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Re: Comments on Canadian 4VWX Purse Seine Herring PCDR

Dear Assessment Team,

Thank you for your detailed and thorough assessment of the Canadian 4VWX Purse Seine Herring Fishery. The Ecology Action Centre participates in the advisory committee for this fishery and we appreciate the work the fishery has done on management over the last number of years. However, in our assessment, it is still premature to certify this stock under the MSC program without lowering the standard of acceptance, and therefore, the credibility of the certification. Upon completion of what is now a condition of assessment – the finalizing of a TRP and assessment of mortality – as well as stronger evidence of stock rebuilding not only in the overall SSB, but in the individual spawning component SSBs as required in the Rebuilding objectives - the stock would more clearly meet the MSC standards set out under P1. Until that time, it would be premature for this fishery to be given a certification by MSC until all the basic aspects of good fisheries management have been put in place for this stock.

Please find our detailed comments below.

P1 – Stock Status

Our main concern for this certification is the optimistic assessment of the status of this stock. The PCDR assesses this stock as depleted, but says there is acceptable evidence that rebuilding occurring. The evidence is patchy and is from a time period so recent that it is uncertain yet whether this trend will continue over the next generation.

1.1.1

The LRP for this stock has been set at the 2005-2010 average acoustic survey biomass and described as 'precautious'. However, when looking at the time series available, this is a case of 'shifting baselines'. The stock has declined quite dramatically when looking at long term records and the newer acoustic survey average has been consistently below the long term average now for a decade, despite management efforts to limit the decline.

Throughout the report there is inconsistent treatment of the two main fishing grounds – Scots Bay and German Bank. At times they are analyzed separately while in other scoring guideposts, such as 1.1.1a, their data is aggregated, thus, as the report itself notes, "disguising the fact" that German Bank continues to decline and has not shown signs of rebuilding.

This is significant to consider and should be addressed in the scoring directly since the stock is at the low end of the cautious zone already and all precaution possible should be taken when assessing it.

The rationale for scoring 1.1.1a is 1) the LRP is precautionary, 2) the stock has recovered from below it since 2001, and 3) the small but continued increase in SSB in recent years. We argue this rationale for passing 60 is not justified for the following reasons:

1. As noted above, the LRP is taken from a time period that masks the historic declines in the herring stocks. There is evidence from other forage fish stocks globally, that recovery to historic levels is possible for these species, so the LRP is set artificially low in this case.
2. The aggregated 3 year moving average has been below the LRP as recently as 2010. While fluctuations in the SSB above and below the LRP could be interpreted as 'recovering' four times since 2001, it could equally be interpreted as showing a stock that has not sufficiently stabilized or demonstrated a clear upward trend for more than a decade. The 'recovery' referred to in the justification is variability from year to year and would not be considered evidence of recovery over a generational timeframe (only 3-5 years for this species).
3. The "small but continued increase in SSB" is only true of the combined data for Scots Bay and German Bank because Scots Bay has shown an increase in the last three years until 2015.

German Bank, however, has declined slowly but steadily since 2011, at which point it was already below long-term (1999-2014) average and short-term 2005-2010 average. The latest stock assessment was released at the advisory committee meeting on July 7, 2016 and there is a considerable decline in the German Bank biomass from 233 000t to 176 000t – a historical low. This continued decline is concerning.

German Bank accounts for significantly more of the overall biomass than Scots Bay (exceeding Scots Bay biomass by 3 times in some years) and a decreasing trend in this location is very significant and has an impact on the overall trend. The overall SSB increase used to justify the scoring of the stock status in the assessment is only due to a substantial relative increase after 2010 to 2012 and again in 2014 in the localized area of Scots Bay after it was at critically low levels for years.

Indeed the latest stock assessment numbers released at the advisory committee meeting on July 7, 2016 now show a slight decline in the combined SSB from 464 000t in 2014 (revised from 469 000t in previous assessment report) to 462 000t in 2015. While slight, this decline does not support the 'continued increase' rationale given in this guidepost. It is not clear that the increasing trend will hold.

An industry quota was imposed in the Scots Bay area that, when reached, moves fishing effort to German Bank and there is no area limit here despite continued decline. This decline may be the result of displaced effort from Scots Bay.

It is premature to score this stock as likely to be above the point where recruitment would be impaired due to a combination of factors: the overall SSB has fallen below the LRP in 5 years out of 10 years between 2004 and 2014; the increase detected in the overall SSB average is not consistent over the last generation, with one year falling below LRP; the most recent stock assessment highlights this and now shows a slight decline between 2014 (the last year in the PCDR) and 2015 in the combined

Scots Bay and German Bank SSB; German Bank SSB, the larger portion of the overall SSB, has declined for the last four years consistently with a significant drop between 2014 and the new data for 2015.

The stock should be monitored and tightly managed until a generational trend of recovery is detectable and only then be considered 'likely' to be above the point where recruitment would be impaired. It should not score 60 for 1.1.1a at this time.

1.1.2 a

The fishery cannot pass the 60 score "generic limit **and** target reference points are based on justifiable and reasonable practice appropriate for the species category". As noted in the assessment the fishery does not yet have a Target Reference Point nor is mortality (F) known. The score calls for both a limit **and** a target reference point.

The IFMP does state that the fishery should strive to keep mortality below F0.1, however there is no assessment of F so this cannot be considered an "implied" reference point that can be measured at this time.

The majority of other MSC certified herring and forage fish species that we reviewed had estimates of F and have URP or TRPs. These should be in place for this fishery before it passes the 60 score. Establishing a TRP and F should not be a condition to be achieved after certification, but rather they are the basic biological reference points that should already be in place both to fulfill Canada's Precautionary Approach and to fulfill the MSC requirements. Therefore, it is again premature to certify this fishery without these in place.

1.1.2 b

As we argued above, the LRP is selected from a relatively stable period between 2005-2010. However in the longer view, this time frame also reflects historically low SSB and is an example 'shifting baselines', a tendency that is quite concerning in Canadian fisheries assessments.

1.1.3

Given the above information on the stock decline, especially in German Bank, it is difficult to argue that there is evidence of stock rebuilding yet or that the strategies in place since 2005 have a reasonable expectation of success at this time.

1.1.3a

The PCDR notes that without a TRP, assessment of the rebuilding plan and its success cannot yet be determined. That is a significant detail and we argue that the TRP should be in place before certification, especially given the depleted state of the stock and the necessity for a strong rebuilding plan.

The rationale given for the fishery meeting the 60 scoring issue in 1.1.3a is that "the stock is currently slowly rebuilding so the strategies have a reasonable expectation of success". As we have argued above, the evidence for rebuilding at this time is precarious and with the most recent assessment (2016) showing a decline in both the overall SSB and the German Bank SSB there is currently not a reasonable expectation of success.

The SSB numbers for German Bank are significant in terms of assessing the rebuilding strategies. If we look at the objectives in the Rebuilding Plan there is a concern noted in the IFMP that these objectives are not being met. An interim short term objective is rebuilding to the 2001-2004 SSB level. If the larger stock area of German Bank is compared to this objective, we see that as of 2015 the SSB is

at about half of that target, well below and without a 'statistically significant positive trend' towards the target (another objective of the Rebuilding Plan).

Another key objective for the Rebuilding Plan is maintaining spatial and temporal objectives. This objective is related to the following indicator from the IFMP:

"There are four main documented spawning grounds (Scots Bay, German Bank, Trinity Ledge and Seal Island). Each of the spawning components should be evaluated individually and comprehensively as one unit.

This was chosen as an indicator because when the stock is in a low abundance situation, spatial distribution for herring can be contracted to the spawning and feeding areas (Ulltang, 1980; Overholtz, 2002; Melvin and Stephenson, 2007; Dickey-Collas et al 2010)."

The continuing decline in German Bank needs to be evaluated individually and the impact on the stock may be significant when also taking into account the declines in the broader herring stocks throughout the Nova Scotia and New Brunswick waters. A contraction of the biomass could be masking a continuing broader issue with the species.

While Scots Bay and the overall SSB are close to or over that target in recent years, it is hard to argue that they should cancel out the concern on German Bank.

We do not agree with the justification for scoring in 1.1.3a

1.1.3 c

There is annual monitoring of the fishery rebuilding through the advisory committee, however there is not sufficient evidence that the management strategy is responsive in addressing the fact that objectives are not being met.

The TAC is the main management strategy and it has not changed since 2011. Only a slight gain in the overall SSB has been achieved with this TAC. In Scots Bay, an industry imposed limit was implemented and may be responsible for the increases in SSB observed there. There have been no similar management measures put in place for German Bank, despite continuing decline. As noted above, the IFMP requires each spawning component to be evaluated individually. The IFMP goes on to state that "following the guidance from the PA Policy, management actions must encourage stock growth in in the short term, and the risk tolerance for decline is low." It was last updated in 2013 when there had been two years of decline in 2011 and 2012 in German Bank, the IFMP states that "if further decline is observed, management action compliant with the PA Policy will be taken. Decline would be a declining trend in biomass indicators (at least two consecutive years) and/or deterioration in secondary indicators."

The action compliant with the PA Policy is stated to be a reduction in TAC. German Bank has declined for a further four years 288,400t in 2012, 264,527t in 2013, 233,034t in 2014, and 176 000t in 2015. No management changes have been put in place to address this.

We disagree with the scoring in 1.1.3c since though monitoring happens there is not much evidence to support the rationale that management is responsive to changes needed for ensuring the rebuilding plan is on track. It should not meet 60.

The rationale for meeting the 80 score is the strong evidence of rebuilding in Scots Bay. Again, we do not think Scots Bay slight gains can cancel out the continued decline in German Bank the undermining of the certainty for overall rebuilding that comes with these declines.

1.1.2a

We do not agree that the fishery meets the score of 80. For the reasons stated above in our comments on 1.1.3c, while there are predetermined rules in place, the management strategy has not been responsive to the continued declining state of the stock in German Bank and has not implemented those rules.

1.2.2b

There is significant uncertainty around the amount of herring being removed from the population by unregulated bait fisheries. This bait fishing could be significant in volume and is not incorporated into the stock assessment for the fishery. Thus, the fishery does not meet the 100 scoring for this guidepost as not all relevant information is collected to support the harvest strategy.

1.2.3a and c

The total fishery removals are not known for this stock as there is considerable unregulated bait fishing also occurring and estimates are not collected or incorporated into the assessment. The fishery cannot score 100 in a or 80 c here.

2.1.1

We argue that Atlantic Mackerel should be considered a main retained species for this fishery. While the fishery does not catch the 5% or 2% of catch weight of the species to meet 'main' retained in the guidance, there is also allowance in the guidance for species to be included as 'main' retained if "a stock might be in such a poor state" which the latest science advice clearly demonstrates. We also argue below that the lack of measures in place for mackerel in the herring fishery and even the small percentage of mackerel catch compared to the overall catch could be having a significant impact on the recovery of mackerel.

The PCDR notes the critical status of Atlantic Mackerel. According to the DFO latest stock assessment (2014), mackerel are in the "critical zone" - overfishing occurring AND overfished. 2015 saw the lowest landings of Atlantic mackerel in recorded history, with fleets able to catch less than half the TAC (2015 landings were about 3900t). In 2009, the TAC for the directed mackerel was 75,000 tonnes, and has since been reduced several times to a current TAC of only 8,000t - in spite of these drastic reductions, recent stock assessments have not shown any improvement in the stock's health. The most recent DFO stock assessments have recommended that landings of mackerel should not exceed 800t – this means that the current TAC is set at ten times what science has recommended.

While the landings of mackerel in this fishery are relatively small compared to overall catch weight even the small amount being caught may have significant impacts on this critical stock. In fact, the reported catch of mackerel has increased significantly in the herring fishery from 8t in 2012 to 16t in 2013 and 48t in 2014. As noted, in the PCDR the reporting on mackerel catch is incomplete in this fishery without observer data on retained species and so there could be significantly more being caught as bycatch than reported by the herring fleet at the mackerel assessment meeting.

The catch of 48t of 2014 is almost 16% of the recommended 800t limit for mackerel catch in all of Atlantic Canada. If the herring fleet was to keep its allowed 10% of overall catch as mackerel they could be landing 5000t – 62.5% of the Atlantic Mackerel TAC, and more than six times the recommended TAC.

Of key concern is that the fact that herring purse seine fleet is allowed to direct for mackerel at the discretion of DFO. DFO expressed interest in removing this allowance to direct from the license conditions at the most recent SF Herring Advisory Committee meeting, however there was resistance from the fleet to this.

At the most recent mackerel science review, neither DFO managers or science nor industry knew if the mackerel catch of the herring fleet was incorporated into the mackerel assessment or counted towards the Atlantic Canadian mackerel TAC. This is concerning in a stock that is at such a critical level.

It is clear that the herring fleet could be impacting the effectiveness of the rebuilding plan for Atlantic Mackerel. Currently there are no measures in place that ensure they are not hindering the recovery of the stock.

Should the certification go forward we urge you to score mackerel as a main retained species and ensure there are conditions for improved management of this species in the herring fishery. This would be consistent with other MSC certifications in the region, especially the lobster LFAs, some of which individually use a similar amount of mackerel for bait as the herring fishery catches, but have conditions they must meet for the species.

Conclusion

We hope that in a few more years, another generation for herring, this fishery will be comfortably meeting the requirements for receiving MSC certification. The fishery states in its current Client Action Plan that it will have a TRP within this time period. Until upper stock reference points and mortality estimates are established, it is premature for the fishery to pass the full assessment. Much of the current scoring justification relies on the "small but consistent increase" seen in recent years in the overall SSB, however the justification is on precarious grounds. This trend is far from significant currently and it is very uncertain if sustained rebuilding is happening. Until both main individual spawning areas are clearly sustaining increasing SSB averages with a strong overall SSB average no longer dipping under the LRP, we think certification is premature. To push this fishery through assessment would undermine the credibility of the standard.

We look forward to hearing your response to our comments.

Warm Regards,

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