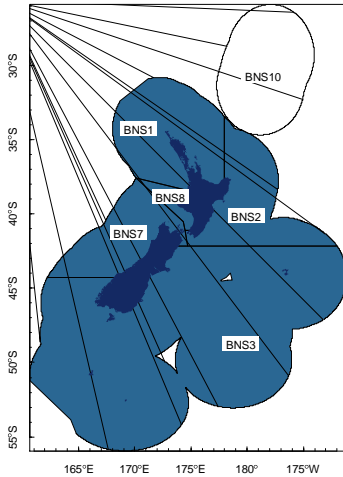


BLUENOSE—BNS 1, 2, 3, 7, 8

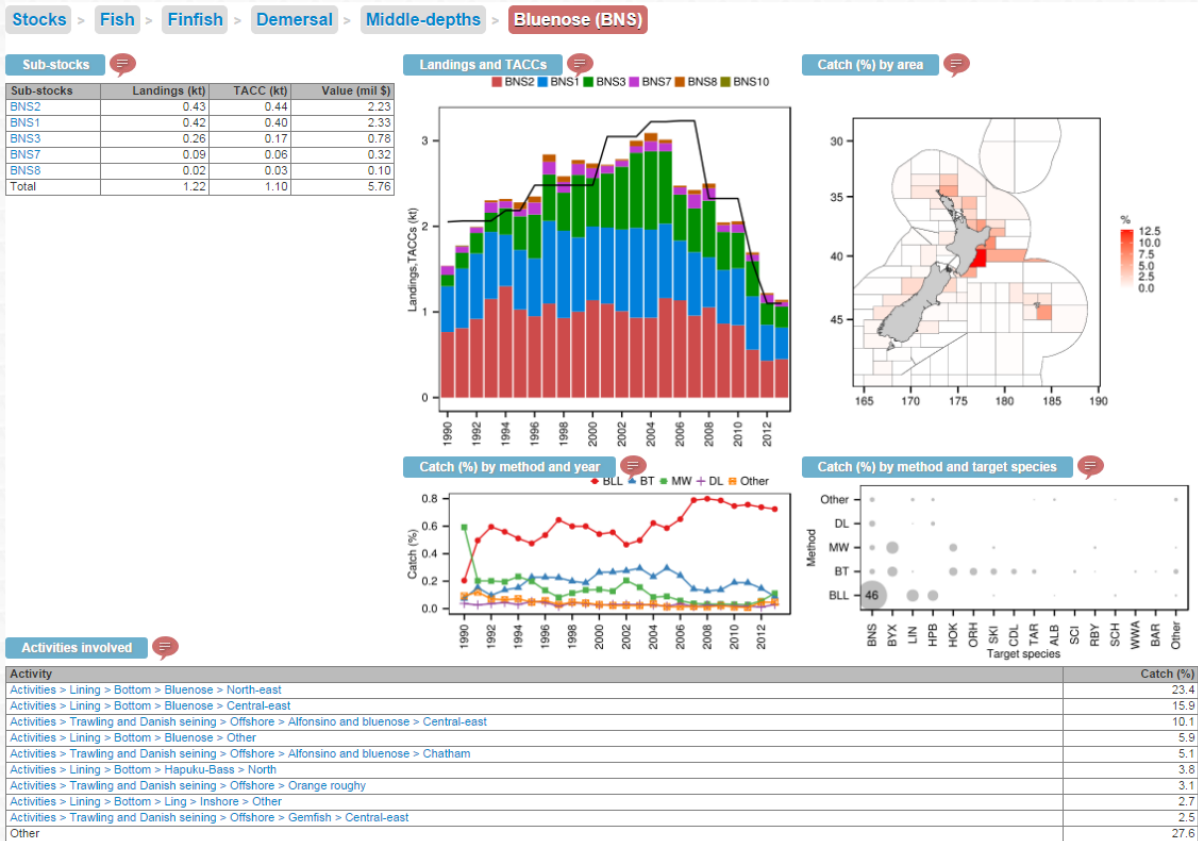
FISHERY MANAGEMENT AND MONITORING PLAN

LAST UPDATED AUGUST 2015

FISHERY OVERVIEW

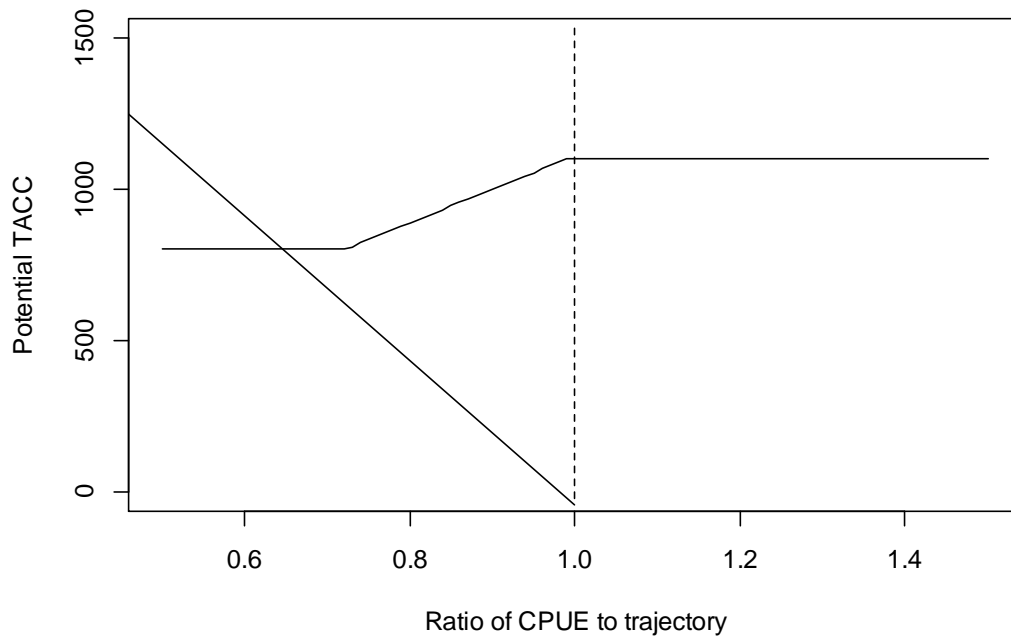


- BNS is managed as six QMS stocks, which are assessed as a single biological stock. For management purposes this biological stock is considered to include BNS 1, 2, 3, 7 and 8.
- BNS are taken primarily in target bottom longline fisheries. They are also commonly taken in LIN and HPB line fisheries, and in the BYX (BNS 2, 3) and HOK (BNS 7) trawl fisheries.



MANAGEMENT PROCEDURE

- The overall TACC for BNS 1, 2, 3, 7, and 8 is set using a Trajectory Status Adjustment Restricted (TSAR) management procedure (see Appendix) which defines a rebuild trajectory for CPUE, as a proxy for abundance. The rebuild trajectory was defined to be consistent with rebuild to 35% B0 within 30 years, or better.
- The value of an annual, smoothed, CPUE index is assessed annually in relation to the rebuild trajectory, and the overall TACC varied (if required) in order to maintain the required rebuild.
- The overall potential TACC is set as illustrated below:



- The actual overall TACC is not varied if the potential TACC is within 5% of the current TACC, and changes are limited to a maximum of 50% of the current TACC.
- The TACCs for BNS 1, 2, 3, 7 and 8 are set by maintaining proportionality within the overall TACC.

ANNUAL MANAGEMENT CYCLE

- 15 Oct – Catch-effort data submitted to FishServe for fishing year ending 30 Sept
- 30 Mar – Updated MP index (rapid CPUE update) and diagnostics calculated, and proposed TACC for next fishing year calculated
- 15 Apr – 30 Jun – consultation on any proposed TACC change
- 1 Sep – Minister’s decision announced
- 1 Oct – updated TACC gazetted

LATEST ANALYSES AND INFORMATION

- In 2013/14 the CPUE index, λ_t , was 0.726.
- The TACC for 2015/16 is 1,110 t.

FOR FURTHER INFORMATION

- 2014: Assessment and management procedure evaluation (**Bentley and Middleton, 2015**)

- 2014: Management procedure implementation report
- 2014: MPI stock assessment plenary

FUTURE MONITORING AND RESEARCH

- Annually: fishery overview updated in January
- Annually until 2018/19: management procedure implementation
- Annually 2014/15 to 2017/18: catch sampling of BLL fisheries.
- Feb – May 2016: examine patterns in catch @ length in 2014/15, 2015/16. Consider value of ageing for upcoming management procedure evaluation.
- Feb - May 2019: updated management procedure evaluation, for implementation from 2019/20.

OTHER MANAGEMENT INFORMATION NEEDS

- When updating the management procedure for 2015/16 onwards, the level of the deemed value should be reviewed.
- Updated recreational harvest estimates, including charter vessels.

APPENDIX – DETAILED MANAGEMENT PROCEDURE SPECIFICATION

- The required rebuild trajectory (\bar{i}_t) is defined by three control parameters, *Initial (I)*, *Slope (S)* and *Target (T)*, with $\bar{i}_t = \min(I + St, T)$. For BNS, $I = 0.6$, $S = 0.02$, $T = 1$, and t is years since 2013/14.
- The TSAR management procedure is based on a smoothed CPUE index \hat{i}_t , calculated as $\hat{i}_t = i_t R + \hat{i}_{t-1}(1 - R)$, with responsiveness parameter $R = 0.675$.
- Current status relative to the trajectory is the ratio of the smoothed CPUE to the trajectory: $s_t = \hat{i}_t / \bar{i}_t$
- The potential TACC for the following year is calculated as $1110 \times s_t$, subject to a minimum TACC of 800 t, and a maximum of 1100 t. If the potential TACC differs from the current TACC by less than 5% of the current TACC, no change is made. Changes are limited to a maximum of 50% of the current TACC.