Pacific Marine Conservation Caucus's Response to MSC Performance Indicators in Canada's Pacific Halibut Fishery

Prepared by Scott Wallace
David Suzuki Foundation

On behalf of the Pacific Marine Conservation Caucus

Canadian Parks and Wilderness Society, BC Chapter
David Suzuki Foundation
Ecotrust Canada
Living Oceans Society
Watershed Watch Salmon Society
World Wildlife Fund

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EXECUTIVE SUMMARY

The Marine Conservation Caucus (MCC) has reviewed the status and management of the Pacific halibut fishery in Canadian waters by halibut (L)-licensed vessels. Several concerns have been identified by the MCC for consideration by the Marine Stewardship Council.

We respectfully request consideration of these concerns raised by the MCC and propose that our concerns be recognized in any MSC certification for halibut in Canadian waters.

Certification of Canada's Pacific halibut fishery requires full recognition of the integrated nature of this fishery.

Items to be addressed:

- Development of a plan to assess all species impacted by the halibut fishery (either through formal stock or standardized risk assessment as appropriate) (General requirement).

- Until a proper stock assessment and area-based TACs are derived for redbanded rockfish and skates, the trip limits must be set at an amount appropriate to access halibut but prevent directed fishing (Requirement 1).

- Develop management measures to reduce catches of species at risk, including bocaccio, soupfin shark (tope), bluntnose sixgill shark, and black-footed albatross. A clear demonstration that the halibut fishery is not impeding the recovery of *Species at Risk* (identified by COSEWIC and/or the IUCN). (Requirements 2,4,5).

- For all rockfish species, future fisheries management plans should impose a reduction in TAC consistent with PSARC-reviewed yield options (Requirement 3).

- Area-based TACs should be developed where appropriate for species presently managed on a coast-wide basis (e.g., rougheye and shortraker rockfish) (Requirement 3).

- Identify and create a system of Rockfish Conservation Areas (RCAs) for rougheye and shortraker rockfish similar to those implemented for inshore rockfish (Requirement 3).

- Undertake stock assessments for all species with outdated assessments (e.g. spiny dogfish) (Requirement 3).

- Implement a mandatory reporting program for species at risk (e.g., sharks and birds) (Requirement 4,5)

- Reduce the number of “unidentified sharks” (Requirement 4).

- Extend sponge-reef closures in eastern Queen Charlotte Sound and Hecate Strait to all groundfish fisheries, not only the bottom-trawl fishery (Requirement 6).

- Identify and protect sensitive habitats impacted by the halibut longlines through the *Coral and Sponge Conservation Strategy* (Requirement 6).

- Develop data-sharing protocols between industry, government, conservation organizations, and other interested stakeholders that allow for release of high-quality datasets while protecting the privacy of individual vessel owners (Requirement 7).

Pacific Marine Conservation Caucus

The MCC is an officially recognized body that provides the conservation community with a means to participate as a full-status “stakeholder” in formal consultations with Fisheries and Oceans Canada (DFO). Member organizations include: Canadian Parks and Wilderness Society – B.C. Chapter, David Suzuki Foundation, Ecotrust Canada, Living Oceans Society, Pacific Streamkeeper Federation, Raincoast Conservation Society, Stewardship Centre for B.C., Watershed Watch Salmon Society, and World Wildlife Fund Canada.

Introduction

In 2004, the Pacific Marine Conservation Caucus (MCC) made a submission to *Scientific Certification Systems* regarding the Marine Stewardship Council's (MSC) certification of the Pacific halibut fishery in Canadian waters. At that time the MCC did not feel that the halibut fishery met MSC's sustainability criteria under Principle 2.[1] Our foremost concern pertained to the management of rockfish species caught in association with the halibut fishery. Since that time, several reforms have largely addressed our previous concerns. Reforms include the completion of the *Rockfish Conservation Area* strategy in outside waters, implementation of a multispecies rockfish survey, and full catch accounting.

Despite the management and fishing practice reforms already made in the integrated groundfish fishery, including the halibut fishery, we feel that ongoing and additional concerns must be addressed. We believe that reforms required to address the concerns highlighted in this document are achievable within the existing management structure of the integrated groundfish fishery. Some of the required reforms pertain specifically to the halibut fishery (L-license) while others apply more broadly to the integrated groundfish fishery as a whole.

At a minimum, concerns raised by the MCC in this document should be considered in the assessment of MSC certification criteria and also identified as conditions within any MSC certification.[2] If these concerns are not addressed, the MCC will not be in a position to support certification of this fishery.

Performance Indicators under MSC Principle 1

As with our previous submission, the MCC has few concerns with the status and management of Pacific halibut. Our largest concern is the emerging issue of recreational-fishery accountability. The MCC has expressed concern to the Department of Fisheries and Oceans (DFO) regarding the lack of catch accounting and monitoring of recreational halibut fisheries. This concern should be reflected in the Performance Indicator 1.1.2.5: *Other fisheries in the area that are not subject to certification are identified and monitored.* There is strong evidence that the sport fishery has greatly exceeded its allocation in recent years.

Performance Indicators under MSC Principle 2

Multi-species fishery: How much retained halibut is there in the halibut fishery?

In 2004, the MCC used a variety of sources to answer this same question. In this submission we have restricted our analysis to the 2006 fisher logbook data, audited through the comprehensive electronic monitoring program. These data demonstrate that the total catch comprises the following retained species: halibut (24%), retained rockfish (15%), sablefish (10%), spiny dogfish (3.5%), arrowtooth flounder (1.3%), lingcod (1.1%), and skate (0.9%) (Table 1).[3] The remaining 44% of the catch comprises a variety

of discarded species, primarily sub-legal sized halibut (18%), spiny dogfish (13%), sablefish (6%), arrowtooth flounder (4%), and skate species (3%) (Table 1).

Discards and associated mortality of halibut, sablefish, lingcod, rockfish species, and spiny dogfish are accounted for and, in the case of legal-sized/marketable fish, the catch is reduced from individual quota holdings. For the remaining species (~7% of the total catch), landings are managed through trip limits and there are no restrictions on discards. Approximately half of the discarded non-quota species is arrowtooth flounder. In general, the halibut fishery captures over 100 different species and therefore the ecosystem impacts of this fishery are the single largest concern.

Commercial Species Without TACs

Redbanded Rockfish: By landed weight, redbanded rockfish is the fifth most important fish caught in the commercial halibut fishery and accounts for the greatest landings of any rockfish species (Table 1). This species has never received a formal stock assessment and consequently is not managed through a total allowable catch (TAC). Current indices are inadequate for tracking abundance. Additional surveys on rockfish species are now underway but will not provide meaningful trend data for at least a decade. At present time the only management consideration for redbanded rockfish is through an exceedingly large trip limit of 8,000 pounds for all non-TAC rockfish species irrespective of the landed weight of halibut on the trip. Non-published data made available to the MCC found that over 25% of the redbanded rockfish catch was landed by 10 vessels landing less than 10% of the halibut TAC. In other words, these vessels are likely engaging in direct targeting of this species.

Longnose, Big, and Sandpaper Skate: Skates make up a large component (~43%) of the non-quota discards. Generally, skates are considered intrinsically vulnerable to the impacts from fishing pressure. A recent assessment by COSEWIC found that these three species to be "not at risk".[4] The hook-and-line fishery presently has no TAC for skates and all three species are collectively managed through a trip limit of 6,000 pounds.[5]

Requirement 1: Until a proper stock assessment and area-based TACs are derived for redbanded rockfish and skates, the trip limit for redbanded rockfish and skates must be set at an amount appropriate to access halibut but prevent directed fishing.[6] Implement a season limit proportionate to halibut licence holdings for non-TAC rockfish and skates to ensure that skate and non-TAC rockfish catch is incidental in conducting the halibut fishery and directed fishing is not permitted on stocks that do not have a stock assessment completed, no TAC, and no management plan in place.

Bocaccio: In 2006 the status of this species was reconfirmed by COSEWIC as "threatened".[7,8] Fisher logbook data indicates that approximately 2100 bocaccio were caught by halibut vessels in 2006 (Table 1). There are no species-specific catch limits and no plans for catch reduction of bocaccio in the halibut fishery management plan.

Requirement 2: Using 2006 and 2007 fisher logbook data, analyze the spatial and temporal distribution of bocaccio catch to determine if and where management measures can be implemented to reduce catch. Additional options include full relinquishment of catch (as currently practiced by the groundfish trawl fleet) and/or vessel caps. Demonstrate that the halibut fishery is not impeding their recovery.

Arrowtooth Flounder: The total catch of arrowtooth flounder by the halibut fleet in 2006 was about 129,000 pieces or approximately 129 tonnes, assuming an average weight of one kg/fish.[9] This amount is about 0.9% of the coastwide TAC of 15,000 tonnes set for the groundfish trawl fishery. Capture and discarding of this species by the halibut fleet is not an immediate conservation concern from a stock abundance perspective.

Species with TACs

Rougheye Rockfish: The rougheye rockfish is one of the longest-lived animals on the planet (205 years maximum recorded age).[10] They have a life history vulnerable to local depletion but are presently managed by a coastwide TAC. The TAC for rougheye rockfish is roughly equally distributed between the hook-and-line (44%) and trawl fishery (56%), suggesting that much of its habitat is fishable.

Rougheye rockfish were recently recognized by COSEWIC as "special concern".[11] The last formal PSARC-reviewed yield option was in 1999 when the yield option was given as 520 to 950 tonnes.[12] For the 2000 fishing year, the quota was ~770 tonnes for all sectors. This was increased to the maximum yield option of 950 tonnes for the 2001 fishing year, followed by another increase to 1140 tonnes in 2006 to accommodate the various sectoral interests in the integrated fishery. In 2006, the halibut fleet, and all other groundfish sectors, captured well below their allocation as the actual bycatch requirements were far less than what was originally identified. The official TAC should be returned to the PSARC-reviewed yield window. A more recent DFO review of this species was conducted in 2005 and formed the basis of the COSEWIC status report.[13] The "special concern" ranking from COSEWIC was due to a truncation in age structure of the population, suggesting that the mortality rate (from all sources including natural and fishing) may have doubled.

Inshore Rockfish (yelloweye and quillback aggregate): The TACs for inshore rockfish were significantly reduced in 2002 based on science advice from DFO vetted through the PSARC process indicating that these species were being harvested at unsustainable rates. The halibut sector's TACs for yelloweye and quillback aggregation respectively were reduced from 174 tonnes and 36 tonnes in 2001 to 76 tonnes and 15 tonnes in 2003. These TACs were subsequently increased to 94 tonnes and 20 tonnes respectively to accommodate sectoral interests in the integrated fishery. In 2006, the halibut fleet, and all other groundfish sectors, captured well below their allocation of these species, as the actual bycatch requirements were far less than what was originally identified. The TACs should now be returned to the scientifically recommended level.

Shortraker Rockfish: This species was last assessed in 1999. There are no area-based TACs for shortraker rockfish. The halibut sector's TAC for shortraker rockfish was also slightly increased to accommodate the integration program (eight tonnes to nine tonnes).

Spiny Dogfish: Next to halibut, spiny dogfish is the most frequently captured species in the halibut fishery. Approximately 427,000 spiny dogfish were captured in the 2006 fishery, of which 78% were discarded. Spiny dogfish, although considered lightly exploited in Canadian waters, have not received a formal stock assessment since 1988. There is some indication based on the last survey point in the Hecate Strait survey data that the proportion of mature females has declined between 1984 in 2002.[14] It is unknown whether this trend has continued as the survey was redesigned in 2005.

Requirement 3: For all rockfish species, future fisheries management plans should impose a reduction in TAC consistent with PSARC-reviewed yield options. Area-based TACs should be developed for species presently managed on a coastwide basis. Identify and create a system of Rockfish Conservation Areas (RCAs) for rougheye and shortraker rockfish similar to those implemented for inshore rockfish. Undertake stock assessments for all species with outdated assessments (e.g. spiny dogfish).

Non-Commercial Species

Bluntnose Sixgill Shark: In April 2007, COSEWIC listed bluntnose sixgill shark as "special concern". Based on fisher logbook data, the halibut fishery captured 79 of these sharks in 2006 (Table 2). Due to the recent COSEWIC status assessment, fisheries capturing this species will need to demonstrate a plan to reduce and limit bycatch. The impact of this level of catch on the population is unknown and depends on the demographic of the catch (maturity, size, sex, etc.), which at present time is unknown.

Soupfin Shark (Tope): [15] In April 2007, COSEWIC listed soupfin shark as "special concern".[16] This species was very heavily fished in Canadian waters and throughout the entire northeast Pacific in the 1940s. It is rarely caught by the various fishing fleets today, indicating either a low population or non-overlapping habitats with commercial fisheries. Due to the recent COSEWIC status assessment, fisheries capturing this species will need to demonstrate a plan to reduce and limit bycatch.

Other Sharks: The single largest shark category (aside from spiny dogfish) in the 2006 fisher logbook data was "unidentified shark" (Table 2). Given the inherent vulnerability of shark populations to fishing mortality, sharks must be identified to the species level.

Requirement 4: Using 2006 and 2007 fisher logbook data, analyze the spatial and temporal distribution of bluntnose sixgill shark and tope catches to determine if and where management measures can be implemented to reduce catch. Because so little is known about these species in Canadian waters, the management plan should include a mandatory reporting program whereby vessel skippers are responsible for recording (when feasible) an estimated/measured length, sex, and location. Establish a voluntary program whereby skippers bring tissue (genetic) samples and/or specimens to DFO for

analysis. To reduce the number of "unidentified sharks", DFO should provide fishers with an easy field identification sheet for the eight species of shark most commonly caught by the halibut fishery. The halibut fishery needs to demonstrate that it is not causing these species to become more "at risk".

Black-Footed Albatross: Prior to integration and seabird-avoidance measures (2002), the annual catch of black-footed albatross in the halibut fishery was estimated to be between five and 64 individuals annually.[17] The most recent logbook data indicates that halibut vessels caught 31 albatross in 2006, indicating that the current avoidance measures are not a foolproof method for limiting seabird bycatch. The MCC does not have data to further understand where, when, and by whom these seabirds are being captured and whether all vessels are complying with the seabird-avoidance measures. In April 2007, black-footed albatross was listed as "special concern" through COSEWIC.[18] Internationally, they are considered endangered by the IUCN.[19] Future management plans will inevitably have to further address the problem of albatross bycatch.

Requirement 5: Using 2006 data from the integrated fishery, determine where and when albatross were captured to determine whether a simple spatial/seasonal closure could mitigate the problem. Determine whether vessels capturing albatross were complying with seabird-avoidance measure requirements through interviews and audits of video footage with sets capturing albatross. Fully implement the code of practice recommended by the Canadian Wildlife Service.[20] The halibut fishery needs to demonstrate that it is not causing these species to become more "at risk".

Habitat

Most of the habitat impact of longlines cannot be identified through what is actually caught as the damaged structures remain on the seafloor; however, catch records of coral and sponge are indicators of the greater damage that is occurring. In 2006 there were 36 records of corals brought aboard, which is a clear indication that fishing continues to occur in areas with sensitive habitat.

Requirement 6: The sponge-reef closures in eastern Queen Charlotte Sound and Hecate Strait should be extended to all fisheries, not only the bottom-trawl fishery. Increased effort should be made to identify and protect sensitive habitats impacted by the halibut longlines through the *Coral and Sponge Conservation Strategy*. Spatial analysis of logbook and electronic monitoring data can be used to identify potentially sensitive areas and inform the *Strategy*.

Transparency and Data Access

As the halibut fishery transitions into a data-rich fishery with full catch accounting and high spatial resolution, the demand by stakeholders to access these data will be greater. This issue extends beyond the halibut fishery to all of Canada's Pacific fisheries.

Requirement 7: Develop data-sharing protocols between industry, governments, conservation organizations, and other interested stakeholders that allow for release of high-quality datasets while protecting the privacy of individual vessel owners through non-traceable coding of vessel IDs.

Summary

The abovementioned requirements are necessary to achieve a fully sustainable ecosystem-based fishery. The requirements suggested are achievable within the management structure already in place for this fishery.

We recommend that certification process for the halibut industry take into account the requirements found in this document. Outstanding and unresolved issues raised as concerns by the MCC should be identified as conditions within any MSC certification. If these concerns are not addressed, the MCC will not be in a position to support certification of this fishery.

The MCC recognizes that the halibut industry has made tremendous improvements in catch accounting since our previous MSC submission. Full catch accounting has allowed the MCC to evaluate bycatch and habitat concerns in the context of the available information such as stock assessments, population indices, and general life-history information.

The primary remaining fisheries-management concerns pertain to redbanded and rougheye rockfish and skates. The main "species at risk" concerns are the ongoing capture of black-footed albatross and bluntnose sixgill shark. The protection of sensitive habitats impacted by halibut longlines remains an outstanding problem. Finally, the ongoing difficulty in accessing high-resolution catch data from this fishery limits the ability of stakeholders such as the MCC to independently assess and make informed recommendations about the fishery.

Table 1. Dockside Monitoring Program (DMP) recorded landings (lbs) and number of each species released and retained recorded in fisher logbooks for the 2006 halibut fishery. Data represents the top 30 species/data categories or ~99% of the total records. Data source: DFO

COMMON NAME	DMP Weight (lbs)	Released (#)	Retained (#)	Total (#)	Discard rate (%)	Release mortality estimate
PACIFIC HALIBUT	11,711,285	478,547	634,727	1,113,274	43.0	0.16
SPINY DOGFISH	657,349	333,680	93,603	427,283	78.1	0.06
SABLEFISH	400,094	146,819	253,202	400,021	36.7	0.15
ARROWTOOTH FLOUNDER	1,922	94,492	34,353	128,845	73.3	NA
ROUGHEYE ROCKFISH	319,021	753	96,830	97,583	0.8	1
REDBANDED ROCKFISH	328,490	733	94,577	95,310	0.8	1
LONGNOSE SKATE	322,626	54,126	19,356	73,482	73.7	NA
SHORTSPINE THORNYHEAD	120,504	1,574	61,927	63,501	2.5	1
YELLOWEYE ROCKFISH	268,428	1,352	50,984	52,336	2.6	1
LINGCOD	459,114	13,713	29,997	43,710	31.4	0.04
QUILLBACK ROCKFISH	61,383	746	29,434	30,180	2.5	1
BIG SKATE	75,502	18,619	5,448	24,067	77.4	NA
SILVERGRAY ROCKFISH	93,103	461	20,155	20,616	2.2	1
PACIFIC COD	8,772	8,386	7,418	15,804	53.1	NA
SHORTRAKER ROCKFISH	52,595	212	9,171	9,383	2.3	1
YELLOWMOUTH ROCKFISH	24,717	128	8,395	8,523	1.5	1
CANARY ROCKFISH	16,397	84	4,627	4,711	1.8	1
SKATES	2,945	4,464	174	4,638	96.2	NA
GREENSTRIPED ROCKFISH	1,621	46	2,533	2,579	1.8	1
ROSETHORN ROCKFISH	3,087	73	2,233	2,306	3.2	1
BOCACCIO ROCKFISH	15,382	131	1,996	2,127	6.2	1
COPPER ROCKFISH	5,091	25	2,070	2,095	1.2	1
CHINA ROCKFISH	2,640	21	1,566	1,587	1.3	1
YELLOWTAIL ROCKFISH	2,829	88	1,306	1,394	6.3	1
SANDPAPER SKATE	18,047	884	332	1,216	72.7	NA
PACIFIC OCEAN PERCH	909	15	802	817	1.8	1
DARKBLOTCHED ROCKFISH	1,606	12	627	639	1.9	1
BLACK ROCKFISH	1,503	2	567	569	0.4	1
TIGER ROCKFISH	1,897	13	523	536	2.4	1
VERMILION ROCKFISH	507	3	153	156	1.9	1
Total	**14,979,366**	**1,160,202**	**1,469,086**	**2,629,288**	**44.1**	
ALL SPECIES	**14,981,741**			**2,657,402**		
% of total species landed in fishery	**99.98**			**98.9**		

Table 2. Records of sharks, seabirds, and habitat-forming organisms of concern captured in the 2006/07 halibut fishery as recorded by fisher logbooks.

COMMON NAME	Logbook Count (#)
BLUE SHARK	820
BROWN CAT SHARK	16
MACKEREL SHARKS	1
PACIFIC SLEEPER SHARK	229
SALMON SHARK	19
SIXGILL SHARK	79
SLEEPER SHARKS	2
SOUPFIN SHARK	17
THRESHER SHARK	5
UNIDENTIFIED SHARK	825
ALBATROSSES	31
SPONGES	4
SOFT CORALS	30
STONY CORALS	6

[1] Wallace, S. 2004. Submission to the Marine Stewardship Council regarding ecological conservation concerns in British Columbia's halibut fishery. Pacific Marine Conservation Caucus. Available at: http://www.mccpacific.org/pages/resources/files/technical_papers/04-12-16-Submission-MSC-Halibut.pdf
[2]Marine Stewardship Council Guidance to potential or actual clients: The MSC Fishery Assessment & Certification Process. "One of the most significant issues to consider is whether the holder of the certificate is able to implement (either directly or indirectly) conditions which may be placed on the fishery client as part of the certification. Failure to implement conditions can lead to suspension or withdrawal of the certificate and as the client, you must therefore be confident that you can successfully implement needed actions."
[3] Fisher logbook data provided to author on March 7, 2007 from DFO statistical services.
[4] http://www.cosewic.gc.ca/rpts/Short_Species_Assessments_e.html
[5] Integrated Fisheries Management Plan Groundfish. 2007/08, Appendix 6: 2007 Halibut Commercial Harvest Plan, Page 7.
[6] The movement patterns of skates in B.C. waters are poorly understood. Preliminary results from a big skate tagging study indicates most movement is within 20 km (McFarlane, pers. comm.), suggesting that area based TACs are appropriate.
[7] http://www.cosewic.gc.ca/rpts/2006_12_ref_e.pdf
[8] Also listed as Critically Endangered by the IUCN. Sobel, J. 1996. Sebastes paucispinus. In: IUCN 2006. 2006 IUCN Red List of Threatened Species. <www.iucnredlist.org>.
[9] Fargo, J. and P. Starr. 2001. Turbot stock assessment for 2001 and recommendations for management in 2002. Canadian Science Advisory Secretariat Research Document 2001/150.
[10] http://www.afsc.noaa.gov/Rockfish-Game/description/rougheye.htm
[11] http://www.cosewic.gc.ca/rpts/Short_Species_Assessments_e.html
[12] Schnute, J. T., N. Olsen, and R. Haigh. 1999. Slope rockfish assessment for the west coast of Canada in 1999. Can. Stock Assess. Sec. Res. Doc. 99/184.
[13] Haigh, R., N. Olsen, and P. Starr. 2005. A review of rougheye rockfish *Sebastes aleutianus* along the Pacific coast of Canada: biology, distribution, and abundance trends Canadian Science Advisory Secretariat Research Document 2005/096.
[14] Wallace, S.S., G.A. McFarlane, S.E. Campana, and J.R. King. In press. Status of spiny dogfish (*Squalus acanthias*) in Atlantic and Pacific Canada. American Fisheries Society Special Publication. xx
[15] Note, the official common name for this species is "Tope".
[16] http://www.cosewic.gc.ca/rpts/Short_Species_Assessments_e.html
[17] Smith, J.L. and K.H. Morgan. 2005. An assessment of seabird bycatch in longline and net fisheries in British Columbia. Canadian Wildlife Service Technical Report Series, 401.
[18] http://www.cosewic.gc.ca/rpts/Short_Species_Assessments_e.html
[19] BirdLife International 2005. *Phoebastria nigripes*. In: IUCN 2006. 2006 IUCN Red List of Threatened Species. <www.iucnredlist.org>. Downloaded on 29 August 2007.
[20] Smith and Morgan (2005).