



Ecology Action Centre



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Attn: Rob Blyth-Skyrme
Intertek Fisheries Certification
rob@ichthysmarine.com

July 13th, 2015

Dear Dr. Blyth-Skyrme,

Re: Comments on MSC Certification of the Canadian 3Ps Cod Fishery

The Ecology Action Centre is one of Atlantic Canada's largest and oldest conservation organization. Our marine program works at the local, regional, national and international levels to secure marine conservation outcomes. We have a long history of engaging on MSC certification, as well as with the Atlantic Canadian groundfish fishery. We are currently members of the Scotia-Fundy Groundfish Advisory Committee and we advocate for population rebuilding and stewardship of marine fish populations that are in decline. We are also founding members of SeaChoice, Canada's Sustainable Seafood program where we work with retail partners to improve their seafood purchasing practices. We are submitting our comments as the Ecology Action Centre as well as on behalf of SeaChoice.

General Comments

We have several concerns about the certification of 3Ps cod as a sustainable fishery. We understand that significant work has been done primarily in partnership with WWF Canada on a Fisheries Improvement Project (FIP) that has led to the pre-assessment and subsequent assessment for Marine Stewardship Certification. We are pleased that the FIP resulted in a Rebuilding Strategy for 3PS cod, as this is the first instance of a rebuilding strategy under the Sustainable Fisheries Framework. Additionally, we support the improvements made to the cod tagging program to improve science on assessing exploitation rates.

While we believe some rebuilding of the stock may have occurred, we are concerned that the increase noted in the 2013 spring RV survey and resulting assessment appears to be the result of a small number of large tows that may have skewed the data. The similarities between the 2012 and 2014 assessments indicate that 2013 is an anomaly, with a small increase rather than the larger increase depicted in 2013. While the active fishery over the last 2-3 years has only caught 30% of the TAC, thus limiting fishing mortality on the population, we remain concerned about this population, specifically regarding the following, which we feel should be in place for certification, and at the very least should be the basis of conditions for improvement:

- incomplete reference points
- significant sources of uncertainty in the data associated with this population
- status of the 3Ps population as "endangered" as assessed by COSEWIC and current consideration under the Canadian Species at Risk Act (SARA) for endangered species listing. We understand that



there are conflicting opinions on the specific designated unit (DUs), particularly between the 3Pn4RS portion of the stock and the 3Ps and we strongly suggest that this be resolved prior to certification or as part of a condition to maintain certification.

Generally, we feel that the scoring as indicated in the draft assessment report is too high and as a result it will be difficult to set necessary conditions for this population. We have included specific rationale below as well as recommendations for scoring as well as some recommendations for conditions of certification that we believe will improve this fishery in the long term and contribute to meaningful conservation measures in the short term.

Specific Comments

Principle 1:

PI 1.1.1 Stock Status. This PI was scored as 70 for all fishery components. It is our recommendation that the score for this fishery should be below 60.

The 3Ps Cod stock is a component of a larger population (Laurentian North) that has been assessed as Endangered by The Committee on the Status of Endangered Wildlife in Canada (COSEWIC). COSEWIC is an independent scientific committee created under the Canadian *Species at Risk Act* (SARA) to advise the Canadian Government on the conservation status of wildlife.

COSEWIC reports to the Minister of Environment and its recommendations are considered by relevant Ministries with jurisdiction over the species, provinces and territories, and wildlife management boards before any listing decisions under SARA are made. COSEWIC uses status criteria based on those adopted by the International Union on the Conservation of Nature (IUCN). COSEWIC reports are publically available on the SARA Public Registry (<http://www.sararegistry.gc.ca>). The Department of Fisheries and Oceans (DFO) has jurisdiction over marine fish fisheries under the Canadian *Fisheries Act* and plays an important role in listing decisions. COSEWIC consists of a number of Species Specialist Subcommittees (SSC) and the Marine Fishes SSC is responsible for preparing status reports on marine fish species. The SSC membership include several DFO stock assessment experts, either currently employed or retired, as well as academics with expertise in fish population dynamics, population genetics, and conservation biology. Atlantic Cod have been assessed three times by COSEWIC, in 1996, 2006, and 2010. It has never been listed under SARA. Rationale for not listing is published in the Canada Gazette. In the case of Atlantic Cod, and indeed all other marine fishes that have not been listed, the reasons for not listing are based in social and economic considerations. While DFO and any other jurisdiction can return a COSEWIC assessment for reconsideration for scientific reasons, this has never happened for Atlantic Cod. In other words, the Canadian Government has not objected to the scientific basis for COSEWIC's status recommendations. COSEWIC status reports should be considered when certifying the sustainability of commercial fisheries.

The PCRD explicitly excludes any COSEWIC assessment that has not resulted in a listing under SARA. As a result, it does not make the best use of available scientific information and it does not deal with important information on the conservation status of a large number of marine fish species that are involved in this fishery. In addition to Atlantic Cod, the following species have been assessed by COSEWIC to be Threatened or Endangered; American Plaice, Redfish (*Sebastes mentella* and *Sebastes faciatius*),

White Hake, Smooth Skate, Thorny Skate, Winter Skate, and Cusk (this is discussed further under Principle 2)

Under PI 1.1.1, the assessment teams concluded that there is a high probability that the current SSB is above a point where recruitment would be impaired. (This is based on estimated status versus a Limit Reference Point (LRP), which is in itself problematic (discussed further below). The conclusion that recruitment will not be impaired is not consistent with the catch history in Figure 3. Clearly the stock has declined considerably and current recruitment is nowhere near what supported the fishery in the 1960-1990 time period when annual catches fluctuating around approximately 40,000 t.

- PI 1.1.2 Limit and Target Reference Points are Appropriate for the Stock.

The cited reference points are based on the SURBA analysis, and are questionable.

The limit reference point (LRP) was set at the lowest SURBA estimated SSB in the time series from which there has been a sustained recovery. This minimum occurred in 1994 and the SSB estimates then increased for 10 years (1 generation¹). This was followed by a rapid decline to below the value in 1994. Thus, the recovery was not sustained and the basis for using this as an LRP is questionable.

The cited upper stock reference (USR) was estimated to be twice the LRP and PCDR states that the USR is an appropriate proxy for B_{MSY} . The estimated USR is 21,260 t (p. 80). The stock produced annual catches fluctuating around 40,000 t for 3 decades (1960-1990), almost twice what is being proposed as B_{MSY} . The USR is not consistent with the catch history and severely underestimates B_{MSY} .

There is no reference point for the removal (harvest) rate. The SURBA analysis does not use any commercial catch data and there are no estimates of the removal rate. The DFO Precautionary Approach framework (PA) requires a removal reference.

- PI 1.1.3 When the stock is depleted, there is evidence of stock rebuilding within a specified timeframe.

This PI was scored at the highest value (100). This score is not justifiable.

It is difficult assigning a score of over 60 for Scoring Issue (SI) (a) because the current rebuilding plan was only approved in 2014. There has not been sufficient time to judge whether rebuilding has been continuous or sustained. There is insufficient information presented to understand what the rebuilding timeframe of this plan is and it is certainly longer than 2016 as stated at the bottom of p. 83. Thus the available information cannot be used to score SI (b).

- PI 1.2.1 There is a robust and precautionary harvest strategy in place.

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Generation time is commonly determined as the age at 50% maturity + $1/M$, where M is the natural mortality rate. For 3Ps Cod, the age of maturity is 5 and $M = 0.2$ giving a generation time of 10 years.

This PI was scored 90 for all components of the fishery. This score is not justifiable.

As noted previously, the harvest strategy has no explicit mechanism to control the harvest rate of the fishery. A removal reference is integral to the DFO PA framework. Thus, it is difficult to understand how the harvest strategy is precautionary.

Simply stating that the harvest strategy is robust (initial part of first sentence in justification of SI (c)) is not sufficient. Nor is the uncited reference to “similar harvest strategies”. Furthermore, the concept of robustness is not developed in the justification.

Given that the harvest strategy was only approved in 2014 and that it has not been evaluated fully yet, a maximum score of 60 for this PI is more appropriate.

- PI 1.2.2 There are well defined and effective harvest control rules in place.

This PI is scored at 90 for all fishery components. This score is questioned.

In order to achieve a score of 80 for SI (a) the harvest strategy must ensure that the exploitation rate is reduced as the LRP is approached. As noted previously, the harvest strategy does not contain explicit consideration for the harvest rate. While the strategy will reduce the TAC as the SSB index declines, the recent TACs have not been taken and the TAC is not restricting exploitation. This SI cannot be scored above 60.

SI (b) deals with taking uncertainty into consideration while implementing the harvest strategy. The scoring justification describes how apparently contradictory data (commercial catch and catch at age) were eliminated from the assessment in order to reduce uncertainty. Any apparent reduction in uncertainty would be artificial since the data uncertainties are masked. The evidence provided does not support the assigned score, or any other score for that matter.

SI (c) asks for evidence that the available tools are used effectively to achieve a target exploitation rate. As noted previously, the harvest strategy does not include explicit targets for the exploitation rate. The evidence presented indicates that current catch monitoring tools are effective. This SI cannot receive a score higher than 60.

- PI 1.2.3 Relevant information is collected to support the harvest strategy

This PI was scored 90 for all fishery components.

A score of 100 was assigned to SI (a) indicating a very high level of information exists on a broad range of issues. Unfortunately, there are no examples of the types of information or references to scientific publications, which are essential to justify such a high score. A significant uncertainty for this stock is

why conventional catch/age² stock assessment models cannot be used. All the relevant data continue to be collected but the models cannot be fit. This seems like a crucial bit of research information and there does not appear to be a research program to address it. A maximum score of 80 would be possible here provided the appropriate references and project descriptions were included. As presented, it is very difficult to justify a score higher than 60.

- PI 1.2.4 There is an adequate assessment of stock status.

This PI was scored 90 for all components of the fishery. This score is not justifiable.

SI (a) was scored 100 meaning that the assessment is appropriate for the stock and for the harvest control rule and takes into account the major features relevant to the biology of the species and the nature of the fishery. This score is questioned.

The SURBA method used for the assessment was developed because conventional catch/age assessment methods did not work. The types of data necessary for such analyses exist including an age-structured index of population abundance from research vessel surveys, indices from sentinel fisheries, and estimates of catch-at-age from the commercial fishery. That the catch / age analysis was deemed unsatisfactory, indicates major contradictions among the various data and / or that certain strong assumptions were violated. These assumptions include:

- 3Ps cod is a unit stock with minimal exchange with adjacent stocks,
- natural mortality fixed over time and age
- catch reporting rate is constant
- research vessel survey and sentinel survey catchability is constant

The PCRD does not provide evidence that these various possibilities were considered and eliminated. Instead, the data used was limited to the RV vessel survey only. In so doing the real uncertainty associated with the assessment is underestimated. The results are not robust to violations of assumptions about stock structure and survey catchability.

Eliminating historical data on total catch, such as that presented in Figure 3 severely restricts the baseline of comparison of current vs. historical productivity. Indeed, the catch history indicates that current production and biomass is much less than what it was in the period 1950-1990.

The SURBA method does not take into account major features relevant to the biology of the species or the nature of the fishery. Therefore this SI cannot be scored 100.

SI (c) was scored at 80 because “The assessment takes uncertainty into account”. In fact, as noted above, the assessment has eliminated significant data from sentinel surveys and the commercial fishery resulting in an apparent reduction in uncertainty. Rather than taking uncertainty into account, the

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catch-age refers to methods such as VPA, ADAPT, Extended Survivors, statistical catch age

assessment has simply avoided uncertainty by eliminating data sources. The SI should be scored at the lower SG, “The assessment identifies major sources of uncertainty”.

SI (d) was not scored. How can this PI receive a score of 90 if one of the SIs was not met at all?

Principle 2:

- PI 2.3.1 The fishery meets national and international requirements for the protection of ETP species
- The fishery does not pose a risk of serious or irreversible harm to ETP species and does not hinder recovery of ETP species

Only species listed under SARA are discussed in this section. We understand that MSC does not consider COSEWIC status species, however, we strongly suggest that there be some consideration for the status of secondary species, particularly those where DFO has conducted a Recovery Potential Analysis (RPA). Marine fish species tend to not get listed under SARA because of socio-economic concerns should SARA listing result in no allowable harm. The eco-certification process should have some provision for addressing this situation, particularly given the value of fisheries that are MSC certified in Canada.

There are several other marine fish species that have been assessed as Threatened or Endangered by COSEWIC that should be included in this section. Thus there is additional information available on management measures to protect these depleted species that has not been presented in the PCRD. The list of species includes:

- American Plaice
- Redfish (*Sebastes mentella* and *Sebastes faciatius*),
- White Hake
- Smooth Skate
- Thorny Skate
- Winter Skate
- Cusk.

Specific Recommendations for Conditions

To improve the data available for this fishery, particularly if it is to be certified with annual surveillance audits, we recommend the following conditions:

1. Improve the assessment model, and ensure that all available data is used. This will require industry collaboration with DFO science. The goal of the improved assessment model should be to complete the reference points for this stock.
2. Improve data collection through mandatory logbooks for harvestors and ensure data is used in improved assessment model.
3. Minimum observer coverage of 15% should be achieved in this fishery. Observers could collect useful scientific information as part of the improved assessment model process as well as catch levels of COSEWIC status species.

4. Ensure a fishery closure is in place during spawning season to maximize the reproductive capacity of the 3Ps cod population. Examples exist in other jurisdictions where fishermen are assisting to locate spawning cod populations. See:
<http://www.npr.org/sections/thesalt/2015/06/15/413672058/scientists-fishing-fleet-team-up-to-save-cod-by-listening>

Certifying an Atlantic cod fishery is a significant milestone for this iconic species. We sincerely hope that our comments are considered as this certification sets a precedent for further certifications of this species.

Sincerely,



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