integer vector | c(10, 20) | Effective sample size of annual catch-at-age observations (independent draws of multinomial observation model) |
| CAL\_nsamp | integer vector | c(50, 100) | Total number of catch-at-length observations per year [positive integer] |
| CAL\_ESS | integer vector | c(10, 20) | Effective sample size of annual catch-at-length observations (independent draws of multinomial observation model) |
| CAL\_cv | numeric vector | c(0.1, 0.15) | The lognormal variability in length at age (lognormal standard deviation) [positive real number] |
| Iobs | numeric vector | c(0.2, 0.6) | Relative abundance index observation error (log normal standard deviation) [positive real number] |
| Mcv | numeric | 0.4 | Controls the range of biases sampled for natural mortality rate (lognormal standard deviation) [positive real number] |
| Kcv | numeric | 0.1 | '' for growth parameter K |
| t0cv | numeric | 0.1 | '' for growth parameter t0 |
| Linfcv | numeric | 0.1 | '' for growth parameter Linf |
| LFCcv | numeric | 0.1 | '' for Length at First Capture (first observed length in fishery) |
| LFScv | numeric | 0.1 | '' for shortest Length at Full Selection |
| B0cv | numeric | 4 | '' for unfished stock size |
| FMSYcv | numeric | 0.2 | '' for Fishing mortality rate at Maximum Sustainable Yield |
| FMSY\_Mcv | numeric | 0.5 | '' for ratio of FMSY to natural mortality rate M |
| BMSY\_B0cv | numeric | 0.2 | '' for position of most productive stock size relative to unfished |
| rcv | numeric | 0.5 | '' for intrinsic rate of increase (surplus production parameter r) |
| Dbiascv | numeric | 0.75 | '' for stock depletion (biomass relative to unfished) |
| Dcv | numeric vector | c(0.5, 1) | observation error in stock depletion (lognormal standard deviation) [positive real number] |
| Btbias | numeric vector | c(0.2, 5) | Bounds on bias in observations of current absolute stock size (uniform on log) [positive real number] |
| Btcv | numeric vector | c(0.5, 1) | Observation error in current absolute stock size (lognormal standard deviation) [positive real number] |
| Fcurbiascv | numeric | 0.75 | " for current fishing mortality rate |
| Fcurcv | numeric vector | c(0.5, 1) | Observation error in current fishing mortality rate (lognormal standard deviation) [positive real number] |
| hcv | numeric | 0.3 | '' for recruitment compensation (steepness, h) |
| Icv | numeric | 0.4 | '' for relative abundance index |
| maxagecv | numeric | 0.2 | '' for maximum age |
| Reccv | numeric vector | c(0.1, 0.3) | Observation error for slope in recent recruitment (absolute recruitment over last 10 years, age 1 individuals) |
| Irefcv | numeric | 0.3 | '' for target (reference) relative abundance index (IMSY) |
| Crefcv | numeric | 0.3 | '' for target (reference) catch (MSY) |
| Brefcv | numeric | 0.5 | '' for target (reference) biomass level (BMSY) |
| Beta | numeric vector | c(0.333, 3) | Bounds on hyperstability / hyper depletion parameter that controls relationship between relative abundance index and biomass (*index(t) = vulnerablebiomass(t)beta*) (uniform on log) [positive real number] |