SSC Report to NEFMC

Newport, RI
November 18, 2014

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Groundfish TORs

Pollock, GB winter flounder, and GOM winter flounder

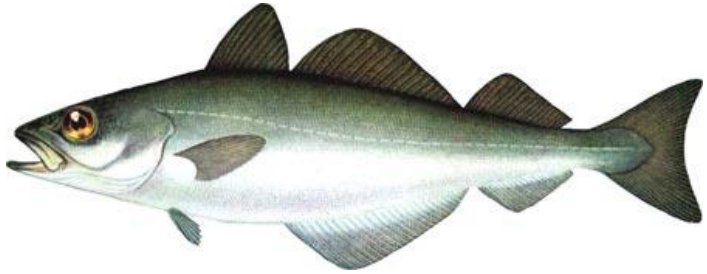
- Review the 2014 operational assessments for pollock, GB winter flounder, and GOM winter flounder and the work of the Groundfish Plan Development Team (PDT) and provide the OFL and ABC for each year for fishing years 2015-2017 that will prevent overfishing, provide for rebuilding and is consistent with the default control rule.

Groundfish TORs (con't)

GOM cod

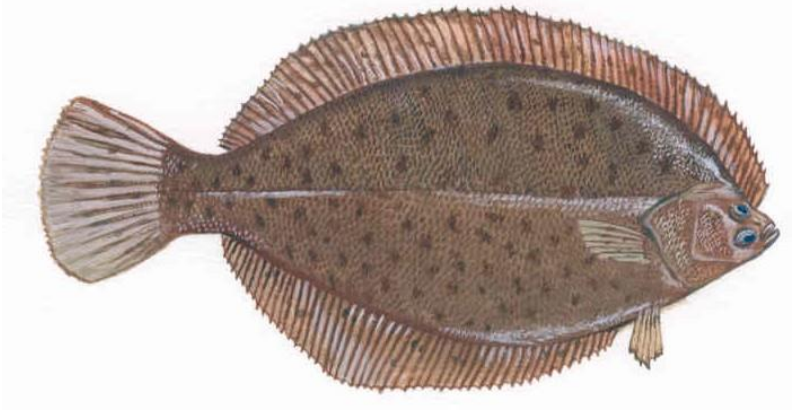
- Review information provided through the PDT that estimates the amount of incidental catch of GOM cod that may be caught if the stock is not targeted. Determine whether the estimates provide information that can help inform ABC recommendations.
- Provide advice on appropriate spawning stock biomass reference points (i.e, SSBMSY), Frebuild and projections of catches and SSBs, that is consistent with the 2014 stock assessment update for the Mramp model with M=0.4 continuing indefinitely.
- Review the 2014 update assessment of GOM cod, previous SSC recommendation, and additional information provided for this meeting. Determine whether the SSC's provisional ABC of 200 mt for FY 2015-2017 should be revised in light of the additional information considered. If so, provide a revised ABC for each year for fishing years 2015-2017 that will prevent overfishing, provide for rebuilding and is consistent with the default control rule.

Pollock



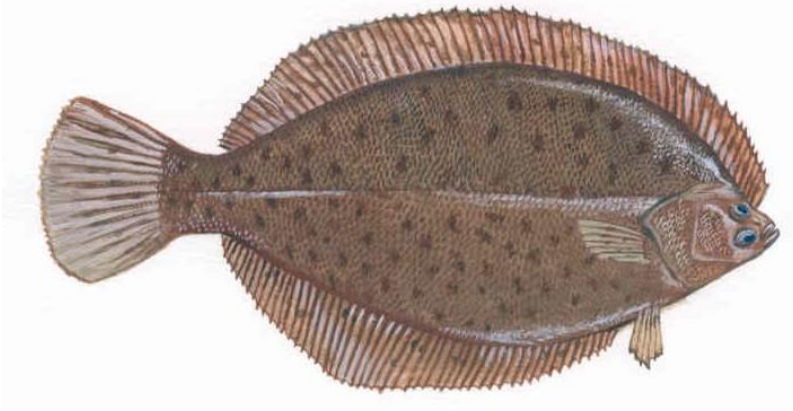
- $B>B_{MSY}$ and $F<F_{MSY}$, so stock is not overfished and overfishing is not occurring.
- ABC: $75\%F_{MSY}$ applied to projected biomass for 2015, and then hold constant for 2016 & 2017 due to uncertainties in projections → 16,600mt for 2015-2017.
- OFL: F_{MSY} applied to projected biomass in each year → 21,538mt in 2015, 21,864mt in 2016, and 24,598mt in 2017.
- Values for 2016 & 2017 might change due to operational assessments scheduled in 2015.
- Important issues in need of attention in next benchmark include nature of selectivity function, data weighting, and causes of the retrospective pattern.

GB Winter Flounder



- B>50% B_{MSY} so not overfished, but B<B_{MSY} so continued rebuilding needed.
- F<F_{MSY}, so overfishing not occurring.
- ABC: $F_{rebuild}$ applied to projected biomass → 2,124mt in 2015, 2,221mt in 2016, and 2,294mt in 2017.
- OFL: F_{MSY} applied to projected biomass → 3,242mt in 2015, 3,383mt in 2016, and 3,511mt in 2017.
- Values for 2016 & 2017 might change due to operational assessments scheduled in 2015.

GOM Winter Flounder



- $F<F_{MSY}$, so overfishing is not occurring.
- Biomass reference points are not available, so overfished status remains unknown.
- ABC: $75\%F_{MSY}$ applied to most recent estimate of exploitable biomass: 510mt for 2015-2017.
- OFL: F_{MSY} applied to most recent estimate of exploitable biomass: 688mt for 2015-2017.
- Values for 2016 & 2017 might change due to operational assessments scheduled in 2015.

GOM Cod TOR1: Incidental catch info.

- Control rule includes provision for basing ABC on incidental bycatch, with a reduction, when projections suggest rebuilding is not possible within 10 years.
  - This is the case if M has ramped to 0.4 and remains at that level, and might be the case in other scenarios as well.
- Grateful to PDT and industry organizations for responding to a difficult request with so little time.
- Information provided was useful.
- Point estimate not possible, but info helped scale the problem → approx. 500-600mt.
- Sources of fishing mortality not included, notably bycatch by other commercial gears.

GOM Cod TOR2: Alternative reference pts.

- Has M has increased, will it remain higher, and therefore should reference points be re-estimated?
- Focused less on numerical values, and more on plausibility of the scenario and its implications.
- SARC55 concluded that cod life history suggests longer term M will be <0.4, and might not have changed from 0.2
- Others feel that changes in the ecosystem have created a fundamentally different state → Regime shift?
  - Need to formally resolve this question.

GOM Cod TOR2: Alternative reference pts.

- If change in M has occurred and is not transient, need to revise rebuilding expectations?
- Increased M without adaptation of other traits (growth, reproduction, etc.) represents a stressed population, which has important implications.
- Basis for reference points might need to change, e.g., higher SPR.
- Consensus that stock is in poor shape under any scenario, fishing mortality should be reduced, and rebuilding is needed.

GOM Cod TOR3: ABC advice.

- OFL remains 514mt.
- Recommend ABC based on 75% of OFL for 2015-2017, or 386mt.
- Values for 2016 & 2017 might change due to operational assessments scheduled in 2015.

GOM Cod TOR3: ABC advice.

- ABC is below the OFL to account for uncertainty in the OFL.
- ABC is substantially reduced (by 75%) from the status quo ABC (1,550mt) as required given the poor state of the stock.
- ABC is below the average of the alternatives based upon 75%F_{MSY} provided by the PDT (405mt for 2015), but above values based on $F_{rebuild}$ (180 mt and 207 mt for 2015) from the projections which suggest rebuilding in ten years is possible.
- The control rule includes a provision for the ABC to be set based on an estimate of incidental non-target bycatch, with a reduction, when projections suggest that rebuilding is not possible within 10 years. Strives to balance different components of the control rule invoked by competing scenarios.

GOM Cod TOR3: ABC advice.

- Prospects for rebuilding Gulf of Maine cod in a 10 year time frame are limited at best:
  - Projections assuming M=0.4 (but using M=0.2 reference points) suggest that rebuilding is impossible.
  - Under M=0.2, rebuilding may be possible, but as the PDT's analysis highlights, this would require favorable environmental conditions and sustained growth of 37-40% per year.
  - Low population size raises the possibility of depensatory processes that may cause projections to be overly optimistic.
- SSB still projected to increase, so an ABC of 386m would not compromise the ability of the stock to rebuild.
- The ABC and OFL values are held constant for years 2015-2017 in recognition of the difficulties making projections at low population sizes and the update assessment scheduled for 2015.

Summary of ABCs and OFLs

Stock	2015		2016[1]		2017[1]	
	ABC	OFL	ABC	OFL	ABC	OFL
Pollock	16,600	21,538	16,600	21,864	16,600	24,598
GB winter flounder	2,124	3,242	2,221	3,383	2,294	3,511
GOM winter flounder	510	688	510	688	510	688
GOM cod	386	514	386	514	386	514

[1]ABCs and OFLs for 2016 and 2017 are expected to be adjusted following the operational assessment planned in 2015.

Questions?