

Commission of Inquiry into the Decline of  
Sockeye Salmon in the Fraser River



Commission d'enquête sur le déclin des  
populations de saumon rouge du fleuve Fraser

## Public Hearings

## Audience publique

**Commissioner**

L'Honorable juge /  
The Honourable Justice  
Bruce Cohen

**Commissaire**

**Held at:**

Room 801  
Federal Courthouse  
701 West Georgia Street  
Vancouver, B.C.

Monday, February 21, 2011

**Tenue à :**

Salle 801  
Cour fédérale  
701, rue West Georgia  
Vancouver (C.-B.)

le lundi 21 février 2011

## **APPEARANCES / COMPARUTIONS**

Brock Martland Kathy L. Grant	Associate Commission Counsel Junior Commission Counsel
Tim Timberg Geneva Grande-McNeill	Government of Canada
Boris Tyzuk, Q.C.	Province of British Columbia
No appearance	Pacific Salmon Commission
No appearance	B.C. Public Service Alliance of Canada Union of Environment Workers B.C. ("BCPSAC")
No appearance	Rio Tinto Alcan Inc. ("RTAI")
Shane Hopkins-Utter	B.C. Salmon Farmers Association ("BCSFA")
No appearance	Seafood Producers Association of B.C. ("SPABC")
No appearance	Aquaculture Coalition: Alexandra Morton; Raincoast Research Society; Pacific Coast Wild Salmon Society ("AQUA")
Judah Harrison	Conservation Coalition: Coastal Alliance for Aquaculture Reform Fraser Riverkeeper Society; Georgia Strait Alliance; Raincoast Conservation Foundation; Watershed Watch Salmon Society; Mr. Otto Langer; David Suzuki Foundation ("CONSERV")
Don Rosenbloom	Area D Salmon Gillnet Association; Area B Harvest Committee (Seine) ("GILLFSC")

**APPEARANCES / COMPARUTIONS, cont'd.**

Phil Eidsvik	Southern Area E Gillnetters Assn. B.C. Fisheries Survival Coalition ("SGAHC")
Christopher Harvey, Q.C.	West Coast Trollers Area G Association; United Fishermen and Allied Workers' Union ("TWCTUFA")
No appearance	B.C. Wildlife Federation; B.C. Federation of Drift Fishers ("WFFDF")
No appearance	Maa-nulth Treaty Society; Tsawwassen First Nation; Musqueam First Nation ("MTM")
No appearance	Western Central Coast Salish First Nations: Cowichan Tribes and Chemainus First Nation Hwlitsum First Nation and Penelakut Tribe Te'mexw Treaty Association ("WCCSFN")
Brenda Gaertner Crystal Reeves	First Nations Coalition: First Nations Fisheries Council; Aboriginal Caucus of the Fraser River; Aboriginal Fisheries Secretariat; Fraser Valley Aboriginal Fisheries Society; Northern Shuswap Tribal Council; Chehalis Indian Band; Secwepemc Fisheries Commission of the Shuswap Nation Tribal Council; Upper Fraser Fisheries Conservation Alliance; Other Douglas Treaty First Nations who applied together (the Snuneymuxw, Tsartlip and Tsawout); Adams Lake Indian Band; Carrier Sekani Tribal Council; Council of Haida Nation ("FNC")
No appearance	Métis Nation British Columbia ("MNBC")

**APPEARANCES / COMPARUTIONS, cont'd.**

Nicole Schabus	Sto:lo Tribal Council Cheam Indian Band ("STCCIB")
No appearance	Laich-kwil-tach Treaty Society Chief Harold Sewid Aboriginal Aquaculture Association ("LJHAH")
No appearance	Musgamagw Tsawataineuk Tribal Council ("MTTC")
Ming Song	Heiltsuk Tribal Council ("HTC")

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1 Vancouver, B.C. /Vancouver  
2 (C.-B.)  
3 February 21, 2011/le 21  
4 février 2011  
5

6 THE REGISTRAR: The hearing is now resumed.

7 MR. MARTLAND: Mr. Commissioner, Brock Martland, M-a-r-  
8 t-l-a-n-d for the record, and with me is Kathy  
9 Grant. Kathy is with a "K", just for the record.

10 We'll be leading evidence for the next nine  
11 days of hearings on two topics, the first being  
12 commercial fishing and in particular, within that  
13 rather broad description, selective fishing,  
14 allocation and licensing of the commercial Pacific  
15 salmon fishery. The second topic is recreational  
16 fishing. That topic begins March 2nd, next week.

17 There's a sense in which some of the  
18 evidence, Mr. Commissioner, that we're leading is  
19 perhaps out of sequence in that it's not the  
20 linear narrative it might have been. The reason  
21 is simply because of witness availability and. An  
22 example of that is Dr. Hargreaves, one of our  
23 witnesses today, is only available today.  
24 Tomorrow we have a commercial fishers' panel.  
25 Some of the members of that panel are looking to  
26 head off to the herring fishing season and they  
27 become unavailable effectively because of that,  
28 within short order. So that's why we're leading  
29 off with that evidence rather than going in a pure  
30 -- I don't know if there is a chronological order,  
31 but there's probably another order that is more  
32 logical than what we're doing. I don't think  
33 it'll present any difficulties for you or for the  
34 people here.

35 The start of this hearing, one of the things  
36 I'd like to do out of the gate is to put into  
37 evidence our Policy and Practice Report, or PPR.  
38 I think we're all probably using that lingo and I  
39 think some of the witnesses even have that lingo.  
40 So the PPR, the Police and Practice Report is on  
41 our exhibit list.

42 I'll be referring, as we move forward, to our  
43 exhibit list. Just for the sake of clarity,  
44 that's the list of exhibits, commercial fishing.  
45 This has been circulated to participants. I hope  
46 that everyone has a copy of it. It has a list of  
47 63 documents. Not all of those will necessarily

1           make their way into evidence, but this is the  
2           first one and I'd like to have that marked as an  
3           exhibit, please, number 1 on the exhibit list, the  
4           PPR for Commercial Salmon Fishing.

5       THE REGISTRAR: You wish that to be marked as a PPR?

6       MR. MARTLAND: Please.

7       THE REGISTRAR: PPR number 6.

8

9

10           PPR-6: Commercial Salmon Fishing -  
11           Licensing, Allocation and Related Issues,  
12           December 22, 2010

13

14       MR. MARTLAND: Thank you. As with other hearings, the  
15           basis on which we're presenting evidence, Mr.  
16           Commissioner, is the expectation that the PPR is  
17           accurate. If witnesses or participants identify  
18           mistakes or clarifications, we certainly have  
19           welcomed them to offer that in their evidence.  
20           There's cases where we expect to take witnesses to  
21           one aspect of the PPR if they've identified a  
22           problem or a concern with it. So we'll do our  
23           best to ensure that the PPR supplemented by the  
24           evidence gives you an accurate picture of where  
25           things stand.

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I should add, for everyone's benefit, the PPR  
does have a glossary of terms. We're into the  
usual alphabet soup of acronyms and groups and the  
like. But the PPR for this, as well as the  
recreational fishing PPR, they both have a  
glossary.  
Today's witnesses are Dr. Brent Hargreaves  
and Gordon Curry on the topic of selective  
fishing. Based on the estimates that have been  
provided to me by counsel for cross-examination, I  
expect we'll be able to conclude their evidence  
today as scheduled. My examination I expect to be  
the longest this morning. Mr. Timberg will follow  
me. We don't expect the cross-examination by  
participants to be too lengthy from the estimates  
I've received.  
I want to express in advance our appreciation  
to participants' counsel for taking a focused  
approach to their examination of witnesses. As  
everyone here knows, we have a very compressed  
schedule and a very limited number of hearing days  
in which to cover a fair bit of ground. Of  
course, the problem of creating difficulties down

1 the road if we're not able to stay on track, so  
2 we're grateful for participants' counsel in  
3 adjusting on the fly in narrowing their questions.  
4 I've invited them, and will continue to invite all  
5 counsel, to contact me and provide input. If  
6 there's areas that I can cover through my direct  
7 examination, I'm happy to try to do that if it can  
8 speed us along.

9 If I could now ask that the witnesses be  
10 affirmed.

11  
12 BRENT HARGREAVES, affirmed.

13  
14 GORDON CURRY, affirmed.

15  
16 THE REGISTRAR: State your full name, please?

17 DR. HARGREAVES: Brent Hargreaves.

18 THE REGISTRAR: Thank you.

19 MR. CURRY: Gordon Curry.

20 THE REGISTRAR: Thank you. Counsel?

21 MR. MARTLAND: I'll move in perhaps a staccato way  
22 through the background for these two witnesses.  
23 First, if I might ask that Dr. Hargreaves c.v.  
24 which is number 2 on the exhibit list, and that's  
25 on the screen before us now, that that be the  
26 first exhibit put in.

27 THE REGISTRAR: Exhibit --

28 MR. MARTLAND: I'll just confirm, Dr. Hargreaves, the  
29 document that's before you is your c.v.?

30 DR. HARGREAVES: That's correct.

31 MR. MARTLAND: Thank you.

32 THE REGISTRAR: Exhibit number 430.

33  
34 EXHIBIT 430: *Curriculum vitae* of Dr. Brent  
35 Hargreaves

36  
37 MR. MARTLAND: And for Mr. Curry, likewise. It's  
38 number 3 on our exhibit list.

39 Mr. Curry, do you recognize that as your  
40 c.v.?

41 MR. CURRY: Yes, I do.

42 MR. MARTLAND: And I'd like that to be the next  
43 exhibit, please.

44 THE REGISTRAR: Exhibit number 431.

45  
46 EXHIBIT 431: *Curriculum vitae* of Mr. Gordon  
47 Curry

1 MR. MARTLAND: Thank you.

2

3

EXAMINATION IN CHIEF BY MR. MARTLAND:

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5

Q Dr. Hargreaves, I won't read your c.v. out, it speaks for itself. I'll just, if I might, quickly confirm you have a Ph.D. in Biological Oceanography from Dalhousie University. You've spent most of your 28-year career with the Department of Fisheries and Oceans, or DFO, as a research scientist and, on occasion, have taken assignments as the lead or a chair of different regional initiatives?

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DR. HARGREAVES: Correct.

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Q And in 1998, as an example, you served as chair of the Coho Response Team and, for that work, you received the Deputy Minister's Prix D'Excellence for outstanding performance?

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DR. HARGREAVES: Right.

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Q Your work on that led to the selective fishing strategy and funding for the Selective Fishing Program which arose in the context of CFAR or the Canadian Fisheries Adjustment and Restructuring plan?

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DR. HARGREAVES: Yes, that was one component of the many things that came out of that, yes.

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Q And focusing on selective fishing, you have conducted research into technologies for selective fishing, for example - and we'll come to these in much more detail - but the effectiveness of revival tanks, the use of escape panels and knotless bunt nets for the seine fishery, similar sorts of work.

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DR. HARGREAVES: Yes, that's true, correct.

43

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Q Dr. Hargreaves, you're a long-standing member of the Pacific Scientific Advice and Review Committee, or PSARC, and have reviewed more than 120 PSARC working papers?

DR. HARGREAVES: Correct.

Q And you have led the DFO scientific investigations on a separate note into sea lice in the Broughton Archipelago?

DR. HARGREAVES: Yes, I was responsible for the marine monitoring component of that program.

MR. MARTLAND: And, Mr. Commissioner, Dr. Hargreaves has significant involvement in the topic, that distinct topic of aquaculture, but it's not part

1 of what we're leading evidence on or having  
2 questions on today.

3 Q I take it, Dr. Hargreaves, your current position  
4 is that you're on an acting assignment basis as  
5 lead of the salmon team?

6 DR. HARGREAVES: That's correct.

7 Q Mr. Curry, for your part, you began work with the  
8 Department as a fisheries officer in the north  
9 coast some 30 years ago, and I understand that in  
10 the early 1990s, you took a leave from the  
11 Department. You obtained Biological Sciences  
12 degree at the University of Victoria, and then  
13 returned to the Department in 1993, at that point  
14 working as a fisheries officer first, and then  
15 spending four years as an Aboriginal Fisheries  
16 Strategy, or AFS implementation officer?

17 MR. CURRY: That is correct.

18 Q From 1998 until March of 2002, I understand that  
19 you worked intensively on the Selective Fisheries  
20 Program and that that work included planning the  
21 program, demonstrating and implementing gear and  
22 method experiments amongst other things.

23 MR. CURRY: That is correct.

24 Q And you, for that work on selective fishing,  
25 received the Deputy Minister's Prix D'Excellence.

26 MR. CURRY: Yes, that's correct.

27 Q Since that point in 2002, I understand you've  
28 served in fisheries management positions including  
29 as a regional negotiator for DFO in the Sliammon  
30 First Nations treaty development and as an  
31 aboriginal affairs advisor for the south coast.

32 MR. CURRY: Yes, and in addition, managed some of the  
33 commercial salmon fleets after the stint with  
34 selective fishing, so groups like the gulf  
35 trollers and some of the gillnetters and seine  
36 fisheries as well.

37 Q And in the course of some of that work, I take it  
38 you've had some exposure to defined share  
39 management models.

40 MR. CURRY: Some involvement in the testing of defined  
41 shares at the beginning.

42 Q And I understand that your present situation is  
43 that you retired from the DFO in October of 2010,  
44 but you've now been hired back as a casual  
45 employee by the Department?

46 MR. CURRY: That would be December 1st I retired from  
47 the Department, and currently I'm working on

1 casual as an aboriginal fisheries strategic  
2 planner.

3 Q Thank you. Why don't I start at the broad level,  
4 and I'm not aiming to repeat information that's  
5 set out in the PPR, but I think it is helpful to  
6 give us some context for today. So, Mr. Curry,  
7 I'm hoping you could give us sort of a two-minute  
8 overview of what selective fishing means.

9 MR. CURRY: Basically, selective fishing is the ability  
10 to avoid non-target species or stocks, and if we  
11 encounter them in fisheries, having the ability to  
12 release them alive and unharmed. So when we talk  
13 about by-catch, we're really talking about it can  
14 be either fish, it can be birds, it can be  
15 mammals, and it isn't in the policy, but also we  
16 need to include reptiles in there for leatherback  
17 turtles.

18 So the whole impetus behind the Selective  
19 Fisheries Program has been looking for solutions.  
20 Where we have issues of by-catch in fisheries that  
21 are restricting our ability to fish on target  
22 stocks that are abundant, such as abundant  
23 portions of the Fraser sockeye stocks, there are  
24 other species that we are looking for solutions to  
25 be able to avoid them or find gear methods that we  
26 can release them alive and unharmed.

27 Q Dr. Hargreaves, could you help to provide a sense  
28 of why selective fishing is important to or  
29 impacts upon Fraser River sockeye in particular?

30 DR. HARGREAVES: I think that it's useful to look at  
31 the world context for this, to begin with, and  
32 it's -- I think what we saw prior to the Second  
33 World War, for example, was that most people felt  
34 that ocean resources were pretty much unlimited,  
35 so there were vast stocks of most fish species  
36 relatively unexploited. The technology levels  
37 were relatively low and most people felt we could  
38 just harvest basically anything we wanted as fast  
39 as we could.

40 Following the Second World War, technology  
41 improved substantially. There was a growing  
42 interest in fish as a food source for humans and  
43 livestock, for example. As technology progressed,  
44 we became more and more efficient at harvesting  
45 fish stocks.

46 By the late, I would say, '70s and '80s, it  
47 became apparent that many of the world stocks of a

1 variety of different species were either fully  
2 exploited or over-exploited already at that point.  
3 There were growing concerns around conservation of  
4 those stocks.

5 So to bring that back to Fraser sockeye, I  
6 think we can jump forward a couple of decades and  
7 realize that there are many stocks of Fraser  
8 sockeye that are in poor condition, that have been  
9 probably over-exploited or at least have declined  
10 to the point that there are conservation risks for  
11 those. So selective fishing was seen as one  
12 avenue of selectively harvesting the stocks that  
13 we have less conservation concerns for and  
14 allowing us to harvest those surplus stocks while  
15 protecting the stocks that are of lower abundance.

16 Q For the Fraser sockeye fishery, are there examples  
17 you can give of how a concern about a particular  
18 stock or species can have an impact for whether  
19 there's openings or the management of the sockeye  
20 fishery in particular?

21 DR. HARGREAVES: Yeah, I can give you two fairly  
22 specific examples. If we look at the Integrated  
23 Fisheries Management Plan, the IFMP that DFO  
24 produces each year which lays out the framework  
25 for how fisheries will be conducted and how we'll  
26 harvest different stocks that are surplus, in that  
27 IFMP there are concerns for coho, for example,  
28 Interior coho, Thompson coho in particular, Fraser  
29 chinook as well, that limit the amount of harvest  
30 or opportunity that we can provide for Fraser  
31 sockeye.

32 Another example of that within the sockeye  
33 species itself is we have some stocks that are  
34 very low levels, for example, Cultus Lake sockeye,  
35 very serious conservation concerns for that.  
36 We've undergone a number of different strategies  
37 and programs to rebuild that stock, but it's still  
38 at a very low level. So that very much -- when  
39 that stock is in the river and in the areas where  
40 fishing -- we'd like fisheries to take place on  
41 more abundant stocks. That constrains the amount  
42 of fishing that we can allow because of the  
43 conservation concerns for Cultus, for example.

44 Q I won't take you to the document, but there's a  
45 newsletter that was produced in the course of the  
46 Selective Fisheries Program, and I'll just use  
47 this, without taking you to the document, but it

1 describes selective fishing. It suggests it's of  
2 particular importance for the Pacific salmon  
3 fishery. I think it uses language to the effect  
4 that this is perhaps the most positive solution.  
5 It may be the only way that we're able to continue  
6 or permit fishing in some situations. Could you  
7 comment on that, please?

8 DR. HARGREAVES: It's perhaps, in my view, overstating  
9 it to say it's the only way. I think there are  
10 many different aspects of selective fishing. In  
11 marine areas, I would agree with that statement.  
12 If we cannot fish more and more selectively - and  
13 we're not there yet, I think it's a long-term  
14 process of improving our selective ability - then  
15 I think we definitely will have constrained  
16 fisheries.

17 In terminal areas, for example, when a single  
18 stock is returning to a particular river or lake,  
19 you can conduct a fishery there with very little  
20 impact on other stocks obviously, if there are  
21 none out in the area. So you can be less  
22 selective in the sense of the type of gear,  
23 although you're being very selective now in terms  
24 of the time and area where you're actually  
25 conducting that fishery. So there are a variety  
26 of different elements of selective fishing that  
27 come to bear here.

28 Q Mr. Curry, I'd like to ask you this question. We  
29 sometimes hear the analogy of a toolbox that the  
30 Department has to manage and oversee the  
31 commercial fishery. The toolbox is said to  
32 include the use of time and area and closings to  
33 control fishing effort, regulating equipment and  
34 regulating techniques or methodology on the part  
35 of commercial fishers. Could you comment, at a  
36 general level, on how management tools can be used  
37 to promote or to effect selective fishing?

38 MR. CURRY: Yes. There's a number of ways that we can  
39 effect selective fishing. One of the first  
40 strategies that we use, and I would reference  
41 within the selective fishing policy, principle  
42 number 4, lays it out in a way that we look at  
43 this whole -- I guess the implementation of  
44 selective fishing is really there's four orders of  
45 how we look at this, from the perspective of the  
46 least harm to potential by-catch.

47 The first order is to avoid the non-target

1 fish or the by-catch as the first order. If you  
2 don't encounter it, it's out there swimming, it's  
3 still alive and doing well. So if we can avoid it  
4 -- we do that by predominantly using time and  
5 area. So if you're fishing in a place where your  
6 stocks of concern don't exist, you're doing fine.  
7 You aren't encountering them, you don't have to do  
8 anything, you're on the target species. That's  
9 the best strategy.

10 Q And perhaps I can just interrupt you because I  
11 think you're reading, or at least referring to --  
12 and I just perhaps should confirm.

13 MR. MARTLAND: Mr. Lunn, if I could jump ahead to  
14 number 14 on our list, it's already an exhibit,  
15 number 266. This, I hope, will show you the  
16 policy for selective fishing. I don't know if  
17 I've guessed accurately.

18 Q Is that what you were looking at?

19 MR. CURRY: Yes, yes, you have.

20 Q All right.

21 MR. CURRY: Yes. So this would be page 9 of the policy  
22 which is principle number 4.

23 Q Okay.

24 MR. CURRY: That's it there. So an example of the  
25 first strategy of time and area, an example of  
26 that would be, for instance, in a First Nations  
27 fishery. If a First Nation is fishing in a  
28 terminal area right near the spawning grounds of a  
29 particular target sockeye that they're fishing,  
30 they're fishing very selectively on a species  
31 being sockeye, but also to the level of a stock  
32 within a group of stocks within the Fraser River.  
33 So that's a very selective fishery.

34 The next order is looking at gear design. So  
35 if you're able to avoid certain species in this  
36 case. An example of that would be in the troll  
37 fishery, if you're able to use large plugs in the  
38 range of, say, an eight-inch plug, seven- or  
39 eight-inch plug. It's a large lure on the end of  
40 the line with a hook. If you're using that, you  
41 tend to catch chinook and you tend to avoid coho.  
42 So the coho that are being avoided haven't been  
43 caught and that's the next best strategy. They  
44 are not being caught and so you don't have to  
45 handle them and there's no mortality associated  
46 with that.

47 The next order is looking at the third

1 strategy, releasing alive and unharmed from the  
2 water as opposed to the next strategy which is  
3 onboard a vessel. So an example of that would be  
4 the work that was carried out with seine grids  
5 where, in the same net, we had plastic panels with  
6 specific size openings in them to allow small fish  
7 to escape from the net. So in this case --

8 Q That's called an "escape grid"; is that right?

9 MR. CURRY: It's an escape grid, yes.

10 Q Thank you.

11 MR. CURRY: So, in this case, you're able to set on a  
12 mix of species and in a number of cases, such as  
13 out in Area 20, which is Juan de Fuca Strait,  
14 there's a lot of immature coho and chinook in  
15 those waters. And so by using escape grids, we're  
16 able to allow these small fish to escape the net  
17 prior to them being brought aboard. So this way,  
18 they swim through a hole in the net and they carry  
19 on, on their journey, and growth. So that's a  
20 very good strategy and we've been able to  
21 accomplish that. So that's an example of that  
22 type of strategy.

23 Our next order of strategy is once you do  
24 bring that fish aboard, that mix of species, then  
25 you're taking the fish out of water, so to speak,  
26 and it's in an air environment, it's not in the  
27 water, so you need to treat that fish carefully so  
28 that you don't damage it, and if you have a  
29 revival tank, you're able to give it an  
30 opportunity to recover before being released back  
31 into the ocean.

32 So an example of another strategy in this  
33 regard would be with a gillnet fishery when you  
34 have a short set time, and ideally a short net as  
35 well --

36 Q And I'll just interrupt you just so I'm clear.  
37 The short set time refers to the length of time  
38 that the net's actually drifting or in the water?

39 MR. CURRY: Yes, that's right. So if you think of --  
40 if you put a net out in the water and it was out  
41 in the water for two hours, a lot of the fish that  
42 you'd bring aboard would be dead, other than those  
43 that were just recently caught.

44 Q And I take it that's because those fish in general  
45 are swimming right into the mesh and getting  
46 caught in it and maybe suffocating when they're  
47 there for some period of time.

1 MR. CURRY: That is correct. And so, as a result, if  
2 you use a short set time, something in the range  
3 of 30 minutes, and you use a shorter net so that  
4 most of the fish that are coming aboard are in  
5 better condition and alive, then you have some  
6 options. So then you can look at recovering those  
7 fish with the revival tank and releasing them back  
8 into the ocean or the river so that they can carry  
9 on, on their journey. So that would be if you're  
10 fishing for Fraser sockeye and you need to release  
11 coho, for instance. So that would be a strategy  
12 that we've used and shown to be successful. So  
13 that's using the fourth strategy in the policy, or  
14 an example of it.

15 Q Are these strategies, in your view, Mr. Curry, are  
16 these strategies that fit better with - I'll use  
17 two things - first of all, a defined share or a  
18 share-based management model, and secondly, a  
19 competitive or a derby-style management model for  
20 the fishery, are these selective fishing  
21 strategies that you mentioned, do they fit better  
22 with one than the other?

23 MR. CURRY: Yes, they do. Basically, what you need in  
24 order to carry out a lot of these selective  
25 fishing strategies is you need some time to handle  
26 the fish properly so that you aren't further  
27 injuring them and you're able to release them  
28 alive and unharmed.

29 So when you slow the pace of the fishery,  
30 harvesters have more time, then, to implement  
31 these strategies effectively so that they can  
32 release those fish. So if you have a defined-  
33 share fishery, as an example, you generally, even  
34 in salmon, have more time to work on the amount of  
35 fish that you're harvesting, and therefore you  
36 also have more time to implement, select a fishing  
37 strategy so that you're ensuring better survival  
38 of those fish that you do encounter.

39 If you're in a regular competitive derby  
40 fishery, it's a race for catching as much fish in  
41 a short period of time as possible. Therefore,  
42 there's not the same amount of care and time  
43 available to work on those species of fish that  
44 you need to be releasing alive and unharmed. So  
45 there's a difference there that is rather  
46 important in terms of the end result of having  
47 live fish going back into the water that have a

1 chance of surviving through to the spawning  
2 grounds.

3 Q Dr. Hargreaves, when I introduced you and we  
4 reviewed your background, that included reference  
5 to the coho response team that you were involved  
6 in. For the Department of Fisheries work on  
7 selective fishing, is it fair to say that there  
8 was a real rise in interest in selective fishing  
9 in the course of the coho crisis in the late  
10 1990s?

11 DR. HARGREAVES: Yeah, I think by the mid-'90s, the  
12 Department was aware of very serious conservation  
13 concerns for a number of stock, particularly  
14 southern B.C. coho and Skeena coho in the north.  
15 This was a result of a long period of assessment  
16 of these stocks. It appeared to indicate these  
17 stocks were declining, and in some cases, probably  
18 would not rebuild even in the absence of fishing.  
19 So this was a very serious period of concern in  
20 terms of conservation.

21 Selective fishing, in order to do that, we  
22 knew that there were going to be fundamental  
23 changes required in the salmon fisheries on the  
24 Pacific coast and that these would disrupt  
25 people's lives, they would revolutionize the way  
26 we do business. In many cases, it would reduce  
27 opportunities for fishing in a very broad sense.  
28 In fact, that's what happened. We basically shut  
29 down the Area B seine for two years in a row. So  
30 very serious consequences.

31 So in understanding that that was what was  
32 required, we also wanted to do whatever we could  
33 to mitigate and reduce that impact. So I think a  
34 number of people, including myself, were aware of  
35 the scientific literature and also the  
36 international interest at that time in terms of  
37 responsible fishing practices, selective fishing  
38 being one of those where you can selectively  
39 harvest stocks that are still abundant while  
40 minimizing the impact on stocks that aren't, or  
41 species that aren't.

42 So there was a real strong focus during that  
43 time in terms of what can we do to minimize this,  
44 recognizing that fundamental changes were  
45 required, but how could we minimize that effect.  
46 Selective fishing, I think, rose up as one of the  
47 real opportunities in salmon, partly because very

1 little work had been done on it. So selective  
2 fishing development, the methods used for  
3 selective fishing had been used in other types of  
4 gear, for example, drag nets, but very little of  
5 that had been applied directly to salmon.

6 Certainly in terms of management, we used  
7 time and area restrictions. We were aware of that  
8 as a selective method, if you like. We were also  
9 aware of the selectivity of terminal area  
10 fisheries, for example, the selectivity  
11 characteristics of particular gear types. For  
12 example, gill nets only capture a certain size of  
13 fish depending on the mesh size and so on.

14 So there was an appreciation of what was  
15 there already, but I think a feeling that we could  
16 go much, much further, that we could explore this  
17 further, we could develop new methods and  
18 recognizing, I think, that industry - and I  
19 include First Nations in particular in that - had  
20 been doing this sort of thing on their own for  
21 quite a long time.

22 Q Could you comment on that? You state that First  
23 Nations had been selectively fishing, I take it,  
24 for some time. Can you give us some examples of  
25 that or describe what you mean, please?

26 DR. HARGREAVES: In a traditional and historical sense,  
27 First Nations have been using often highly  
28 selective fishing methods for as long as we're  
29 aware of. So traps, weirs, baskets, those sorts  
30 of fishing methods have been very selective.  
31 Others much less so. A spear, for example, is  
32 again an historical and traditional method and is  
33 not very selective. You basically see a shadow in  
34 the water, depending on what species and stocks  
35 are present, you stab the fish, and if you don't  
36 catch it or if it's the wrong one in terms of  
37 conservation, it's not very selective.

38 Q It's too late.

39 DR. HARGREAVES: It's too late to do anything about it.

40 Q Sure. But the basket is an example or a trap, I  
41 take it -- are those both examples of a live  
42 capture method where, if you've got a non-target  
43 stock or species, the prospects of release and, we  
44 hope, survival, are better?

45 DR. HARGREAVES: Yup, and a trap would be a good  
46 example too. You have to be cautious there in the  
47 sense that they're not necessarily the best

1 technique. Depending how long the fish stays in a  
2 basket or in a net, for example, it can be  
3 descaled, it can be stressed. If it's out of the  
4 water for a longer time or tangled in the gear, it  
5 won't actually save that fish. So, again, what it  
6 shows is the potential of these methods and maybe  
7 more development that's required to modernize it  
8 in a way that really does protect the health of  
9 that fish.

10 Q So I suppose my question to you about interest in  
11 the late 1990s and the coho crisis really, in a  
12 sense, skips over the fact that although it may  
13 not have had that label, selective fishing is  
14 something that has a long history and particularly  
15 among First Nations fishers.

16 DR. HARGREAVES: Yes.

17 Q I'd like to move to talking about this Pacific  
18 salmon Selective Fisheries Program. I'll be  
19 referring to that as the "program", and I take it  
20 the dates are from 1998 till 2002. Just to  
21 clarify one point and correct something in the  
22 PPR, I believe one of you had pointed out that in  
23 the PPR, our Policy and Practice Report, and I  
24 don't know that I need to take anyone to this, but  
25 just for the sake of reference, it's paragraph  
26 130. I think we misstated the correct title.

27 So if I could just confirm that I have this  
28 correct, Mr. Curry, I'll direct this to you,  
29 please. Don Lawseth's title - and Lawseth is L-a-  
30 w-s-e-t-h - and his title, am I right, was Program  
31 Coordinator?

32 MR. CURRY: Yes, that's right. Don Lawseth was the  
33 Coordinator of the Selective Fisheries Program in  
34 the Pacific region.

35 Q Thank you. And, Mr. Curry, your title was the  
36 Project Authority and Training and Education  
37 Coordinator?

38 MR. CURRY: That is correct, yes.

39 Q Let me start, Mr. Currie, please with a short  
40 overview of the goals of the Pacific Salmon  
41 Selective Fisheries Program, please.

42 And again, this is just fine if you're going  
43 to documents. I don't mind you doing that at all.  
44 But perhaps when we do that, if you could just  
45 mention to me what you're looking at so I can  
46 bring it up and we all have the same thing in  
47 front of us. I can make a guess because we have

1           one of the papers in here that summarizes the  
2           program.

3 MR. CURRY: Yes. There's the Selective Salmon  
4 Fisheries Program final report.

5 MR. MARTLAND: And that's number 6 on our list of  
6 exhibits for this. Mr. Lunn, we're jumping around  
7 as usual, but if I could have you bring that up?  
8 Thank you.

9 Q If you could please look at the screen, Mr. Curry,  
10 and confirm that that's what you're looking at?

11 MR. CURRY: That is the document, yes.

12 Q And that document, I take it, was written at the  
13 conclusion of this report and summarizes the work  
14 done under that program?

15 MR. CURRY: That is correct. That is the final report  
16 that reflects the four years of the Selective  
17 Fisheries Program.

18 Q And I'll return to it for some other questions.

19 MR. MARTLAND: If I could have that marked as an  
20 exhibit, please?

21 THE REGISTRAR: Exhibit 432.

22  
23                   EXHIBIT 432: Selective (Salmon) Fisheries  
24                   Program, Final Report  
25

26 MR. MARTLAND: Thank you.

27 Q Go ahead.

28 MR. CURRY: So better than going completely from  
29 memory, on page 2 of this document, Part One under  
30 the "Background" section, there's two objectives  
31 listed for the Selective Fisheries Program.

- 32  
33           1. Fisheries will be conducted to achieve a  
34           zero fishing mortality for critical  
35           upper Skeena and Thompson coho stocks.  
36  
37           2. Where upper Skeena and Thompson coho  
38           stocks are not prevalent, fisheries must  
39           be selective and demonstrate that the  
40           risk of coho by-catch mortality on other  
41           stocks will be minimal.  
42

43           So that was the impetus to build the Selective  
44           Fisheries Program around, is these stocks of  
45           concern, these coho stocks of concern.

46           But it goes beyond that as we got into the  
47           Selective Fisheries Program to look at how to

1 solve the issue of unintended by-catch and how to  
2 avoid them or release them unharmed as I've stated  
3 before. So we then carried out a multi-faceted  
4 program to carry that out if you wanted to go into  
5 that.

6 Q And I take it the program had five components to  
7 it. You probably have these from memory, but  
8 you're welcome to look at the document. Could you  
9 briefly describe those, please?

10 MR. CURRY: Yeah, those are listed on page 3, and  
11 basically there's these five components. We had  
12 experimental pilots where basically we had project  
13 proposals from First Nations, recreational and  
14 commercial harvesters to look at different ways  
15 that they believe they could make their fishery  
16 more selective. So we would work with them in a  
17 project team environment and look at ways to carry  
18 out an effective project that could then  
19 demonstrate more selective methods. So that was a  
20 very key component to this.

21 Another strategy was the First Nations gear  
22 purchase program where there was 60 First Nations  
23 that received gear that was deemed to be more  
24 selective than some of the gear that they were  
25 currently using. For instance, replacing the use  
26 of some gillnets with the use of a fish wheel  
27 which is a live harvest method capturing fish  
28 alive, allowing you the ability then to release  
29 those fish back into the river, in this case,  
30 alive and unharmed. Whereas a gillnet, it's much  
31 more difficult to do that, especially if you've  
32 got a gillnet that's set for several hours. So  
33 that was another component where funding was made  
34 available and First Nations purchased that gear.

35 Research projects, which were more the  
36 scientific research variety looking at the  
37 mortality rates of by-catch, for instance, looking  
38 at coho. For instance, if they're caught in a  
39 gillnet, a seine or by a troll or other gear, how  
40 many of those fish survive a 24- to 48-hour  
41 challenge in a net pen, as an example and then  
42 thereby DFO being able to come up with some  
43 measure of the impact in the form of mortality on  
44 which to manage fisheries.

45 So that's one aspect of the research, as well  
46 as looking at all this myriad of gear and fishing  
47 methods and looking for the proof for the validity

1 of some of these methods to be better than some of  
2 the methods being used in the past.

3 A fourth component was education, training  
4 and communication. So basically when we're  
5 working on trying to create such a huge paradigm  
6 shift in the fishery moving to weak stock  
7 management where the impacts on stocks of concern  
8 is really the driving force in our fisheries. We  
9 then have to make sure that all harvesters are  
10 aware of the constraints and why.

11 So we had a program that I was leading where  
12 we made sure that we did everything we could to  
13 get pamphlets out. We held workshops. There was  
14 a lot of interaction in multi-stakeholder type of  
15 environments, and there was even an eight-part  
16 series of videos that were created as part of a  
17 training tool that covered off a number of things  
18 from an overview of selective fishing, salmon ID,  
19 handling effectively, those fish as well as what  
20 does a selective fishery on a troller, a  
21 gillnetter or a seiner look like? So how do you  
22 carry that out on board those vessels?

23 So use these as a training method as well as  
24 looking at the complementary benefits that quite  
25 often go with fishing selectively. There's some  
26 benefits from a quality perspective, so we  
27 reflected that in the video as well.

28 The final component was looking at the First  
29 Nations fishery and the variety of fisheries that  
30 are out there and reflecting on their selectivity  
31 and demonstrating that in a visual format.

32 The final component of this was compliance.  
33 So where you're implementing these measures within  
34 the fishery, you then have to look at are the  
35 harvesters using these methods? So our fishery  
36 officers were similarly trained on the selective  
37 fishing methods so that they could then be  
38 effective in the field in ensuring that these  
39 methods were being effectively used.

40 Q I take it the compliance point refers to, as an  
41 example, where a selective fishing approach or  
42 technology has been mandated by law or regulation,  
43 for example, a revival box. At that point, an  
44 enforcement officer is actually checking to ensure  
45 that it's being used? Is that an example of how  
46 it would be --

47 MR. CURRY: Yes, that's correct, and that is an

1 important part that ultimately a fishery officer  
2 will look at whether a piece of gear or a method  
3 of fishing is being implemented properly.

4 But probably a lot more important than that  
5 is the attitude of the harvesters themselves. Is  
6 there buy-in? Is there buy-in? Are there  
7 incentives to fish more selectively? Because  
8 without having a commitment to using the various  
9 selective fishing strategies, many of them that  
10 are very difficult to put into regulation, per se,  
11 it's up to the harvester to buy into this and  
12 effectively handle fish appropriately. Therefore,  
13 the education and training to try and elicit that  
14 -- the importance of this so that that is carried  
15 on into the future and the paradigm shift is more  
16 complete and more effective in that the measures  
17 are being carried out properly.

18 Q Ultimately that refers to a change in attitude  
19 that is -- I take from your answer, that's not  
20 something that's simply policing and enforcing a  
21 set of rules that's going to necessarily change  
22 attitude. It's bigger than that; is that a fair  
23 comment?

24 MR. CURRY: Very much so, yes.

25 Q Mr. Curry, I mentioned Don Lawseth. I take it he  
26 was the head and administered the program, the  
27 1998 to 2002 program?

28 MR. CURRY: That is correct.

29 Q What was your role in that program?

30 MR. CURRY: My role in the program was, having had a  
31 significant amount of experience in fisheries  
32 management, I played more of a practical role in  
33 terms of looking at the various fishing methods,  
34 the fishing gear as well as looking at working on  
35 these project proposals and working with  
36 individuals like Dr. Hargreaves for science input,  
37 and others for science input, pulling teams  
38 together to work on these projects so that they  
39 were properly carried out and so that we were  
40 getting good results from them.

41 Then the other component was taking a lead  
42 with the training and education component where we  
43 even took a group of individuals from the various  
44 sectors out to the east coast to look at the  
45 training schools that exist on the east coast, the  
46 various courses and training and  
47 professionalization movement back there, and their

1 facilities, so that these key individuals within  
2 the various fisheries could bring that knowledge  
3 back and look at how they could apply that here on  
4 the west coast. So those were the types of things  
5 that I was focused on within the program.

6 Q Thank you. And I'll take you to some of those  
7 materials at least briefly in a few minutes.

8 Dr. Hargreaves, could you describe your  
9 involvement in the program, please?

10 DR. HARGREAVES: Yeah, there were sort of two elements.  
11 One was there was a regional team, different  
12 people at different times, but basically a  
13 selective fishing group that included Science  
14 staff and fisheries management as the main people  
15 in it. So I was one of those team members.

16 So we helped design and actually select the  
17 programs that were run each year. So each year  
18 there was a competitive process basically. People  
19 would submit designs, if you like, for different  
20 -- of the different components that Gord Curry has  
21 just elaborated on. So there was a selection  
22 process to decide which ones would be funded that  
23 year, and which ones would go forward and the  
24 steps of that.

25 The other role that I played was as a  
26 research scientist in DFO, I assisted in the  
27 design of many of the experiments, so the  
28 scientific design, how it would be set up, how it  
29 would be analyzed and how it could be determined  
30 whether it was successful or not.

31 Q What I'd like to do now is to go into a little  
32 more detail with respect to this program, the  
33 Selective Fisheries Program from 1998 to 2002. I  
34 have a series of questions about the work that was  
35 completed under the program, and I take it, Mr.  
36 Curry, from the way you described the components  
37 of the program, there's sort of two ways to think  
38 about the experimentation or projects that were  
39 undertaken, one, and tell me if you think this is  
40 an accurate way to put it.

41 One part of that is work that's being done  
42 really driven by the sectors undertaking an  
43 experimental pilot project. The other component  
44 is more of a science, whether that's DFO driven or  
45 driven by someone else, but it's more of a science  
46 research type of project.

47 MR. CURRY: Yes. Within the experimental projects that

1 were submitted by commercial harvesters,  
2 recreational and First Nations harvesters, those  
3 -- there was quite a wide range in those. Some of  
4 them were looking at a new and innovative piece of  
5 fishing gear and basically just trying to catch  
6 some fish with it. So it's a fairly simple design  
7 to the project, whereas there was some that were a  
8 lot more sophisticated and needed to look at good,  
9 scientific principles in order to carry out a  
10 project that was sound in terms of if you release  
11 a salmon at the waterline from a troller, is that  
12 going to result in less injury to that fish as  
13 opposed to bringing it aboard and using a revival  
14 tank to recover, and then release it.

15 So you have to have very stringent controls  
16 around the design. So we had these two types of  
17 projects, some that were fairly straightforward,  
18 others that were very close to what Science would  
19 be carrying out within the Department.

20 An interesting part of this was that the  
21 project proposals that came in, although at the  
22 beginning of the Selective Fisheries Program, a  
23 team of DFO and provincial staff rated and ranked  
24 and decided on the projects that would go ahead,  
25 by the end of the program, there were  
26 representatives from the various fisheries in the  
27 room with us making those determinations as to  
28 which projects should go ahead.

29 So we're working on moving to a more  
30 collaborative approach to carrying out this work,  
31 and it's very important, as I mentioned earlier,  
32 that you need buy-in. So you've got to have the  
33 acceptance of the harvesters in order to have  
34 successful projects which begets, then,  
35 potentially successful implementation of those  
36 strategies.

37 Q Dr. Hargreaves, could you provide a description of  
38 the work that DFO Science Branch undertook on  
39 selective fishing under this program?

40 DR. HARGREAVES: As I said, there were two components.  
41 The first I've already mentioned which was to help  
42 design some of these experiments that were done by  
43 harvesters.

44 The second, probably more important component  
45 was that we actually conducted -- Science Branch  
46 scientists conducted particular research projects  
47 that we felt we were in a better position to do

1 than the industry. One example of that is, as  
2 Gord mentioned, one of the big unknowns - and  
3 unfortunately it still remains to some degree - is  
4 the question of the long-term survival versus the  
5 short-term survival. So you can develop all these  
6 selective fishing methods, you can get a fish back  
7 into the water or hopefully not even encounter it  
8 in the first place. If that's the case, you've  
9 done a good job.

10 The second case, as soon as you catch and  
11 start handling a fish, there's a concern about  
12 what's its short-term and, more importantly, the  
13 longer term survival and spawning success of that  
14 fish in the case of salmon. So a number of the  
15 experiments that the Science Branch of DFO worked  
16 on was the question of mortality rates. Both the  
17 encounter of mortality rates, the short-term  
18 mortality rates over the first, say, 24 hours  
19 after capture and release, and then the longer  
20 term mortality rates and spawning survival rates.  
21 So that was the main focus of the Science Branch.

22 Q How was the reporting on the Science work that was  
23 undertaken under the program? How was Science  
24 reporting done?

25 DR. HARGREAVES: Predominantly through the PSARC  
26 process so the Pacific Scientific Advice process  
27 which is now called the CSAP program.

28 Q Mm-hmm. And let me take you to number 12 on our  
29 list of exhibits, and this may be an example. As  
30 it's being brought up, number 12 on the list of --  
31 not exhibits, I'll have to correct myself. From  
32 our exhibit list is a paper on mortality rates of  
33 coho salmon caught by commercial salmon  
34 gillnetters. I think the title will give us a  
35 good sense of what it focuses on, the  
36 "Effectiveness of Revival Tanks and Reduced Soak  
37 Times for Decreasing Coho Mortality Rates".

38 You co-authored this paper?

39 DR. HARGREAVES: Yes, I was the senior author on it,  
40 yes.

41 MR. MARTLAND: If this could become an exhibit, please?

42 THE REGISTRAR: Exhibit number 433.  
43  
44  
45  
46  
47

1                   EXHIBIT 433: Paper titled "Mortality Rates  
2                   of Coho Salmon Caught by Commercial Salmon  
3                   Gillnets and the Effectiveness of Revival  
4                   Tanks and Reduced Soak Time for Decreasing  
5                   Coho Mortality Rates  
6

7                   MR. MARTLAND:

8                   Q     Is this a paper that stems from your work under  
9                   the Selective Fisheries Program?

10                  DR. HARGREAVES: Yes, directly from it.

11                  Q     And if you could give us a quick understanding of  
12                   the conclusions that this paper reached. If you  
13                   need to, I can take you to part of it if that's  
14                   helpful, but you likely have it offhand.

15                  DR. HARGREAVES: It was ten years ago or more, but I  
16                   think I still remember it.

17                   The purpose of this paper was to summarize a  
18                   lot of the work that had been done. So industry,  
19                   for example, had done I think it was about 11  
20                   different experiments at this point dealing with  
21                   soak time, which is the amount of time a gillnet  
22                   stays in the water, and revival tanks. As well,  
23                   DFO had done a really large experiment in 1998  
24                   that I was responsible for directly.

25                   So the interest in this was, well, how do we  
26                   summarize this and bring this information together  
27                   so that we can make some sense of it and  
28                   understand how we move forward. So the focus in  
29                   the paper was looking at the mortality rates of  
30                   coho salmon that were caught in gillnets and the  
31                   effectiveness of basically two different selective  
32                   fishing methods, revival tanks and soak time for  
33                   reducing those coho mortality rates. So this is  
34                   basically coho that would be caught in commercial  
35                   fisheries that are not targeting coho. So this is  
36                   a by-catch issue. We want to conduct a fisher, we  
37                   want to minimize the impact on coho so that we can  
38                   continue to conduct that fishery, for example, on  
39                   sockeye.

40                   So the question is what can we do to reduce  
41                   the impact on the coho which, if we didn't reduce  
42                   it, would stop the fishery basically. So that was  
43                   the intent of it.

44                   So in terms of revival tanks, the idea of a  
45                   revival tank was that if you bring a fish aboard  
46                   in a gillnet, it's typically -- if you wait long  
47                   enough, it drowns. It basically can't ventilate

1 its operculum. It can't get water past the gills  
2 so it drowns in the net. Now, that sounds funny  
3 when you think about fish that's still in water,  
4 but that's basically what happens to that fish.

5 If you get to that fish very quickly, so soon  
6 after it enters the net, it's still alive, it  
7 hasn't drowned yet. So then there's the question  
8 of how long do you have before you can bring that  
9 fish aboard and still release it alive, if you  
10 like. The second thing is once you've brought it  
11 aboard, is there anything you can do on deck to  
12 actually improve the survival of that fish.

13 Well, what we find is when the fish has gone  
14 in the net and if it's been there for quite a  
15 while, it's very lethargic if it's not dead  
16 already. It doesn't move. It needs some time  
17 before you throw it back in the water. If you  
18 throw it back in the water, typically it will sink  
19 to the bottom and it will either die there or else  
20 something else will kill it, or whatever, a seal  
21 or whatever.

22 So the revival tank idea was that when you  
23 bring a fish aboard in a gillnet and you take the  
24 fish out of the net and put it in a tank with  
25 fresh running water in it and give it time to  
26 revive before it actually goes back into the  
27 water. It sounds like a simple principle, but  
28 nothing like this had really been tried before.  
29 It turned out that it was remarkably effective.  
30 Properly designed, a revival tank can bring back  
31 fish that are, by all intents and purposes, even  
32 by the experts, the fishermen themselves, dead.  
33 Fishermen ranked them as dead. They're in the  
34 net, they come aboard, they're dead. You put them  
35 in a revival tank and up to 90 percent of those  
36 fish will revive and become fully functional  
37 again.

38 So quite a remarkable advance in terms of a  
39 conservation method. It didn't get there right  
40 away. We had to figure out how to do this, the  
41 flow rates, the size of the boxes, that sort of  
42 thing. There was an initial box that was  
43 developed for gillnets, for example, and then a  
44 more efficient design that came out later, the  
45 Jake Fraser revival tank.

46 Jake Fraser was a commercial fisherman who  
47 really passionately got interested in this issue.

1 The comment later in the program was it was called  
2 "Jesus Tank" because it could revive the dead. So  
3 he made remarkable progress in terms of being able  
4 to revive these fish at various stages.

5 The second part of this was the soak time.  
6 By analyzing all these different experiments, and  
7 in this particular paper, the analysis is there.  
8 What we found was that the mortality rate of coho  
9 that were caught in gillnets was directly  
10 proportional to the time that the net was sitting  
11 in the water. This, perhaps, again, shouldn't be  
12 surprising. If you think of the net going in the  
13 water and the fish hitting the net, it's slowly -  
14 not immediately, doesn't immediately drown - but  
15 it's slowly drowning because it can't ventilate  
16 enough. It's like being restricted in your air  
17 flow.

18 If you put a net in for 24 hours and the fish  
19 hit that right away, the first hour, well, 24  
20 hours later it will be dead. There will be  
21 nothing. Even the Jake Fraser box won't bring  
22 that one back. But if you bring back the time  
23 that that net's in the water to, say, an hour or,  
24 even better, 30 minutes, almost all the fish that  
25 come out of that net are revivable.

26 So again, the function of this paper was to  
27 demonstrate that the soak time, the amount of time  
28 that the net stays in the water is extremely  
29 critical. Again, this was important, because at  
30 this point it wasn't unusual for a fisherman to  
31 soak their net for several hours, sometimes  
32 overnight even, so you might get a 12-hour soak.  
33 It's convenient to do that. You can set your net,  
34 you can go off and anchor and have a sleep and  
35 come back and pick your net and take the fish out,  
36 but the mortality rate of the by-catch that you  
37 want to save is very high.

38 So these were two methods, then, that I think  
39 we confirmed quite convincingly that the value of  
40 revival tanks and the value of reduced soak times  
41 to conserve coho.

42 Q And indeed, on the management front, are these two  
43 examples of where there were management changes  
44 put in to reflect those conclusions?

45 DR. HARGREAVES: Yes. Both of these techniques,  
46 revival tanks and reduced soak time are used as  
47 routine measures, conservation measures in the

1 gillnet fisheries.

2 Q So the document that's in front of us, this CSAS  
3 paper we've been speaking about is an example of  
4 the complete research paper. What I'd like to do  
5 next is bring up number 17 from our list. This is  
6 a PSARC request for working paper. It dates to  
7 2004. The title is -- the paper title, if  
8 developed, from the third or fourth line down, "A  
9 Review of Selective Fishing Gear and Methods Used  
10 by Commercial Salmon Seine Vessels to Minimize  
11 Mortality of Non-Target Species", with you, Dr.  
12 Hargreaves, proposed as the lead author, and Mr.  
13 Curry as resource management, lead author.

14 I take it -- I'll just narrate a little bit  
15 more to lead you through. I don't expect that  
16 presents a difficulty. Halfway through the  
17 rationale for the request, it talks about the  
18 review focusing on the effectiveness of escape  
19 grids and fine mesh knotless bunts in the  
20 commercial salmon seine nets. That was the focus  
21 of this propose work?

22 DR. HARGREAVES: Yes, that's correct.

23 Q What happened to that request for the working  
24 paper?

25 DR. HARGREAVES: I received the request and partly this  
26 was Gord Curry and I agreeing that this work  
27 needed to be done. Gordon and I had both worked  
28 quite extensively on escape grids and small-mesh  
29 bunts as conservation measures, and what we felt  
30 at the time was that we needed another summary  
31 similar to what I just described for the gillnet  
32 work.

33 So this request was generated. It arrived my  
34 desk, if you like, and we began this summary.  
35 Then unfortunately it was never completed, and the  
36 reason for that is that I was the lead author  
37 proposed for this, but I was reassigned to work on  
38 the aquaculture sea lice issue in 2003 and I  
39 didn't have enough time to continue working on the  
40 same grids as this point, so we didn't have enough  
41 support or a suitable person to follow up on the  
42 finishing of this paper, so...

43 Q And this work has not been done, I take it?

44 DR. HARGREAVES: It's not been completed, no.

45 MR. MARTLAND: If this could become the next exhibit,  
46 please?

47 THE REGISTRAR: Exhibit 434.

1 MR. MARTLAND: Thank you.

2  
3 EXHIBIT 434: PSARC Request for Working Paper  
4 - Review of Selective Fishing Gear and  
5 Methods Used by Commercial Salmon Seine  
6 Vessels to Minimize Mortality of Non-Target  
7 Species, 22 Oct 2004  
8

9 MR. MARTLAND:

10 Q Is this a paper, Dr. Hargreaves, in your view, if  
11 it were completed now, if the work were done now,  
12 would it still be of value or relevant?

13 DR. HARGREAVES: Yes, I think the -- well, the paper is  
14 basically a summary and scientific peer review of  
15 the process. I think the technique itself, the  
16 seine escape grids and small-mesh knotless bunts,  
17 I'm certainly satisfied, without having written  
18 the paper, but certainly as a research scientist  
19 that this is an extremely useful piece of  
20 selective fishing gear. So I think it would go a  
21 long ways to solving some of our issues in terms  
22 of, particularly, the catches of small chinook and  
23 coho in some of the seine fisheries.

24 Q Mr. Curry, I'd like to take you to a different  
25 document, number 7 from our list. This is a  
26 somewhat unwieldy document, so I won't be flipping  
27 through it, unwieldy simply 'cause it's along, and  
28 I think at least the formatting, someone's choice  
29 of margin size or something is a little bit off by  
30 the time we have it in ringtail.

31 But leaving that aside, I take it that this  
32 is a -- please tell me if I have this right. This  
33 is a document that provides a summary of the lists  
34 of abstracts for most -- perhaps not all, but most  
35 of the different selective fishing experiments  
36 that were conducted by industry under the  
37 Selective Fisheries Program.

38 MR. CURRY: Yes. Brent Hargreaves would probably be  
39 best to respond to this because he was more  
40 directly involved with this particular analysis of  
41 the work that was completed and the creation of  
42 this listing.

43 Q All right.

44 DR. HARGREAVES: And I apologize for the formatting.  
45 This is basically a text version of an access  
46 database file. So the access database file, each  
47 one of these is a separate record and gives you a

1 much better formatting and much easier search  
2 capabilities than this. So this was our attempt  
3 to deliver it in a format that was more  
4 accessible.

5 Q That's just fine.

6 DR. HARGREAVES: Anyway, the purpose of this was to try  
7 to capture, in a summary sense, all of the  
8 experimental work that had been done, particularly  
9 by industry. A large number of these projects  
10 were not fully analyzed, for example, or were not  
11 designed in a way that needed analysis. So as  
12 Gord Curry emphasized, it might be a piece of  
13 gear, say, a tangletooth net, that had never been  
14 tried before on salmon. We wanted to see simply  
15 whether it would catch salmon or not.

16 So the result of that would be that we fished  
17 it for 19 different sets, and five of those we  
18 caught eight salmon in it, or something like that,  
19 as compared to, say, a gillnet nearby or something  
20 like that.

21 Q Mm-hmm.

22 DR. HARGREAVES: So this particular database is  
23 basically the summary from all of the final  
24 reports of the experiments that were done by  
25 industry primarily.

26 MR. MARTLAND: Thank you. If this could be the next  
27 exhibit, please, Mr. Registrar.

28 THE REGISTRAR: Exhibit 435.

29

30 EXHIBIT 435: Summary of Selective Fishing  
31 Projects, October 8, 2003

32

33 MR. MARTLAND:

34 Q Was there ever a science review paper that -- I'm  
35 sorry, Mr. Curry, go ahead.

36 MR. CURRY: I just thought I'd add to that, that  
37 included in this is there's some reports of  
38 interest. Early in the Selective Fisheries  
39 Program, we were also looking at work that had  
40 been completed prior to the Selective Fisheries  
41 Program so that we were learning from work that  
42 had been done in B.C., other parts of the world,  
43 that were relevant to where we were going in B.C.  
44 with the Selective Fisheries Program, so there's a  
45 number of reports of interest in here that were  
46 reviewed as well.

47 Q Thank you.

1 MR. CURRY: Just thought I'd add that.

2 Q Was there a science review paper that reflected  
3 all of this work?

4 DR. HARGREAVES: No. No, there's not.

5 Q What I'd like to do at this point is to try and  
6 move at highway speed through a number of  
7 documents and materials to ensure that they're put  
8 into evidence. Some of these we've already  
9 touched on so it may simply be a matter of  
10 confirming that I have the right thing before us.

11 If I could start with number 10 on the list  
12 of exhibits. Now, this may or may not be easy to  
13 pull up, Mr. Lunn, it's a video. I've thrown him  
14 a curve ball. I don't propose to play a video  
15 here. I know Mr. Fugere from the Department of  
16 Justice offered to buy us all popcorn if I did,  
17 but I don't think we have the luxury of hearing  
18 time to play the video.

19 However it's brought up, I will just ask to  
20 confirm the video. Mr. Curry, you referred in  
21 your evidence to producing a series of videos that  
22 were done really with an aim to train and educate  
23 fishers in the different sectors about selective  
24 fishing gear methodology and the like. I take it  
25 the title of the video series "Salmon Sense: A  
26 Training Series for Responsible Fishing"?

27 MR. CURRY: Yes, that is correct, and it was very much  
28 a collaborative effort.

29 MR. MARTLAND: And it's a little artificial, Mr.  
30 Commissioner, to do it without the exhibit proper,  
31 but I think we're all referring to the same thing.  
32 It is in the ringtail database. I'd like to have  
33 that marked as the next exhibit, the "Salmon  
34 Sense: Training Series" videos as one exhibit.

35 THE REGISTRAR: Exhibit 436.

36 MR. MARTLAND: Thank you.

37

38 EXHIBIT 436: Series of videos titled "Salmon  
39 Sense: Training Series for Responsible  
40 Fishing"

41

42 MR. MARTLAND:

43 Q In league with that, number 9 from the list, our  
44 exhibit list, is three different newsletters  
45 called "The Selective Fishing Newsletters, Volumes  
46 1 through 3." You'll see the first page of the  
47 first one in front of us. Could you quickly tell

1 us about that, please, Mr. Curry?

2 MR. CURRY: Yes. We received advice through some of  
3 the multi-stakeholder workshops that we had that  
4 we needed to do more to get information out on  
5 what was happening with the various selective  
6 fisheries projects and so on. So we, towards the  
7 end of the program, we started up a newsletter to  
8 provide information out to all interested parties  
9 about ongoing work that was happening. So we  
10 ended up with three issues of a selective fishing  
11 newsletter that these are, that I had a great deal  
12 of involvement with, pulling them together and so  
13 on to reflect the current actions that are going  
14 on within selective fishing in B.C. at the time.

15 MR. MARTLAND: Thank you. If that could be the next  
16 exhibit, please.

17 THE REGISTRAR: Exhibit 437.

18  
19 EXHIBIT 437: Selective Fishing Newsletters,  
20 Volumes 1 through 3  
21

22 MR. MARTLAND: And to editorialize for a moment, I'll  
23 suggest these are materials for the benefit of  
24 participants or members of the public that are  
25 useful in translating, I think, the description of  
26 the program and putting it into reality. There's  
27 a number of pictures, for example, in the  
28 newsletters. Obviously the video helps to put a  
29 real face on selective fishing methods onboard  
30 different gear types and vessels and so forth.

31 MR. CURRY: That's correct.

32 MR. MARTLAND: The next document, number 8 from the  
33 list.

34 Q Mr. Curry, you referred to travelling to the east  
35 coast and having a look at how they approach the  
36 training for - I don't know if it was commercial  
37 fishers specifically - and the possible relevance  
38 or applicability of that approach to the British  
39 Columbia salmon fishery.

40 MR. CURRY: Yes, this document reflects the results of  
41 that multi-sector investigation of east coast  
42 training and with the idea of bringing that  
43 information back to the Pacific, yes.

44 Q And what was the result of that trip to the east  
45 coast? Was there -- go ahead.

46 MR. CURRY: The result was that through the key  
47 individuals that were on that trip with me, they

1 were able to work through their Area Harvest  
2 Committees and so on to talk about and work  
3 towards developing strategic plans for training  
4 and education through the Selective Fisheries  
5 Program, but also beyond the Selective Fisheries  
6 Program, what are the types of things that would  
7 be needed in order to reach harvesters so that  
8 they're aware of the various selective fishing  
9 gear and methods and how to use them and so on.  
10 As well, in-house to DFO making sure that managers  
11 and fishery officers are aware of the strategies  
12 so that when they're in the field as well,  
13 especially fishery officers, they're recognizing  
14 the selective fisheries' gear, they understand the  
15 nature of it, why it's there, how it's operated,  
16 and also how someone might cheat with it, that  
17 sort of thing. You usually work with respected  
18 fishermen to work through how you'd make this work  
19 effectively and so on. So those were all key  
20 aspects that came out of this trip.

21 Q And this is a paper that you co-wrote?

22 MR. CURRY: That's correct.

23 MR. MARTLAND: If this could be the next exhibit,  
24 please.

25 THE REGISTRAR: Exhibit 438.

26  
27 EXHIBIT 438: Curry & Fearon, Industry and  
28 Departmental Responsible & Selective Salmon  
29 Fishing Training Program Development: The  
30 East Coast Experience, May 2000  
31

32 MR. MARTLAND:

33 Q Number 4 on the list, I thought at one point we  
34 invented the term Policy and Practice Report. It  
35 turns out that's not the case. This is a document  
36 that's called "The Selective Fisheries Policy and  
37 Practice" prepared in early 1999 by Edwin Blewett  
38 and Timothy Taylor Consulting.

39 Mr. Curry, do you recognize that as that  
40 report?

41 MR. CURRY: Yes. Basically, early on in the Selective  
42 Fisheries Program, we wanted to look at pulling  
43 together what we knew about selective fishing and  
44 so contracting Edwin Blewett and Timothy Taylor to  
45 provide some background on selective fishing on  
46 which we could then help to base where we're going  
47 with the program and so on in the appropriate

1 context and so on.

2 MR. MARTLAND: I'd ask that be the next exhibit,  
3 please.

4 THE REGISTRAR: Exhibit 439.

5

6

EXHIBIT 439: Selective Fisheries Policy and  
Practice, January 1999

7

8

9 MR. MARTLAND: Mr. Commissioner, I note the time. This  
10 may be an appropriate time for the break. Thank  
11 you.

12 THE REGISTRAR: The hearing will now recess for 15  
13 minutes.

14

15

(PROCEEDINGS ADJOURNED FOR MORNING RECESS)  
(PROCEEDINGS RECONVENED)

16

17

18 THE REGISTRAR: The hearing is now resumed.

19

20 EXAMINATION IN CHIEF BY MR. MARTLAND, continuing:

21

22 Q Mr. Curry, I am going to ask you more general type  
23 of a question. We've been speaking about the  
24 program from 1998 to 2002. Could you describe  
25 generally how the different sectors, First  
26 Nations, recreational and commercial sectors  
27 responded to that program?

28 MR. CURRY: Yes. With regards to the various sectors  
29 and their buy-in to the program, within all the  
30 various sectors, or so First Nations, recreational  
31 and commercial, and commercial including troll,  
32 gillnet and seine, there were individuals  
33 certainly within all those categories that were  
34 very supportive and very energetic to working  
35 towards solutions. In general, First Nations were  
36 very excited about working within this concept and  
37 put a lot of energy into it.

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But that's not to say that everyone was  
accepting of it. There were individuals,  
sometimes very influential individuals within  
harvest groups and so on, which were not that keen  
on this method. They seemed to want to go back to  
fishing the way fishing used to be, and but didn't  
seem to be recognizing that selective fishing was  
a tool to find solutions. And so I would say that  
we had mixed reactions. Overall it was positive,  
but there were individuals in influential

1 positions that made it more difficult to make  
2 progress.

3 Q Can I take you to a document which is number 16 on  
4 the list, and this is two things together, if I  
5 have it correct. It's a memorandum for the RDG.  
6 It dates to, at least it refers to, the Selective  
7 Fishing in the 2004 Areas A and B Seine fisheries.  
8 Attached to it I think is an e-mail from Chris  
9 Ashton. It seems to indeed be part of the  
10 document. It's a numbered page, but it's given as  
11 attachment 1 in the last page. And to frame my  
12 question, what I'd like to do, Mr. Lunn, is go  
13 back to the very first page in that box, the  
14 summary box with the different bullets. I'd like  
15 to refer you to the second-to-last bullet:  
16

17 In spite of the large investment and very  
18 promising results to date, industry leaders  
19 have recently informed DFO that they are  
20 opposed to any addition testing or broader  
21 implementation of these new selective fishing  
22 methods in 2004.  
23

24 Is that an example of when you describe a mixed  
25 reaction or some, whether it's hesitation or  
26 resistance or disagreement?

27 MR. CURRY: Yes, that would be one example of it.  
28 There were others. But this was an example in a  
29 context of commercial harvesters in a situation  
30 where they weren't making a lot of money. They  
31 were struggling often with the amount of salmon  
32 that they were able to harvest. So there was  
33 resistance just from the perspective of the cost  
34 of making changes.

35 But on the flip side of that, without doing  
36 the work and utilizing effectively the tools at  
37 their disposal and the resources to come up with  
38 the solutions, they were risking not fishing at  
39 all in some cases, as opposed to coming with  
40 solutions and being able to increase their ability  
41 to continue harvesting, and harvesting in a more  
42 selective and responsible way.

43 Q And this memorandum, I take it you and Dr.  
44 Hargreaves jointly prepared?

45 MR. CURRY: That is correct.

46 MR. MARTLAND: Could this please be the next exhibit.

47 THE REGISTRAR: Exhibit number 440.

1 EXHIBIT 440: Memo for the RDG (Decision  
2 Sought) Selective Fishing in the 2004 Area A  
3 & B Seine Fisheries, with attached May 13,  
4 2004 e-mail from Chris Ashton  
5

6 MR. MARTLAND:

7 Q I have asked you some questions about the final  
8 report and about the Selective Fisheries Program  
9 that both of you have been describing this  
10 morning. I don't want to spend very much time on  
11 this, but, Mr. Curry, what I'd like to pick up on  
12 is the audit that took place.

13 This is number 11, Mr. Lunn, on the list.

14 Now, I take it this is the Audit and  
15 Evaluation Directorate's Program Evaluation, I  
16 think is the title, for the Pacific Salmon  
17 Selective Fishing Program; is that correct?

18 MR. CURRY: That is correct, as far as I understand it  
19 to be.

20 MR. MARTLAND: And I'll just pause there to ask if this  
21 could be the next exhibit, please.

22 THE REGISTRAR: Exhibit number 441.  
23

24 EXHIBIT 441: Pacific Salmon Selective  
25 Fishing Program Evaluation, Draft, February  
26 11, 2005, Audit & Evaluation Directorate DFO  
27

28 MR. MARTLAND:

29 Q And I don't propose to spend a great deal of time,  
30 but I take it, Mr. Curry, you're very familiar  
31 with this document. It gives a description of the  
32 successes and shortcomings of the program and  
33 gives a summary of the lessons learned. And I  
34 take it you have a mixed view. There are parts of  
35 this you agree with and there are some parts that  
36 you feel don't fairly reflect the program.

37 MR. CURRY: I would say that this is a draft document,  
38 so I'm not sure whether we have a final version.  
39 But there was a response from DFO to this draft  
40 audit of the program, that on a number of cases  
41 staff who had been involved with the program were  
42 not happy with the assessment by some government  
43 staff, who were very unfamiliar with fisheries,  
44 and were evaluating this program, and we thought  
45 that they didn't do a fulsome job of evaluating  
46 the program and the benefits of that program.

47 Q And I suspect Mr. Timberg may take you to some of

1           those materials that reflect some of the concerns  
2           that you have. At a general level, what was the  
3           overarching concern or concerns that you had about  
4           the audit?

5       MR. CURRY: For instance, it didn't recognize the  
6           significance of the paradigm shift towards  
7           selective fishing, whereby this is a long-term  
8           benefit over time of changing how we all view  
9           fisheries and how we prosecute fisheries, and the  
10          importance of that to move to a more responsible  
11          fishery. And that was a significant aspect of  
12          this program and I don't think it was covered that  
13          well. But there were many smaller details, and I  
14          was only one person involved with reviewing this.  
15          There were many people that reviewed this and made  
16          comments on it besides myself.

17       Q       In terms of the status of this document you  
18           describe it as being a draft. Do you recall ever  
19           seeing something after this, a further or a final  
20           version?

21       MR. CURRY: I don't recall seeing a final version, but  
22           I suspect there was. But just on recollection I  
23           don't recall it offhand.

24       Q       And is this sort of an audit, is it internal to  
25           the DFO in general?

26       MR. CURRY: This was an internal DFO audit of the  
27           program, looking at the finances as well as did  
28           the program meet its goals and objectives.

29       Q       Dr. Hargreaves, I have a question which is general  
30           in nature. I don't need to take you to the  
31           Selective Fishing Policy, per se, but I take it  
32           you were involved, and it's an Exhibit number 266  
33           already. But you were involved in the preparation  
34           of the writing of the Selective Fishing Policy, I  
35           understand?

36       DR. HARGREAVES: Yes, I was.

37       Q       In your view how well has the Department done in  
38           implementing the policy?

39       DR. HARGREAVES: I think we did a very good job during  
40           the period of the CFAR funding. So as I said  
41           earlier, this was a fundamental shift in the way  
42           that we conserved stocks and managed the fisheries  
43           for salmon on the Pacific Coast. It meant major  
44           changes both within DFO and also within the  
45           harvest sectors, all of the harvest sectors. I  
46           think the CFAR funding jumpstarted that. It got a  
47           lot of people fishing when we wouldn't have been

1 fishing. It provided opportunities to experiment  
2 and to make progress, and I think many people were  
3 very excited about that opportunity.

4 I think with the end of the CFAR funding,  
5 even though there was a clause, if you like, in  
6 both the Allocation Policy and also the Selective  
7 Fishing Policy, that we could continue to use a  
8 portion of the available catch, the TAC, the total  
9 allowable catch, each year to continue to develop  
10 selective fishing, particularly the methods and  
11 education, and so on. We didn't really go there.  
12 Very little of that five percent was used. And  
13 then subsequently with the **Larocque** decision, it  
14 became basically not possible to use the resource  
15 to take fish to pay for this sort of thing.

16 So I think from about 2003 or so, shortly  
17 after the end of the CFAR funding, selective  
18 fishing has stalled to a large degree. There are  
19 a number of elements that continue to be a part of  
20 our normal practices, both for conservation and  
21 management. For example, things like revival  
22 tanks and brailing of sets in seine fisheries, and  
23 so on.

24 Q Mm-hmm.

25 DR. HARGREAVES: So where some of the practices and  
26 equipment design, stuff that was developed during  
27 the CFAR program has continued, but I don't think  
28 the emphasis is still there, and certainly the  
29 interest in terms of continuing to develop these  
30 methods has waned considerably since 2002 and the  
31 end of the CFAR funding.

32 Q Mr. Curry, do you agree with that? Do you think  
33 selective fishing has fallen off the radar  
34 somewhat since the end of the program?

35 MR. CURRY: Since the end of the program, selective  
36 fishing has been carried out through the Salmon  
37 Working Group within Fisheries and Oceans, and  
38 actual hands-on carried out by the fisheries  
39 managers within DFO. And it's without having a  
40 directed funding source and without having someone  
41 working to continue to work with First Nations and  
42 recreational and commercial harvesters to progress  
43 with some of these gear and methods that we had  
44 started, some that could definitely use  
45 completion, there wasn't someone driving that. So  
46 it has relaxed and there isn't the same type of  
47 push that I feel there should be in order to solve

1           some of these issues that are getting more and  
2           more stringent as we move to Wild Salmon Policy,  
3           **SARA** legislation, more and more a need to solve  
4           some of these bycatch issues.

5           Q     Dr. Hargreaves, since 2002 what has happened on  
6           the selective fishing front, and in particular in  
7           terms of research or pilot projects? You may be  
8           better positioned to speak to the research  
9           component.

10          DR. HARGREAVES: There has not been a lot of research  
11          done since then. One of the documents you  
12          referred to earlier, which was the decision note  
13          around the seine bunts.

14          Q     Yes.

15          DR. HARGREAVES: For three years after 2002 we  
16          continued to work with industry, with the  
17          commercial sector to work on the seine bunts one.  
18          There has been a small amount of research activity  
19          in some of the other sectors, as well, but very  
20          little, actually.

21                 And I think one of the biggest gaps, if I can  
22          insert it here, is that the question of post-  
23          release mortality rates is something that we  
24          committed to as a Department that we would  
25          continue to work on, and very little work,  
26          essentially no work has been done on that since  
27          the end of the CFAR Program. And to me that's a  
28          critical gap in our knowledge. Even if we  
29          developed all the selective fishing methods in the  
30          world, and they worked wonderfully, the value of  
31          those methods depends entirely on the post-release  
32          survival rates and the effectiveness of those fish  
33          to get back and spawn successfully, and we have  
34          not addressed in my mind, to my satisfaction, of  
35          knowing that we understand that yet.

36          Q     Mr. Curry, do you have anything to add on this?

37          MR. CURRY: I would say that just to add that where  
38          we've seen progress since the end of this, like a  
39          fisheries program, is where we've implemented some  
40          fisheries. I'll use one example. Out in Area 20,  
41          Juan de Fuca Strait, with the Area B seine fleet,  
42          we have carried out a very stringent fishery  
43          that's managed by a manager on the grounds with  
44          cooperation from the seine harvesters out there,  
45          where we've implemented a number of strategies  
46          within the fishery, including moving the fleet  
47          within the fishery off of the areas in that body

1 of water that have higher incidence of bycatch  
2 onto the more abundant flow of sockeye through  
3 that area. So by using a number of strategies,  
4 we've been able to carry out a fishery and improve  
5 on it over time.

6 There's still room for improvement, as we've  
7 talked about, in terms of the post-release  
8 mortality issue, where it's high out there because  
9 of the nature of the area. But we have carried on  
10 with implementing a very stringent fishery there  
11 that shows some good signs of success. But as Dr.  
12 Hargreaves mentions, with post-release mortality,  
13 there's more work to be done. There's certainly  
14 lots to be gained by continuing the work that we  
15 -- that we did with grids and in bunts, for  
16 instance, that show promise to solve some of these  
17 issues out in areas like that, that are difficult  
18 fishing waters.

19 Q Yes.

20 DR. HARGREAVES: Sorry, just can I add another comment.  
21 There are still, there's interest in the various  
22 sectors in continuing some of this work. For  
23 example, there's interest in using beach seines in  
24 First Nations fisheries in the Fraser River, for  
25 example, which would be more selective method than  
26 a gillnet. There's interest in the commercial  
27 seine group, for example, of fishing close to the  
28 mouth of the Fraser River, which would minimize  
29 the encounter rates of coho, for example. So  
30 there is still a strong interest in this, I think,  
31 but there hasn't been a real focus in terms of  
32 moving ahead with selective fishing, per se.

33 Q Do you think it needs that push?

34 DR. HARGREAVES: I think it do, it does, yes.

35 Q Mr. Curry, could you indicate with respect to  
36 standards, I think the policy talks about setting  
37 standards for selective fishing. Have there been  
38 formal or informal standards that have been  
39 developed?

40 MR. CURRY: Towards the end of the Selective Fisheries  
41 Program and with a goal of trying to create  
42 selective fishing standards by 2003, there was  
43 some efforts internally to work on heading in that  
44 direction to lay out standards in a fishery. So,  
45 you know, a particular fishery would need certain  
46 gear to be used, certain methods to be employed,  
47 and that we would have known mortality rates and

1 that sort of thing, so that we could set the  
2 standards for an acceptable fishery under certain  
3 conditions.

4 We haven't pulled together a comprehensive  
5 list of standards that was envisioned through the  
6 Selective Fisheries Program, and that's laid out  
7 in the Selective Fisheries Policy. But  
8 nonetheless, standards are in existence in a  
9 general way throughout the Integrated Fisheries  
10 Management Plan, or IFMP, each year do lay out  
11 standards in general. But the real details of  
12 those standards come into play when you are  
13 dealing with the conditions, the commercial  
14 conditions of licence, for instance, where these  
15 measures are laid out very specifically in terms  
16 of revival tank use and the type of mesh being  
17 used in a gillnet fishery, et cetera, and as well  
18 as the notices that come out will also call upon  
19 what measures need to be employed in a particular  
20 fishery as well.

21 Q In terms of the development since 2002, if I use  
22 that as the basis for this question, am I right to  
23 say that there is currently no program lead for  
24 selective fishing?

25 MR. CURRY: That is correct.

26 Q There's no A-based --

27 MR. CURRY: Other than I will just say --

28 Q I'm sorry.

29 MR. CURRY: -- the Salmon Coordinator takes on, in  
30 essence, a lead for selective fishing. But if you  
31 look at what's on the plate of the Salmon  
32 Coordinator, there's a whole array of things as  
33 you'll soon find out over the next few days. So  
34 what we're saying is that there's no one person  
35 that has the time required in order to push  
36 selective fishing to the point where it gets back  
37 more on the radar screen where it is creating  
38 solutions.

39 Q There's no A-based funding for selective fishing?

40 MR. CURRY: No.

41 Q Is there funding for selective fishing projects  
42 now, or do they take place, if at all?

43 MR. CURRY: They would take place if costs are very  
44 modest, and a harvest group has some access to  
45 funds outside of DFO, they could use those funds.  
46 Like we mentioned, the five percent use of the  
47 total allowable catch for selective fishing

1 projects would be a very good legacy from the  
2 Selective Fisheries Program, allowing at least the  
3 commercial sector the opportunity to continue  
4 working. But as Dr. Hargreaves mentioned, the  
5 **Larocque** case trumps that at this point and we're  
6 not able to use it. But the recreational and  
7 First Nations do not have the same access to  
8 specific funding for selective fishing. But in  
9 essence, the commercial don't have access to it  
10 now, either.

11 Q You'll both be relieved. I think I only have two  
12 questions left. The first is at a general level  
13 if you have other comments on the status of  
14 selective fishing, and whether for the different  
15 sectors or gear types there are specific immediate  
16 things that you think could happen and should  
17 happen to make them, to have them fishing more  
18 selectively.

19 MR. CURRY: I guess I could start off by saying that  
20 what I would recommend in order to regain a focus  
21 on finding solutions that can get harvesters back  
22 fishing more selectively, a few things could  
23 happen. One would be slowing the pace of the  
24 fishery so that there's the time to implement  
25 these strategies effectively, and so with defined  
26 shares there's some measure of greater time.

27 Another one would be completing the  
28 standards, making the standards more visible to  
29 the harvesters so that they can get a sense of how  
30 high the bar is set for various fisheries under  
31 certain circumstances so that they can then look  
32 at what tools can they use to make their fishery  
33 more selective, more responsible, and therefore,  
34 you know, getting back in the water in some cases  
35 where they currently can't. So of course with  
36 this, a funding source would be key, some form of  
37 funding this further work.

38 And there needs to be a collaborative  
39 relationship between the harvest sectors and DFO  
40 that works towards the buy-in to resolve these  
41 issues. We get greater buy-in if you're in it  
42 from the beginning, working on the strategies  
43 together to solve, as opposed to something that  
44 DFO might be trying to impose because it's a very  
45 good strategy that may be backed by science.  
46 Trying to impose that is a difficult thing. If  
47 you have buy-in from the beginning, it's obviously

1 much easier.

2 Analysis of work that's been completed, I  
3 think that's key. So that it helps guide where we  
4 go in the future, where would we get our greatest  
5 gains, looking at that analysis, and finally  
6 ongoing training and education, so that not only  
7 harvesters but managers and fishers have the  
8 training and education required to carry it out  
9 effectively. And this also can reflect on things  
10 like certification of fisheries for being  
11 responsible, and that sort of thing. When all  
12 these things come together, they're to carry out a  
13 responsible fishery.

14 Q Dr. Hargreaves.

15 DR. HARGREAVES: I guess I've got a short list similar  
16 to Gord's here. We didn't collude on this one,  
17 so...

18 Q Well, you say "this one", it makes me wonder about  
19 your other answers. Go ahead.

20 DR. HARGREAVES: It does sound very similar, maybe  
21 because we've had the same experience. But, Mr.  
22 Commissioner, in my view, selective fishing is one  
23 of the most critical things we can still do in the  
24 salmon fisheries in British Columbia. I think if  
25 we don't focus again on selective fishing for both  
26 conservation and harvest opportunities, in the new  
27 environment, which includes MSC certification, the  
28 Wild Salmon Policy, and other constraints that  
29 have come on since 2002, there will be no  
30 fisheries. That's where we'll end up. And I  
31 think we'll be unable to recover a lot of the  
32 stocks that are currently in dire circumstances  
33 for conservation. So I see it as a critical  
34 thing; still is.

35 I think the ability to fund it in some form  
36 is essential. And I think the original plan of  
37 using a five percent TAC was a beginning point for  
38 that. History has now shown that the industry  
39 sectors will not do this without that incentive.  
40 So there needs to be an incentive to do this and  
41 to continue that work, either through the  
42 government or through industry, in the example of  
43 the TAC, set aside.

44 I think there's a critical need to understand  
45 the knowledge gap of post-release mortality rates  
46 for this to work, and that's probably a  
47 significant component of that as a departmental

41  
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Cross-exam by Mr. Timberg (CAN)

1 responsibility to do that research. Hopefully in  
2 collaboration with other academic organizations  
3 that can assist with that.

4 And I think the commitment of the fishermen  
5 themselves is critical to the success. Again, no  
6 matter how many selective fishing methods and  
7 procedures we develop, if the fishermen are not  
8 committed to it, it won't work and we'll have  
9 wasted time and effort and not achieved the  
10 success of that. And as Gordon said, there is  
11 still a lot of analysis that needs to be done for  
12 the work that's already been done to lead us  
13 forward in the future.

14 MR. MARTLAND: Mr. Commissioner, that concludes the  
15 questions I have. Mr. Timberg is next on the  
16 list. Thank you.

17 MR. TIMBERG: Yes, for the record, Tim Timberg, T-i-m-  
18 b-e-r-g, and with me is Geneva Grande-McNeil.

19  
20 CROSS-EXAMINATION BY MR. TIMBERG:

21  
22 Q Mr. Registrar, could I have the PPR number 6,  
23 please.

24 And a question for Mr. Curry. Mr. Curry,  
25 could you provide us with your general response,  
26 having read this Commercial Fishing PPR, what your  
27 sort of general comments are with respect to the  
28 content of what's here before us today?

29 MR. CURRY: Yes. Reviewing the PPR as it's being  
30 referred to, I find it to be a fairly good summary  
31 of selective fishing. It seems to be fairly well  
32 -- it cover things fairly well. I would say that  
33 a weakness in it is that it definitely has a  
34 commercial fisheries focus, and appears to be weak  
35 on First Nations aspects of selective fishing, and  
36 probably to some extent the recreational, as well,  
37 it's weak on. But other than that, it seems to be  
38 a fairly good reflection of the selective fishing  
39 component of commercial fishing, or of Pacific  
40 Fisheries.

41 Q Okay, thank you. And if we could turn to  
42 paragraph 102. And, Dr. Hargreaves, perhaps you  
43 could comment on the last sentence in this long  
44 paragraph, which discusses -- I'll just read it  
45 for the record. It says:

46  
47 Future development of selective fishing

1 techniques might allow testing of fish for  
2 genetic or DNA markers that would identify  
3 their conservation unit and allow for fish  
4 sorting by genetic markers.  
5

6 DR. HARGREAVES: I think this is a really good example  
7 of the vision that selective fishing provided in  
8 the beginning, so some people will look at that  
9 and say that this is speculative, it's impossible,  
10 we can't get there from here, we won't, we'll  
11 never get there, it's too expensive, and so on.  
12 And that's basically the same response that we got  
13 at the beginning of the Selective Fishing Program.  
14 Many of the things that we thought of or imagined  
15 at that point, people thought was impossible. And  
16 with just a few years of work, a considerable  
17 amount of money and a huge amount of innovation on  
18 the basis of the people doing the fishing, we  
19 achieved most of that. So this one here, I think  
20 DNA markers, this technology doesn't exist right  
21 now, but I argue again that if we don't have  
22 something like this working in the field where we  
23 can individually test fish and either release them  
24 or harvest them, we won't be fishing.

25 Q And if we could turn to paragraph 114, and the  
26 one, two, three, the fourth bullet, I think Dr.  
27 Hargreaves, you've covered this in your earlier  
28 testimony but perhaps you could comment on here,  
29 it says:  
30

31 A significant knowledge gap still remains  
32 with respect to post-release mortality  
33 rates, --

34 - and it says -

35 -- "but the department plans to continue to  
36 investigate solutions."  
37

38 If you could perhaps comment on that.  
39

40 DR. HARGREAVES: During the Selective Fishing Program,  
41 we did a lot of work on short-term mortality  
42 rates, so the mortality rates that occur in fish  
43 within sort of 24 or 48 hours after release from  
44 fishing gear. And I think we have a fairly good,  
45 not a complete picture of that, but a fairly good  
46 idea of what that is like. What we don't have a  
47

1 good idea of is what's the longer-term effects of  
2 selective fishing. So once the fish is released,  
3 you know, a week, a month, a year from then, if  
4 it's returning to the spawning grounds say two  
5 months later, is it actually successfully spawned.  
6 Does it get to the spawning grounds and can it  
7 successfully spawn after being released.

8 And in some cases this fish may have been  
9 released several times, so it might have been  
10 encountered by a sport fisherman out in the Strait  
11 of Georgia, for example. It might have  
12 encountered and even been captured in a net in the  
13 Lower Fraser. It might then be caught by a First  
14 Nations fisherman in a terminal area. And then it  
15 gets to the spawning ground, and the question is  
16 all these captures, whether one or multiple, how  
17 does that affect its ability to spawn and  
18 reproduce? And that question is a fundamental one  
19 related to selective fishing.

20 We assume through selective fishing that we  
21 can provide opportunities to fish, and by fishing  
22 selectively, that we can mitigate the impact of  
23 that on the spawning success. But we're not sure  
24 of that, and it's a huge knowledge gap at this  
25 point.

26 Q Thank you. And then if we could turn to paragraph  
27 125. And, Mr. Curry, at the last sentence here it  
28 says:

29  
30 DFO has not formalized a set of selective  
31 fishing standards as contemplated under  
32 Principle 2 of the Selective Fishing Policy.  
33

34 And I presume this ties back to your testimony  
35 this morning, or at least back to the work that is  
36 being done, and perhaps you could explain that.

37 MR. CURRY: Yes, basically that the concept was to have  
38 a comprehensive listing of standards that all  
39 harvesters would be able to look at and understand  
40 what they need to do in order to be operating in a  
41 responsible fishery. And so right now, those  
42 standards are scattered all through our -- they're  
43 generally listed in our Integrated Fisheries  
44 Management Plans, but more specifically they're  
45 listed in conditions of licence, and so there are  
46 standards. There's certainly standards throughout  
47 all our fisheries that we have to meet in order to

1 carry them out. So they're there, but we don't  
2 have a comprehensive listing which was envisioned,  
3 and I think would be helpful for everyone to be  
4 able to understand a little more about what would  
5 be entailed.

6 Q Thank you. And if, Mr. Registrar, if we could  
7 have from Canada's list of documents, at Tab 1,  
8 the Code of Conduct for Responsible Fisheries.

9 And, Dr. Hargreaves, could you identify this  
10 document for us. What is this?

11 DR. HARGREAVES: The Code of Conduct for Responsible  
12 Fisheries, this is the Food & Agricultural  
13 Organization of the United Nations. So this is an  
14 international organization basically that  
15 developed this Code of Conduct for Responsible  
16 Fisheries. Basically as I went back to my early  
17 testimony, there was a growing concern, certainly  
18 back in the mid-'70s to early '80s, basically, of  
19 conservation and responsible fisheries practices  
20 in the word. Many of the world's fisheries were  
21 fully exploited or in many cases over-exploited.  
22 So the FAO came out with this Code of Conduct and  
23 Canada actually played a significant role in the  
24 development of this Code. And basically the  
25 purpose of this Code was to describe how to fish  
26 responsibly, to conserve stocks of concern, to  
27 minimize bycatch, a number of others, quite a long  
28 lengthy document, but it basically sets out  
29 guidelines for how to develop responsible  
30 fisheries.

31 Q Okay. And could we turn to section 6.2 of this at  
32 page 11 of 49. And is this article 6.2, 6.3, the  
33 most relevant as it relates to selective fishing?

34 DR. HARGREAVES: Yes, both of these relate directly to  
35 selective fishing. I believe also if you can go  
36 down to section 8, I believe. If we can just jump  
37 down a little bit further, I think there's another  
38 mention. Yes. So there's a number of different  
39 things in this 8.1 that I think are also relevant  
40 to the Selective Fishing Program.

41 Q Okay. And can you explain how selective fishing  
42 is implemented internationally.

43 DR. HARGREAVES: That's a very big question. There's,  
44 as I said, many different nations contributed to  
45 the Code of Conduct, and in most cases, as in  
46 Canada, we've developed a Code of Conduct  
47 specifically for Canadian fisheries. That Code of

1 Conduct differs by each fisheries species and gear  
2 type basically. So in an international sense  
3 there are many different implementations of the  
4 Code of Conduct that are specific to a fishery.  
5 I'll just use one example.

6 One of the most notable ones was dolphin-safe  
7 tuna. So there was a lot of concern, I don't know  
8 if you remember back that far, but there was a  
9 huge concern at one time about the tuna that we're  
10 eating was resulting in a high mortality of  
11 dolphin. And the reason for that is that the  
12 dolphin are attracted to the tuna, too. In fact,  
13 the fishermen follow and look for dolphin, which  
14 tells them that there's tuna below them, then set  
15 the net around the dolphin to harvest the tuna  
16 that were below them. But a result of that was  
17 the very high mortality rate of the tuna --

18 Q Right.

19 DR. HARGREAVES: -- or of the dolphin, I'm sorry. So  
20 that's an example where over a number of years the  
21 fishermen took it onto themselves, basically, I  
22 think in this case and I'm quite impressed by  
23 that, decided that they had to fix this, partly  
24 because it was affecting their market  
25 acceptability of their product, and developed  
26 methods to release and safely release the dolphin  
27 with very little mortality rates. So as a result  
28 of that, when you see a can of tuna, you'll see  
29 that it's dolphin-safe certified, which means that  
30 there's extremely low mortality rates. So that's  
31 one example of an international implementation of  
32 selective fishing.

33 Coming back to the salmon situation in  
34 Canada, as I said, many of our fishing  
35 organizations have developed our own Code of  
36 Conduct that follows the FAO guidelines, if you  
37 like, guidance from that, that's much more  
38 specific in terms of the measures and the  
39 practices that we use for selective fishing in  
40 Canada.

41 Q So perhaps let's go to the next tab, Tab 2 of the  
42 binder, and this is the Code of Conduct for  
43 Responsible Fisheries of 1998. And can you --

44 THE REGISTRAR: Mr. Commissioner, did you wish to mark  
45 the other one first?

46 MR. TIMBERG: Oh, yes, thank you. If we could have the  
47 first tab marked as the next exhibit.

1 THE REGISTRAR: It will be marked as Exhibit 442.

2  
3 EXHIBIT 442: Code of Conduct for Responsible  
4 Fisheries, 1995, Food & Agriculture  
5 Organization of the UN  
6

7 MR. TIMBERG:

8 Q And if we could turn to the next tab. And Dr.  
9 Hargreaves, if you could comment on the Canadian  
10 Code of Conduct for Responsible Fishing  
11 Operations.

12 DR. HARGREAVES: I think it would be more appropriate  
13 for Gord. He was more directly associated with  
14 this one.

15 Q Okay.

16 MR. CURRY: Yes, the Canadian Code of Conduct for  
17 Responsible Fishing Operations was a Canadian  
18 Fishing Industry led development, guided by the  
19 FAO Code. They developed a Code for Commercial  
20 Fisheries within Canada and I think currently it's  
21 somewhere in the range of 80 percent of commercial  
22 fishing organizations have endorsed this Code.

23 And if you go to principle 6, it's probably  
24 the most directly related to selective fishing,  
25 but in essence, all these principles relate in  
26 some way to selective fishing, and but I would say  
27 that principle 6 is the one that is most directly  
28 related to selective fishing.

29 Q And just for the record it states:

30  
31 To the extent practical, fish harvesters will  
32 minimize unintended bycatch and reduce waste  
33 and adverse impacts on the freshwater and  
34 marine ecosystems and habitats to ensure  
35 healthy stocks.  
36

37 MR. CURRY: So this, just I'll just add that this  
38 guidance is very helpful in that we've got the  
39 International Code, we've got this Canadian Code  
40 for Commercial Fisheries, and then we have a  
41 Selective Fisheries Policy that guides us in terms  
42 of if we're looking at then trying to set up  
43 commercial fishing plans for Fraser sockeye, which  
44 are laid out that those fishing plans are laid out  
45 in the IFMP, so you have bringing it down to a  
46 more real state where you get down to where you're  
47 actually carrying out fisheries that are tied into

1 all this policy work nationally and  
2 internationally.

3 Q Okay. And I'm wondering if there are other  
4 policies, Dr. Hargreaves, you spoke this morning  
5 about the coho crisis and the changes that DFO had  
6 at the time. I'm wondering whether if you can  
7 explain for the benefit of the Commissioner the  
8 relevance of the Allocation Policy for Pacific  
9 salmon, how that fits with the selective fishing.  
10 And, Mr. Registrar, I think -- I believe that's  
11 Exhibit 264. It's already in evidence.

12 MR. CURRY: Yes. The Allocation Policy was, as the  
13 title says, "The Fourth in a Series of Papers from  
14 Fisheries and Oceans". This is under the New  
15 Directions Policy document. So as a result of the  
16 coho crisis in particular, as I indicated earlier,  
17 there was a decision within DFO that we needed to  
18 fundamentally change the way salmon fisheries were  
19 managed and stocks were conserved on the Pacific  
20 Coast. And in order to clarify that direction,  
21 the new direction, there was the whole series of  
22 policy papers that came out in short order, the  
23 Allocation Policy being one of those.

24 This particular policy described how salmon  
25 would be allocated between the different user  
26 groups, so First Nations, recreational and  
27 commercial. Basically the split of allocation of  
28 different species, for example, it gives priority  
29 to the recreational fishery for chinook and coho,  
30 not exclusive access, but priority access to them.  
31 There's a recognition that in some commercial  
32 fisheries chinook and coho will be captured as a  
33 bycatch, not a targeted catch perhaps in most  
34 cases. So there was a recognition of that. There  
35 was a recognition or a policy statement made that  
36 the majority of pink and chum and sockeye would be  
37 allocated to the commercial fleet.

38 Q Right.

39 MR. CURRY: Roughly 95 percent of that, of the total  
40 TAC would go to those groups. So basically it  
41 laid out the framework for how fish, salmon would  
42 be allocated.

43 Q And, Mr. Registrar, if we could turn to page 29 or  
44 35 of 46 on this document. We spoke earlier about  
45 the five percent allocation to selective fishing.  
46 And perhaps you could just explain for the  
47 Commissioner how that worked here, and comment on

1 the two-year period that's stated.

2 MR. CURRY: So the original Coho Response Team report  
3 came out in 1998, and in moving forward with these  
4 various policy documents, there was a recognition  
5 that in order to do the selective fishing  
6 development, developing the years, training people  
7 how to use them, investigating the results of  
8 that, that there would be some funding required to  
9 do that.

10 So the CFAR Program provided government  
11 funding to a certain extent, but there was also a  
12 decision taken that up to five percent of the  
13 commercial catch would be allocated, could be  
14 allocated to support selective fishing  
15 development. And the idea was that that would  
16 occur for two years, a two-year period, and then  
17 we would reassess whether that was sufficient, or  
18 whether it could be relaxed or go away entirely.  
19 So that was the original purpose, that we would  
20 take some of the fish resource itself to help fund  
21 this new direction of selective fishing, and up to  
22 five percent of the TAC would be set aside for  
23 that purpose.

24 Q And if I understand your evidence from this  
25 morning, due to the impact of the **Larocque**  
26 decision, you're not able to effectively utilize  
27 that today, is that...

28 MR. CURRY: That's the current understanding. I don't  
29 think that's actually been tested in the courts,  
30 but I believe that would be the outcome, that  
31 would be my thought on it. And prior to that  
32 decision, though, there was a period when the five  
33 percent existed there in terms of this policy  
34 document, and this again also appears in the  
35 Selective Fishing Policy document, as well. But  
36 it wasn't fully utilized between the end of the  
37 CFAR Program and the **Larocque** decision. So even  
38 though the five percent was there, as we showed in  
39 that earlier document about the decision memo.

40 Q Mm-hmm.

41 MR. CURRY: There was a proposal there to use some of  
42 that five percent tax to support that particular  
43 experiment.

44 Q Right.

45 MR. CURRY: So it was there, but it was not fully  
46 utilized.

47 MR. TIMBERG: Thank you. And, Mr. Registrar, if we

1           could turn the Commission to the actual Selective  
2           Fishing Policy, it's at Tab 14 of the Commission's  
3           binder. I don't have the exhibit number handy.

4   THE REGISTRAR: Again, Mr. Timberg, did you wish to  
5           mark the Canadian Code of Conduct?

6   MR. TIMBERG: Yes, thank you. If that could be marked  
7           as an exhibit.

8   THE REGISTRAR: That will be marked as Exhibit number  
9           443.

10   MR. TIMBERG: Thank you.

11  
12                   EXHIBIT 443: Canadian Code of Conduct for  
13                   Responsible Fishing Operations, Consensus  
14                   Code 1998  
15

16   MR. TIMBERG:

17   Q   And if we could turn to page 16, please. And, Mr.  
18           Curry, I note that there's a definition here of  
19           "selective fishing" in the Selective Fishing  
20           Policy. Could you just perhaps clarify how DFO  
21           utilizes that definition?

22   MR. CURRY: Yes. Well, the definition in here:

23  
24                   A conservation-based management approach  
25                   which allows for the harvest of surplus  
26                   target species or stocks while aiming to  
27                   minimize or avoid the harvest of species or  
28                   stocks of conservation concern, or to release  
29                   bycatch unharmed.  
30

31                   So basically it's what we're looking to do is  
32                   create fisheries that for all intents and  
33                   purposes, you're catching the target species and  
34                   you're minimizing the impacts on any unintended  
35                   bycatch that you might encounter.

36   Q   Right. And there's a variety of tools that --  
37           that could be utilized for that?

38   MR. CURRY: Absolutely. There's from all the work that  
39           was carried out in the Selective Fisheries Program  
40           and work prior to that and after that, there are  
41           quite a suite of tools that can be employed in  
42           various fisheries and used where they need to be  
43           used to solve some of the issues that harvesters  
44           are facing.

45   Q   Mr. Registrar, if we could turn to Tab 7 of  
46           Canada's binder.

47                   Oh, sorry, Dr. Hargreaves.

1 DR. HARGREAVES: May I just add something. In that  
2 same document on page 10, just to point out, Mr.  
3 Commissioner, the last sentence of the third  
4 paragraph it says:

5  
6 In the salmon fishery, Fisheries and Oceans  
7 Canada will continue to provide up to five  
8 percent of the...TAC to support experimental  
9 pilots...

10  
11 So and just again emphasizing that it does appear  
12 in this document again. So this was seen as a  
13 fundamental way of trying to continue to fund the  
14 development of selective fishing.

15 Q All right. Mr. Registrar, if you could turn to  
16 Tab 7, I've got a series of maps that I've taken  
17 from the IFMP.

18 This morning, Mr. Curry, you provided a  
19 helpful example of some of the toolbox of tools  
20 for selective fishing. And I'm wondering if you  
21 could take the Commissioner through these maps,  
22 and the first one is -- and for the record, these  
23 are taken from the IFMP. The first one is Area B  
24 - Seine map, and perhaps just for the assistance  
25 of the Commissioner, explain how this map works  
26 briefly, and then perhaps you could describe some  
27 of the selective fishing tools for the seine  
28 fishery, and then we'll go on to the gillnet  
29 fishery and you could perhaps just sort of help  
30 bring this to light.

31 MR. CURRY: Okay, I'll try and be brief. There are a  
32 lot of tools. So this map of Area B - Seine,  
33 seines in the Pacific Fishery are divided into two  
34 geographic areas. This map represents Area B,  
35 which is the south coast fishing area for seine  
36 vessels. There is a corresponding map for the  
37 north coast, which is Area A with seine.

38 In Area B, with the Selective Fisheries  
39 Program, the advent of brailing of catches. A  
40 normal practice prior to the Selective Fisheries  
41 Program and the coho crisis was that when a seine  
42 boat would catch a number of fish, it would bring  
43 these fish over the stern of the vessel. So  
44 sometimes you have quite a number of fish coming  
45 over the stern of the vessel, and there's a lot of  
46 pressure exerted within the net coming over the  
47 stern, and compressing the fish. So if had small

1           coho, for instance, or small chinook in there,  
2           they could be injured as a result of being in  
3           there with a lot of sockeye, for instance.

4           So what was employed is using a brailer,  
5           which is a power-assisted dip net, a very large  
6           one that can hold several hundred fish at a time,  
7           or up to, depending on the size of it, and then it  
8           is raised and the fish are placed on board the  
9           vessel, often in a sorting area, a wet sorting  
10          area, whether that's a portion of the deck or  
11          actually constructed on the top of the hold, where  
12          the harvesters then can get a look at the fish and  
13          pull out the coho or chinook, deposit them in the  
14          revival tank. These vessels all have to  
15          functioning revival tanks on them. And so then  
16          when those fish are ready to be released after the  
17          finishing up of the set and giving them time to  
18          recover, then those coho and chinook, for  
19          instance, in a sockeye fishery, would then be  
20          released. That's an example of a few of the  
21          measures within Area B - Seine.

22        Q       And this morning you were both referring to a  
23        knotless bunt, and can you just describe what that  
24        -- that term means.

25        MR. CURRY: Sure. A good example of that is in the  
26        area marked on the map here, Area 20, Juan de Fuca  
27        Strait, you're in an area where there's generally  
28        large swells. And so when the boats are fishing  
29        out there, and they're bringing in the last part  
30        of their net, that's referred to as the bunt, the  
31        boats are rocking back and forth, and the net is  
32        going up and down out of the water. And so the  
33        bunt is webbed with knots in it, and it's very  
34        abrasive against the fish, and you can see the  
35        scales in the water as a result of this action.  
36        So when we talk about knotless bunts, it's simply  
37        that, it's a bunt that doesn't have knots. And in  
38        the case where we're looking at employing escape  
39        grids, the meshes is a lot smaller, and so you  
40        need to provide an avenue of escape, and so the  
41        grids provided that.

42                In the old way with the knotted bunts, they  
43        were of a certain size and did release some of the  
44        very small coho and chinook could swim through  
45        that web, but there are many others that would  
46        either get gilled in it, or would not be able to  
47        get out and would then have to be handled and that

1 sort of thing. So basically the knotless is more  
2 fish friendly. Because if you take too many  
3 scales off a fish, it will not survive.

4 Q Right. If we could then perhaps flip to the next  
5 map here, which is the Area D Gillnet. And  
6 perhaps you could just briefly describe some of  
7 the selective fishing methods for gillnet.

8 MR. CURRY: The Area D Gillnet, as you can see by the  
9 map, one of their main fishing areas is Johnstone  
10 Strait, for instance. So if they're fishing for  
11 Fraser sockeye, they'd be fishing in Areas 12 and  
12 13 in Johnston Strait. And we would look at  
13 there's incidental or there's bycatch of coho and  
14 chinook in that fishery, as an example. So we  
15 want to see those fish coming aboard alive with  
16 the option of being able to give those fish some  
17 time to recover in a revival tank, so they all -  
18 all - vessels require having a revival tank. And  
19 there's a limited set time. I'm not sure whether  
20 it's 45 minutes. I believe it has been 45 minutes  
21 in the last few years. And so a number of fish  
22 are coming aboard alive and that gives those  
23 harvesters the ability to recover those fish and  
24 then release them back into the water after  
25 they've retrieved their net and taken their catch  
26 aboard.

27 Q Thank you. And then over the page, Area E Gillnet  
28 is just a different location, a different area?

29 MR. CURRY: Yes, the Area E Gillnet area, as you can  
30 see, extends out just to the west coast of the  
31 southern part of Vancouver Island and up into the  
32 Georgia Basin, as well as into the lower reaches  
33 of the Fraser River. And the fishing for Fraser  
34 sockeye there is in the Fraser river. And again  
35 similarly to Area D, revival tanks are mandatory,  
36 set times are controlled so that as many live fish  
37 as possible are coming aboard, so that they can be  
38 released. And there's other measures that can be  
39 used or pulled out of the toolbox if need be. If  
40 we're dealing with steelhead issues, or other  
41 species that are being caught and needing to be  
42 released, and so on.

43 Q All right. And then over the page we have Area G  
44 - Troll. And perhaps you could explain for the  
45 Commissioner some of the selective fishing  
46 techniques for the troll.

47 MR. CURRY: Sure. With troll, there's three troll

1 areas within the province, and there's Area G -  
2 Troll shown here, which is for the most part the  
3 West Coast of Vancouver Island, and they would  
4 encounter Fraser sockeye off the west coast of  
5 Vancouver Island, and some of the measures that we  
6 employed was barbless hooks. I believe that there  
7 was less damage to fish that were caught with  
8 barbless hooks. Also because when you have caught  
9 a fish with a barbless hook, you've got to then  
10 take the hook out and release it. If you have a  
11 barb on the hook, it can cause a lot more damage  
12 to the fish physically, and therefore potential  
13 mortality. So one of the strategies was to have  
14 barbless hooks on all troll vessels, as well as in  
15 the recreational fishery.

16 One of the things that we use extensively is  
17 time an area with all the fleets, but as an  
18 example, in this fleet would be looking at where  
19 can we fish and target sockeye and not have a high  
20 incidence of coho and chinook at the same time.  
21 So we would also look at looking at what type of  
22 gear can we utilize. And one of the things where  
23 the West Coast fleet fishes chinook, we have had  
24 fisheries with large plugs, which sockeye  
25 basically are not going to be biting, therefore it  
26 could be they would be able to prosecute a fishery  
27 on chinook and not have an incidence of bringing  
28 in any sockeye. So again, some of the toolbox  
29 options that are available.

30 Q Helpful. And then if we could just flip over the  
31 page. You've discussed the Area H - Troll, and  
32 here's the next map is Area A - Seine, which you  
33 referred to earlier, so this is the north coast.

34 MR. CURRY: Mm-hmm.

35 Q And then over the page, Area F - Troll, is the  
36 north coast troll, and Area C - Gillnet.

37 MR. CURRY: That's right.

38 MR. TIMBERG: If this compilation of maps could be  
39 marked as the next exhibit.

40 THE REGISTRAR: Exhibit number 444.

41  
42 EXHIBIT 444: Maps of Commercial Fishing  
43 Areas, excerpted from Exhibits 349 and 445  
44

45 MR. TIMBERG: And, Mr. Commissioner, I'm wondering if  
46 this a time for the noontime break.

47 THE COMMISSIONER: Yes, thank you, counsel. Just

1 before we break, I am advised that we have with us  
2 today in the public audience a group of students  
3 from Quest University who are studying in the area  
4 in which we are investigating, and I want to  
5 welcome them here today. One has to wonder why  
6 they would leave the beauty of Squamish for a  
7 glass tower in downtown Vancouver, but they are  
8 determined obviously to find out more about this  
9 area. So we welcome them. Thank you very much.  
10 We'll now adjourn.

11 THE REGISTRAR: The hearing is now adjourned until 2:00  
12 p.m.

13  
14 (PROCEEDINGS ADJOURNED FOR NOON RECESS)  
15 (PROCEEDINGS RECONVENED)  
16

17 THE REGISTRAR: Order. The hearing is now resumed.

18 MR. TIMBERG: And it's Tim Timberg, T-i-m-b-e-r-g,  
19 counsel for Canada, continuing. Mr. Registrar, if  
20 we could have the 2010/2011 Pacific Region  
21 Southern Salmon IFMP brought up, please?  
22

23 CROSS-EXAMINATION BY MR. TIMBERG, continuing:  
24

25 Q And if we could have Mr. Curry just identify this  
26 document for us, please?

27 MR. CURRY: Yes. This document is the annual salmon  
28 fishing plan in the Pacific Region that is  
29 produced each year to provide guidance to the  
30 Pacific fisheries.

31 MR. TIMBERG: And if we could -- Mr. Registrar, if we  
32 could then turn to page 58/59 of 160.

33 Q And at the top of page 59 is Table 8, Post-Release  
34 Mortality Rates. So this morning, Dr. Hargreaves,  
35 we were speaking about the various post-release  
36 mortality rates between the various gear types and  
37 I'm wondering if either Mr. Curry or Dr.  
38 Hargreaves, if you could perhaps comment on  
39 whether different gear types have different post-  
40 release mortality rates and the relevance of this  
41 to selective fishing.

42 DR. HARGREAVES: Now, this table was entered into the  
43 IFMP this year basically to remind people in the  
44 harvest sectors basically of what post-release  
45 mortality rates that the DFO was assuming for  
46 various fisheries. So if you look at the left  
47 side, you see fishery is the title and then it

1 goes through First Nations fisheries, recreational  
2 troll, recreational troll gear for chinook and on  
3 down to the bottom, commercial troll all areas.  
4 And then what it shows is two additional columns,  
5 the pre-2001 post-release rates and then the next  
6 column is a 2001 post-release rates.

7 The post-release basically applies or is the  
8 -- refers to what rate do we think the fish will  
9 die after release from that particular type of  
10 fishery. So that type of gear, that type of  
11 fishery and that location and that species of  
12 fish.

13 So if we look in the second column, for  
14 example, if we go down to the second one, so  
15 recreational troll gear, so a recreational  
16 fisherman that's trolling for sockeye, pink, coho  
17 and chum, we assume a ten percent post-release  
18 rate. So if he catches a coho and releases it,  
19 we're assuming that 90 percent of those fish would  
20 survive or alternatively, ten percent would die as  
21 a result of the injury of that. And so on down  
22 the list.

23 If you go down, I guess, to the fourth one or  
24 fifth one there, commercial gillnet, we're  
25 assuming somewhere between 60 and 70 percent  
26 mortality rates in that type of fishery and again,  
27 the assumption is that a gillnet has a higher  
28 mortality rate and those are based on studies that  
29 have been done over the years.

30 And then in the last column, the post-2001,  
31 these are basically updates to those rates based  
32 on additional studies that have been done and  
33 additional research since that 2001 period.

34 Q And what's the relevance of this with respect to  
35 how DFO manages a selective fishery?

36 DR. HARGREAVES: It's very important in terms of  
37 selective fishing, because basically these rates  
38 then determine what the impact is of various  
39 fisheries on non-target species, for example. So  
40 if you again deal with Fraser sockeye, for  
41 example, if we set a target of, say, three percent  
42 incidental harvest or incidental mortality rate of  
43 Thompson coho, for example, then when we reach  
44 that, when we estimate we've reached that, then  
45 the fishery would be terminated. So it sets  
46 basically the pace of the fishery, but also how  
47 long that fishery can stay open.

1 Q All right. Thank you very much.

2 MR. TIMBERG: If this could be marked as the next  
3 exhibit.

4 THE REGISTRAR: Exhibit number 445.

5

6 EXHIBIT 445: Pacific Region IFMP Salmon  
7 Southern BC - June 1, 2010 - May 31, 2011

8

9

MR. TIMBERG:

10 Q This morning we were, Dr. Hargreaves, we were  
11 focusing primarily on how selective fishing works  
12 in a mixed species fisheries, i.e., between  
13 various different species of fish. Perhaps you  
14 could tell us how selective fishing would operate  
15 with a mixed stock fishery or, so, for example,  
16 under Wild Salmon Policy between salmon from  
17 different conservation units, and perhaps you  
18 could give an example of the Cultus Lake  
19 conservation unit.

20 DR. HARGREAVES: Okay. The relevance of selective  
21 fishing to a mixed stock fishery, so within a  
22 particular species, is much more challenging.  
23 It's very difficult in the ocean and in the  
24 fishery for a fisherman to identify fish from a  
25 particular stock.

26 If we use an example of Cultus, we know from  
27 historical timing of the run when they will  
28 return, roughly the timing curve of that, and that  
29 overlaps with a number of other stocks. So  
30 there's a concern if those other stocks are large  
31 and have a harvestable surplus, how can we  
32 minimize the impact on Cultus, for example, and  
33 preserve the fish in that particular conservation  
34 unit.

35 So our progress on that has largely been  
36 limited to the fishing time and area type  
37 approaches. Again, sort of pushing the envelope a  
38 bit, I guess, I think we could go much further  
39 than that if we deployed selective fishing more to  
40 our advantage. And again, I'll verge on the  
41 speculative here at the moment, but we did talk  
42 about real time sorting fish based on DNA. That's  
43 not available yet, but I think it could be. I  
44 don't think that's speculation.

45 Another example might be, for example, if we  
46 could put enough tags on Cultus Lake fish going  
47 out and then turn those tags on, let's say they're

1 an acoustic tag, and this technology already  
2 exists, turn that tag on when the adults are  
3 coming back, then basically as the fish are  
4 approaching the Strait of Georgia - these would be  
5 Cultus Lake fish - we would be watching for them  
6 at the doorways, if you want. We could be fishing  
7 in the Gulf and then as the tags are detected,  
8 that fishery could condense down and up the river  
9 ahead of the Cultus Lake and basically conserve  
10 those fish as they appear, rather than just  
11 guessing when they might be there based on time  
12 and area type things as we do now.

13 Again, we're not doing that right now, but  
14 the technology exists to do that, so...

15 Q And so that's a key point here, that selective  
16 fishing is an ever-evolving management idea, just  
17 a variety of different gears and techniques can be  
18 utilized.

19 DR. HARGREAVES: Yes. Very much so. I think a big  
20 challenge, and I think is to keep ahead with the  
21 technology, so the technology provides -- as  
22 technology improves, it provides all kinds of  
23 opportunities and I think we've taken very little  
24 advantage of that since about 2002.

25 Q And just so we're clear on the record that the  
26 present approach with respect to the Cultus Lake  
27 fishery, you said we use time and area. Perhaps  
28 just clarify what we presently do, so we have that  
29 on the record.

30 DR. HARGREAVES: Basically, from historical timing  
31 curves, so we know basically when the fish arrive  
32 at Cultus Lake, we back that up so we know when  
33 they'll be in the main stem of the Fraser and when  
34 they'll be in the marine approach areas, but  
35 that's based on historical averages. We might be  
36 able to vary that a little bit, but we could be  
37 off by a week, two weeks, three weeks even in  
38 terms of that timing. So we try to be  
39 conservative, which means we shut down fisheries  
40 probably earlier than we need to and don't open  
41 them until later than we could if we actually knew  
42 the exact timing of those fish coming through  
43 their home river or home lake.

44 Q Thank you.

45 MR. CURRY: Just to add to that --

46 Q Sure.

47 MR. CURRY: -- just one quick thing. In addition to

1 that example, there is the possibility today that  
2 exists and does exist that, for instance, if you  
3 fish beyond the reach of the Cultus sockeye, so if  
4 you're fishing in the Lower Fraser Canyon, once  
5 those fish have split off and headed off to the  
6 Cultus, then you're fishing stocks -- a different  
7 array of stocks minus Cultus, so if you have a  
8 restriction on Cultus, you then no longer have  
9 that restriction once you're fishing further up  
10 the river.

11 There may be other stocks that are of concern  
12 now or into the future, but that's the type of  
13 flexibility that one needs to look at the  
14 different options that are available. They're not  
15 -- they're not just -- there's many in essence to  
16 look at and assess on an annual basis.

17 Q Thank you. Mr. Curry, for the benefit of the  
18 commissioner, are there any safety issues that  
19 should be raised with respect to selective fishing  
20 techniques?

21 MR. CURRY: Basically, yes. That's one of the things  
22 that, besides moving to a more conservation-based  
23 selective responsible fishery, it needs to be  
24 environmentally sound. It's got to be  
25 economically sound, but also measures that you  
26 implement need to be safe, as well, for the  
27 harvester.

28 So an example I could use is, for instance,  
29 if you're using a current brailer in a seine  
30 fishery and you're out in Juan de Fuca Strait  
31 where there's large swells and the boats are  
32 moving around, that brailer is powered and hung  
33 from the rigging and when it's raised up, there's,  
34 although they try and control it, sometimes that  
35 brailer can be swinging around and can be quite  
36 dangerous.

37 So one of the innovative commercial fishermen  
38 created a soft brailer which is basically a  
39 brailer with a tube that's attached to the  
40 vessel. And what this does is it raises the fish  
41 in the water. They slide through a tube, onto a  
42 sorting tray and it doesn't allow the brailer  
43 then to be swinging around. So one has to be  
44 thinking about the safety issues, as well.

45 And when we're looking at putting revival  
46 tanks on all vessels, there's some commercial  
47 gillnetters, for instance, that are very small, so

1           you have to be very cognizant of stability issues  
2           if you're putting a several-gallon tank on the  
3           side of the rail of a boat, it could have  
4           stability issues. So those things have to be  
5           taken into consideration in this, as well.

6           Q     Thank you. This morning Mr. Curry spoke about the  
7           importance of buy-in from various stakeholders and  
8           I was wondering if, Dr. Hargreaves, you had any  
9           comment on that theme?

10          DR. HARGREAVES: I agree with Gord's comments. I think  
11          I would emphasize that if we had the best  
12          selective fishing toolbox in the world, it won't  
13          make any difference if the fishermen don't use it  
14          properly. And no amount of enforcement can ensure  
15          compliance with that.

16          So take an example of two fishing boats that  
17          are equipped exactly the same way, they have all  
18          the requirements that are required under the  
19          Regulations and their licence conditions and so  
20          on, they have revival tanks, they have the flow  
21          rates and every thing else; if the CMP officer  
22          comes aboard, everything looks to be fine. The  
23          CMP officer goes back in his boat to the next boat  
24          and behind them, the skipper basically says,  
25          "Forget it. Don't worry about it. We're too  
26          busy. Don't put the fish in the revival tank,"  
27          or, "Leave the fish that's in there," if that is  
28          the sort of attitude of the crew, then all of that  
29          equipment is wasted. It won't achieve any sort of  
30          benefit.

31          And we've seen that in the fleet. I've  
32          actually personally seen that, where some --  
33          they're in perfect compliance legally, but they're  
34          not achieving the benefits that we wanted to see  
35          from that equipment. And it's the buy-in from the  
36          fleet. So if they don't agree - and this applies  
37          to the recreational fishermen, as well. If they  
38          are not -- if they have the right equipment, it  
39          doesn't necessarily mean they'll use it in the way  
40          that's appropriate and if they don't, we won't get  
41          any conservation benefit from it.

42          Q     Okay. And this morning we spoke, commission  
43          counsel put before you Exhibit 441 which was the  
44          audit of the Selective Fishing Program and I'd  
45          like to ask Mr. Registrar to bring forward to  
46          documents. It's Tab 3 from Canada's book of  
47          documents. And I think, Mr. Curry, can you

1 comment on -- can you identify this document for  
2 us? What is this document?

3 MR. CURRY: This document is, from what I recall, a  
4 compilation of input from Fisheries and Oceans  
5 staff with regards to the evaluation of the  
6 Selective Fisheries Program that was taking place.  
7 So there was, throughout this document, it  
8 reflects where we might agree with the auditors or  
9 where we disagree with the auditors and why.

10 MR. TIMBERG: All right. If this could be marked as  
11 the next exhibit, please.

12 THE REGISTRAR: Exhibit 446.

13  
14 EXHIBIT 446: Factual Validation and  
15 Commentary on Audit and Evaluation Report -  
16 November 2004 - Pacific Salmon Selective  
17 Fisheries Program  
18

19 MR. TIMBERG:

20 Q And if we could turn then to Tab 4 of the binder  
21 and if you could identify this document, please,  
22 Mr. Curry?

23 MR. CURRY: Yes. This document is a more specific one,  
24 similar to the previous one but focused on  
25 comments from conservation and protection, so the  
26 fishery officers in Fisheries and Oceans had  
27 specific comments with regards to the audit that  
28 they wanted to provide, and that's what this  
29 document reflects.

30 MR. TIMBERG: If this could be marked as the next  
31 exhibit.

32 THE REGISTRAR: Four hundred and forty-seven.

33  
34 EXHIBIT 447: C & P - Pacific Comments on  
35 Draft Advisory Report - November 2004 -  
36 Pacific Salmon Selective Fisheries Program  
37 Evaluation  
38

39 MR. TIMBERG:

40 Q And, Mr. Curry, is there anything you needed to  
41 add from this morning with respect to your  
42 consideration of that audit?

43 MR. CURRY: I think I've covered it. I think there was  
44 criticisms that we had of it and felt that it  
45 wasn't a fair assessment, and therefore we wanted  
46 to express that and why we thought that on various  
47 points and they're reflected in these documents.

1 MR. TIMBERG: Mr. Commissioner, I have no further  
2 questions.

3 MR. MARTLAND: Mr. Commissioner, I'm just going to  
4 identify for the benefit of all counsel, on my  
5 math, we have about an hour and 45 minutes but  
6 that's to include a break. We have seven  
7 participants who have sought -- who want to cross-  
8 examine. On a pure equitable basis, that's 15  
9 minutes apiece. Some counsel have asked for  
10 significantly more than 15 minutes. I think what  
11 we should do is to our level best start and I'll  
12 appreciate any counsel who can go well under ten  
13 or 15 minutes. That would be great.

14 The first counsel is the province. Thank  
15 you.

16 MR. TYZUK: Commissioner, for the record Boris Tyzuk,  
17 T-y-z-u-k, for the Province of British Columbia.  
18

19 CROSS-EXAMINATION BY MR. TYZUK:  
20

21 Q Mr. Curry, at the end of your testimony this  
22 morning, you were mentioning that there were  
23 various techniques that could be used for  
24 selective fishing and you referred, I think, just  
25 at the end to the Area G troll -- Area E gillnet  
26 and then you made a comment that other techniques  
27 could be used for Fraser River steelhead. Could  
28 you expand on that, please?

29 MR. CURRY: Absolutely. One of the tools in the  
30 toolbox with regards to steelhead is that through  
31 past research we know that steelhead swim in the  
32 upper water column and quite often within a metre  
33 or two of the surface of the ocean and/or river,  
34 and therefore, one of the strategies that can be  
35 employed, say if you have a chum gillnet fishery  
36 in the Fraser River, for instance, or if you  
37 happen to have an overlap with sockeye and  
38 steelhead, but it's certainly applicable to chum,  
39 you can use a weed line.

40 And a weed line is simply the gillnet floats  
41 are on the surface of the water. The actual  
42 capturing portion of the web is two, three, four  
43 metres down from the surface, therefore allowing  
44 for surface swimming steelhead to swim over the  
45 capturing web, for the most part. Any, of course,  
46 that are swimming lower could get caught, but then  
47 they could be released using proper techniques.

1           So a weed line can be an effective means of  
2           conserving steelhead.

3           Q     Okay. So you're saying these could be, but at  
4           present they aren't being used; is that...?

5           MR. CURRY: They're part of the toolbox, and it's up to  
6           the managers and the harvesters to look at  
7           implementing them effectively in order to respond  
8           to that conservation issue.

9           Q     So do you know if between 2002 and now those  
10          techniques have been used?

11          MR. CURRY: I'm personally not aware of the weed lines  
12          being used extensively, but I've been a little bit  
13          away from some of the management of the Fraser  
14          River in some of the other jobs that I've been in  
15          since then.

16          Q     Thank you. Dr. Hargreaves, when you were summing  
17          up and saying what you felt like -- what I got out  
18          of it, and I have a scribble in my notes, so I  
19          have to go back and check, was that you felt that,  
20          as I saw it, selective fisheries were critical to  
21          the future of fishing on the West Coast and the  
22          Fraser River sockeye. And one of the things you  
23          mentioned was MSC certification. Would you expand  
24          on that, please?

25          DR. HARGREAVES: Yes. The MSC certification is  
26          something that's basically come along since the  
27          2002 end of the CFAR program. To achieve MSC  
28          certification, you have to go through a series of  
29          steps and then there's basically an action plan  
30          associated with that. I think certainly there are  
31          conditions under the current certification for  
32          Fraser sockeye, for example, conditions that apply  
33          both to Sakinaw and Cultus sockeye, for example.  
34          But there are certain conditions that have to be  
35          met in order to maintain that certification and I  
36          see that -- those are only the two current  
37          examples. As time goes forward and probably, in  
38          all likelihood, there will be additional stocks  
39          that have problems in terms of conservation, that  
40          that -- the difficulty of maintaining that  
41          certification will just grow, so...

42          Q     And -- but if selective fishing were to be more of  
43          a priority with the department, then there's a  
44          chance to deal with those things?

45          DR. HARGREAVES: I think -- and it's not that it's not  
46          a priority for the department. I think it is a  
47          priority for the department. I think there's a

1 lot more work that could be done. We have to  
2 figure out how to fund that, but I think selective  
3 fishing is a very valuable tool to help us move  
4 forward and meet those MSC certification  
5 requirements.

6 Q Okay. And just on that point, the evidence that  
7 we got this morning, as I saw it, is that there's  
8 no program leader for selective fisheries right  
9 now. There's no A-based funding. So yet you're  
10 saying it's a priority. Is it fair to say it's  
11 certainly not a high priority?

12 DR. HARGREAVES: No. I would take exception to that  
13 interpretation too. If I use another example, the  
14 Wild Salmon Policy, for example, we don't have  
15 really dedicated funds to implement that and we  
16 don't have specific regional lead for it either.  
17 I think both of those would assist us. But with  
18 selective fishing, as similar with Wild Salmon  
19 Policy, it's part of our routine business. So we  
20 are -- all of our fisheries managers are aware of  
21 selective fishing. We need -- I think personally  
22 we need to do a lot more. We need to make it more  
23 visible.

24 Having a lead would probably help. I agree  
25 with Gord on that but that doesn't mean  
26 necessarily that we're not doing anything about  
27 it.

28 Q And having A-based funding would help, as well.  
29 DR. HARGREAVES: Funding is a very serious issue, and I  
30 raise that again, because I think history has  
31 shown us that without the funding, selective  
32 fishing will not advance, so there was an  
33 opportunity for the fleets to use TAC when that  
34 option was available. When the DFO money ran out,  
35 the interest in selective fishing disappeared  
36 basically from all the fleets, and we've made very  
37 little progress since then. So the funding issue  
38 is critical. If we --

39 Q Okay.  
40 DR. HARGREAVES: -- the *Larocque* decision prevents us  
41 from doing that right now, is my interpretation of  
42 that. In the new *Fisheries Act* the idea of using  
43 TAC to support this type of activity, selective  
44 fishing, was there. In the most recent revision  
45 of the *Fisheries Act* that's gone again. So how do  
46 we fund the development of selective fishing to  
47 move forward is a critical question, I think.

1 MR. TYZUK: So without the funding -- all right. I'll  
2 just leave it at that. Thank you very much. I  
3 have no further questions.

4 MR. MARTLAND: Conservation Coalition, Mr. Harrison.

5 MR. HARRISON: Good afternoon. Mr. Commissioner, for  
6 the record Judah Harrison, last name H-a-double-r-  
7 i-s-o-n. I represent Conservation interests,  
8 various not-for-profits and an individual focused  
9 on conservation of salmon.

10

11 CROSS-EXAMINATION BY MR. HARRISON:

12

13 Q My first question, Mr. -- Dr. Hargreaves, excuse,  
14 me, you were just talking about Wild Salmon Policy  
15 and the role of selective fishing in meeting the  
16 Wild Salmon Policy and MSC, as well. Originally I  
17 was going to ask whether selective fishing is a  
18 good tool to meet the goals of the Wild Salmon  
19 Policy, but I'd like to actually flip that around  
20 and ask in your view is it possible to meet the  
21 goals of the Wild Salmon Policy absent a large  
22 increase in selective fishing?

23 DR. HARGREAVES: Again, I would say that selective  
24 fishing is a critical component of it. I think I  
25 would be reluctant to say that we couldn't achieve  
26 it without it. There are many ways to accomplish  
27 different goals, I guess. I think the Wild Salmon  
28 Policy is a very ambitious goal for the department  
29 and for the managing the resource. I think  
30 selective fishing is a very significant tool that  
31 would help us to achieve that, but probably not  
32 the only tool.

33 Q Okay. And then I guess specifically within the  
34 Wild Salmon Policy, the protection of conservation  
35 units as conservation units and the distinction  
36 between various conservation units, would you  
37 describe selective fishing as a very effective  
38 tool to meet that particular goal of the Wild  
39 Salmon Policy?

40 DR. HARGREAVES: You're posing difficult questions  
41 here.

42 Q Thank you.

43 DR. HARGREAVES: For sockeye, most of the conservation  
44 units or virtually all of them are single stocks  
45 in single lakes. In a mixed stock fishery in the  
46 marine approach areas, it's very difficult to sort  
47 that out. Selective fishing is not -- the current

1 methods of selective fishing do not help us very  
2 much in that situation. You can't -- it's very  
3 difficult for a fisherman, impossible basically  
4 for a fisherman to distinguish a Cultus Lake  
5 sockeye from a Harrison sockeye, or some other  
6 stock. So the basic sorting ability of selective  
7 fishing is not very helpful.

8 But time and area component of targeting the  
9 fishery is very powerful. We can use it to some  
10 degree in the saltwater end. For example, if  
11 we're sure that there are no -- based on run  
12 timing, for example, that it's too early for  
13 Cultus sockeye to show up, then we can prosecute  
14 fisheries with very little danger to that  
15 conservation unit. Or you can prosecute a fishery  
16 at the terminal area, where Cultus have split off  
17 to go into their river and up into their lake  
18 where we're pretty sure that's the only group that  
19 we're targeting on or protecting, as Gord said.  
20 If you go further up the river, where it's highly  
21 unlikely that Cultus sockeye would have travelled  
22 that far upriver, they're past their normal  
23 turnoff, then again, selective fishing can be very  
24 useful in that circumstance.

25 Q Thank you. That's a really good segue into my  
26 next question, which is for Mr. Curry. You  
27 mentioned this morning terminal fisheries. I'd  
28 like it if you could please expand upon that and  
29 talk about it as -- among the suite of tools,  
30 please.

31 MR. CURRY: Yes. Well, basically when you're dealing  
32 with a mixed species fishery, as well as a mixed  
33 stock fishery, as you move from the open ocean  
34 mixed fisheries, and as you move towards the  
35 spawning grounds you narrow the array of stocks or  
36 species down so that you can then become more  
37 selective as you get towards the terminal areas  
38 or, in essence, once you're on the spawning  
39 grounds, you're dealing with a stock of salmon and  
40 often you can identify that species of salmon on  
41 the spawning grounds. So that's the ultimate in  
42 terms of being able to be very specific.

43 As you move back out to the ocean, it becomes  
44 more and more difficult, but again, using the  
45 tools that we've talked about and potential tools  
46 in the future, you can have likely some greater  
47 success with sorting stocks out. But certainly a

1 terminal, a purely terminal fishery does that. I  
2 mean, it has its drawbacks in terms of the quality  
3 of the fish and various things, but some species  
4 are better -- are in a better condition in the  
5 terminal area than others.

6 Q Okay. And are there any terminal fisheries in  
7 B.C. or any significant -- are there significant  
8 examples of terminal fisheries in B.C.?

9 MR. CURRY: Without a doubt. First Nations are living  
10 and have been subsisting on fish taken from  
11 terminal systems, rivers and so on, and that's  
12 been one of the very strong strategies that  
13 they've employed for many, many years to in  
14 essence be selective before anybody coined the  
15 term.

16 Q Okay. I think I'll pick up the pace, just given  
17 Mr. Martland's warning. You referenced industry  
18 buy-in on various occasions and then, Mr. Curry,  
19 also throughout this morning you mentioned that  
20 selective fishing requirements or just selective  
21 fishing can be put as a condition of licence. And  
22 my question is are there any aspects of selective  
23 fishing that are currently mandatory?

24 MR. CURRY: Yes. There are mandatory requirements. An  
25 example of that would be barbless hooks in the  
26 recreational fishery, barbless hooks in the  
27 commercial troll fishery. That's a blanket  
28 requirement in those fisheries. Revival tanks on  
29 all commercial vessels is a requirement.  
30 Brailing on seine vessels is almost a blanket  
31 requirement. We do take that off in situations  
32 where we have a sufficiently terminal fishery that  
33 isn't -- doesn't have any issues with bi-catch.  
34 But the -- brailing is the standard and it's only  
35 not used in a very small number of cases.

36 Q Okay. Thank you. With respect to industry buy-in  
37 - this is a question for either one of you - is it  
38 fair to say that there are certain commercial  
39 fishermen who have bought into selective fishing;  
40 that you cannot make the comment that industry-  
41 wide, the commercial fishing industry does not buy  
42 into selective fishing?

43 MR. CURRY: There are some very, very committed  
44 individuals, committed to selective fishing and  
45 looking for solutions. And some of the area  
46 harvest committees that I've worked with have a  
47 real strong component of individuals that want the

1 tools and ability to adjust their fisheries to be  
2 able to solve some of these issues. There are  
3 others that are not as strategic as those. That's  
4 the nature of the array of opinions that are out  
5 there.

6 Q And if either of you feels that it's fair to  
7 comment on this, do either of you feel that you  
8 can comment on potential peer pressure or an  
9 industry -- how certain members of commercial  
10 fisheries would treat other members of commercial  
11 fisheries that adopt selective fishing or promote  
12 selective fishing?

13 MR. CURRY: We've had discussions about peer pressure  
14 as a tool to elicit buy-in to carrying out  
15 selective fishing measures appropriately, and so  
16 when I've met with commercial -- for instance,  
17 commercial reps, that was one of the strategies is  
18 looking at having the harvesters helping in that  
19 process of policing or keeping an eye on their  
20 counterparts to help in fostering a more  
21 progressive climate.

22 Q And I guess I was asking with an interest in the  
23 other way, i.e., if there are certain people who  
24 adopt selective fishing have either of you had  
25 experience where you've seen that they've been  
26 subject to pressure from other members of  
27 industry?

28 MR. CURRY: Yes. Very much. There's a report in here,  
29 Making Cooperative Research Work, in the Canadian  
30 set of documents, and I've laid out a scenario  
31 that I presented at a conference up in Alaska and  
32 basically, when you don't have buy-in from the  
33 start from the harvesters it's very difficult then  
34 to, you know, prove a selective fishing strategy  
35 and then try to impose it upon a group of  
36 harvesters. And we attempted that in essence with  
37 the selective grids in seine bunts and ran into  
38 some resistance to do the further testing that was  
39 needed and acceptance of that very compelling  
40 selective fishing tool. So there's certainly a  
41 lot of pressure out there to resist change from  
42 some sectors.

43 Q Yes?

44 DR. HARGREAVES: I would agree with Gord that there was  
45 in some cases pretty strong resistance. I think  
46 one of the outcomes from that was that when the  
47 department agreed to let the area harvest

1 associations decide whether they would proceed  
2 with using their TAC in their particular, you  
3 know, the troll TAC or the seine TAC to proceed  
4 with selective fishing almost in every case that  
5 the answer was no, we won't do that. We'd rather  
6 keep the TAC and not use it for selective fishing.  
7 But I think the point I'd like to make though is  
8 that I think this -- there are a number of people,  
9 quite a large number of people in all the fleets,  
10 First Nations especially, recreational and  
11 commercial, who are very interested in supporting  
12 selective fishing given the opportunity, I think,  
13 and given the funding to do so, and I think it has  
14 huge potential benefits. For example - that Gord  
15 just used - the selective bunts, I think if we had  
16 pursued that vigorously over the last few years,  
17 we'd be in a very different position this year,  
18 where we've got a huge -- probably a near record  
19 number of pink salmon coming back that we're going  
20 to want to harvest. At the same time, we're going  
21 to have a relatively low return on sockeye,  
22 presumably, and we're going to have a very  
23 difficult time harvesting those pinks and  
24 conserving the sockeye. There will be huge  
25 pressure on the department to do that.

26 If we had pursued the selective fishing in  
27 the escape grids, we would now be in a position  
28 where we could selectively harvest pinks with  
29 almost no impact on the sockeye. I'm convinced of  
30 that. We didn't do that, so that -- the TAC that  
31 could have been used for that wasn't used. The  
32 department didn't provide money for that. So now  
33 we're in a position of making very difficult  
34 decisions, both in terms of missing harvests and  
35 also achieving conservation of sockeye, because we  
36 didn't make that investment. So there is a price  
37 to pay for it.

38 Q Okay. Thank you. My last line of questioning,  
39 Mr. Lunn, can you please bring up Exhibit 441?  
40 This is the audit that was discussed by Mr.  
41 Timberg and Mr. Martland earlier. Particularly  
42 interested in page 12 of the actual document. I'm  
43 not sure PDF page. Not that. Yeah. Right there  
44 is great.

45 As part of the audit it referenced, I mean,  
46 if you look under the bold heading "Were  
47 Monitoring and Enforcement Activities Effective?"

1 the first line says:  
2

3 Monitoring was not sufficient to identify in  
4 a timely manner...  
5

6 And you could read that. I'll give you some time  
7 to read it.

8 My question relates to monitoring generally  
9 in the salmon fishery. I wonder if you could  
10 comment on monitoring generally in the salmon  
11 fishery, and perhaps compare monitoring  
12 requirements in the salmon fishery versus  
13 monitoring requirements in the halibut fishery.

14 MR. CURRY: Very generally, where we're headed through  
15 the Selective Fisheries Program is to look at  
16 monitoring fisheries more precisely, so that we  
17 have a better handle on not only catches, but all  
18 the other bi-catch impacts, et cetera, et cetera,  
19 that go with it, and monitoring the compliance of  
20 the fisheries. So we have been through the  
21 Selective Fisheries Program in salmon have been  
22 exploring electronic monitoring, for instance, and  
23 use of cameras and those types of things from a  
24 selective fishing perspective has been part of the  
25 cadre of things that we've tested.

26 That type of monitoring gear is in existence  
27 in the ground fish fisheries like the halibut  
28 fisheries, so they've hit a level of monitoring  
29 that is different and that goes hand-in-hand with  
30 quota type fisheries or they -- you basically have  
31 to have a very good accounting system because  
32 everyone has a particular share and they want to  
33 make sure that they got their share and everybody  
34 else didn't go over on theirs so you've got to  
35 monitor very, very tightly and very closely. And  
36 if salmon were to go to complete defined shares,  
37 you'd have to have monitoring that is similar to  
38 that, to that level of monitoring and obviously,  
39 you have to find a way of making it affordable.

40 Q Okay. And the last related question is DFO  
41 employees get their numbers from monitoring from  
42 the commercial fisheries. In general, how much  
43 confidence could you say as a DFO employee you had  
44 in the numbers that you received from the  
45 commercial fishery? And again, I think it would  
46 be useful to compare halibut and salmon, i.e., one  
47 that has a camera and an on-board monitor versus

1 one that does not.

2 MR. CURRY: Well, I would say that it depends on the  
3 salmon fishery. I mean, for instance, we have the  
4 gulf trollers that -- which is Area H. They've  
5 been exploring share-based fish -- yes, share-  
6 based fisheries or defined share fisheries since  
7 2002. And so their fisheries currently have a lot  
8 of these strategies like a halibut fishery built  
9 into their fishery, where they have observers,  
10 they have dockside landing, and so that has  
11 brought that fishery up to the scale that it  
12 competes with the halibut fishery. There's others  
13 that don't have that level of monitoring and  
14 compliance around the catch and information. But  
15 DFO does its part in doing as much as we can to,  
16 you know, have observers within the fisheries and  
17 have systems and strategies so that we have very  
18 good confidence in the catches that we're getting.  
19 But obviously, the -- where we have defined  
20 shares, it's a much more reliable set of  
21 information that's coming in.

22 MR. HARRISON: That's great. Those are my questions.  
23 Thank you.

24 MR. MARTLAND: I have next Mr. Rosenbloom.

25 MR. ROSENBLOOM: Thank you very much. My name is Don  
26 Rosenbloom. I represent Area B Seiner/Area D  
27 Gillnet.

28  
29 CROSS-EXAMINATION BY MR. ROSENBLOOM:  
30

31 Q I appreciate you answering my questions. One of  
32 the recurring themes of my cross-examination  
33 throughout this inquiry relates to funding issues  
34 within DFO. And particularly today we're focused  
35 on funding issues as they relate to selective  
36 fishing program and Dr. Hargreaves, in particular,  
37 you have said some very strong words and I don't  
38 fault you for it whatsoever, but speaking of the  
39 consequence of ignoring this aspect of scientific  
40 investigation relating to selective fisheries, you  
41 have put us into the perspective of recognizing  
42 between 1998 and 2002 that there was this active  
43 program. You have then documented to us, as I  
44 understand your testimony that that program passed  
45 away or was put into abeyance because of various  
46 issues. I so far have summarized generally some  
47 of your comments that you've made at this inquiry

1 today?

2 DR. HARGREAVES: The active pursuit of selective  
3 fishing ended in 2002 with the end of the CFAR  
4 program, yes.

5 Q Yes. You have said, and I took down your words, I  
6 believe, that you said in part today, this  
7 morning, that frankly, if this program isn't given  
8 more attention and resuscitated - these are my  
9 words, not yours - that there might not be any  
10 fishing or will not be any fishing. You did say  
11 that, did you not?

12 DR. HARGREAVES: Yes.

13 Q So you feel very, very strongly that obviously,  
14 this whole initiative is a critical initiative in  
15 terms of the management and harvest of the future  
16 fishery of this province; is that correct?

17 DR. HARGREAVES: Yes, I do. And I should clarify that  
18 the no fishing, basically I'm thinking of the  
19 marine approach areas. I mean, there will always  
20 be opportunities to fish in the terminal areas, of  
21 course, but the fisheries would be very different  
22 from what we see today.

23 Q I appreciate that. Now, recognizing your strong  
24 belief in the testimony you have given, I'd like  
25 to focus on the anatomy of how this has come  
26 about, that DFO abandons this program in 2002 and  
27 up to this moment we don't have favourable  
28 announcement from anybody within DFO that we're on  
29 the cusp of reviving this program and getting the  
30 selective fishing program back on the rails. My  
31 question to you is this, if you feel as strongly  
32 as you have testified that this program is so  
33 critical, what is going on within DFO that the  
34 program is not being pursued in terms of treasury  
35 board being properly funded, if it can't be funded  
36 through the five percent TAC and the **Larocque**  
37 decision, who is fighting the battles to ensure  
38 that the treasury board recognizes how critical  
39 this is to a public resource?

40 DR. HARGREAVES: Well, I think the short answer to that  
41 is the Government of Canada has many, many  
42 priorities, the strongest one being right now the  
43 Economic Action Plan. And we -- the Government of  
44 Canada committed \$400 million to the Selective  
45 CFAR Program, including the vessel buy-back  
46 component of it, so there was a huge commitment of  
47 funding by the government and there's an ongoing

1 commitment in terms of supporting selective  
2 fishing measures in the fisheries, but at some  
3 point, you know, again I'll be blunt, I think  
4 industry has to take some ownership of this and  
5 invest themselves, and we haven't seen that.

6 Q Okay. Well, let's put that aside for a moment. I  
7 first want to focus - I'm happy to come back to  
8 that and deal with it in terms of questioning you,  
9 but dealing with that Government of Canada's  
10 responsibilities, in other words, DFO's  
11 responsibilities, you do recognize that DFO has a  
12 financial responsibility to invest in this  
13 selective fishing program; do you not?

14 DR. HARGREAVES: Yes. Among many other priorities,  
15 yes.

16 Q Yes. Among many other priorities. But from  
17 hearing your testimony today, you clearly consider  
18 this to be truly one of the highest priorities  
19 that DFO should have on their priority list?

20 DR. HARGREAVES: No. I think -- I believe that this is  
21 a significant tool in the toolbox for managing and  
22 conserving salmon. I believe for other things,  
23 for example, the Wild Salmon Policy, is extremely  
24 important too, to conserve and manage salmon  
25 properly. So selective fishing is just one of  
26 many things that we need to fund.

27 Q But you would agree with me, yes, maybe it's one  
28 of many, but it appears to be one, according to  
29 your testimony, that there will be a calamity if  
30 it isn't pursued and properly funded, that is  
31 there will be no marine fishery.

32 DR. HARGREAVES: Well, I'm looking forward, as a  
33 scientist, and what I see is more and more and  
34 more constraints being put on as we move  
35 particularly towards the conservation unit  
36 strategy under Wild Salmon Policy, that right now  
37 we are still managing in basically a traditional  
38 sense of we have fisheries that are operating on  
39 aggregates of CUs. So we're not operating a  
40 fishery on a particular CU. We're basically  
41 saying there's a group of conservation units of  
42 different stocks that are coming through, four  
43 main aggregates in the Fraser River, for example,  
44 that have a whole bunch of different conservation  
45 units within it.

46 And as we go down the path that I see, which  
47 is more and more issues around the conservation of

1 different CUs, it's going to become more and more  
2 difficult for us to manage in that traditional  
3 way. Selective fishing can bridge that gap and  
4 maybe even solve it.

5 Q Well, I want to come back to this issue of whether  
6 DFO in its budgetary proposals to treasury board  
7 has been asking from 2002 to the present for  
8 funding to carry on with the program in selective  
9 fishing that commenced in '98 and carried on till  
10 2002?

11 DR. HARGREAVES: Not to my knowledge.

12 MR. MARTLAND: Mr. Commissioner, I'm just going to --  
13 I'm not trying to infringe on these lines of  
14 questions. I just do want to clarify. I'm not  
15 sure to what extent these are witnesses that can  
16 speak to the overall picture of treasury board  
17 funding and it may be more fair to the witnesses  
18 to frame that as a question in terms of their  
19 understanding or whether to ask if they have that  
20 knowledge.

21 MR. ROSENBLOOM:

22 Q Well, I assumed that was built into the question.  
23 Your understanding. I'm not asking for anything  
24 but your understanding. Because of your  
25 prominence, sir, Dr. Hargreaves, with this  
26 particular program, I'm asking from your personal  
27 knowledge to what extent has DFO been in their  
28 budget asking for proper funding for this program  
29 and can I assume that it was turned down by  
30 treasury board if it was pursued by DFO?

31 DR. HARGREAVES: To my knowledge, there was no specific  
32 request to treasury board for additional funding  
33 for the CFRA program.

34 Q Well, you say additional funding. I guess what  
35 I'm really asking is year to year, as DFO proposes  
36 its budget and goes through the usual levels of  
37 scrutiny of the budget before it goes to treasury  
38 board, my question is has DFO since 2002 been  
39 requesting in its budget that there be proper  
40 funding for the selective fishing program?

41 DR. HARGREAVES: No, not to my knowledge. My  
42 understanding is that the decision was that the  
43 five percent TAC would be sufficient to continue  
44 this selective fishing initiative, so...

45 Q But do I understand this correctly - please  
46 correct me if I'm wrong - that that's totally  
47 unsatisfactory option in light of the **Larocque**

- 1 decision?
- 2 DR. HARGREAVES: Yes. But that came quite a bit later,  
3 so...
- 4 Q Yes. But the **Larocque** decision was what year,  
5 sir, approximately?
- 6 DR. HARGREAVES: I don't remember the date of it.
- 7 Q '07, yes.
- 8 DR. HARGREAVES: '07.
- 9 Q 2007. So --
- 10 DR. HARGREAVES: So five years after CFAR.
- 11 Q Okay. Fair enough. But let's even focus on 2007  
12 until today, 2011, has DFO been asking for a line  
13 item in their budget which would cover the  
14 implementation of continuation of the program for  
15 selective fishing of -- up to 2002?
- 16 DR. HARGREAVES: Not to my knowledge.
- 17 Q Okay. Can you explain why? I'm not faulting you  
18 for it, sir, believe me, but can you explain to  
19 this commission why, if it is as critical as you  
20 have stated it to be, DFO is not asking treasury  
21 board for funding for this program? Do you have  
22 any idea?
- 23 DR. HARGREAVES: Well, it may be that I'm wrong. Maybe  
24 it's not so critical.
- 25 Q But, sir, in reading your credentials as they  
26 being as impressive as they are and as you have  
27 been a -- if I may call it, a specialist within  
28 this area, your opinion would carry some weight  
29 within DFO, would it not?
- 30 DR. HARGREAVES: I think it has some weight, but I  
31 think, again, the government has many, many  
32 different priorities, so there's only so much  
33 money and there's only so much things that we can  
34 do. So it's a capacity issue, as much as  
35 anything.
- 36 Q Do you believe that within the senior managers of  
37 DFO in the region that they do not subscribe to  
38 your opinions as to the importance of this  
39 program?
- 40 DR. HARGREAVES: No. I believe senior management  
41 understands the importance of it. They may not be  
42 as enthusiastic about it as I am.
- 43 Q And you would agree with me, and I think you've  
44 sort of said this already during your testimony,  
45 that with the implementation of the WSP, selective  
46 fishing becomes a more and more urgent matter to  
47 be refined and in a state to implement; do you

1           agree?

2       DR. HARGREAVES: Yes.

3       Q     And yet nothing is being done?

4       DR. HARGREAVES: Less is being done than I would like  
5           to see personally.

6       Q     Well, you've really testified nothing has been  
7           done to speak of, hasn't it, since 2002?

8       DR. HARGREAVES: No, that is not correct actually. I  
9           did indicate there are experiments that are still  
10          going on, for example, the use of beach seines in  
11          the river by First Nations, so there are some  
12          efforts. We had a request by an independent  
13          fisherman to try tangle nets again this year in  
14          the Fraser River. So there is still an interest  
15          out there and I think there's an interest in the  
16          department in pursuing it amongst all the other  
17          priorities.

18       Q     And you would agree with me further, sir, would  
19           you not, that in the event that DFO continues in  
20           its current direction of failing to fund this  
21           program and resuscitate it from 2002, that the  
22           real victims of such a situation would be the  
23           commercial harvesters, because there will simply  
24           be closures of fisheries which otherwise might not  
25           be closed if there was a selective fishery; do you  
26           agree with that?

27       DR. HARGREAVES: Yes. I think there will be a price to  
28           pay there. I think that the conservation of the  
29           resource is also another potential victim --

30       Q     Yes.

31       DR. HARGREAVES: -- of this, yes.

32       Q     And I was intrigued with your comments, Dr.  
33           Hargreaves, this afternoon, I think, where you  
34           were speaking of technologies that are now  
35           available to all of us that at least are  
36           encouraging in terms of what could be done if you  
37           had -- if one had the funds and if I heard you  
38           correctly, you were speaking of Cultus Lake  
39           tagging program that you imagined and I may have  
40           misunderstood your testimony, but that you foresaw  
41           that current technology could offer a tagging  
42           system wherein there could be a more effective  
43           fishery with less closure because there would be  
44           confidence of the managers that Cultus Lake stock  
45           were not being affected during their run. Did I  
46           understand you correctly?

47       DR. HARGREAVES: Yes.

- 1 Q Okay. And that is something that is within our  
2 grasp today. The technology is there and you've  
3 said that, haven't you?
- 4 DR. HARGREAVES: Yes.
- 5 Q Why hasn't that been done if Cultus Lake is as  
6 critical as we learn it to be during this inquiry?
- 7 DR. HARGREAVES: Well, I use that as an example. I  
8 think the first example I gave was the real time  
9 DNA testing, which is not currently possible. I  
10 think the technology exists, but the application  
11 is not quite ready yet or it would be very  
12 expensive. I think the tagging one exists because  
13 in the last few years, we've actually been using  
14 the POST system which is the Pacific Ocean  
15 Tracking Array, where we have tagged - again, this  
16 is a component of the run, larger sockeye from  
17 Chilko, for example, tracked them out of the  
18 Fraser River to see where they're dying along the  
19 way and then tracked them coming back into the  
20 river. So again, it's a very expensive program to  
21 maintain the marine arrays out to the ends of the  
22 Vancouver Island and so on, but it's possible.  
23 And as the technology improves and the prices come  
24 down, it may become a management tool.
- 25 Q And it's not being done today in part because  
26 there isn't money?
- 27 DR. HARGREAVES: It's partly money, but also because  
28 improving the technology itself, so this is  
29 relatively new technology and we're now still in  
30 the trial phases of that, so... But it's much  
31 closer to implementation than, say, real time DNA.
- 32 Q Yes. And you said something that intrigued me in  
33 your will-say and I'm not putting it in front of  
34 you - I think you'll remember - about the future  
35 of DNA testing right on boats, individual boats as  
36 I understand it. How far off are we from maybe  
37 realizing that technology to be applied?
- 38 DR. HARGREAVES: Well, the last time I did a Google  
39 search on the internet, there were three different  
40 companies that were offering hand-held DNA  
41 testers.
- 42 Q No kidding. And --
- 43 DR. HARGREAVES: None of them work, I understand --
- 44 Q -- let me ask -- pardon me?
- 45 DR. HARGREAVES: None of them work, as I understand it  
46 when I investigated it further, but we're getting  
47 much closer.

1 Q And one would assume, would they, that first  
2 generation of such units will be very, very  
3 costly?

4 DR. HARGREAVES: Yes, I'm sure.

5 Q And just without taking up too, too much time in  
6 this inquiry, but it's an important point in terms  
7 of the future, would these units operate as you  
8 imagine it where you wouldn't need a technologist  
9 on board? This would be done by the harvesters?

10 DR. HARGREAVES: In my vision of the world ten years  
11 from now or 15 years from now, there will be --  
12 we've, as part of the selective fishing program  
13 we've demonstrated you can sort fish in the water,  
14 so a seine, for example, would catch a large  
15 number of fish. You would bring the unit up to  
16 it. The fish would go through it and it would  
17 either be deflected into the keep part of the net  
18 or released, and it would be based on DNA. That's  
19 my vision of the future. In which case our  
20 conservation concerns pretty much go away.

21 Q Because you wouldn't have a mortality issue with  
22 the fish?

23 DR. HARGREAVES: Yeah. In terms of selective fishing,  
24 you're now, even if you haven't avoided them by  
25 time and area, for example, from the tagging thing  
26 that we just talked about, in this case you can  
27 actually catch the fish and release it without  
28 being touched basically.

29 Q But we're a little ways off from that.

30 DR. HARGREAVES: Yes.

31 MR. ROSENBLOOM: In a document that is -- has been  
32 provided to us and I don't think it's an exhibit  
33 and I want to have my -- commission counsel's  
34 assistance in this regard. It is a document which  
35 is number 9, a briefing note to the minister and  
36 it's number 9 on what I believe is the  
37 commission's list.

38 MR. MARTLAND: Mr. Commissioner, I think this is -- I  
39 think Mr. Rosenbloom may have a list that's  
40 different than our list of exhibits. It's not  
41 something that's immediately accessible, so  
42 perhaps we can -- it has a Ringtail number we can  
43 provide.

44 MR. ROSENBLOOM: Yes. We're Ringtail number 001787.  
45 Let me first try to do this with you, Dr.  
46 Hargreaves, without even referring to the  
47 document, but if at any time you're uncomfortable

1 and you want to see the document, it's fine.

2 Q There's a briefing note to the minister in the  
3 year --

4 MR. TIMBERG: Mr. Commissioner, I'm just wondering if  
5 the witnesses have seen this document before.

6 DR. HARGREAVES: I don't know what we're referring to.

7 MR. ROSENBLOOM: I'm assuming -- have the witnesses not  
8 seen all the documents (indiscernible - away from  
9 microphone). Well, may I be permitted to do it  
10 the old way by at least showing the witnesses  
11 document and seeing if you're familiar with it?

12 Q And I'm just focused on one paragraph. This is a  
13 document briefing note to the minister. It  
14 appears to be the year 2000 and it is signed by  
15 you, sir. I appreciate obviously you haven't seen  
16 this document for 11 years probably. Are you --  
17 generally do you agree it appears to be a document  
18 under your signature?

19 DR. HARGREAVES: Yes. Yes. The timing is right. I  
20 don't remember the document.

21 Q All right. I don't want to -- thank you. I don't  
22 want to take a lot of time. I want to focus on  
23 just one sentence in this document and invite you  
24 to make comment. You say:

25  
26 In the event --

27  
28 This is back in 2000.

29  
30 In the event the --

31  
32 MR. TIMBERG: Mr. Commissioner, could the witness  
33 perhaps be given a moment to review the document  
34 before being taken to one sentence?

35 MR. ROSENBLOOM: I'm happy to do that. I will say,  
36 Counsel, that I'm only referring to one little  
37 paragraph here and asking a few questions on that,  
38 but --

39 MR. TIMBERG: Take a moment --

40 MR. ROSENBLOOM: I don't think it's necessary --

41 MR. TIMBERG: -- to take a look at it.

42 MR. ROSENBLOOM: -- to read the whole document.

43 DR. HARGREAVES: If you have any questions for the  
44 other witness here, you could proceed while I have  
45 a look at this, if you like. Save time.

46 MR. ROSENBLOOM:

47 Q While you're looking at it, I'm simply asking you

1 a question on socioeconomic issues with that one  
2 paragraph. I will not be asking about anything  
3 else in the document.

4 MR. LUNN: Mr. Rosenbloom, what page are you looking  
5 at?

6 MR. ROSENBLOOM: Sorry? It is -- I don't know. The  
7 witness will be able to tell you in a moment.

8 Sorry. Oh, you're putting it up on the screen?

9 DR. HARGREAVES: Okay.

10 MR. ROSENBLOOM:

11 Q Okay. It is page 6 actually looks like page 0006  
12 right at the bottom right-hand corner. And, sir,  
13 all that I speak to - this was a briefing document  
14 to the minister back in 2000 - the paragraph  
15 second bullet to the bottom:

16

17 In the event the Fraser River sockeye return  
18 is low, the impact of little or no commercial  
19 fisheries for the third year in a row will  
20 have extreme economic and social consequences  
21 for the southern commercial fishing fleets.

22

23 My question is this: up until now, Dr.  
24 Hargreaves, I have not heard any evidence about  
25 socioeconomic impacts to the commercial fleet from  
26 a poor fishery or no fishery. Upon what basis did  
27 you make that comment? What are the consequences  
28 as you see them being as experienced as you are  
29 with DFO to the communities when they're -- and  
30 what are the socioeconomic impacts of no fishery?

31 DR. HARGREAVES: Well, that -- if I read that -- the  
32 glance that I've had at that document was  
33 basically providing advice on both the outlook of  
34 the salmon stocks, a variety of different stocks  
35 and species for that year, and also what the  
36 various harvest management measures might be and  
37 opportunities might be, so that statement was  
38 basically recognizing that if we had three years  
39 in a row of very low fishing opportunities that  
40 would have extreme social and economic  
41 consequences.

42 Q And what are they?

43 DR. HARGREAVES: Unemployment, people can't make  
44 payments on their boats, processors can't maintain  
45 their staff and their facilities. I mean, all of  
46 those things have happened since this period, so  
47 we've had processing plants close, we've had

1 people lose their boats because they can't make  
2 the payments any more. You know, they can't  
3 maintain the payments on their houses. So it has  
4 extreme social and economic --

5 Q Thank you.

6 DR. HARGREAVES: -- consequences.

7 MR. ROSENBLOOM: Thank you. I wondered if it's  
8 appropriate to have this document marked as an  
9 exhibit? Thank you.

10 THE REGISTRAR: Exhibit number 448.

11

12 EXHIBIT 448: Briefing Note for the Minister  
13 - prepared by Brent Hargreaves 2000  
14

15 MR. ROSENBLOOM:

16 Q My last area of examination again with you, Dr.  
17 Hargreaves - I'm sorry to ignore you, Mr. Curry -  
18 relates to -- in fact, possibly, Mr. Curry, you do  
19 have some information to provide here. I'm  
20 informed of the following from my clients: that  
21 the American fleet that are catching Fraser River  
22 sockeye under the treaty and I believe under the  
23 treaty that they have an entitlement to -- excuse  
24 me, I'm just looking at the figures. Maybe you  
25 can tell me just offhand under the treaty what is  
26 the percentage of their take -- is 13 percent or  
27 -- I'm sorry, I'm not sure. Do you remember what  
28 it is?

29 MR. CURRY: I believe it's 16 percent, but my  
30 information might be --

31 Q Yes.

32 MR. CURRY: -- a little out of date.

33 Q Give or take. I'm told that the American fleet do  
34 not have to braille and sort their fish because  
35 they're not under the same restrictions as the  
36 Canadian fleet in respect to the selective fishing  
37 initiatives that you have previously spoken about.  
38 Do you know anything about that?

39 DR. HARGREAVES: No, I'm not really familiar with the  
40 specific requirements for different fisheries and  
41 I know those vary by year and by area, as well,  
42 so...

43 Q Okay. And Mr. Curry, do you have anything to add?

44 MR. CURRY: I've -- same comment. I don't have  
45 sufficient knowledge of the details of their  
46 fishery to be able to comment on that.

47 Q I'm further informed, and again, if either of you

1 have input, please speak up, that under the  
2 rebuilding strategy, the maximum allowed mortality  
3 on the Fraser coho is 13 percent and the U.S. gets  
4 ten percent and Canada gets only three percent;  
5 you do -- Mr. Curry, you're saying you're in the  
6 affirmative on that?

7 MR. CURRY: Yes. Basically, within Canada we stick to  
8 an overall mortality on Thompson coho of three  
9 percent. The U.S. has impacts that are somewhere  
10 around ten percent or less in any particular year.  
11 But, you know, so we've managed fisheries within  
12 Canada within that three percent since the coho  
13 crisis in 1998.

14 Q Now, we're talking about treaty provisions and  
15 this commission probably can't make any difference  
16 to what is embodied within a treaty, but could you  
17 explain to me the inconsistency that the Canadian  
18 fleet is so restricted to a three percent  
19 mortality on the coho whereas the Americans  
20 catching the same fish have a ten percent leeway?

21 MR. CURRY: Myself, it wouldn't be appropriate for me  
22 to comment on that because I'm not involved in  
23 those negotiations to be able to answer that  
24 effectively. I don't know whether Dr. Hargreaves  
25 has more information on that with his involvement.

26 Q You don't? You would agree with me there's  
27 clearly an inconsistency there? It's not  
28 rational, is it?

29 MR. CURRY: There's a perceived inconsistency there,  
30 yes.

31 Q And in fact, an inconsistency that leads to a  
32 prejudice to the coho stock?

33 MR. CURRY: Well, there's -- there's levels of  
34 conservation where some researchers believe that  
35 if you're impacting a stock by 15 or 20 percent,  
36 that that 15 or 20 percent may not be critical to  
37 the survival of that stock. It may have an effect  
38 on its rate of recovery. So a rate of 13 percent  
39 in total is still quite a low impact and in  
40 Canada, holding it to three percent has been --  
41 has involved a tremendous amount of work, a lot of  
42 it attributed to selective fishing strategies in  
43 order to keep our impacts low enough so that we  
44 can wait for the environment to turn around and  
45 for these stocks to rebuild.

46 Q And you would agree with me, would you not, that  
47 the three percent applied to the Canadian fleet is

1 three percent across all their fisheries from pink  
2 to all the species of salmon as opposed to the  
3 Americans, where of course the treaty only speaks  
4 to sockeye?

5 MR. CURRY: We're talking about all fisheries, all  
6 fishing sectors within the Pacific Region, with a  
7 total impact of three percent.

8 Q And with the Americans, it's a ten percent solely  
9 on the sockeye salmon. That's all they're fishing  
10 of the Fraser.

11 MR. CURRY: Again, I'm not confident enough to be able  
12 to respond on the American conditions.

13 Q Lastly, I'll be just three or four minutes at the  
14 most. There has been discussion about seiner nets  
15 and new form of seiner nets that cause less  
16 chafing to the fish and lead to a higher survival.  
17 I'm led to believe that the cost of purchasing  
18 such a net, if such a program was implemented, is  
19 somewhere in the range of five to \$10,000 per  
20 boat, per net. Do you have any information to  
21 bring to this proceeding?

22 DR. HARGREAVES: I think that's in the ballpark. My  
23 estimate, I think, was around \$10,000 per net.

24 Q Yes.

25 DR. HARGREAVES: That's to replace just the bunt  
26 portion of the net, which is the final catching  
27 portion of the net.

28 Q Yes. And if this program were to be implemented  
29 to the best of your knowledge, DFO would be  
30 looking to each individual fisher to obviously  
31 fund the purchase of such a net?

32 DR. HARGREAVES: Possibly. One of the things that we  
33 had considered is the possibility of asking the  
34 fleet -- or allowing the fleet to only use one net  
35 instead of two, so right now we have two different  
36 kinds of seine nets that are used in different  
37 areas and by possibly going to just one, that that  
38 could be a saving that would offset the cost of  
39 the new net.

40 Q And you'd agree with me that where -- when you are  
41 asking individual fishers to make sacrifices and  
42 sometimes selective fishing does require  
43 sacrifices, you would agree with that, would you  
44 not?

45 DR. HARGREAVES: Sacrifices in what way?

46 Q For example, having to fish slower, having a  
47 slower harvest because you're being careful about

1           what you take and what you don't take. That's a  
2           sacrifice, isn't it?

3 DR. HARGREAVES: Why would that be a sacrifice?

4 Q       Well, Mr. Curry seems to be nodding in the  
5           affirmative. Do you agree?

6 MR. CURRY: It depends on your definition of a  
7           sacrifice. Certainly if carrying out these  
8           measures means that they have access to a fishery  
9           that they otherwise wouldn't, would it then be a  
10          sacrifice?

11 Q       No, I appreciate that. But I'm speaking of the  
12          immediate moment of carrying out some of the  
13          selective fishing, that it can be a sacrifice in  
14          the sense that unless you're in an ITQ fishery,  
15          you're obviously going to be slower in harvesting  
16          your fish, correct?

17 MR. CURRY: You're going to be slower but you may be  
18          afforded the opportunity to catch all of your  
19          fish, as opposed to a derby fishery, which is a  
20          little bit of a gamble, especially for a manager  
21          in terms of how many fish are going to be caught.  
22          So certainly with a defined share fishery, you  
23          have that ability to manage more effectively and  
24          provide sufficient time for harvesters to be able  
25          to catch their -- the amount of fish while also  
26          implementing these other strategies.

27                 And the other thing that hasn't been looked  
28          at effectively is the harvesters and DFO teaming  
29          up to look at what's an effective strategy to  
30          assist the harvesters in implementing this gear.  
31          Are there funding strategies that could be used  
32          and, you know, such as Dr. Hargreaves has  
33          mentioned, can we go to one net on this coast  
34          instead of two? Those types of things have yet to  
35          be fully explored to team up and look at viable  
36          solutions that can allow for the advancement of  
37          selective fishing without it being a hardship on  
38          the harvesters.

39 Q       Yes. But when I was speaking of sacrifices or  
40          hardship - I'm happy to adopt that word - in a  
41          non-ITQ fishery, what is a derby fishery,  
42          obviously it's a slower harvest when you are  
43          applying selective fishing programs, right?  
44          Obviously.

45 MR. CURRY: Not necessarily.

46 Q       Really?

47 MR. CURRY: If you're -- for instance, if you're using

1 a seine net with grids in it and you're able to  
2 sort these fish -- for instance, First Nations  
3 when they're wanting to harvest sockeye in  
4 Johnstone Straits, in a year like we have coming  
5 up where there's going to be a lot of pink salmon  
6 around, they have an issue with the number of pink  
7 salmon that they would catch when they're trying  
8 to get their sockeye. So here's a strategy  
9 whereby they could sort in the water and not by  
10 hand or from the deck of the vessel, turning over  
11 20,000 pinks back into the water in order to get  
12 their sockeye.

13 This is a method that they could use in the  
14 water and therefore, it could save them time. It  
15 could be a benefit in a lot of ways, as well as  
16 the quality of those fish would likely be better,  
17 as well. So there are -- there are certainly  
18 trade-offs and it's not necessarily always a  
19 hardship. There's benefits that offset that, as  
20 well.

21 Q Yes. And my clients will be speaking to this in  
22 testimony tomorrow, but would you agree with me in  
23 terms of buying into the selective fishing  
24 program, that the more the benefits are  
25 identifiable and discernible to each individual  
26 fisher, the more likely there's going to be buy-  
27 in?

28 MR. CURRY: Yes. One of the examples we used during  
29 the Selective Fisheries Program was up in the  
30 Skeena river with the seine fishery that after  
31 July 18th we allowed the fishery to continue with  
32 the seine fleet because they were more selective  
33 than gillnet gear and --

34 Q Yes.

35 MR. CURRY: -- they ended up because of using selective  
36 fishing strategies, catching an additional one  
37 million sockeye as a result. So there's examples  
38 like that and highlighting those types of examples  
39 are helpful for generating that buy-in.

40 Q Yes. And so you see a more optimistic future in  
41 terms of selective fishing if DFO can implement a  
42 program that has those discernible benefits,  
43 they're manifested to each individual fisher,  
44 correct?

45 MR. CURRY: Those benefits are being manifested, but I  
46 think we certainly could do a better job of  
47 recognizing where those selective fisheries are

1           allowing for access to the abundant species, and  
2           so that everybody is clear on it, and the use of  
3           standards within the fisheries certainly would  
4           help that, as well.

5       MR. ROSENBLOOM: I thank you very much for answering my  
6           questions, both of you. Thank you.

7       MR. MARTLAND: Mr. Commissioner, I note the time and  
8           yet Dr. Hargreaves is not available tomorrow.  
9           Now, I don't know as in point of practice whether  
10          we're able to continue through without a break or  
11          whether I might at least propose if we can move  
12          out of sequence and have Mr. Harvey - I think he  
13          wins the Polonius prize for brevity of time  
14          estimates for his questions, so maybe if he's  
15          next, that may let us see where we stand at that  
16          point.

17       MR. HARVEY: I just want to deal with one matter that  
18          Mr. Curry raised and that is the suggestion that  
19          the ITQ model is a more favourable model in terms  
20          of the Selective Fisheries Program.

21  
22       CROSS-EXAMINATION BY MR. HARVEY:

23  
24       Q     First of all, Mr. Curry, just to be clear, the  
25           various tools that you mentioned, brailleurs,  
26           knotless bunts, revival boxes, et cetera, et  
27           cetera, those are imposed by license conditions or  
28           some other method, both on ITQ fisheries and non-  
29           ITQ fisheries, are they not?

30       MR. CURRY: Yes, that's correct. We quite often test  
31          ITQ-type fisheries. While a portion of the fleet  
32          is a demonstration fishery around defined shares  
33          and the rest of the fleet is in a derby-type  
34          fishery, as we're moving through a transition to  
35          wherever we end up.

36       Q     Yeah, all right. In other words, ITQs have no  
37           bearing on the use of those tools. They would be  
38           used regardless.

39       MR. CURRY: We would require that they be used  
40          regardless but the issue is the time and the buy-  
41          in to do it. When a fisherman is pressured by  
42          time to catch as many fish as possible in a short  
43          period of time, the more responsible requirements  
44          of selective fishing go out the window to some  
45          extent when you're in that time crunch. And we've  
46          seen that. So with a quota-type fishery of some  
47          type, whether it's a pool fishery or some other

1 form of defining shares, there's more time  
2 involved, not a lot more time, but we have shown  
3 with the fisheries that have been carried out in  
4 -- demonstration fisheries that have been carried  
5 out since 2003, 2002 actually, on defining shares,  
6 has shown that the defined share-type fisheries  
7 end up with somewhat more time in order to catch  
8 their fish.

9 Q All right. Well, you said not a lot more time and  
10 that's what I wanted to get to. In other words,  
11 how significant is this? The main selective  
12 fishery tool is time and area, of course, isn't  
13 it?

14 MR. CURRY: That's one of the main --

15 Q Yes.

16 MR. CURRY: -- tools that --

17 Q Yes.

18 MR. CURRY: -- we've used prior to the Selective  
19 Fisheries Program and will continue to use it,  
20 yes.

21 Q Yes. And in fact, the time restrictions may  
22 become so severe, as we've heard from Dr.  
23 Hargreaves, that there may be no fishing at all  
24 unless other means are found. So I want to put  
25 this to you. Your comment with respect to the ITQ  
26 model being more favourable in terms of  
27 selectivity works better in a fishery that has the  
28 luxury of time, such as the halibut fishery, which  
29 can be spread out over most months of the year, as  
30 opposed to the sockeye fishery, which is  
31 compressed into a very short time period.  
32 Correct?

33 MR. CURRY: I would say that there's still benefits  
34 that are accrued within the salmon fishery. And I  
35 would agree that, yes, in the halibut fishery you  
36 have a longer period of time to work with and that  
37 makes for the ability to work in the selective  
38 strategies within the halibut fishery much easier  
39 than in --

40 Q Yes.

41 MR. CURRY: -- a salmon fishery.

42 Q Yes.

43 MR. CURRY: But it's been shown that, through the work  
44 that's been done, there is more time and that time  
45 seems to be a significant factor within complying  
46 with these measures.

47 Q All right. In the Fraser River sockeye fishery,

1           the managers and fishermen all are aware, are they  
2           not, that the fishery will close when stocks of  
3           concern arrive? Is that a fair generalization?  
4   MR. CURRY: Yes, it is.  
5   Q       Yes.  
6   MR. CURRY: And so we try and set the boundaries in  
7           terms of timing of fisheries and so on in relation  
8           to the stock make-up information that we receive  
9           in-season to make those determinations in-season  
10          to when we hit a critical limit or a critical  
11          limit is relieved with dealing with stocks of  
12          concern so --  
13   Q       Yes.  
14   MR. CURRY: -- that we can either close or open a  
15          fishery.  
16   Q       All right. And when the stocks of concern arrive  
17          to the point that you have to close the fishery,  
18          it is closed for ITQ fishery component as well, is  
19          it not, even if the ITQs have not been caught?  
20   MR. CURRY: It depends on where you're at with that  
21          requirement. It might be that you still have a  
22          bit of room to go and the risk to open up a non-IQ  
23          fishery would be to grate and to allow a few boats  
24          to continue on to catch a defined amount of fish  
25          and, therefore, a defined impact. You may be able  
26          to allow, and we have allowed, smaller impact  
27          fisheries to continue to give them more time in  
28          order to reach our allocations --  
29   Q       Yes.  
30   MR. CURRY: -- while not going beyond our set  
31          guidelines for a particular stock or concern.  
32   Q       All right. On the west coast of Vancouver Island,  
33          you mentioned just briefly in passing how the  
34          sockeye fishery is managed there when it is  
35          available. Is this the general picture? Sampling  
36          is done and then the fishery is opened in a way  
37          that is tailored to the stocks that are there,  
38          whether sockeye or chinook?  
39   MR. CURRY: Yes.  
40   Q       Yes.  
41   MR. CURRY: Stock assessment is absolutely key in  
42          determining when and where you fish and what the  
43          impacts of the mix of stocks that you're fishing  
44          on, whether it's within the chinook stocks or  
45          whether it's within the sockeye stocks.  
46   Q       Yes. And the fishery is basically tailored by  
47          means of time and area, opening and gear, correct?

1 MR. CURRY: Yes, we have gear restrictions in place.  
2 And then, for instance, if we're talking about  
3 Area G, fishing on the west coast of Vancouver  
4 Island, they are going to be the first fleet *per*  
5 se that's going to touch, say, the Summer Run  
6 sockeye, if that's the stock grouping that we're  
7 fishing on, they would be the first ones to see  
8 the abundance of those fish allowing for a  
9 fishery, followed by fisheries in Johnstone Strait  
10 and Juan de Fuca Strait --

11 Q Yes.

12 MR. CURRY: -- followed by the mouth of the Fraser  
13 River, in the lower Fraser and then continuing to  
14 move up the river.

15 Q Yes.

16 MR. CURRY: So these fish move through an area so the  
17 stock assessment is critical to tell you when  
18 those stocks that you're wanting to target are in  
19 the area but also when the stocks of concern --

20 Q Yes.

21 MR. CURRY: -- have diminished to a point where they're  
22 insignificant in the catches.

23 Q Yes. And the results of that fishery are a useful  
24 determinant of the quantity of stocks approaching.  
25 First of all, it's first in time and it's the  
26 first indication of biomass that you get; is that  
27 correct?

28 MR. CURRY: Well, it's a very general assessment but  
29 being that we don't have a test fishery out in  
30 that area in particular on an ongoing basis year  
31 after year to look at that information and make  
32 some assumptions about the quantity, unless we had  
33 that type of test fishery out there, we wouldn't  
34 be able to make strong determinations or  
35 assessments of what the stock abundance is. Once  
36 those fish hit the test fisheries, the well-  
37 established over time test fisheries, in Juan de  
38 Fuca Strait or Johnstone Strait and then, you  
39 know, further inland, those test fisheries allow  
40 us to make comparisons to other years and use an  
41 awful lot of data analysis to then come up with  
42 are we on target with our expectations or not.

43 Q Yes.

44 MR. CURRY: And we manage from an in-season perspective  
45 based on those test fisheries.

46 Q But the sockeye fishery on the west coast of  
47 Vancouver Island is the first fishery. And when

1           it's done on a non-IQ basis, in other words a  
2           derby basis, correct?

3       MR. CURRY: Yes, that's correct.

4       Q     And does that not give you at least some early  
5           information as to biomass that you would not get  
6           if it was an ITQ fishery?

7       MR. CURRY: It tells you what the make-up of the stocks  
8           are but it doesn't give you a lot of strong  
9           information about the abundance. Intuitively, it  
10          can provide a sense of whether there's lots of  
11          fish out there or not a lot of fish out there.  
12          And when you work with very experienced fishermen  
13          that have been fishing out there for many years,  
14          you may get a sense of whether it looks like it  
15          might be an abundant year or not but it's very  
16          precarious because you could just have a small  
17          blip of fish that makes it look good for a moment  
18          and then it collapses behind it. So you need a  
19          longer time series of information in order to  
20          confirm those types of assumptions.

21       MR. HARVEY: All right. Those are my questions. Thank  
22           you.

23       MR. MARTLAND: Mr. Commissioner, I'm in your hands. We  
24           have three participants who have questions  
25           remaining, Mr. Eidsvik, Ms. Gaertner, Ms. Schabus,  
26           and I think about 35 minutes if we don't take the  
27           break with our time constraints. Dr. Hargreaves  
28           is not available tomorrow. I don't know if we're  
29           best to perhaps press on and ask counsel to do the  
30           best they can in that limited time?

31       THE COMMISSIONER: I don't think we have a lot of  
32           choice. But I always like to check first with  
33           Madam Reporter. If we sit until 4:00, Madam  
34           Reporter, are you going to be able to manage that?

35       THE REPORTER: Of course.

36       THE COMMISSIONER: All right. I'm going to say if she  
37           can, I think Mr. Lunn and Mr. Registrar probably  
38           will find -- so let's have the three remaining  
39           participants who wish to cross-examine divide up  
40           the time evenly between now and four o'clock, if  
41           they can. And who's first?

42       MR. MARTLAND: Mr. Eidsvik is next, thank you.

43       THE COMMISSIONER: Thank you.

44       MR. EIDSVIK: Thank you, Mr. Commissioner. Ten minutes  
45           is a lot shorter than I anticipated because the  
46           subject matter today has been much broader than I  
47           anticipated. But I'll be as quick as I can to

1 assist the people coming behind me. My name is  
2 Philip Eidsvik. I'm on with the B.C. Fisheries  
3 Survival Coalition and the Area E Gillnetters who  
4 fish the Fraser River.  
5

6 CROSS-EXAMINATION BY MR. EIDSVIK:  
7

8 Q One of the things I wanted to start off quickly,  
9 Dr. Hargreaves, was the statement about prior to  
10 World War II everyone thought the fish supply was  
11 inexhaustible. Do you remember when the  
12 International Pacific Salmon Fisheries Commission  
13 began their rebuilding program on the Fraser  
14 River?

15 DR. HARGREAVES: No, I don't remember the exact dates,  
16 no.

17 Q Would it surprise you if it was before World War  
18 II?

19 DR. HARGREAVES: No, it wouldn't.

20 Q Yeah, so the idea that there's this great big,  
21 let's kill every last Fraser sockeye, wasn't  
22 really relevant in the context of Fraser River  
23 sockeye, was it?

24 DR. HARGREAVES: No, my comment was in the global  
25 perspective in terms of fisheries throughout the  
26 world not specifically on salmon on that  
27 particular comment.

28 Q Okay. So I'm just trying to say that we had a  
29 massive, successful rebuilding program on Fraser  
30 River sockeye from the '30s to the '90s. So to  
31 use that world perspective and apply it to Fraser  
32 River sockeye is a little troublesome for some of  
33 the people, I think.

34 DR. HARGREAVES: I was personally leading up to the FAO  
35 Code of Conduct document.

36 Q Oh, good.

37 DR. HARGREAVES: That was what I was referring to.

38 Q Thank you for clearing that up. There was a  
39 statement that gillnet fishermen on the coast will  
40 anchor all night and leave their nets in the  
41 middle of the channel. I've never heard of that.  
42 Perhaps you can offer a bit of detail on that.

43 DR. HARGREAVES: In my experience, it's not unusual,  
44 particularly in, for example, the Fraser River for  
45 a gillnet to be set and left overnight.

46 Q Are you talking about set nets or driftnets?

47 DR. HARGREAVES: A net that's been tied off to the

1 shore.  
2 Q So you're not talking about the public commercial  
3 fleet?  
4 DR. HARGREAVES: I have personally observed, for  
5 example, in Port Alberni where I worked for many  
6 years, where a fisherman would set the net at dawn  
7 -- or at dusk, I mean, and not come back till the  
8 early morning.  
9 Q We're talking about Fraser River sockeye here.  
10 And I guess you're aware that there's a licence  
11 condition that all -- and I'm talking about the  
12 public commercial fleet and tidal waters below  
13 Mission -- you're aware there's a licence  
14 condition that says you can't leave your net  
15 unattended?  
16 DR. HARGREAVES: Yes, I'm aware of that.  
17 Q And what would happen if you left your net  
18 unattended in the Fraser River? If it's a  
19 driftnet --  
20 DR. HARGREAVES: Probably fill up with debris.  
21 Q It would fill up with debris. Would it drift down  
22 on the shore maybe a log boom?  
23 DR. HARGREAVES: Probably, yes.  
24 Q If you left your net unattended in Johnstone  
25 Strait, perhaps a cruise ship might go through it,  
26 is that fair to say, or a towboat?  
27 DR. HARGREAVES: No, there's a relatively small number  
28 of cruise ships going in a very specific route.  
29 So if you did that in Area 13 --  
30 Q Log (indiscernible - overlapping speakers).  
31 DR. HARGREAVES: -- yes.  
32 Q Okay. So it's not a common practice in the  
33 commercial sector. And we're talking about coho  
34 and I think DFO did a really good map a number of  
35 years ago where they showed all the coho streams  
36 here in the Vancouver area that had been paved  
37 over. Do you recall that map?  
38 DR. HARGREAVES: No, I don't remember that map.  
39 Q Oh, okay. If there was a stream below this  
40 building that was paved over, obviously a  
41 Selective Fishing Policy wouldn't restore that  
42 stream.  
43 DR. HARGREAVES: No.  
44 Q Okay. In the great scale of thing, how big are  
45 habitat and water usage issues on Thompson coho?  
46 DR. HARGREAVES: I think it's probably significant but  
47 I don't think that's been well defined.

1 Q But I'm curious, if it's a big factor or  
2 significant, why wouldn't it be well defined?  
3 DR. HARGREAVES: I think it's a very, very complex  
4 issue so there's water extraction issues, there's  
5 use by agriculture, there's, you know, a variety  
6 of uses in there that would affect the habitats.  
7 Q All right. But selective fishing only deals with  
8 commercial fishing, one part of the equation that  
9 might have an impact on Thompson coho. And the  
10 other part is out there. You just don't know  
11 enough about it; is that fair to say?  
12 DR. HARGREAVES: I hope we've made it clear that it's  
13 much broader than just commercial fishing so I  
14 would correct that comment.  
15 Q Okay. So commercial, recreational --  
16 DR. HARGREAVES: And First Nations.  
17 Q -- fishing -- yeah, okay. Selective fishing prior  
18 to 1998 when the program was put in, I always  
19 thought there was a selective -- and Mr. Harvey  
20 referred to it as time and area. Certainly, the  
21 Fraser River chinook fishery was closed when the  
22 Fraser River gillnet chinook fishery, targeted  
23 gillnet fishery; do you recall?  
24 DR. HARGREAVES: Yeah, I think Gord mentioned that -- I  
25 mean time and area has always been a significant  
26 management technique, probably one of the most  
27 important, right back to the beginning of the  
28 fishery so...  
29 Q Okay. So do you recall when the Fraser chinook  
30 fishery was closed?  
31 DR. HARGREAVES: No. You mean the west coast?  
32 Q No, in the Fraser River itself, the Fraser River  
33 gillnet fishery on chinook?  
34 DR. HARGREAVES: No, I don't remember the date.  
35 Q Mr. Curry, do you recall?  
36 MR. CURRY: I don't recall the date specifically but  
37 I'm aware of it, yes.  
38 Q It's been many years.  
39 MR. CURRY: Yes.  
40 Q Has there been a targeted fishery on that stock  
41 since it's been rebuilt by the Fraser River  
42 gillnet fleet?  
43 MR. CURRY: I don't believe there has been. But I  
44 couldn't speak completely because I haven't been  
45 working on the Lower Fraser fishery throughout  
46 that entire time period. So I don't know whether  
47 there's been some demonstration fisheries or some

1 fisheries to attempt to catch Fraser chinook while  
2 allowing sockeye to pass through the nets.

3 Q What I'm trying to get at is a lot of commercial  
4 fishermen are reluctant to buy into another  
5 program from DFO. And I'm sure you must have  
6 heard that, you know, when the Fraser River  
7 chinook fishery was closed. They were promised  
8 when the fishery was rebuilt it would re-open for  
9 them. It hasn't. Do you hear comments from the  
10 fishing fleet they don't really trust DFO to keep  
11 their promises?

12 MR. CURRY: What I see is that the commercial industry  
13 has a code of conduct that clearly the majority of  
14 commercial harvesters have endorsed and,  
15 therefore, I would expect that out of  
16 professionalism they would be looking to do  
17 everything that they could to make a more  
18 selective and a more responsible fishery. And as  
19 we've mentioned, we work with many individuals  
20 that have done just that, whether they're in the  
21 lower Fraser or out in the marine areas working to  
22 find those solutions.

23 Q Yeah, I guess what I'm getting at is probably  
24 despite previous actions, people in the commercial  
25 sector have gone along with it. And I'm just  
26 going to ask you. There was a number of  
27 complaints that have been talked about and I know  
28 one of them was, were there concerns that  
29 selective projects were delivering fish to small  
30 groups of people that were sort of private. And  
31 did you hear complaints about that?

32 MR. CURRY: We heard complaints like that at the  
33 beginning of the program but even throughout the  
34 program. So how we changed, how we did business  
35 is that we invited commercial reps to sit in on  
36 the selection of these projects so that they were  
37 involved in that selection process so that they  
38 could report out to their constituents how those  
39 projects were being selected. Because they  
40 certainly were not provided to certain interests  
41 and so on; it was simply based on the merits of  
42 their proposals and the possible benefits that  
43 could accrue from the work that they proposed to  
44 do. And there was many people that were critical  
45 of those that were trying to work with DFO. And  
46 that was very unfortunate because it was very  
47 unfounded.

1 Q So there were some people in DFO that perhaps the  
2 fishing fleet thought were a little too close to  
3 DFO and there's some disputes over that; is that  
4 fair to say?

5 MR. CURRY: I heard those comments but from my  
6 experience they didn't apply.

7 Q There's a general principle, I think, maybe in  
8 fisheries management. If I'm wrong, you can clear  
9 me up, that the conservation benefits accrued by  
10 the best managed fishery can often be negated by a  
11 fishery that's less well-managed if they fish on  
12 the same stock. Is that a fair statement?

13 MR. CURRY: Yes, that could be a fair statement. An  
14 example is where you've got a quota-type fishery  
15 that's very well-managed and controlled and then  
16 you have a derby-style fishery being carried out  
17 upstream of that where when you open it, you don't  
18 know the number of fish that you're going to  
19 harvest. You could overshoot your target by a  
20 hundred percent and that's the precariousness of  
21 that kind of management. So DFO does everything  
22 we can to use past information and data to try and  
23 hit that target but it's not always possible  
24 because it's a very difficult thing to do.

25 Q I see. So despite fishery management being able  
26 to rebuild the Fraser sockeye run from 1930 to  
27 1990 with a fleet much larger or less people, you  
28 guys, if I can get it right, seem to be unable to  
29 do this any other way except through an IQ  
30 fishery?

31 MR. CURRY: Well, I think the complexity of this issue  
32 is so much greater than that statement. I mean,  
33 we had a great big slide in the Fraser River back  
34 in 1913 and we've been rebuilding actually since  
35 then. And we're going through a period of time  
36 recently with global warming that is changing the  
37 environment, changing the productivity. It can be  
38 up one year, down the next. And so it's a very  
39 difficult environment in which to manage these  
40 fisheries.

41 Q I think we'll deal with that as we go along in  
42 time. I want to ask you a couple of questions  
43 about revival tanks in the Fraser River. Every  
44 buy-licence condition, every gillnetter in the  
45 public commercial fleet needs a revival box; is  
46 that correct? Buy-licence condition?

47 DR. HARGREAVES: Yes.

- 1 Q If you don't have it or you don't have it  
2 operating, can you be charged and prosecuted?  
3 DR. HARGREAVES: Yes.  
4 Q What about the Aboriginal commercial fishery on  
5 the Fraser in the tidal waters? Are all those  
6 vessels required to have coho revival boxes and  
7 steelhead revival boxes?  
8 DR. HARGREAVES: No.  
9 Q So for the boats that fish in both fisheries, if  
10 they fish in the public fishery on Monday, they  
11 need the revival box and they'll go to court if  
12 they don't have it or don't operate it, and on  
13 Tuesday then in the Musqueam, Tsawwassen, Sto:lo  
14 commercial fishery, you can go ahead and operate  
15 without a revival box; is that correct?  
16 DR. HARGREAVES: Yes.  
17 Q Do you know why that is?  
18 DR. HARGREAVES: I think because of the priority of  
19 First Nations. So the first priority is  
20 conservation and the second is First Nations FSC,  
21 food, social and ceremonial.  
22 Q But this is a commercial fishery I'm talking  
23 about.  
24 DR. HARGREAVES: Yes, I'm aware of that but often those  
25 same boats are used for the FSC component. So  
26 when they go out to get their FSC. So they're not  
27 required to have a revival tank when they fish for  
28 FSC purposes.  
29 Q So I'm trying to get this clear then. So during a  
30 commercial fishery that's licensed where they can  
31 sell fish, you're saying that they're still  
32 fishing for food; therefore, they don't need to  
33 pay attention to the regulation that's applicable  
34 to the other fleet?  
35 DR. HARGREAVES: Yes, I'm not certain why.  
36 Q Are they allowed to keep coho?  
37 MS. SCHABUS: Objection, Mr. Commissioner. I just want  
38 to clarify something. Mr. Commissioner, I just  
39 wanted to clarify something. Mr. Eidsvik just  
40 pointed out that they were not following  
41 regulations but actually the regulations do not  
42 stipulate that. I just wanted to clarify that  
43 point and I'm going to remain standing just in  
44 case.  
45 MR. EIDSVIK: Thank you for that. I believe my  
46 question was quite proper because there's a  
47 regulation that applies to our sector, the public

1 commercial fishery, but not to the Aboriginal  
2 commercial sector. And I agree with my friend  
3 that there's different regulations and that's what  
4 I was trying to get at. So there's a conservation  
5 issue for the public commercial fleet in the lower  
6 Fraser River but not one for the Aboriginal-only  
7 commercial fleet in the Fraser. And that's what I  
8 was trying to establish.  
9 Q Can you tell me, how big is the set net fishery in  
10 the Fraser Canyon?  
11 DR. HARGREAVES: I don't know.  
12 Q How many nets?  
13 DR. HARGREAVES: I don't know.  
14 Q No idea?  
15 DR. HARGREAVES: No.  
16 Q Would it surprise you if it was 400 in a busy  
17 fishery?  
18 DR. HARGREAVES: Possible.  
19 Q Do they use --  
20 MS. SCHABUS: I'm going to object again. Mr.  
21 Commissioner, I'm afraid that the witnesses have  
22 indicated that they are actually not in a position  
23 to comment on this and unless Mr. Eidsvik  
24 establishes the basis and that they would be in a  
25 position to comment on that, I'd ask him --  
26 MR. EIDSVIK: Well, the basis for that is we're talking  
27 about selective fishing in the commercial sector  
28 and in the Aboriginal sector and in the sport  
29 sector we talked about barbless hooks.  
30 Q My question is simple. There's a very large  
31 commercial fishery in the Fraser Canyon. Do they  
32 use revival boxes for their gillnet harvest?  
33 DR. HARGREAVES: I don't know. I'm not familiar with  
34 that fishery.  
35 Q Well, maybe you can help me because your job, I  
36 think, was selective fishing, wasn't it?  
37 DR. HARGREAVES: Yes.  
38 MR. CURRY: If I can comment.  
39 DR. HARGREAVES: Okay, Gordon, go ahead.  
40 MR. CURRY: I'll comment on one way that it's managed  
41 and that is when we are dealing with coho, as I  
42 mentioned earlier, the 3 percent mortality on coho  
43 that we manage by is borne by all fisheries. We  
44 look at all fisheries and all fishery impacts. So  
45 the current fisheries, as they stand are meeting  
46 that requirement. There may be some  
47 inconsistencies but the bottom line is that

1 assortment of fisheries is meeting the current  
2 standard at 3 percent.  
3 Q Well, you've said that the revival box really adds  
4 to the survivability of coho. So if all  
5 commercial fishermen were to use revival boxes, it  
6 seems to me there'd be less coho mortalities;  
7 therefore, we could target on the main species  
8 more. But have I got that wrong?

9 MR. CURRY: That's correct.

10 MR. EIDSVIK: Okay. Those are my questions. Thank  
11 you, Commissioner.

12 MR. MARTLAND: Yes, Ms. Gaertner, thank you.

13 MS. GAERTNER: Good afternoon, Mr. Commissioner.  
14 Brenda Gaertner for the First Nations Coalition  
15 and with me, Crystal Reeves, R-e-e-v-e-s. I'm  
16 going to go with highway speed and see how well I  
17 do. And I hope I've got my questions down to the  
18 bare minimum.

19  
20 CROSS-EXAMINATION BY MS. GAERTNER:

21  
22 Q Gentlemen, I just wanted to clarify something  
23 that's a working premise that I have and I'm not  
24 sure I've got it right. But if we don't have buy-  
25 in by industry, that makes selective gear-type  
26 fisheries more difficult. That's an assumption.  
27 Is that a correct assumption?

28 MR. CURRY: Yes, that's a correct assumption, that you  
29 need buy-in in order to carry out selective  
30 fisheries to its fullest extent.

31 Q And if we don't have that buy-in, then you're  
32 going to have to continue to up your increased use  
33 of selective fisheries through time and area; is  
34 that correct? So you'll have more closures and  
35 likely more fisheries up-river; is that correct?

36 MR. CURRY: Potentially, yes.

37 Q All right. And so I'm confused. What's your  
38 experience, why is it that it's difficult to have  
39 industry buy-in to selective fisheries?

40 MR. CURRY: Like I've said before, there's many  
41 individuals and representatives that have buy-in  
42 and are favourable to making changes, although  
43 there are many others that don't. So it's a  
44 matter of which road are we going down? And my  
45 recommendation is that you've got to be working  
46 together in order to have that buy-in and we need  
47 to re-focus and have that working relationship in

1 order to be able to have effective implementation  
2 of the selective fisheries strategy.

3 Q I'm happy to say, as you've already both spoken  
4 to, that my clients have actually have quite an  
5 interest in selective fishing, as you know. And  
6 your report that was done on the Selective Fishing  
7 Project, which is Exhibit 432, at page 14, you  
8 list some of the First Nation projects on  
9 selective fishing that were done during the  
10 program. In particular, there were 11 trap nets  
11 and six fish wheels. Some of these are on the  
12 Fraser, some of these are in other places, as I  
13 read the report, some education programs, some  
14 water sorting and some survival tank studies.  
15 They're all on page 14 under the list there. I'm  
16 actually interested in having you describe the  
17 challenges that you experienced in working with  
18 some of those projects, what you learned from  
19 them, what we could learn from them going forward.  
20 As you know, First Nations are very interested in  
21 pursuing selective fishing and working closely  
22 with partners around that. And so it would very  
23 useful to know where their challenges are, what  
24 we've learned and how we can move forward on that.

25 MR. CURRY: Yes, with working with individuals within  
26 these projects, as with other projects, you're  
27 working with motivated individuals that have  
28 proposed a strategy or gear type. And so we would  
29 work together in a team environment. And a lot of  
30 the First Nations projects were very effective and  
31 we had good working relationships. And the  
32 Aboriginal sector also worked on pulling together  
33 education and training materials and workshops  
34 that also went out to communities throughout the  
35 province to increase the exposure of selective  
36 fishing and the importance of it, whether it was  
37 through videos, as well as pamphlets, pamphlets  
38 they created to get out to their communities, and  
39 so on, as well as the workshop. So it was a very  
40 good working relationship.

41 Q Great. And challenges going forward with respect  
42 to any of that, anything you'd like to bring to  
43 our attention at this point?

44 MR. CURRY: Nothing that wasn't, you know, equivalent  
45 within the commercial or recreational. There's a  
46 lot of challenges in terms of being able to carry  
47 out these projects effectively but there was a lot

1 learned and gained from this work.

2 DR. HARGREAVES: May I just add something to that?

3 Q Sure, Dr. Hargreaves.

4 DR. HARGREAVES: One of the things I would suggest is,  
5 for First Nations who are interested in this,  
6 there's a fairly active selective fishing program  
7 getting underway now in the United States,  
8 particularly in the Columbia River, where they  
9 have a lot of **Endangered Species Act**, ESA-listed  
10 stocks, and they're being quite successful with  
11 that. So they're following on some of the work  
12 we've done but they're also striking off in new  
13 directions as well. And the First Nations, the  
14 tribes down there are very engaged in that. So  
15 there's a lot of knowledge there that could be  
16 transferred up to our own First Nations.

17 Q And it's something that you're familiar with? Is  
18 there any particular recommendations that you're  
19 already aware of that could be useful in Mr.  
20 Commissioner's review of selective fishing for  
21 Fraser River sockeye?

22 DR. HARGREAVES: Well, as I say, they're just getting  
23 underway right now so they're reviewing what we've  
24 done. But the earlier reports in the Columbia  
25 Basin Bulletin, which you're probably aware of,  
26 indicate a steep learning curve. Last year, for  
27 example, a lot of the selective fishing methods  
28 they tried didn't work or had marginal success.  
29 But the second year was much more successful and  
30 they're going to expand that program again this  
31 year.

32 MS. GAERTNER: Great. I'm wondering if we could have  
33 Exhibit 18 on the Commission's list.

34 Q Mr. Curry, I believe this is a presentation you  
35 did in 2005 -- or '04 or '05. Are you familiar  
36 with this?

37 MR. CURRY: Yes, I am.

38 Q I'm just going to take you to a couple of pages on  
39 it. The first one is on the very first page. You  
40 do an overview. And on the top on the right  
41 you'll see your little thing called "Overview".  
42 And the fourth bullet is "DFO and industry have  
43 resources to find solutions", and at that point  
44 that you were hoping that that 5 percent of  
45 commercial tuck would be useful to you. But then  
46 you've gone and commented on a challenge that  
47 First Nations and recreational communities don't

1           have the funding. Is that something you still  
2           agree with now and --

3 MR. CURRY: Yes, they don't --

4 Q       -- see as part of the challenges directly?

5 MR. CURRY: They don't have the ability to take a  
6           portion of the catch, sell it and have the  
7           resources available to do this work. So then you  
8           have to look at strategies of where can you find  
9           the resources in terms of what pots of money are  
10          out there that are available to secure in order to  
11          carry on this work. And that's obviously a much  
12          more difficult thing to do than if you have  
13          something that's set aside.

14 Q       And on the last page, the very last box is "Other  
15          issues and recommendations". And in fact, you  
16          make a recommendation there that First Nations  
17          encouraged to adopt selective fishing gear and  
18          methods; therefore, AFS and treaty staff. Are you  
19          familiar with those recommendations and what your  
20          thinking was at the time as to how selective  
21          fishing could be assisted with AFS and/or treaty  
22          negotiations?

23 MR. CURRY: Yes. Basically what I'm referring to is  
24          that as we move forward to not lose sight of the  
25          benefits that accrue from fishing selectively.  
26          Through the managers and most of the managers now  
27          that are managing AFS are fishery managers. And  
28          so keeping it on their radar in terms of when  
29          we're managing fisheries, Aboriginal fisheries,  
30          that we need to be thinking about the selectivity  
31          of the fisheries to make sure that they're moving  
32          ahead in a responsible and selective way and that  
33          when negotiators are looking at negotiating fish  
34          chapters to treaties that again, depending on the  
35          nature of the discussions and the fishing gear  
36          that's talked about, looking at moving as much as  
37          possible to the most selective fisheries possible,  
38          it's an opportunity to keep that front and centre  
39          and part of those discussions to make for more  
40          responsible First Nation fisheries where they need  
41          to be.

42 Q       We're going to spend a fair bit of time on another  
43          part on the AFS agreements so I won't go into that  
44          too much right now.

45 MS. GAERTNER: I'm going to ask that document 12 on our  
46          document list be put forward.

47 MR. MARTLAND: I wonder, just before we leave this

1 document, it was on the Commission's list but --  
2 MS. GAERTNER: Oh, sorry.  
3 MR. MARTLAND: -- it wasn't, in fact --  
4 MS. GAERTNER: Yes, please.  
5 MR. MARTLAND: -- marked through our direct. So I  
6 wonder if I could suggest this document that's up  
7 now become an exhibit, please?  
8 THE REGISTRAR: That's document number 18 --  
9 MS. GAERTNER: Thank you, Mr. Martland.  
10 THE REGISTRAR: -- Exhibit Number 449.  
11 MS. GAERTNER: It's that highway speed. I'll try not  
12 to pass.

13  
14 EXHIBIT 449: Selective (Salmon) Fishing  
15 Update - 2004 Overview and Process, 2004  
16 Projects, Recommendations for 2005  
17

18 MS. GAERTNER:

19 Q I'm actually going to jump to one other question I  
20 have of Dr. Hargreaves because I only have one for  
21 sure that I need to ask you and if it becomes  
22 useful we might have to have Mr. Curry back. But  
23 Dr. Hargreaves, I just want to ask one question  
24 around the catch-and-release matters that you  
25 referred to earlier. And in particular, as you  
26 know, a number of my clients in the Fraser River  
27 particularly and further up have concerns around  
28 catch-and-release. And I was interested in your  
29 evidence this morning about how the research to  
30 date has been a little bit more successful in  
31 understanding the more immediate effects of catch-  
32 and-release so you're able to identify and watch  
33 and return a salmon or a sockeye back hopefully  
34 healthy and able to return to the journey.

35 But what I'm concerned with is the research  
36 that needs to be done to ensure that that same  
37 salmon, if it's caught two or three times, does  
38 hit the spawning ground. And you were very clear  
39 in your evidence this morning that further  
40 research needs to happen on that. Would you agree  
41 with me that if there are openings and closings or  
42 any kind of fisheries that rely on that type of  
43 selective fishery that this is a place where a  
44 precautionary approach needs to be taken? We  
45 don't have the scientific evidence to prove that  
46 those catch-and-release fisheries are necessarily  
47 safe in the long-term and we do need to take care

1 with those. Would you agree with me on that?

2 DR. HARGREAVES: I certainly agree with the  
3 precautionary approach. But I think you have to  
4 put it in context. And the context that's  
5 relevant here is the risk associated with it. So  
6 if a particular fishery was operating, let's say  
7 it was a beach seine in the lower Fraser catching  
8 sockeye, for example, for First Nations. If the  
9 total allowable catch happened to be 200 pieces of  
10 sockeye, they could catch those fish in a  
11 relatively short time, a few sets of the net  
12 probably. As a fisheries manager, if I was the  
13 manager of that fishery, I would not be overly  
14 concerned about the impact on the fish that were  
15 released on that. So maybe they'd catch four or  
16 five coho, let's just say, as an example. Those  
17 fish might or might not survive. What I'm getting  
18 at is that the risk is small. To the stock as a  
19 whole, the risk for that particular fishery, done  
20 in a selective way, is minor. If we're talking a  
21 much riskier fishery, maybe a large commercial  
22 fishery in Area 20 that could encounter thousands  
23 of coho, maybe tens of thousands of coho, then the  
24 issue of what happens post-release for those fish  
25 is extremely important.

26 Q Thank you. That's very helpful. I actually think  
27 there's one more question that Mr. Curry may want  
28 your assistance on. And that's, I was looking at  
29 the difference between the United Nations FAO  
30 Standards that we have as Exhibit 442 and Canada's  
31 document, the Code of Conduct in Exhibit 443, and  
32 we can bring those exhibits forward, if either of  
33 you would like to look at them. But I notice that  
34 in the United Nations Standards, both ecological  
35 conservation, local knowledge, traditional  
36 ecological knowledge are all very strong themes in  
37 that document, as a code of conduct for selective  
38 fisheries and otherwise. But I can't find those  
39 in Canada's documents. Did I miss them? Did I  
40 miss something in the review? What happened in  
41 that translation?

42 MR. CURRY: The Canadian document is one specific to  
43 the commercial fisheries. And I would say that  
44 traditional ecological knowledge is very important  
45 within commercial fisheries, as well as in  
46 Aboriginal fisheries. So I don't know whether I'm  
47 answering your question correctly or as you

- 1 intended but that is an important factor. And  
2 when we team up and work with harvesters to find  
3 solutions, that traditional ecological knowledge  
4 is a key component of what we gain by teaming up  
5 and working together.
- 6 Q Are you aware whether or not the Canadian document  
7 was reviewed by First Nations before it was  
8 finalized? Was there a consultative effort or was  
9 this all just done on the commercial industry and  
10 then finished? This is a Canadian Code of  
11 Conduct.
- 12 MR. CURRY: It was industry-led and it was supported by  
13 DFO nationally. So I don't know whether there was  
14 specific consultation with First Nations on that  
15 particular Code.
- 16 MS. GAERTNER: All right. Just two more questions  
17 actually. I would now like document 12 on our  
18 list.
- 19 Q And this is a question for you, Mr. Curry, unless  
20 Dr. Hargreaves knows about this. I just want to  
21 take you on past 2004. Are you familiar with the  
22 River to Plate initiatives that are going on with  
23 respect to selective fishing in the lower Fraser  
24 and -- or actually lower to upper Fraser, actually  
25 more particularly?
- 26 MR. CURRY: Yes, I have familiarity with it, yes.
- 27 MS. GAERTNER: And I'm wondering if we could go to page  
28 6 of this document.
- 29 Q And so this is an example of how selective fishing  
30 efforts are continuing after the slowdown in  
31 funding, as we might call it. And in particular,  
32 there's some small demonstration fisheries that  
33 are being licensed in the Fraser River since 2005,  
34 in the Harrison River, mid-Fraser, the Thompson  
35 and Quesnel and the Fraser near Prince George; is  
36 that correct?
- 37 MR. CURRY: That's my understanding, yes.
- 38 Q And could you bring to our attention any  
39 continuing benefits and usefulness that you're  
40 finding with respect to continuing with these  
41 selective fisheries?
- 42 MR. CURRY: I can't speak to the specific demonstration  
43 fisheries that have been going on because I  
44 haven't been intimately involved with them. But  
45 in a general sense, this, from what I have seen  
46 and what I have heard from colleagues, that this  
47 is a continuation of a sorts of selective fishing

1 but it's focusing on the ability to harvest in-  
2 river and look at the viability, economically and  
3 ecologically, of the harvest in-river through to  
4 the marketplace but I can't speak to the specific  
5 projects, as I haven't been working on those  
6 specifically.

7 MS. GAERTNER: I wonder if I could have this document  
8 marked as the next exhibit.

9 THE REGISTRAR: Exhibit Number 450.

10  
11 EXHIBIT 450: From River to Plate 2009 - An  
12 Implementation Update and 2008 Activities  
13 Report CAN037620  
14

15 MS. GAERTNER:

16 Q This morning when you were reflecting on the  
17 various recommendations that both of you could  
18 bring to Mr. Commissioner's attention, there was  
19 one matter that I didn't see you speak on and I  
20 wonder if you could, which is, is it also going to  
21 be increasingly necessary for the flexibility in  
22 where these commercial fisheries are harvested?  
23 There's a lot of effort being made to try to put  
24 selective fisheries out into the marine. But is  
25 it also going to be necessary, as we continue  
26 forward and given all the challenges around  
27 conservation units and other things, that these  
28 selective fisheries will need to move up river?

29 MR. CURRY: I think that's one of the strategies that  
30 can be used. And I used the example of avoiding  
31 impacts on Cultus stocks by fishing north of the  
32 Vedder River, for instance. And so those types of  
33 strategies need to be part of the toolbox and  
34 whether, you know, if you have a defined share,  
35 whoever fishes it is, in essence, maybe not a  
36 concern. What the concern is, are you able to  
37 harvest the abundant stocks and protect the weak  
38 stocks? And one of those strategies is to fish  
39 more terminally. So we need to be looking at  
40 combinations of strategies here.

41 Q And given your familiarity with the complexities  
42 around management issues, you're also familiar  
43 that that may increase the abilities of DFO and  
44 First Nations to meet their FSC requirements and  
45 the priority requirements and so there are some  
46 synergies there, also?

47 MR. CURRY: Without a doubt. Where there's increased

1 capacity to harvest, it can increase the capacity  
2 of First Nations to meet their FSC needs.

3 MS. GAERTNER: Those are my questions, Mr.  
4 Commissioner, I think.

5 THE COMMISSIONER: Thank you very much.

6 MS. SCHABUS: Mr. Commissioner, I'm taking it we're  
7 carrying on with the late run?

8 THE COMMISSIONER: Till 4:00, yes.

9 MS. SCHABUS: Okay.

10

11 CROSS-EXAMINATION BY MS. SCHABUS:

12

13 Q Gentlemen, just because there seems to have been a  
14 little bit of a problem earlier, let me just  
15 establish at the beginning, when I talk about  
16 commercial -- in the following, when I talk about  
17 commercial industrial harvest, I'm referring  
18 specifically to the area harvesters. And I'm just  
19 going to put it to you that there's obviously a  
20 difference between this larger scale commercial  
21 industrial harvest with my clients and --

22 MS. SCHABUS: Sorry. I forgot to introduce myself.  
23 Nicole Schabus. I'm counsel for the Sto:lo Tribal  
24 Council and Cheam Indian Band, co-counsel.

25 Q -- that fish with what my clients called large  
26 appliances, so larger vessels that have a capacity  
27 to catch hundreds of thousands of fish in a span  
28 of a few hours in a derby-style fishery, in  
29 comparison to an Aboriginal fishery that would use  
30 different kinds of gear types, but when it comes  
31 in the cases that boats are used, they would be  
32 smaller in size and -- quite often smaller in size  
33 so it's quite important to make a distinction  
34 between that Aboriginal fishery even if it has a  
35 commercial aspect and a larger scale commercial  
36 industrial area style harvest.

37 MR. CURRY: My experience around Aboriginal fisheries  
38 has seen that First Nations individuals that have  
39 vessels that they use within the food, social,  
40 ceremonial fishery but also use them in a  
41 commercial fishery, yes, generally, there's more  
42 vessels of a smaller size and less capacity.  
43 Quite often, in some cases, their nets are still  
44 the same length as in a commercial fishery. But  
45 in other cases, they use smaller nets just because  
46 of the capacity of their smaller vessels or  
47 whether they're bringing those nets in potentially

- 1 by hand, which is, you know, very inefficient  
2 compared to the style of commercial vessels today,  
3 gillnet vessels.
- 4 Q Gillnet vessels where they'd be mechanically  
5 hauled in, for example?
- 6 MR. CURRY: Yes.
- 7 Q And especially in the Fraser River context, up  
8 river. If you're in-river and you're dealing with  
9 those smaller boats, I think one of the issues  
10 that you already pointed to when it comes to  
11 survival tanks, one of the issues is stability of  
12 such a smaller boat and that would be a safety  
13 concern that you would have to take into account,  
14 right?
- 15 MR. CURRY: Yes, that's right. And we made concessions  
16 for vessels under a certain size not having  
17 revival tanks.
- 18 Q Now, when it comes to selective fishing, that can  
19 be achieved not just through selective fishing  
20 technologies, such as fishing gear, but also for  
21 restrictions in fishing times and geographic  
22 restrictions, right? And I think that's also an  
23 element of a selective fishery to actually take  
24 into account fishing times, geography, et cetera.
- 25 MR. CURRY: Absolutely. Time and area.
- 26 Q Now, when you're dealing with a more mixed stock  
27 fishery, especially in -- so when it comes to  
28 dealing with a more mixed stock fishery especially  
29 in marine areas, that in comparison to an in-river  
30 fishery, that would already be a more selective  
31 fishery?
- 32 MR. CURRY: Depends on where you are. If you're in the  
33 lower Fraser River, the mix of stocks are going to  
34 be not that dissimilar to those that are out in  
35 the marine area because many of those stocks have  
36 a long ways to go up the river. There's only a  
37 few in the very lower reaches of the river that  
38 branch off so, yes, there are some options.  
39 Greater options in the lower river. But as you  
40 proceed up the river, those options increase.
- 41 Q Or for example, with the Cultus after the turn  
42 off?
- 43 MR. CURRY: Yes.
- 44 Q Now, also in terms of size of appliances, very  
45 large capacity boats and nets, you have a bigger  
46 issue with bycatch and incidental catch.
- 47 MR. CURRY: Not necessarily. It all depends on the

1 specific fishery. For instance, early time  
2 chinook in the Fraser River can be a serious  
3 concern and the level of impact could be -- a  
4 small number of fish could be a large impact  
5 whereas you could be looking at a different  
6 situation in the marine area. So you really have  
7 to look at fishery-to-fishery --  
8 Q The specific.  
9 MR. CURRY: -- and be very specific.  
10 Q Now, when it comes to the example you gave about  
11 the fisheries office on the west coast, basically  
12 what you saw is he built in working together with  
13 the different fisheries knowledge over time about  
14 in which areas you would see more mixed catch or  
15 more bycatch and in which areas you could target  
16 specific stocks better, right?  
17 MR. CURRY: Through time and area, the more terminal  
18 you carry out your fishery, the more precisely you  
19 can be stock specific. But as we've mentioned,  
20 there could be technological abilities or tagging  
21 abilities and so on that could rival that  
22 strategy.  
23 Q Now, when it comes to the issue of buy-in --  
24 MS. SCHABUS: And I'd ask Mr. Lunn to briefly bring up  
25 Exhibit 440.  
26 Q -- this memo from 2004 was signed off by -- or  
27 drafted, I understand, by both of you at a time  
28 that you were no longer working on selective  
29 fisheries issues, right? Or no longer  
30 specifically -- you'd moved on to different posts  
31 by that time?  
32 DR. HARGREAVES: Yes, that's correct. We weren't  
33 specifically tasked with selective fishing at that  
34 time.  
35 Q So there was actually no -- DFO already no longer  
36 had this as a priority or specifically funded but  
37 you took it on to still draft that memo and deal  
38 with that issue?  
39 DR. HARGREAVES: Yes.  
40 Q Now, it speaks to a lacking of buy-in from  
41 industry. And I'd like to take you to page 2, the  
42 last paragraph.  
43 MS. SCHABUS: If Mr. Lunn could blow it up so we can  
44 all read it together.  
45 Q But one of the points that you're pointing to,  
46 although the Area B harvest committee accepts the  
47 results in terms of the coho, so that there would

1 be actually a very positive effect, on the coho  
2 populations, they are reluctant to proceed with  
3 implementation is what you're setting out there,  
4 correct?

5 DR. HARGREAVES: Yes.

6 Q Now, going to the page over and that they believe  
7 that solving the coho problem will not afford them  
8 with additional commercial fishing time. So it's  
9 weighing their interests of commercial fishing  
10 time vis-à-vis coho conservation concerns and,  
11 therefore, not seeing the need to implement,  
12 right? That's what you're setting out in the  
13 memo?

14 DR. HARGREAVES: Yes.

15 Q Now, just to the second bullet on that page,  
16 please. And the result in the action that DFO  
17 takes as a result is DFO is considering relaxing  
18 some selective fishing strategies to allow more  
19 gear. So you're actually basically at that stage  
20 giving in to the industry demand. I'm looking at  
21 bullet number 2.

22 DR. HARGREAVES: Yeah, we're saying we're considering  
23 relaxing it, yes.

24 Q And that's what happened?

25 DR. HARGREAVES: I can't remember specifically what  
26 happened on that. What happened was that that  
27 experiment was not conducted so...

28 Q And when it comes to -- that experiment was not  
29 conducted as a result, right?

30 DR. HARGREAVES: Mm-hmm.

31 Q Now, when it comes to Aboriginal peoples, I think  
32 it's fair to say that you've had very good buy-in  
33 when it comes to selective fishing practices and  
34 projects, right?

35 DR. HARGREAVES: Yes, generally that's true.

36 Q And that also would go in connection with the fact  
37 that they already have traditional fishing  
38 techniques, some of which would be quite  
39 selective, so they actually have traditional  
40 knowledge regarding selective fishing.

41 MR. MARTLAND: And Mr. Commissioner, I'm simply  
42 identifying the concern about the time that we all  
43 face today. I don't know how many more questions  
44 my friend has.

45 MS. SCHABUS: I actually have two more. And I'm sorry,  
46 I'm trying to stick within my ten minutes just as  
47 well. I don't know which one of the gentlemen was

- 1 getting ready to answer.
- 2 MR. CURRY: Yes. Basically, with in-river or terminal  
3 fisheries, there's been a lot of selective  
4 components to the Aboriginal fishery. In the  
5 marine areas, many of the First Nations employ  
6 gillnet, seine and trawl vessels to catch their  
7 FSC allocations. And the move towards more  
8 responsible and selective fisheries could be  
9 enhanced by a greater use of selective methods by  
10 those vessels in the marine areas over and above  
11 what they're currently employing.
- 12 Q And that's when we're talking about fishing on  
13 Fraser River stocks but not, for example, on the  
14 stocks that they would if they hadn't been so  
15 depleted otherwise have had in their territories  
16 indigenous stocks in their territories, right?
- 17 MR. CURRY: I didn't quite catch your question there.
- 18 Q I was talking too fast. Well, that's when they're  
19 fishing on Fraser River stocks and that's a  
20 logistical requirement to a certain extent. But  
21 you're not talking about when they would be  
22 fishing in their own rivers with their own salmon  
23 runs in their territories.
- 24 MR. CURRY: Yes, those are two different things. One  
25 is a terminal fishery on local stocks and the  
26 other is a traditional fishery on passing stocks.
- 27 Q The other thing that plays into the selective  
28 fishery, in my submission, would be when we are  
29 looking at the geography, the knowledge that  
30 indigenous people have about traditional and  
31 current use sides, specific knowledge, where to  
32 harvest which species of fish and traditional  
33 knowledge in regard to time and geography of fish  
34 stocks.
- 35 MR. CURRY: Is there a question there?
- 36 Q Yes, I'm putting it to you that that would be an  
37 important element to take into account as well in  
38 selective fishery.
- 39 MR. CURRY: Absolutely. The traditional knowledge of  
40 all harvesters is very important to incorporate.
- 41 Q And so you'd agree with me that traditional  
42 knowledge is a key area in which we can still  
43 expand selective fisheries by integrating *in situ*  
44 knowledge so on-the-spot, in-the-territory  
45 knowledge of indigenous peoples and their long-  
46 established practices?
- 47 MR. CURRY: There are lessons to be learned from First

1 Nations, as well as longstanding commercial  
2 harvesters, traditional knowledge that we can  
3 learn from, and we do, and have done and need to  
4 continue to learn from that experience.  
5 Q My last question goes to the international level  
6 and the Food and Agriculture Organization of the  
7 United Nations and specifically COFI, the  
8 Committee on Fisheries, that started work on  
9 responsible fisheries already in the 1990s, early  
10 '90s, correct?  
11 DR. HARGREAVES: That's correct.  
12 Q And I think that's Mr. Hargreaves mainly. Now,  
13 their Code was adopted on October 31st, 1995.  
14 Now, I understand that also when comparing it with  
15 the Canadian Code that not all the parts of the  
16 International Code, especially when it comes to  
17 traditional knowledge, have actually been  
18 implemented through Canadian Codes?  
19 DR. HARGREAVES: Yes.  
20 Q Now, and I take it you're also aware that there  
21 are further U.N. standards developed under COFI,  
22 specifically that they do now have a Code for  
23 conduct for responsible fisheries and indigenous  
24 peoples that focuses specifically on indigenous  
25 peoples and responsible fisheries?  
26 DR. HARGREAVES: Yes, and I think the Canadian  
27 government views that as guidance. So although we  
28 contribute to the development of those types of  
29 things at the international level, it doesn't  
30 necessarily all apply to the Canadian situation  
31 (indiscernible - overlapping speakers).  
32 Q It hasn't necessarily all yet been implemented but  
33 you would agree --  
34 DR. HARGREAVES: Yes.  
35 Q -- that it's important guidance that you --  
36 DR. HARGREAVES: Yes, I would.  
37 Q -- could reach to. So you could use those  
38 international standards and learn from them and  
39 implement them on the ground?  
40 DR. HARGREAVES: Yes.  
41 MS. SCHABUS: Those are my questions. I see my friend  
42 rising and I'll accede the mike to her. Thank  
43 you.  
44 MS. GAERTNER: Mr. Commissioner, I missed a question  
45 and I've checked it with the Commission counsel  
46 and they weren't able to help me so I'm sorry,  
47 gentlemen, I have one more question to ask and I

1 apologize.

2 CROSS-EXAMINATION BY MS. GAERTNER, continuing:

3

4 Q Exhibit 266, which is the Selective Fishing  
5 Policy, it's the actual policy, my read of it has  
6 the department consulting with the recreational  
7 and commercial harvesters but First Nations aren't  
8 mentioned there. And I was just wondering why  
9 not.

10 DR. HARGREAVES: Can you point out the particular --

11 Q Shall I take you to the exhibit? Yeah, Exhibit  
12 266, and it's page 15, and we have "Next Steps":

13

14 The department will consult with  
15 recreational, angler and commercial harvester  
16 organizations on further selective fishing  
17 initiatives.

18

19 And you'll see that First Nations aren't mentioned  
20 there and I was just absolutely curious as to why  
21 not.

22 DR. HARGREAVES: I don't know.

23 Q And oversight?

24 DR. HARGREAVES: I think it's an oversight. If you  
25 look up at the paragraph at the beginning of the  
26 paragraph above, it says:

27

28 Document being publicly released and  
29 circulated among First Nations.

30

31 So I mean it was our intent and our practice at  
32 the time to consult with First Nations so I think  
33 it must have just been an oversight.

34 Q All right. So either that or it was perhaps that  
35 you were already aware how well they were  
36 supportive of the initiative?

37 DR. HARGREAVES: Well, there's certainly no intent  
38 there to eliminate or not consult with First  
39 Nations.

40 MS. GAERTNER: Absolutely. Thank you, Mr.  
41 Commissioner.

42 MR. MARTLAND: Mr. Commissioner, I don't think we've  
43 had any area closures. We've certainly had  
44 significant time restrictions and I want to  
45 express my appreciation to all counsel for moving  
46 up and moving their speed along. Thank you.

47 THE COMMISSIONER: Thank you, Mr. Martland. I just

1 want to express my appreciation to Dr. Hargreaves  
2 and Mr. Curry. Thank you both very much for your  
3 patience and for being here today. And to counsel  
4 for once again being so cooperative to meet your  
5 time constraints. Ten o'clock tomorrow morning,  
6 Mr. Martland?

7 MR. MARTLAND: Please.

8 THE COMMISSIONER: Thank you very much.

9 MR. MARTLAND: Thank you.

10 THE COMMISSIONER: And thank you to our hearing staff,  
11 who were so cooperative as well. Thank you very  
12 much.

13 THE REGISTRAR: Hearing is now adjourned for the day  
14 and will resume at ten o'clock tomorrow morning.  
15 Counsel is aware that there is a meeting at 9:15  
16 tomorrow morning here in this room.

17  
18 (PROCEEDINGS ADJOURNED TO FEBRUARY 22, 2011,  
19 AT 10:00 A.M.)  
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3 true and accurate transcript of the  
4 evidence recorded on a sound recording  
5 apparatus, transcribed to the best of my  
6 skill and ability, and in accordance  
7 with applicable standards.  
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12 Diane Rochfort  
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36 Susan Osborne  
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Karen Acaster