IPHC Contracting Party Report: Canada

DATE: 18/DEC/2020, REVISED 31/JAN/2020

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FISHERY SECTOR/S

All

IPHC REGULATORY AREA/S

IPHC Regulatory Area 2B (Canada: British Columbia)

DISCUSSION

Each year Fisheries and Oceans Canada provides harvest opportunities to First Nations for food, social and ceremonial (FSC) purposes (or domestic purposes for First Nations with modern treaties), and the commercial and recreational fisheries. First Nations, recreational, and commercial fisheries on the Pacific coast of Canada have long harvested groundfish. Groundfish serve as a source of food, they provide jobs, income, and enjoyment for individuals, businesses, and coastal communities and they play key roles in natural ecosystems.

The B.C. Ministry of Agriculture is responsible for collection and reporting of data and statistics for the agri-food sector. An important part of that mandate is to analyze the impact of various sectors, including fisheries and seafood to the broader provincial economy. B.C. commercially harvests and reports on over 25 wild fisheries including Pacific halibut which is within B.C.'s top most valuable wild fishery commodities.

Indigenous fisheries

In the 1990 Sparrow decision, the Supreme Court of Canada found that where an Indigenous group has an Indigenous right to fish for food, social, and ceremonial (FSC) purposes, it takes priority, after conservation, over other uses of the resource. Fisheries are authorized via a Communal Licence issued by the Department under the Aboriginal Communal Fishing Licences Regulations.

Commercial fisheries

There are seven distinct commercial groundfish sectors: Groundfish trawl, Halibut, Sablefish, Inside Rockfish, Outside Rockfish, Lingcod, and Dogfish fisheries that are managed according to the measures set out in the Integrated Fisheries Management Plan (IFMP). The management of these sector groups is integrated, with all groups subject to 100% at-sea monitoring and 100% dockside monitoring, individual vessel accountability for all catch (both retained and released), individual transferable quotas (ITQ), and reallocation of these quotas between vessels and fisheries to cover catch of non-directed species. There are approximately 308 active commercial groundfish vessels. Information on licensed vessels is available online at the DFO website: http://www.pac.dfo-mpo.gc.ca/fm-gp/licence-permis/index-eng.htm.

The 2019 commercial fishery is described in appendix 1 of this report, "Fisheries and Oceans Canada 2019 IPHC Annual Report," and appendix 3 of this report, "Halibut Compliance and Enforcement."

Recreational fisheries

A recreational fishery may occur where authorized by a valid Tidal Waters Sport Fishing licence, which is required for the recreational harvest of all species of fish. Approximately 300,000 Tidal Waters Sport Fishing licences are sold each year. Tidal Waters Sport Fishing Licences can be purchased online by using the DFO website: http://www.pac.dfo-mpo.gc.ca/fm-gp/rec/licence-permis/application-eng.html

The 2019 recreational fishery is described in appendix 2 of this report, "2019 Canadian Recreational Fishery Halibut Catch Report," and appendix 3 of this report, "Halibut Compliance and Enforcement."

RECOMMENDATIONS

That the Commission:

1) **NOTE** paper IPHC-2020-AM096-NR01 Rev_1 which provides the Commission with a summary from Fisheries and Oceans Canada of Halibut fisheries in IPHC Regulatory Area 2B.

REFERENCES

Integrated Fisheries Management Plan for Groundfish, effective February 21, 2019. https://waves-vagues.dfo-mpo.gc.ca/Library/40804343.pdf

APPENDICES

Appendix 1: Fisheries and Oceans Canada 2019 Fishery Overview Report
Appendix 2: Fisheries and Oceans Canada 2019 Recreational Fishery Report
Appendix 3: Fisheries and Oceans Canada 2019 Enforcement Report
Appendix 4: Province of British Columbia 2019 Annual Report

APPENDIX 1

Fisheries and Oceans Canada 2019 Fishery Overview Report

PREPARED BY: Fisheries and Oceans Canada (18Dec2019)

DATE: 18/DEC/2019

CONTRACTING PARTY: CANADA

AGENCY:

Fisheries and Oceans Canada

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FISHERY SECTOR/S:

All

IPHC REGULATORY AREA:

IPHC Regulatory Area 2B (Canada: British Columbia)

Discussion

Catch Limits

Fisheries and Oceans Canada follows an allocation policy that defines access to the Pacific Halibut Canadian Total Allowable Catch (CTAC) for Canadian commercial, recreational, and food, social, and ceremonial (FSC) fisheries. For 2019, the CTAC was 6,395,969 net pounds (fresh, head-off, dressed weight). The CTAC is composed of the catch limit for regulatory area 2B and an allocation for FSC. In addition to the CTAC, a carryover of quota from previous seasons is allocated to some licences.

Priority access is provided to the CTAC for FSC purposes, while commercial and recreational access is divided between the sectors 85% / 15% respectively. The 2019 Commercial and Recreational catch limit for allocation purposes was 6,155,000 net pounds. The net carryover from 2018 to 2019 was 118,232 net pounds between the commercial and Experimental Recreational Halibut fishery pilot program (XRQ fishery). The resulting TAC for commercial and recreational harvest in 2019 was 6,031,401 net pounds[1].

[1] Quota totalling 30,855 net pounds have been set aside for treaty mitigation and as part of the Pacific Integrated Commercial Fisheries Initiative (PICFI). See Table 1 for more details.

Commercial and Recreational Fishery Summaries

For allocation purposes, the commercial / recreational total allowable catch (TAC) is equal to the Canadian catch limit, plus “O26” wastage mortality. The TAC is then allocated between the commercial and recreational sectors, and the “O26” wastage mortality is removed from the commercial and recreational TACs (Table 1). The combined commercial and recreational TAC, including carryover adjustments, for 2019 was 6,031,401 net pounds. As of December 18, 2019, the combined commercial and recreational halibut catch (including landed catch and mortality associated with all released fish in the commercial groundfish fisheries) was 5,788,475 net pounds.

Commercial Fishery Summary

The 2019 Canadian commercial Halibut TAC, including the catch limit allocation and carryover, was 5,112,542 net pounds. Halibut may be caught and retained by all commercial hook and line, and trap groundfish fisheries in Canada. This includes category L, K, ZN, and Schedule II licences.

In 2019, the Canadian commercial Halibut catch totalled 4,954,112 net pounds (Table 2). This catch, reported by all hook and line/trap groundfish fisheries in area 2B, includes both landed and released at-sea mortality. Given that non-halibut groundfish fisheries continue throughout the Halibut winter closure, additional released at-sea mortality will continue to be attributed to the 2019 Halibut catch until February 20, 2020, after which released at-sea mortality will be attributed to the 2020 TAC. As such the 2019 commercial catch is current as of December 18, 2019.

Commercial Integrated Management Plan

First introduced as a pilot program in 2006, the Commercial Groundfish Integration Program (CGIP) was made permanent in January 2010 to manage groundfish fisheries, including Pacific Halibut, in British Columbia. The objectives of the CGIP are to improve and maintain groundfish harvest sustainability and management through improved catch monitoring and catch accountability. The CGIP implemented individual vessel accountability for all catch, both retained and released, via individual transferable quotas which may be reallocated between licences and fisheries to cover non-directed catch. In addition these management tools are supported by 100% at-sea monitoring and 100% dockside monitoring for all groundfish vessels.

Notable management changes for the 2019 season include the ongoing rebuilding measures for Yelloweye Rockfish and Bocaccio in all commercial groundfish fisheries, and the establishment of several protected areas. These protected areas have been established to conserve the biological diversity, structural habitat, and ecosystem function in various areas across the Pacific coast. For more information on these closures and other work planned between now and 2021, refer to section 5.2 of the of the front section of the IFMP, and Appendix 10 of the IFMP. In particular, harvesters are reminded that as of May 1, 2019, South Moresby and Lyell Island RCAs have been superseded and replaced by the strict protection zones of the Gwaii Haanas National Marine Conservation Area Reserve.

The 2020/2021 commercial groundfish fishing season will commence February 21, 2020, at which time the renewed Groundfish Integrated Fisheries Management Plan (IFMP) will be available. All commercial groundfish management measures are detailed in the IFMP, which can be requested once available at: http://www.pac.dfo-mpo.gc.ca/fm-gp/ifmp-eng.html#Groundfish

Recreational Fishery Summary

There are two opportunities for recreational halibut fishing in area 2B, the recreational fishery, and the Experimental Recreational Halibut fishery pilot program (XRQ fishery). The 2019 recreational Halibut TAC was 890,013 net pounds. The XRQ fishery has acquired 28,846 net pounds, resulting in a combined recreational and XRQ fishery TAC of 918,859 net pounds as of December 18, 2019 (Table 3). The estimated 2019 Canadian recreational Halibut catch totalled 819,085 net pounds, including 17,724 net pounds of catch in the XRQ fishery. The estimation methods of the recreational catch are outlined in *2019 Canadian Recreational Fishery Halibut Catch Report*. Management measures for the 2019 recreational fishery are summarised in the Area 2B Recreational Fishery Halibut Catch Report.

Halibut Experimental Recreational Fishery Program

The Experimental Recreational Halibut fishery pilot program allows individual anglers as well as guides, charters, lodges, marinas and other fishing experience providers to lease Halibut quota and subsequently retain Halibut that is in excess of the regular recreational fisheries daily and possession limits, and maximum size limits. An XRQ licence holder is permitted to fish for and retain Halibut from April 1 – December 31, even if the traditional recreational fishery is closed prior to December 31. Participants in the XRQ fishery must complete logbooks and submit them electronically within seven days of retaining a Halibut.

The XRQ fishery has operated as a pilot program since 2011, and was continued for a ninth season in 2019. A regulatory process is underway to create a category of annual sport fishing licence in s.17 of the *British Columbia Sport Fishing Regulations, 1996*. Public consultations about the regulatory changed were held throughout 2012/2013, and a Regulatory Impact Assessment Statement that summarizes feedback from the public meetings on the experimental licence and regulatory change has been presented to the Minister. A regulatory intent document will be presented for additional public comment prior to the proposed regulatory changes being posted in Canada Gazette 1.

The 2019 XRQ fishery has reallocated 21,547 net pounds of quota (as of December 18, 2019) from the commercial groundfish fisheries, and has carried over 7,299 net pounds of uncaught quota from the 2018 season (Table 3). Reallocations into and out of the XRQ fishery are permitted until January 31, 2020. Any uncaught quota may be reallocated back to the commercial fishery or it may be carried over into the 2020 XRQ fishery (the greater of the 200 net pounds or 10% of the total quota on the licence).

Additional details about the XRQ program are available online: http://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/ground-fond/index-eng.html

Canadian Aquaculture Research

There were no halibut aquaculture research or production activities in area 2B for 2019.

Food, Social and Ceremonial and Treaty Fishery

The estimated Food, Social, and Ceremonial (FSC) halibut catch in area 2B is 405,000 pounds. Since 2009, new conditions have been applied to commercial Halibut licences and many communal halibut permits, to improve catch reporting of FSC caught fish on commercial trips. Of the total FSC halibut caught in 2019, approximately 37,317 net pounds were caught in conjunction with commercial fishing trips and were subject to all commercial monitoring requirements, including 100% at-sea and 100% dockside monitoring. In addition, First Nations engaging in fishing only for FSC used tools such as catch calendars, some dockside monitoring and phone surveys to estimate their catch. Fisheries and Oceans Canada continues to work with First Nations to improve catch reporting within the FSC fisheries.

In April 2011 the Maa-nulth Final Agreement came into effect. The agreement allocates 26,000 pounds of FSC Halibut (part of the 405,000 pounds described above) plus 0.39% of the total CTAC to the Maa-nulth First Nations for FSC purposes (equivalent to 50,944 pounds in 2019). In 2011 DFO mitigated for the additional treaty allocation through acquisition of 0.47% of the commercial TAC which is set aside for the Maa-nulth First Nation on an annual basis (identified as part of the "net reallocations into/out of the commercial fishery" in Table 1). To date, the 2019 Maa-nulth First Nation's FSC Halibut catch totaled 40,490[2] net pounds of a total 50,944 net pounds allocated under the Maa-nulth Final Agreement.

RECOMMENDATIONS: NA

REFERENCES: See hyperlinks above

[2] The Maa-nulth FSC catch estimate is an in-season estimate which will continue to be updated throughout the year. As such the 2019 Maa-nulth catch is current as of December 18, 2019 and is included in the 405,000 pound estimate.

Appendices

Tables

Table 1. Halibut allocations in 2B as of December 18, 2019. All values in net pounds.

Commercial / recreational TAC for allocation		6,155,000
Commercial allocation	x 85%	
O26 wastage	- 130,794	
2018 Underages [A]	+ 179,916	
2018 Overages [B]	- 68,983	
Net carryover	+ 110,933	
Net reallocations into/out of the commercial fishery [C]	- 39,301	
Commercial TAC		5,112,542

Recreational allocation	x 15 %	
O26 wastage	- 33,237	
Recreational TAC		890,013
XRQ allocation	x 0 %	
XRQ acquired quota	+ 21,547	
2018 XRQ Underages [A]	+ 7,348	
2018 XRQ Overages [B]	- 49	
Net carryover	+ 7,299	
XRQ TAC [D]		28,846
Recreational and XRQ TAC [D]		918,859

2B commercial and recreational TAC [D]	6,031,401
2B commercial and recreational catch [E]	5,788,475

A Underage. Unfished quota equaling 10% or less of a commercial licence's individual transferable quota is carried over into the following year.

B Overage. All catch that exceeds the available quota on an individual commercial licence at the end of a given fishing season is deducted from the individual commercial licence the following season.

C Net reallocations include quota reallocated from the commercial halibut sector to Maa-nulth First Nations Treaty, the Pacific Integrated Commercial Fisheries Initiative (PICFI), and Allocation Transfer Program (ATP), as well as the Halibut Experimental Recreational Fishery pilot program. Of the current net reallocations, 30,855 net pounds have been set aside for treaty mitigation and as part PICFI, and are unavailable to either the commercial or recreational fisheries. This value is current as of December 18, 2019.

D There is no initial allocation provided to XRQ fishery, though quota may be transferred into the XRQ fishery from commercial Halibut fisheries. As a result the XRQ TAC changes proportionately with the commercial TAC as quota is transferred between fisheries.

E Catch includes all landed fish, as well as the mortality associated with legal-sized released fish in the commercial fishery.

Table 2. Halibut for 2B commercial groundfish fisheries as of December 18, 2019. All values in net pounds.

Commercial TAC	5,112,542
Commercial Groundfish catch	4,954,112

Table 3. Halibut for 2B recreational and the Halibut Experimental Recreational pilot program (XRQ) fisheries as of December 18, 2019. All values in net pounds.

Recreational TAC	890,013
Recreational catch	816,639
XRQ TAC	28,846
XRQ catch	17,724 [F]
Recreational and XRQ TAC [D]	918,859
Recreational and XRQ catch [E]	834,363

D There is no initial allocation provided to XRQ fishery, though quota may be transferred into the XRQ fishery from commercial Halibut fisheries. As a result the XRQ TAC changes proportionately with the commercial TAC as quota is transferred between fisheries.

E Catch includes all landed fish.

F Effective December 18, 2019.

APPENDIX 2

Fisheries and Oceans Canada 2019 Recreational Fishery Report

PREPARED BY: Fisheries and Oceans Canada (18December2019)

DATE: 18/DEC/2019

CONTRACTING PARTY: CANADA

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FISHERY SECTOR/S:

Recreational

IPHC REGULATORY AREA:

IPHC Regulatory Area 2B (Canada: British Columbia)

DISCUSSION

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1. Overview

This report summarizes the 2019 harvest and biological data from the Canadian recreational Halibut fishery in the tidal waters of British Columbia (BC). The recreational total allowable catch for 2019 was 890,013 pounds[3] and the estimated harvest is 816,639 pounds (73,374 pound underage). The estimated harvest by pieces is 57,364.

The 2019 season opened on March 1 and closed on December 31. Traditional monitoring and reporting programs, such as logbooks, lodge manifests and recreational creel surveys, collected catch, effort and biological data during peak months and areas of the fishery. Estimates of catch in months and areas not monitored by traditional programs were generated from data collected during DFO's internet-based recreational survey (iREC). Initiated in 2012, the iREC survey collects catch and effort information from recreational licence holders on a monthly basis throughout the recreational fishing year[4].

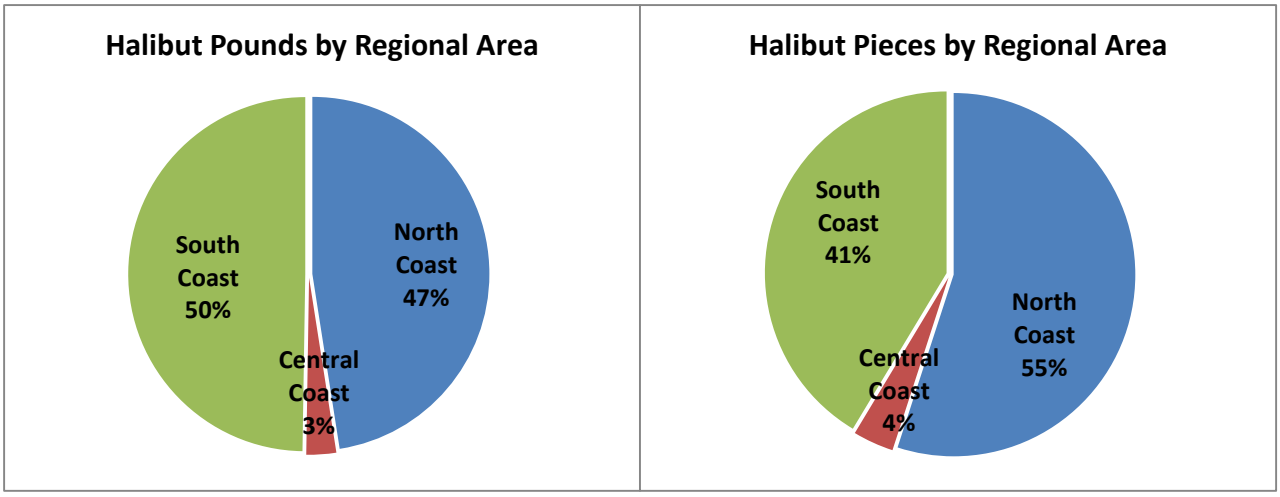
Final estimates are anticipated to be available by the spring of 2020. Estimated harvest in pieces and net weight by regional areas are noted below.

1.1. Harvest

Table 1. Estimated Harvest in Pieces and Pounds by Regional Area

Area	Pieces	Pounds
North Coast	31,577	387,948
Central Coast	2,092	22,285
South Coast	23,695	406,407
Totals	**57,364**	**816,639**

Figure 1. Percentage of Halibut harvested by piece and weight by Regional Area



[3] Pounds in this document refer to net weight (head off, dressed) pounds. See Biological Sampling section for the equations used to convert round weight (head on, undressed) and fork length to net weight.
[4] For more information on the Internet Recreational Effort and Catch (iREC) Survey please visit the following internet site; http://www.dfo-mpo.gc.ca/csas-sccs/publications/sar-as/2015/2015_059-eng.html.

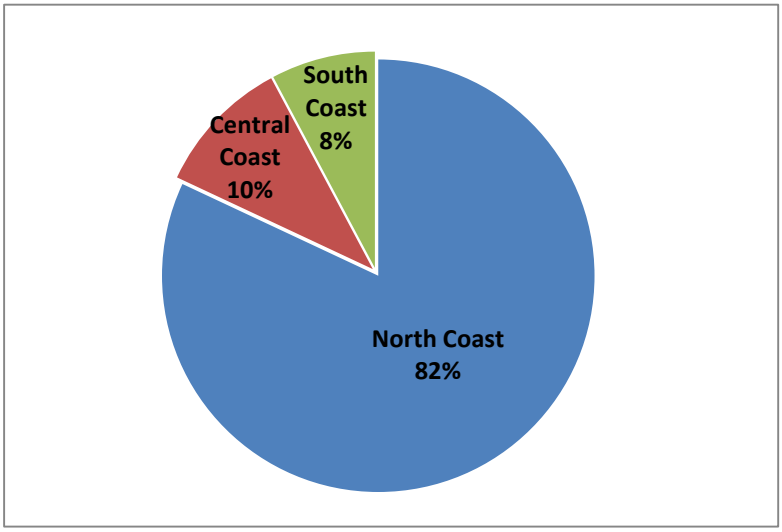
1.2. Biological Samples

A coast wide total of 18,417 halibut were biologically sampled for either length or weight in 2019, representing 32% of the estimated harvest. The number of biological samples collected by regional areas is noted below.

Table 2. Number of Halibut Biologically Sampled by Regional Area

Area	Samples
North Coast	15,097
Central Coast	1,886
South Coast	1,434
Totals	**18,417**

Figure 2. Percentage of Halibut size samples taken from each regional area.



1.3. Fishery Logistics

Catch monitoring of the recreational fishery in BC is extremely challenging given the large geographic area (numerous remote areas), the diversity of fishing opportunities and the diversity of participants.

Starting in 2015, Tidal Waters Sport Fishing Licences included Conditions of Licence that make catch reporting mandatory. Specifically, the conditions state that "*The licence holder shall provide accurate information regarding their catch and fishing activities upon request of a Creel Surveyor or an on-line surveyor, authorities designated under s.61(5) of the Fisheries Act".* Conditions of Licence also included regulations related to possession limits, size limits and an annual limit.

In response to the IPHC's 2012 request for data collection programs on recreational discards, Fisheries and Oceans Canada reviewed its existing recreational halibut catch and release information and examined options

for the estimation of release mortalities. DFO obtains information from anglers on the number of halibut releases through creel surveys, logbooks and internet surveys. In BC, anglers are not required to keep any records of released Halibut. Fishers are not required to record sizes of released Halibut in part because Such a practice may increase release mortality and present challenges in terms of angler safety, and provide data of variable quality.. Size limits and angler preference are some reasons why released halibut may be a different average size compared to the average size of retained fish. Given these various limitations of the information available, DFO does not currently use recreational release data for the purposes of recreational halibut management or allocation decisions.

DFO estimates recreational fishery discard mortality based on the ratio of recreational halibut discard mortality to landed catch in adjacent management areas. The current ratio is 3.6%. Applying this ratio to the 2019 landed catch results in an estimate of 29,399 pounds. This discard mortality is accounted for before the 2B recreational catch limit is established and thus is not included in the calculation of catch relative to the recreational catch limit described elsewhere in this report.

DFO continues to work with the recreational fishery sector in BC to improve recreational fishery monitoring and catch reporting. While the focus remains on strengthening data collection and monitoring for retained catch in recreational fisheries, new reporting tools such as the iREC survey of recreational harvesters include questions about anglers' releases. As the survey continues to be refined and improved, DFO will be exploring how the data gathered on releases may be used to inform management.

2. MANAGEMENT, MONITORING and POLICY DEVELOPMENT

2.1. 2019 Recreational Fishery Management Plan

The current domestic sharing arrangement between commercial and recreational fisheries is 85% of the resource allocated to the commercial sector and 15% to the recreational sector, after accounting for First Nations' Food, Social, and Ceremonial requirements. The 15% recreational share in 2019 equates to a total allowable catch of 890,013 pounds.

The recreational halibut fishery opened on March 1, 2019. The fishery operated under 2018 recreational management conditions until March 31. On April 1, the 2019 management measures entered into effect. The 2019 measures included:

- A maximum length of 126cm (approx. 49inches) head-on length
- A possession limit is either of:
    - one (1) Halibut measuring from 90-126cm head-on length, OR;
    - two (2) Halibut measuring under 90cm head on length
    - NOTE: if in possession of one (1) Halibut 90cm head-on length or longer, you shall not possess any other Halibut
- An annual limit of six (6) in aggregate, from April 1, 2019 to March 31, 2020
- All halibut retained must be recorded on the Tidal Waters Licence plus the date and area from which each halibut is caught and its length
- A mandatory Condition of Licence to report catch when surveyed.

The opening was for all Pacific Fishery Management Areas (PFMAs) with the exception of portions of Area 121. Anglers were not permitted to fish for nor retain halibut in Area 121 outside the twelve nautical mile limit and in the waters of Swiftsure Bank.

DFO and the Halibut Sub-committee of the Sport Fishing Advisory Board (SFAB) reviewed in-season catch estimates on a monthly basis. By the end of October, it was determined that the estimated harvest to date plus the forecasted catch to December 31 would likely not exceed the 890,013 pound Total Allowable Catch.

In October, DFO announced the fishery would remain open until further notice.

For 2020, the SFAB is considering various management options they may recommend to DFO. These options include considering changes to:

- Minimum and Maximum size limits
- Individual annual limits
- Daily and total possession limits
- Season length
- Time and area closures

2.2. Halibut Experimental Recreational Fishery Program

In 2011, the Department piloted an experimental fishery program where interested recreational stakeholders, such as individual recreational harvesters, lodges, charters, guides or marinas, could request an experimental licence that would allow them to lease quota from commercial harvesters through a market based transfer mechanism. The experimental licence permits licence holders to fish halibut beyond the limits and times of the regular recreational licence.

In 2012, the Minister of Fisheries and Oceans Canada confirmed that the experimental licence would continue to be available and announced the Department was moving forward with a regulatory proposal to continue the experimental fishery for the long term.

This year, the experimental fishery commenced April 1 and remained open until December 31, 2019. For the 2019 season, 21,547 pounds of halibut quota was transferred from the commercial sector to experimental licence holders, of which 17,724 pounds of halibut was caught.

3. RECREATIONAL CATCH MONITORING and REPORTING PROGRAMS

3.1. Background

Marine creel surveys in BC began in 1980. Originally developed to estimate the catch of chinook and coho salmon in the Strait of Georgia, the geographical scope expanded to include Barkley Sound and Alberni Inlet in 1984, the entire West Coast of Vancouver Island (WCVI) in 1991, Haida Gwaii and the rest of the North Coast in 1995, and most recently Johnstone Strait in 1998. The objectives of the creel survey have been expanded to include estimates for most recreationally caught finfish, including halibut. In 2019, creel programs were implemented in peak fishing times and areas with specific emphasis on halibut and chinook fishing activities.

Lodges operating along the coast provide census data to the Department through the logbook program, manifest data or the electronic log (elog) pilot program. The Department also receives data from some independent guides and avid anglers via logbook programs. These data are combined with the creel survey data to produce estimates of catch for each PFMA by month where traditional monitoring and reporting programs exist.

To address monitoring gaps in the recreational fishery the Department has been using and enhancing an online survey since 2012. The Internet Recreational Effort and Catch (iREC) survey was peer reviewed by the Canadian Scientific Advisory Secretariat (CSAS) in 2015. The iREC survey was developed to provide catch and effort estimates for all areas, months, fishing methods, and species harvested by the recreational sector. To minimize the effect of potential biases in iREC survey estimates, a calibration procedure was developed to relate iREC survey estimates and creel survey estimates in areas and times not covered by a creel survey.

3.2. 2019 Recreational Fishery Catch Monitoring

DFO has been working with the Sport Fishing Advisory Board on an implementation plan to strengthen recreational fishery monitoring and catch reporting in the Pacific Region. For the 2019 recreational halibut fishery, DFO used estimates from three sources; the iREC survey, logbook and lodge manifest program, and creel surveys.

As in previous years, traditional monitoring and catch reporting programs such as logbook, lodge manifest and the creel survey were used during peak months and areas of the recreational fishery. In areas and months where traditional programs were not implemented in 2019, DFO used in-season iREC survey catch estimates.

3.3. Haida Gwaii

Haida Gwaii recreational monitoring and reporting programs include a lodge logbook program and a creel survey. Lodge logbook data accounts for approximately 85% of the estimated halibut catch in Areas 1 and 2.

The Haida Gwaii Creel Survey (HGCS) estimates recreational catch from Areas 1 and 2 surrounding Haida Gwaii. Since 1995, the program has conducted creel surveys to estimate catch from recreational anglers in Masset Inlet, Naden Harbour, Langara Island, Skidegate Channel, Cartwright Sound and Rennell Sound. Fish caught in Haida Gwaii by recreational harvesters are also subject to random audits by the Haida Watchmen (Guardians) through the HGCS, which operates in the main fishing months in Area 1 and parts of Area 2.

Information collected from the creel survey is combined with data submitted through the lodge logbook program to generate total catch estimates for Areas 1 and 2. In 2019, 14,385 halibut were sampled for either length or weight.

3.4. North Coast Creel Survey

The North Coast Creel Survey program collects catch information from the recreational fishery surrounding Prince Rupert and Port Edward on the North Coast of B.C. It is focused in Areas 3 and 4, comprising the waters of Chatham Sound between the mouths of the Nass and Skeena Rivers. Chatham Sound is bordered by the Alaska/BC border to the north, Dundas and Stephens Island groups to the west and Porcher Island to the south, covering an area of approximately 4,200 km^2.

The North Coast Creel Survey program has a hybrid design with four components: an access point angler interview survey, an aerial effort count survey, a trailer census and a fishing lodge logbook program. The study design is similar to the one used in the South Coast Creel Survey.

Access point angler interview surveys collect catch information, angling activity times and biological samples of selected species from anglers at the completion of the fishing trip. The data is used to calculate species specific Catch per Unit Effort (CPUE) values and create angler activity profiles. Aerial surveys are conducted to capture the 'instantaneous' counts of the number of boats fishing at the time of the flight and are expanded using the angler effort profiles generated from the ground surveys to produce an estimate of total daily effort. Lodges in the area submit logbooks to DFO post-season. Lodge data is treated as a complete census of catch, is summed and added to the creel estimates to get an estimate of total catch. To prevent bias in the effort estimates from lodge boats counted during the aerial surveys, a temporal-spatial analysis is conducted of lodge logbook data for days when the overflight occurs and any boats that were fishing in the survey area during the time of the flight are removed from the final count of boats fishing in the area.

In 2019, 712 halibut were sampled for either length or weight.

3.5. Central Coast

Catch information in Areas 7, 8 and 9 on the Central Coast is collected from lodges and some charter operators operating in these areas, primarily through the logbook program. Most lodges participate in the logbook program and collect catch, effort and biological data that are submitted to the Department on a monthly basis. There is no creel program to estimate the number of halibut caught by independent anglers or guides in these areas due to challenges with implementing a survey in this remote and geographically dispersed fishery.

This year a total of 13 lodges\charter operators reported the number of halibut kept in their logbook along with their associated round weights (i.e. biological samples). In 2019, 1,886 biological samples were reported.

3.6. South Coast Creel Survey

In the southern waters of BC creel surveys are the main tool to estimate catch of halibut. Surveys are conducted in select fishery strata based on: the highest catch of halibut and chinook, the highest effort, in-season management requirements, and potential impact on stocks of concern. Creel surveys consist of effort surveys and estimation of catch per boat trip based on fishery observers at selected ramps and marinas.

Data collected during angler interviews are recorded in the South Coast Marine Creel Survey form and provide average catch per unit effort by species and fishing times, while aerial counts from chartered aircraft capture ‘instantaneous’ counts of the number of recreational boats fishing on randomly selected dates. Fishing times obtained from angler interviews are used to generate daily fishing activity profiles which are used to expand the ‘instantaneous’ aerial counts to estimate the number of boats fishing each day. The estimate of boats fishing is multiplied by the average catch to estimate the total number of halibut caught each day. Estimates are generated monthly, or occasionally for two week periods where samples rates are high. The estimates are stratified by weekend and holidays vs. weekday dates. In addition, logbook catch data submitted by remote fishing lodges, independent guides and expert anglers are incorporated into creel estimates post season. The survey in Kyuquot Sound (PFMA's 26, 126) is entirely logbook-based, as fishing from lodges represents essentially all recreational effort in this remote area; in 2018 estimates were improved through use of iREC survey information on the proportion of guided to unguided trips.

Catch and effort is estimated by creel sub-area and rolled up to DFO PFMAs by month. South Coast waters include PFMAs11 through 29. The Port Hardy survey also collects information from recreational fishing trips in Area 10.

Creel surveys are active during the peak season of recreational angling and vary in duration depending on location. The spatial and temporal coverage of the survey program can vary year to year in response to budget and fishery priorities. In 2019 surveys were conducted in months outlined in Tables 3 and 4 below.

Table 3. South Coast surveys in inside waters (Johnstone and Georgia and Juan de Fuca Straits)

Location	PFMAs	Duration
Port Hardy	11, 12	Jun. – Aug.
Campbell River	13, 14	Jun.- Sep.*
Sunshine Coast	15, 16	Jun. – Sep.*
Nanaimo	17, 18	Jun. - Sep.*
Victoria	19, 20	Mar. - Sep.
Vancouver	28, 29	Jun. – Sep.*

Note:
*coverage may be incomplete during these months

Table 4. South Coast surveys in outside waters (West Coast of Vancouver Island)

Location	PFMAs	Duration
Port Renfrew	20, 21, 121	Jun. – Sep.
Barkley Sound	123	Jun. – Sep.
Port Alberni	23	Jun. – Sep.
Tofino	124, 123	Jul. – Sep.
Tahisis/Nootka	25, 125	Jul. – Sep.
Kyuquot	26, 126	Jun. – Aug.
Winter Harbour	27, 127	Jul.– Aug.

For further details on the methodology and results of the South Coast Creel survey, including catch and effort estimates with level of uncertainty, please visit:

http://www-ops2.pac.dfo-mpo.gc.ca/xnet/content/salmon/sc%20stad/bulletins.htm

In 2019, 1,434 halibut were sampled for length or weights during the South Coast Creel survey interviews.

3.7. Biological Sampling

A total of 18,417 halibut were sampled for lengths or weights, representing 32% of the total estimated coastwide harvest. Samples were collected from lodges, guides and independent anglers interviewed at access points and converted to net weight, head off and dressed, using the following formulas developed by the IPHC:

$$\text{Round Weight} = \text{Fork Length (cm)}^{3.24} \times (6.921 \times 10^{-6})$$
$$\text{Net Weight} = \text{Round Weight} \times 0.75$$

Average net weights were calculated for each Area on a monthly basis to generate estimates of total net weight by month and area caught in the fishery.

4. APPENDICES

The following tables provide detailed catch and biological information collected during the 2019 recreational halibut fishery in BC. Note: these figures are preliminary and subject to change.

Table 5. Summary of the 2019 Recreational Halibut Catch by Pacific Fishery Management Area (PFMA)

Regional Area	PFMA	Est. Piece Count	Est. Total Net Wt. (lbs)
North Coast	1	12,350	129,246
	2	4,550	61,703
	3	3,864	51,947
	4	8,541	114,794
	5/6	2,272	30,259
Central Coast	7/8/9	2,092	22,285
South Coast	10/11	720	13,397
	12	902	11,140
	13/14	530	7,811
	15-18/28/29	86	1,080
	19	1,849	37,694
	20	763	12,223
	21/121	7,666	132,321
	23/123	4,183	70,312
	24/124	807	15,328
	25/125	1,248	18,523
	26/126	3,637	64,372
	27/127	1,304	22,204
Total Landed in Canada		57,603	816,639
Rec TAC (15% of total CDN)			890,013
Estimated Balance (net wt lbs) - END OF DECEMBER			73,374

Table 6. Recreational Halibut Monthly Catch Estimates (net wt. lbs) for 2017, 2018 and 2019

Month	Net Weight (lbs)			Cumulative Net Weight (lbs)		
	2017	2018	2019	2017	2018	2019
Feb	17,199	0	0	17,199	0	0
March	17,868	16,029	8,172	35,068	16,029	8,172
April	16,985	15,715	10,259	52,053	31,744	18,432
May	62,654	58,494	40,988	114,706	90,239	59,420
June	273,084	176,370	152,282	387,790	266,608	211,702
July	437,991	296,745	336,520	825,782	563,354	548,221
Aug	285,783	237,880	207,866	1,111,565	801,234	756,088
Sept	26,302	25,484	53,956	1,137,867	826,718	810,044
Oct	-	14,053	834	-	840,771	810,878
Nov	-	3,866	0	-	844,638	810,878
Dec	-	3,406	5,761	-	848,044	816,639
Total	1,137,867	848,044	816,639	3,682,029	5,129,380	4,850,474
					Recreational Allocation (15% of Canadian TAC)	890,013
					Estimated Total Catch	816,639
					Estimated Balance (net wt lbs) - END OF DECEMBER	73,374

Table 7. 2019 Estimated 2019 Halibut Catch in Pieces by Area and Month

2019 i-Rec data	Fishery Closed	Summary of 2019 In-season Recreational Halibut Catch Estimated Halibut Pieces Retained by Area and Month												
3-yr iRec avg. (2016-'18)	2019 catch monitoring program ('creel') data	Feb	March	April	May	June	July	August	Sep	Oct	Nov	Dec	Estimated Total Pieces by Area	% of Total Pieces by Area
PFMA	1	0	0	0	100	3050	4100	4300	800	0	0	0	12,350	22%
	2	0	0	0	250	1250	1200	1200	650	0	0	0	4,550	8%
	3	0	77	0	346	716	1241	1450	33	0	0	0	3,864	7%
	4	0	0	48	631	2147	2711	2502	503	0	0	0	8,541	15%
	5/6	0	0	75	51	565	806	592	184	0	0	0	2,272	4%
	7	0	0	0	43	111	465	348	60	0	0	0	1,027	2%
	8	0	0	0	25	41	200	229	0	0	0	0	495	1%
	9	0	0	0	25	92	181	149	123	0	0	0	570	1%
	10/11	0	0	19	51	182	303	166	0	0	0	0	720	1%
	12	0	0	38	40	158	201	395	0	70	0	0	902	2%
	13/14	0	0	0	15	57	91	60	307	0	0	0	530	1%
	15-18/28/29	0	0	0	15	35	0	36	0	0	0	0	86	0%
	19	0	280	243	237	237	93	7	485	0	0	0	1,849	3%
	20	0	77	132	266	46	112	68	62	0	0	267	763	1%
	21/121	0	0	26	85	691	5670	1155	39	0	0	0	7,666	13%
	23/123	0	0	19	95	152	2076	1621	220	0	0	0	4,183	7%
	24/124	0	0	41	56	435	239	16	20	0	0	0	807	1%
	25/125	0	0	19	184	124	685	161	75	0	0	0	1,248	2%
	26/126	0	0	0	0	607	2393	595	42	0	0	0	3,637	6%
	27/127	0	0	0	165	260	539	321	19	0	0	0	1,304	2%
2019 Totals	Monthly	0	434	658	2,681	10,956	23,306	15,371	3,622	70	0	267	57,364	
	Cum.	0	434	1,092	3,773	14,729	38,034	53,405	57,027	57,097	57,097	57,364		

Table 8: 2019 Average 2019 Net Weight Estimates of Retained Halibut by Area and Month

PFMA	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
1	10	9	11	12	10	11	10	13	11	11	11
2	13	12	14	13	14	14	13	12	13	13	13
3	14	12	14	15	13	13	13	13	13	13	13
4	14	13	14	15	13	13	13	13	13	13	13
5/6	13	13	13	13	13	13	13	13	13	13	13
7/8/9	14	14	14	14	16	11	12	12	12	12	12
10/11	9	10	8	8	8	8	8	8	8	8	8
12	9	9	8	9	8	9	11	10	10	10	10
13/14	17	16	18	18	17	19	21	20	20	20	20
15-18/28/29	13	14	13	13	14	12	12	12	12	12	12
19	18	18	15	19	11	16	14	15	15	15	15
20	13	13	13	13	13	12	12	12	12	12	12
21/121	18	21	16	18	20	22	22	23	22	22	22
23/123	20	20	16	16	20	16	16	16	16	16	16
24/124	15	11	19	19	22	16	19	19	19	19	19
25/125	17	15	17	17	19	15	19	17	17	17	17
26/126	19	16	19	19	19	19	19	19	19	19	19
27/127	16	16	16	16	19	14	14	14	14	14	14

Table 9. 2019 Estimated 2019 Halibut Catch in Net Weight (lbs) by Area and Month

PFMA		Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1		0	0	0	1,223	30,538	43,853	43,360	10,271	0	0	0	129,246
2		0	0	0	3,354	17,145	16,926	16,155	8,122	0	0	0	61,703
3		0	906	0	5,086	9,380	16,660	19,466	449	0	0	0	51,947
4		0	0	661	9,276	28,126	36,395	33,589	6,746	0	0	0	114,794
5/6		0	0	995	672	7,489	10,687	7,950	2,465	0	0	0	30,259
7/8/9		0	0	0	1,024	2,894	8,690	7,668	2,008	0	0	0	22,285
10/11		0	0	334	902	3,066	5,684	3,412	0	0	0	0	13,397
12		0	0	471	503	2,150	2,317	4,865	0	834	0	0	11,140
13/14		0	0	0	285	623	1,489	813	4,602	0	0	0	7,811
15-18/28/29		0	0	0	200	454	0	426	0	0	0	0	1,080
19		0	5,758	3,832	4,283	4,812	2,007	151	11,089	0	0	5,761	37,694
20		0	1,508	2,064	4,154	718	1,749	1,062	968	0	0	0	12,223
21/121		0	0	503	1,639	15,457	91,711	22,259	752	0	0	0	132,321
23/123		0	0	321	1,629	2,903	31,525	30,209	3,725	0	0	0	70,312
24/124		0	0	770	1,065	8,264	4,541	304	384	0	0	0	15,328
25/125		0	0	306	3,003	2,317	9,585	2,261	1,052	0	0	0	18,523
26/126		0	0	0	0	12,334	42,571	8,521	945	0	0	0	64,372
27/127		0	0	0	2,692	3,611	10,129	5,395	377	0	0	0	22,204
2019 Totals	**Monthly**	0	8,172	10,259	40,988	152,282	336,520	207,866	53,956	834	0	5,761	816,639
	Cum.	0	8,172	18,432	59,420	211,702	548,221	756,088	810,044	810,878	810,878	816,639	

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APPENDIX 3

Fisheries and Oceans Canada 2019 Enforcement Report

PREPARED BY: Fisheries and Oceans Canada (20December2019)

DATE: 20/DEC/2019

CONTRACTING PARTY: CANADA

AGENCY:

Fisheries and Oceans Canada

CONTACT:

Ann Bussell, Groundfish Enforcement Coordinator, Ann.Bussell@dfo-mpo.gc.ca

FISHERY SECTOR/S:

All

IPHC REGULATORY AREA:

IPHC Regulatory Area 2B (Canada: British Columbia)

DISCUSSION

Halibut Compliance and Enforcement – Commercial Halibut Summary 2019

2019 Commercial Halibut Fishery

The 2019 commercial halibut fishery opened at 12:00 hours local time on March 15, 2019 and closed at 12:00 hours local time on November 14, 2019. A total of 156 vessels and 526 fishing trips were recorded during the 2019 commercial halibut fishing season.

Compliance and Enforcement Priorities – 2019

Groundfish, including commercial Halibut, enforcement priorities for 2019 were identified in the Groundfish Integrated Fisheries Management Plan and by the Groundfish Enforcement Coordinator as follows:

- Fishing in closed areas such as Rockfish Conservation Areas (RCAs), sponge reef marine protected areas and in season closures;
- Dockside Observer Treatment Issues – not providing all reasonable assistance to the DFO designated observers;
- Non-compliance with the Dockside Monitoring Program (DMP) including hails;
- Retention of groundfish caught, retained, or possessed without authority of a licence. Priority will be placed on occurrences where retention for the purpose of sale is indicated;
- Unauthorized dual fishing. Dual fishing is defined as ‘fishing for and retaining groundfish under the authority of a Commercial Groundfish Licence and a Communal Groundfish Licence during the same fishing trip’;
- Non-compliance with electronic monitoring (EM) conditions of licence, especially time gap occurrences;
- False and misleading information provided to dockside observers.
- Non-deployment of seabird avoidance gear as required by conditions of licence.

Links to Pacific Region Groundfish Integrated Fisheries Management Plan – 2019:

Summary:

http://www.pac.dfo-mpo.gc.ca/fm-gp/ifmp-eng.html#Groundfish

Full Text:

https://cat.fsl-bsf.scitech.gc.ca/record=4076516&searchscope=06

Occurrences

Occurrences are reported or observed incidents which are potential violations of any Act or Regulation which falls under the mandate of a Canadian fishery officer.

Halibut Compliance and Enforcement – Recreational Halibut Summary - 2019

2019 Recreational Halibut Fishery

The 2019 recreational halibut fishery opened coast-wide at 00:01 hours on March 1, 2019 until further notice and with management measures in effect until March 31, 2019. On April 1, 2019 and effective from 00:01 hours until further notice recreational fishing for halibut opened coast-wide. Between January 1, 2019 and November 30, 2019 a total of 320,099 recreational licences were issued.

Halibut Compliance and Enforcement – Halibut Experimental Recreational Program - 2019

2019 Halibut Experimental Recreational Fishery

The halibut experimental recreational fishery (XRQ) opened on April 1, 2019 and closed on December 31, 2019. Two hundred and forty-three (243) licences were issued in 2019. There continues to be a staff member in the Groundfish Management Unit who closely tracks and sends out information to licence holders. This has resulted in an increased ability to identify non-compliance issues.

Additional details about the XRQ program are available online: http://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/ground-fond/index-eng.html

Halibut Compliance and Enforcement – Commercial, Food, Social and Ceremonial (FSC) and Treaty Fisheries - 2019

For all dual fishing (commercial and FSC) halibut trips the vessel master is responsible for following the conditions of licence specific to dual fishing. All of the fish require 100% monitoring at-sea and 100% monitoring at the dock. In 2019 forty-eight (48) commercial halibut vessels hailed out for one hundred and twenty-six (126) dual fishing trips.

FSC halibut fishing does not have the same monitoring requirements as commercial and dual halibut fishing. DFO is working with indigenous nations to improve catch monitoring and reporting.

RECOMMENDATIONS: NA

REFERENCES: See hyperlinks above

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Appendix 2**:** Tables – Fishery Officer Enforcement Effort Summary 7

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Appendix 5**:** Background Information *10-13*

Appendix 1: Tables - Occurrences

Table 1: ***Commercial Halibut Fishery*** *Occurrences - January 1, 2019 to November 30, 2019*[5]

Occurrence Type (not all are found to be violations)	**Number of Occurrences**
Observer Treatment	1
Area/Time (closed area)	10
Dual Fishing	138*****
EM System Issues	1
Sea Birds Caught	7
Gear Illegal/Used Illegally	3
Piece Count Issues	3
Registration / Licence	2
Hails	2
Release Rockfish	29**
Reported Overages	2
Species/Size Limit	1
Hold Check Not Completed	6
Halibut Tagging Issues	5
Scale Related	2
Total	**212**

[1]Source: DFO *Departmental Violations System (DVS) and Archipelago Marine Research Ltd. Portal for Clients*

***** *Most of the Dual Fishing occurrences are of a minor administrative nature.*

****** *Seven rockfish releases will be investigated further.*

Table 2: ***Recreational Halibut Fishery*** *Occurrences - January 1, 2019 to November 30, 2019*[6]

Occurrence Type	Number of Occurrences
Reporting	5
Quota/Bag Limits	11
Area/Time	1
Species/Size Limit	12
Registration/Licence	6
Illegal Buy/Sell/Possess	4
Illegal Transportation	4
Other Legislation	2
Assault/Obstruct	1
Total	**46**

[2]Source: DFO *Departmental Violations System (DVS*)

Table 3: ***Aboriginal Halibut Fishery*** *Occurrences - January 1, 2019 to November 30, 2019*[7]

Occurrence Type	Number Of Occurrences
Illegal Buy/Sell/Possess	8
Registration/Licence	1
Gear – Illegal/Used Illegally	2
Total	**11**

[3]Source: DFO *Departmental Violations System (DVS*)

Appendix 2: Tables – Fishery Officer Enforcement Effort Summary

Table 4: *2017, 2018, & 2019 C&P Fishery Officer Groundfish enforcement hours for aboriginal, commercial, and recreational Halibut fisheries and recreational hours comparing halibut to finfish and salmon in tidal waters*[8]

ENFORCEMENT ACTIVITY – Comparison of years 2017, 2018, and 2019 (January 1, 2018 to November 30, 2018)						
HALIBUT DEDICATED HOURS and % of TOTAL ENFORCEMENT EFFORT FOR PACIFIC REGION						
	2017	**2017**	**2018**	**2018**	**2019**	**2019**
FISHERY TYPE	**HOURS**	**% TOTAL ENF. EFFORT**	**HOURS**	**% TOTAL ENF. EFFORT**	**HOURS**	**% TOTAL ENF. EFFORT**
ABORIGINAL HALIBUT	427.5	0.6%	220.75	0.3%	392	0.5%
COMMERCIAL HALIBUT	592.25	0.8%	318.75	0.5%	666.5	0.85%
RECREATIONAL HALIBUT	500.5	0.7%	520.75	0.8%	693.75	0.89
TOTAL	**1520.5**	**2%**	**1060.25**	**1.6%**	**1,752.25**	**2.24%**
RECREATIONAL HOURS and % of TOTAL ENFORCEMENT EFFORT FOR PACIFIC REGION						
RECREATIONAL HALIBUT	500.5	0.65%	520.75	0.8%	729.75	0.94%
RECREATIONAL FINFISH – TIDAL WATERS	1366.25	1.77%	2057.25	3.1%	2,502.5	3.2%
RECREATIONAL SALMON – TIDAL WATERS	5025.5	6.5%	6280.75	9.4%	4667	6.02%
TOTAL	**6892.25**	**8.92%**	**8858.75**	**13.3**	**7,899.25**	**10.16**

***Note**: The recreational patrols are typically conducted on a "multi species" or "multi fishery" basis with the predominant effort in recreational tidal directed toward salmon and other finfish. Halibut checks are conducted on these patrols so they are included as part of enforcement effort directed towards recreational halibut fishing.*

[4] Source: DFO *Fisheries Enforcement Activity Tracking System (FEATS)*

Appendix 3: Tables – Aerial Surveillance Patrol Summary

Table 5: *2019, 2018, 2017, & 2016 C&P Aerial Surveillance Patrols – number of missions, total hours spent flying, and number of halibut vessels viewed during missions*[9]

AERIAL SURVEILLANCE PROGRAM (ASP) ACTIVITY			
Air Patrols	***Missions***	***Hours***	***Total Halibut Vessels Recorded Per Year***
January 1, 2019 – November 30, 2019	185	1036.59	146 (130 L, 16 FL)
January 1, 2018 – November 30, 2018	178	1057	294 (263 L, 31 FL)
January 1, 2017 – December 15, 2017	166	879.49	500 (461 L, 39 FL)
January 1, 2016 – December 15, 2016	154	876.04	388 (338 L, 50 FL).

L = commercial halibut licence FL= communal commercial halibut licence

[5]Source: Provincial Aerospace Limited - Surveillance Information System (SIS)

Appendix 4: Tables – Violation Summaries

Table 6: *2016, 2017, 2018 & 2019 Violations for Aboriginal, Commercial and Recreational Halibut – Charges Laid, Charges Pending/Under Review, and Tickets/Warnings Issued*[10]

PACIFIC REGION

VIOLATIONS	2016	2017	2018	2019	GRAND TOTAL
ABORIGINAL GROUNDFISH – HALIBUT	**5**	**14**	**2**	**14**	**35**
CHARGES LAID					
CHARGES PENDING/UNDER REVIEW	4	13	1	12	**23**
TICKET ISSUED				1	**1**
WARNING ISSUED	1	1	1		**3**
NATIVE PROTOCOL				1	**1**
COMMERCIAL GROUNDFISH - HALIBUT	**12**	**25**	**12**	**4**	**53**
CHARGES LAID	1			2	3
CHARGES PENDING/UNDER REVIEW	11	5	3	2	21
TICKET ISSUED		7			7
WARNING ISSUED		13	9		22
RECREATIONAL GROUNDFISH - HALIBUT	**51**	**80**	**64**	**85**	**280**
CHARGES LAID	5	8	1	6	20
CHARGES PENDING/UNDER REVIEW	5	10	6	38	59
TICKET ISSUED	20	26	21 (1 XRQ)	25	92

[10]Source: DFO Departmental Violations System (DVS)

VIOLATIONS	2016	2017	2018	2019	GRAND TOTAL
WARNING ISSUED	21	36	36 (2 XRQ)	16	109
GRAND TOTAL	**68**	**119**	**78**	**103**	**368**

[6]Source: DFO Departmental Violations System (DVS)

SIGNIFICANT CONVICTIONS:

- ***Closed Area Fishing – Hecate Glass Sponge Reef Marine Protected Area (MPA) – Commercial Halibut -*** $45,000.00 fine. First successful conviction for Glass Sponge Reef MPA under *Oceans Act* and *Fisheries Act*.

SIGNIFICANT 2019 INVESTIGATIONS and/or PENDING INVESTIGATIONS:

- *Seven Unauthorized Dual Fishing Trips*
- *Two No Seabird Avoidance Gear Deployed*
- *One Marina & Lodge Recreational Fishing Operator – Halibut Experimental Recreational Licence*

Link to DFO Conviction Tables**:**

http://dfo-mpo.gc.ca/media/charges-inculpations/pac-eng.htm

Appendix 5: Background Information

In 2016 the Government of Canada took action to strengthen and restore lost protections and incorporate modern safeguards to the *Fisheries Act*. In June 2019 Bill C-68, an Act to amend the *Fisheries Act* passed Parliament. On June 21, 2019 the amended *Fisheries Act* entered into force.
Fish and Fish Habitat Protection provisions came into force on August 28, 2019. New regulations are coming into force. Training for Fishery Officers is continuing.

COMPLIANCE ISSUES AND STRATEGIES

Overview

Fisheries and Oceans Canada (DFO) is a natural resource management organization with an infrastructure necessary to support professional law enforcement activities. The enforcement policies and activities of DFO with respect to regulatory compliance of aboriginal, commercial and recreational fisheries, is the responsibility of the Conservation and Protection (C&P) program.
The program is delivered through a three pillar enforcement approach which includes:

- Promotion of compliance through education and shared stewardship;
- Monitoring, control and surveillance activities; and,
- Management of major cases/special investigations in relation to complex compliance issues.

C & P, Pacific Region, is responsible for providing monitoring, control and surveillance activity along a coastline of 27,000 kilometers extending from the southern tip of Vancouver Island to northern British Columbia and the Yukon Territory.

Management of the groundfish fisheries off the west coast of Canada is described within the Groundfish Integrated Fishery Management Plan (IFMP). The IFMP is not enforceable; rather, fishery officers rely on

conditions of licence, variation orders and acts and regulations for enforcement purposes.

There are currently 160 fishery officers in the Pacific Region, the majority of which are located within four distinct operational Areas and the Aquaculture Enforcement unit. These areas/units are supported by the National Fisheries Intelligence Service. Currently C&P is staffing up to fill a number of vacancies in the region.

More information about DFO Compliance and Enforcement is available at the following website: http://www.dfo-mpo.gc.ca/fm-gp/enf-loi/index-eng.htm

Sanctions and Deterrence

DFO's C&P program pursues violations of fisheries legislation and regulations in three ways.

1. For violations that are considered minor, an officer may issue warning letters or tickets that will form part of the fisher's compliance history and will be considered when investigating future occurrences.
2. Alternative Measures Agreements are now a part of the new amended *Fisheries Act* and include a range of different types of agreements which may be used as an alternative to prosecution in the court system. The focus is on the rehabilitation of the offender and the public interest which may be better served outside of the traditional criminal process. Restorative Justice (RJ) is one example of such an agreement and is a community based approach.
3. Finally, serious or repeat offenders are dealt with through the provincial and federal courts where sentencing may include significant fines, prohibitions, licence suspensions and jail time.

MONITORING, CONTROL AND SURVEILLANCE

National Aerial Surveillance Program in Pacific Region

C&P operates a coastal air surveillance program utilizing a specially configured aircraft with a Fishery officer on board all flights. Close monitoring of the halibut fleet for compliance with hail-out, use of seabird avoidance gear, and area closures such as Rockfish Conservation Areas is an integral element of all patrols. Patrol coverage also monitors vessel activity within Canada's Exclusive Economic Zone. Air surveillance resources are utilized weekly throughout the year subject to weather conditions and conflicting requirements.

Information collected on the flights is available to fishery officers via an internet-based flight information system.

Fisheries Patrol Vessels

Inshore and near shore patrols are conducted by fishery officers using program vessels, which are primarily rigid hull inflatable boats, 7.33, 7.53, 8.5 and 10 meters in length.

Marine Patrol Program

There are two Canadian Coast Guard (CCG) mid-shore patrol vessels (MSPV) based in the southern and northern patrol areas. Each of the ships is dedicated to the C&P program and annually conduct 22 patrols each, resulting in between 286 to 309 operational days per year. There are two to three fishery officers on each patrol.

The National Aerial Surveillance Program and the Marine Patrol Program work together to ensure

effective and efficient use of C&P assets.

Fisheries Observer Programs

Additionally, certified fisheries observers, both dockside and at-sea, are designated under Section 39. (1) of the *Fishery (General) Regulations* and perform duties related to monitoring of fishing activities, examination and measurement of fishing gear, collection of biological samples, recording of scientific data, monitoring of the landing of fish and verification of the weight and species of fish caught and retained. Fisheries observers are not armed and do not have authority to enforce the law. They perform an observe, record and report function.

TRANSFORMATION OF THE CONSERVATION AND PROTECTION PROGRAM

C&P continues to develop into a fully integrated, risk-based and intelligence-led program.

National Fisheries Intelligence Service (NFIS) and Major Case Management

In 2019 NFIS continued to develop its intelligence-led program. In the Pacific Region this program will improve C&P's ability to set priorities and make decisions which focus on activities that are most harmful to fisheries and ocean resources. The western region of NFIS is almost fully staffed.

The application of Major Case Management (MCM) principles and practices will enable the C&P program to focus its resources on investigations that lead to successful prosecutions and sanctions. Currently a dedicated MCM unit is being developed and staffed. It will work with NFIS and Fishery Officers in the Pacific Region.

NFIS has developed a national verification program and the Pacific Region and now has three (3) fishery officers trained in the Pacific Region. In 2019 trained fishery officers started verifying that the dockside observers were carrying out their duties as required by regulation and national and regional policies and procedures. As well, two (2) verifications of DFO designated observer companies were completed by Ottawa NFIS staff.

This national initiative along with the Marine Patrol Program and Aerial Surveillance Program round out C&P's commitment to improved compliance monitoring and enforcement.

HALIBUT ENFORCEMENT OVERVIEW

Fisheries observers and electronic monitoring (EM) systems perform a key role in observing and documenting fishing-related occurrences. Fishery officers have access to EM and observer data for enforcement purposes.

Fishery officers conduct inspections both dockside and at sea for compliance with licence conditions. Directed enforcement effort on the Halibut fishery is dependent on work load and the priorities identified by the respective C&P Area Chiefs.

The hook and line halibut fishery has 100% monitoring through the use of sophisticated GPS, hydraulic sensors and video imaging equipment, logbooks and dockside observers. This along with significant court sanctioned penalties has resulted in a high rate of compliance.

Commercial Licence Categories

A Commercial Halibut category ‘L’ or Communal Commercial Halibut category ‘FL’ licence is required to participate in the directed commercial Pacific Halibut fishery.

Category ‘L’ Halibut eligibilities are limited entry and vessel-based. Category ‘FL’ eligibilities are party-based; an indigenous group or organization is the licence eligibility holder and the eligibility must be designated to a commercially registered fishing vessel.

Vessels are permitted to conduct combined Halibut ‘L’ or ‘FL’ and Sablefish ‘K’ or ‘FK’ trips. These vessels are required to identify their intentions at the time of hail-out.

DFO INTERNATIONAL CONSERVATION & PROTECTION

The Pacific Region has a Senior Compliance Program Officer involved in monitoring and addressing illegal, unregulated and unreported (IUU) fishing in international waters. They are seeing a shifting dynamic in the “legal” fleets operating further north and east in the Pacific Ocean due to shifting climate and economics (collapse of their local stocks).

Links to International Illegal, Unregulated, Unreported (IUU) Fishing articles:

https://www.cbc.ca/news/canada/nova-scotia/satellites-illegal-fishing-radarsat-constellation-1.5256197

https://seapowermagazine.org/coast-guard-cutter-mellon-returns-after-80-day-patrol-of-pacific-ocean/

https://www.maritime-executive.com/article/chinese-and-u-s-coast-guards-partner-for-driftnet-bust

Prepared by Groundfish Enforcement Coordinator 2019-12-20

APPENDIX 4

Province of British Columbia 2019 Annual Report

PREPARED BY: British Columbia Ministry of Agriculture

DATE: 21/DEC/2019

CONTRACTING PARTY: CANADA

AGENCY:

The Province of British Columbia represented by the Minister of Agriculture.

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FISHERY SECTORS:

All sectors within British Columbia.

IPHC REGULATORY AREA

IPHC Regulatory Area 2B (Canada: British Columbia)

DISCUSSION

The Province of British Columbia (B.C.) has a long history of involvement with the Pacific halibut fishery and the International Pacific Halibut Commission (IPHC). B.C recognizes the importance of Canada working bilaterally with the United States through the Pacific Halibut Treaty as well as the work done by the IPHC to develop and conserve Pacific halibut stocks. The significant history of this Treaty as one of the first Canadian international agreements and the near-century of mutual benefit to both countries serves as a tremendous example to the fisheries management world. B.C. commends the efforts made by the Commission to reach agreement during the 2019 IPHC Annual Meetings. Thousands of jobs rely on the continued cooperation and it is critical that this history of collaboration continues.

The B.C. Ministry of Agriculture is responsible for collection and reporting of data and statistics for the agri-food sector. An important part of that mandate is to analyze the impact of various sectors, including fisheries and seafood to the broader provincial economy. B.C. commercially harvests and reports on over 25 wild fisheries including Pacific halibut which is within B.C.'s top most valuable wild fishery commodities[1]. The Pacific halibut fishery supports significant commercial harvests in Canada's waters while providing many fishing and processing jobs and is significantly important to small coastal communities and First Nations across the Canadian west coast. The Province licences seafood processors and annually collects data on the volumes and values of the various seafood products. In 2018, the surveys showed the processing of 3,300 tonnes (7.2M lbs) of Pacific halibut, which also includes imported halibut processed in B.C. The survey also showed landed and wholesale values of $44.1M and $63.2M respectively. Pacific halibut account for roughly 10% of the wholesale value of all B.C.'s wild fisheries including all groundfish, salmon, and shellfish. In 2018, B.C. exported 1.5M kilograms (3.3M lbs) of halibut products worth $33M. The Province also conducts a seafood sector employment survey every three years which provides data on jobs, wages, and

seafood processing activities. In 2016, there were 85 processing facilities that reported processing halibut and generated 319 jobs with an estimated $14M paid in wages. An average of 50 companies annually have reported wholesale sales of halibut products within the last three years[2].

In addition, the recreational halibut fishery supports the hundreds of fishing lodges, charter companies, and individuals that also contribute tremendously to the economies of coastal communities. In 2019 there were severe restrictions on salmon fishing in B.C. which amplified the importance of the recreational halibut fishery to the sector, helping contribute to its over $1B impact on the B.C. Gross Domestic Product. B.C. is pleased to understand that the IPHC has contracted a fisheries economist to investigate the broader socioeconomic impacts and downstream effects of the Pacific halibut fishery and looks forward to working together through the Ministry of Agriculture as B.C.'s agency responsible for fisheries and seafood economic data.

First Nations are entitled to a Food, Social and Ceremonial (FSC) allocation of the TAC, and many jobs within the halibut fishery and halibut processing facilities are held by members of First Nations in British Columbia. In the commercial halibut fishery, approximately 23% of licenses are held by B.C. First Nations. B.C. recently became the first province in Canada to introduce legislation aimed at adopting the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), that mandates that government bring its laws and policies into harmony with the aims of the declaration. The B.C. government has set Indigenous reconciliation as a top priority and is actively working to ensure that First Nations are meaningfully included in management of all B.C. fisheries.

B.C. has an integrated groundfish fishery with 100 per cent monitoring and 100 per cent bycatch accountability. This well-developed program, which includes at-sea observers and electronic monitoring solutions, is regarded as one of the most well monitored fisheries in the world. In September 2009, the B.C. Pacific halibut fishery earned Marine Stewardship Council certification for being a sustainable and well-managed fishery. These extensive fisheries monitoring programs come at a direct cost to fishermen and license holders as they are entirely funded by industry. West coast Canadian fishers respect that the monitoring programs level the playing field by keeping all fishery participants compliant with the rules that help to ensure sustainable stocks and the future of their industry.

The decisions made annually by the IPHC greatly impact the livelihood of many coastal B.C. residents and local economies. With the extensive and costly efforts of accounting for all halibut bycatch in place, B.C. expects that all fishers who share access to the Pacific halibut stocks should be held to similar standards of catch accounting. B.C. fishers need to be assured that the decisions made by the IPHC are based on the best data and science possible by ensuring that all contributing data sources are as thorough and reliable as what they contribute. Fishers deserve a return on the investment they put in to the detailed and reliable data that provide full accounting of nearly every fish pulled from B.C. waters.

Research indicates there is a net southeasterly migration of juvenile halibut from the Bering Sea and the Gulf of Alaska into B.C.[3] This pattern allows Alaskan fisheries to intercept the halibut stocks prior to them entering B.C. and southern U.S. state waters. Incomplete monitoring and Alaskan bycatch of halibut in trawl fisheries impact recruitment of juvenile halibut to the fishery as many halibut caught in industrial trawl nets do not survive release, resulting in significant mortality in juvenile halibut that might otherwise grow and become available for other areas such as 2A, 2B and 2C. Uncertainty regarding post-release mortality rates and its implication for total removals adds to these concerns. The 2019 IPHC Fishery Statistics report confirms continued low observer coverage and poor bycatch mortality estimates in area 3 as well as a significant increase of halibut bycatch mortality in area 4CDE[4].

With the overall TAC decreasing again this year, it is exceedingly important that the issues of bycatch uncertainty and lack of bycatch accountability are addressed as soon as possible. Allowing these issues to continue in areas known to have higher levels of U26 halibut could hinder recruitment and impact future sustainability for all regulatory areas. The Province of B.C. supports more robust monitoring programs to ensure that fisheries are held accountable for their catch and bycatch,

especially in areas with incomplete and/or less reliable data. The integrity of the data collected in all areas is important to managing Pacific halibut as a shared resource.

The Province of B.C. commends the Commission's decision during the 2019 IPHC Annual Meeting to recommend evaluating and redefining TCEY to include the U26 component of discard mortalities, including bycatch, as steps towards more comprehensive and responsible management of the resource. B.C. supports the intent that each Contracting Party to the Treaty would be responsible for counting its U26 mortalities against its collective TCEY, and the intent that this change would take effect for TCEYs established at the 2020 Annual Meeting.

Recommendation

The Government of British Columbia's position is that the IPHC must exercise its authority to regulate the incidental catch of Pacific Halibut in all regulatory areas by:

1. **developing a framework for addressing poor bycatch mortality estimates, and**
2. **developing a robust method of accountability for U26 bycatch.**

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3. *IPHC Management Strategy Evaluation (MSE): update. (A. Hicks, P. Carpi, S. Berukoff & I. Stewart; 25 October 2019). IPHC-2019-IM095-14*
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