

Specifications of the CCSBT Management Procedure

2. Non-Technical Summary of the Cape Town Procedure

The Cape Town Procedure (CTP) has 3 components based on the data inputs from the following monitoring programs: Gene-tagging, CPUE and Close-Kin Mark Recapture (CKMR). Gene-Tagging provides an index of recruitment (abundance of 2 year-olds), CPUE provides an index of abundance for the age-classes exploited by the Japanese longline fishery and CKMR provides two indices of spawning biomass (one from Parent-Offspring-Pairs and one from Half-Sibling-Pairs) as well as information on the total mortality on the spawning component of the population.

For the gene-tagging component, the input is the most recent 5-year weighted average of the abundance estimates, where the weighting is proportional to the number of matches in each year. For the 2020 TAC decision only 3 estimates are available (2016-2018). The TAC change variable for the gene-tagging component will be less than one if the recent average is below the fixed lower bound, or will be greater than one if the recent average is above the fixed upper bound. If the recent average is between the upper and lower bounds, then the TAC multiplier is equal to one. Missing data points have a weight of 0 in the calculation of the weighted average.

For the CPUE component, the TAC change variable is also calculated based on fixed upper and lower bounds. It uses the average of the 4 most recent years from the specified standardised CPUE time-series. If this average value is between the bounds, the contribution to the overall TAC change is zero. If this average is below the lower bound, then the TAC change variable is negative, and if above the upper bound, the TAC change variable is positive. As the current rebuilding target of 30% TRO0 is approached (approximated in the Close-Kin component), the MP is designed to become less reactive, i.e. the recommended TAC changes will be smaller, to minimise future fluctuations in TAC while maintaining the spawning stock close to the target level.

The Close-Kin Mark-Recapture (CKMR) Parent-Offspring-Pair and Half-Sibling-Pair data are used in a simple population dynamics model of abundance and total mortality of adults, which provides a trend in adult abundance. This trend is compared to a threshold growth rate required to rebuild the adult abundance to the target in 2035. If the trend in adult abundance is above the threshold growth rate then the TAC change variable will be positive, and if the trend is lower than the threshold growth rate, the TAC change variable will be negative. The threshold growth rate is not fixed in the CTP but is calculated in the population model. This TAC change variable also becomes less reactive as the target level of rebuilding of the stock is approached.

These three components are combined to give a single multiplier of the current TAC (see technical section below). The final TAC recommendation is constrained to be within a maximum change of 3000t and minimum change of 100t.