

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.

Wednesday, November 3, 2010

Tenue à :

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

le mercredi 3 novembre 2010

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	Musgagmagw Tsawataineuk Tribal Counsel ("MTTC")

TABLE OF CONTENTS / TABLE DES MATIERES

	PAGE
WENDY WATSON-WRIGHT (Affirmed)	
In chief by Mr. Watson	1
Cross-exam by Mr. Taylor (CAN)	31
PANEL NO. 4 (Affirmed):	
DR. SIDDIKA MITHANI	
In chief on qualifications by Mr. Wallace	51
In chief by Mr. Wallace	51/79
Cross-exam by Mr. Taylor (CAN)	88/91/93/113
DR. LAURA RICHARDS	
In chief on qualifications by Mr. Wallace	60
In chief by Mr. Wallace	62/78/85
Cross-exam by Mr. Taylor (CAN)	86/89/92/94/97/104/110/113
Cross-exam by Mr. McDade (AQUA)	115
AL CASS	
In chief on qualifications by Mr. Wallace	61
In chief by Mr. Wallace	62
Cross-exam by Mr. Taylor (CAN)	86/95/103/104
DAVID BEVAN	
In chief by Mr. Wallace	77/80/82/85
Cross-exam by Mr. Taylor (CAN)	87/89/91/92/101/112
Cross-exam by Mr. McDade (AQUA)	120
PAUL SPROUT	
In chief by Mr. Wallace	77/80
Cross-exam by Mr. Taylor (CAN)	87/95/98/102/106/109

EXHIBITS / PIECES

<u>No.</u>	<u>Description</u>	<u>Page</u>
36	Science at Fisheries and Oceans Canada: A Framework for the Future	4
37	Science Management Board Minutes of Meeting, October 13 and 14, 2005	6
38	Science Management Board Minutes of Meeting, January 3, 2006	7
39	Science Management Board Minutes of Meeting, October 4, 2006	9
36	Science at Fisheries and Oceans Canada: A Framework for the Future	4
37	Science Management Board Minutes of Meeting, October 13 and 14, 2005	6
38	Science Management Board Minutes of Meeting, January 3, 2006	7
39	Science Management Board Minutes of Meeting, October 4, 2006	9
40	Fisheries and Oceans Canada: Five-Year Research Agenda (2007-2012)	9
41	Science Management Board Minutes of Meeting, April 19, 2007	10
42	Science Management Board Minutes of Meeting, October 11, 2007	10
43	Science Management Board Minutes of Meeting, April 22, 2008	10
44	Science Management Board Minutes of Meeting, November 28, 2008	11
45	Science Management Board Minutes of Meeting, April 17, 2009	11
46	Science Management Board Minutes of Meeting, October 27, 2009	11
47	A New Ecosystem Science Framework in Support of Integrated Management	12
48	Fisheries and Oceans Canada, Five-year Research Plan (2008-2013)	22
49	National Human Resources Strategy for the Science Sector, Fisheries and Oceans Canada, April 2007	26

<u>No.</u>	<u>Description</u>	<u>Page</u>
50	Department of Fisheries and Oceans: Policy on Collaborative Arrangements with Non-Government Organizations	27
51	Government of Canada: A Framework for the Application of Precaution in Science-Based Decision Making About Risk	28
52	List of DFO scientists who attended the October 2010 brainstorming session	59
53	DFO Science Advisory Process Framework	62
54	Operational Guidelines for Science Special Response Processes (SSRP)	64
55	Procedure for the Development of the Annual CSAS Peer Review Schedule	67
56	Pacific Scientific Advice Review Committee Terms of Reference	70
57	Policy Governing Public Participation in the Pacific Scientific Advice Review Committee (amended 2005)	73
58	Regional Management Committee Decision Paper of	
	April 2006	73
59	June 1st, 2007 Regional Management Committee Decision Paper entitled "Prioritizing PSARC Requests" with five attachments	74

EXHIBITS FOR IDENTIFICATION / PIÈCES POUR L'IDENTIFICATION

Nil

1
Wendy Watson-Wright
In chief by Mr. Wallace

Vancouver, B.C. /Vancouver (C.-B.)
November 3, 2010/le 3 novembre 2010

1
2
3
4 THE REGISTRAR: The hearing is now resumed.
5 Commissioner Cohen is presiding.

6 MR. WALLACE: Morning, Mr. Commissioner. We have, on
7 the phone and by videoconference, Dr. Wendy
8 Watson-Wright, from Paris. And the idea is that I
9 will ask her questions for the next hour and a
10 half or so. Perhaps there will be time, following
11 that, for Mr. Taylor to ask questions, but I think
12 that the intention is that Dr. Watson-Wright will
13 come back tomorrow morning at this time, to answer
14 questions from participants. Her time, tomorrow,
15 is limited. If we run out of time on that period,
16 Mr. Commissioner, my submission is, well, we'll
17 just have to try and accommodate another
18 opportunity as soon as we can.

19 Mr. Giles, could you please affirm Dr.
20 Watson-Wright.

21 THE REGISTRAR: Doctor, we will affirm you, now. This
22 is the registrar.

23 Do you solemnly affirm that the evidence to
24 be given by you to this hearing shall be the
25 truth, the whole truth and nothing but the truth?

26 DR. WATSON-WRIGHT: Yes, I affirm that.

27 THE REGISTRAR: Would you state your full name, please?

28 DR. WATSON-WRIGHT: Wendy Watson-Wright.

29 THE REGISTRAR: Thank you.
30

31 EXAMINATION IN CHIEF BY MR. WALLACE:
32

33 Q Dr. Watson-Wright, let me just ask you, very
34 briefly, ask you some questions. I'll take you
35 through your background. You have a Physiology
36 PhD from Dalhousie, and a Master of Science and
37 Bachelor of Physical Education, all from
38 Dalhousie?

39 A Yes.

40 Q You joined DFO in 1989, worked in Halifax through
41 1992, and from 1992 to 1997, you were the director
42 of DFO's St. Andrew's Biological Station, and in
43 the last two years of that you were also Regional
44 Manager of the Aquaculture Science Division at St.
45 Andrew's?

46 A Yes, I was, for the Atlantic zone.

47 Q Thank you. From '97 to '99, Dr. Watson-Wright,

2
Wendy Watson-Wright
In chief by Mr. Wallace

1 you were the Director General of Review -- the
2 Review Evaluation and Audit Director of DFO in
3 Ottawa, reporting to --
4 A Yes.
5 Q -- the associate deputy?
6 A Yes.
7 Q And from '99 to 2001, you were with Health Canada,
8 as Director General of Strategic Policy Director,
9 Population and Public Health Branch, and as the
10 Associate Assistant Deputy Minister, correct?
11 A Yes, that's correct.
12 Q I understand you returned to DFO as Assistant
13 Deputy Minister of Science in December of 2001,
14 and you held that position until December of last
15 year, correct?
16 A That's correct.
17 Q You're currently on a leave of absence from the
18 department and from the federal civil service, and
19 you are assistant deputy -- sorry, the Assistant
20 Director General and Executive Secretary of the
21 Intergovernmental Oceanographic Commission of
22 UNESCO, correct?
23 A That's correct.
24 Q Dr. Watson-Wright, I have some questions for you
25 relating to the direction of science and some of
26 the documents produced in that regard during your
27 time, I think mostly during the time you were the
28 assistant deputy minister of science.
29 The first document I would ask you to look at
30 is Exhibit 1 in the list, Mr. Lunn, and that is A
31 Framework for the Future. You have that document
32 in front of you, Dr. Watson-Wright?
33 A I certainly can. Yes, I do.
34 Q Can you tell the Commissioner, please, the genesis
35 of that document?
36 A Yes, I'd be happy to, thank you. The document
37 refers to the framework that we used for what we
38 called science renewal. When I came into the
39 department there were clearly a number of
40 challenges being faced by science, and although
41 when I first joined, the department was
42 undergoing, first, a departmental assessment, and
43 then following that, a departmental assessment and
44 alignment project. That took a few years. And
45 following those two in-depth departmental
46 assessments, the science sector underwent a
47 review.

1 When I came into the department, as I said,
2 there were some challenges being faced by the
3 sector. First of all, there was a growing demand
4 for science advice, but an absence of resource
5 increase, and the growing demand stemmed from the
6 fact that whereas previously we had -- science had
7 traditionally been servicing the **Fisheries Act**
8 with the passage of a number of other acts, which
9 included the **Canadian Environmental Assessment**
10 **Act**, the **Oceans Act**, and the **Species at Risk Act**,
11 there was more of a demand for science.

12 So in addition, the complexity of the work
13 was increasing, we needed to ensure that the
14 science sector was responsible and flexible, so
15 there were challenges, as I say. Through the --
16 what I noticed most in coming back, though, was
17 that it seemed that science was not that well
18 understood by the other sectors who we were trying
19 to serve, and by senior management, and there
20 seemed to be a little bit of a disconnect across
21 the country as well. Nobody's fault, just that
22 times were changing.

23 So what we did was undertake a review of the
24 science program through the 2004, and what came
25 out of that was we did find that there was lack of
26 inadequate priority setting mechanisms, there was
27 a bit of a lack of efficiency in delivering the
28 program, it seemed, we were facing an accelerating
29 loss of staff and, of course, there were fairly
30 severe funding pressures. So from that we took a
31 science renewal, and the framework, the document
32 that you have in front of you, is really the
33 umbrella document where we set out our strategy
34 under the four pillars of relevant, effective,
35 affordable and value for the science program that
36 we wanted to have, and it was within that context
37 that we established a number of strategies and
38 then action plans, which would help move us
39 forward within science renewal.

40 Q Thank you, Dr. Watson-Wright. If I may take you
41 to page 5 of the exhibit, which I will now ask Mr.
42 Registrar to mark.

43 A Yes.

44 MR. WALLACE: So it says Science at Fisheries and
45 Oceans Canada: A Framework for the Future, will
46 be exhibit number --

47 THE REGISTRAR: 36.

4
Wendy Watson-Wright
In chief by Mr. Wallace

1 EXHIBIT 36: Science at Fisheries and Oceans
2 Canada: A Framework for the Future
3

4 MR. WALLACE: Thank you.

5 Q And if I may ask you, Dr. Watson-Wright, to page 5
6 of that document, you've described, I think, the
7 substance of the framework. I have a question
8 about the paragraph at the bottom of the left-hand
9 column. It identifies the completion of the
10 review in 2004 and 2005, and the conclusion here,
11 which I would just like to ask you about, the
12 conclusion that:
13

14 ...the Science Program needed to establish a
15 transparent priority-setting process based on
16 integrated risk management. In doing so,
17 strategic and operational planning would be
18 improved and thus, funding pressures caused
19 by an expanding mandate and emerging
20 priorities could be alleviated. Finally, the
21 review revealed the need to renew the Science
22 Program workforce in order to offset
23 retirement and attrition.
24

25 A Yes.

26 Q I think you've addressed the last two points
27 there, the last two sentences, but I would like to
28 ask you about the meaning of the previous phrase,
29 "transparent priority-setting process based on
30 integrated risk management". Can you describe
31 that, tell me a little more about the process that
32 you established?

33 A Yes, although I think it's in some of the other
34 documents that we may be discussing, but the
35 transparent priority-setting process really refers
36 to what I mentioned earlier, and that was we were
37 -- we had a very longstanding relationship with
38 fisheries management that had been our traditional
39 client for 100 years or more. So it was not -- it
40 was not so difficult to set priorities in
41 conjunction with them. But with the **Oceans Act**
42 and with the **Species at Risk Act** and whatnot, we
43 had more clients, so we also had to service the
44 Species at Risk program and the oceans program and
45 any environmental programs, and we didn't have a
46 mechanism for having all the clients in the same
47 room at the same time, or having some sort of a

1 forum whereby all those who we were trying to
2 serve would understand, you know, others had needs
3 as well.

4 So it wasn't that science was ever trying to
5 hide anything, it's just that we didn't have that
6 mechanism. So that's what we were attempting to
7 put in place, and we began that with the
8 establishment of the Science Management Board.

9 And in terms of the integrated risk
10 management, we did -- well, the department, as
11 well, but the science sector undertook a risk-
12 based approach in terms of we set up a framework
13 for risk and ultimately had an integrated risk and
14 performance-management framework. I don't have a
15 copy of that here, but it certainly should be
16 available.

17 And essentially, it's like any other risk
18 process whereby across the country we sat down
19 with the science regions and in headquarters to
20 determine, what are the greatest risks for
21 science, and by "risks" we mean to -- not being
22 able to perform the science, not being able to
23 serve clients' needs, and all those sorts of
24 things. So it was a fairly -- it was quite a
25 formal process in the end, but in fact, it was
26 very helpful and contributed, I believe, to the
27 department risk-based framework.

28 Q Thank you, Dr. Watson-Wright. You mentioned the
29 Science Management Board, and was that established
30 as a direct result of the new framework?

31 A Yes, it was, in fact. And the first meeting was
32 held in October of 2005.

33 Q Thank you. And may I just quickly -- we provided
34 the -- we received these documents only very
35 recently and provided them yesterday, which is not
36 much notice, I'm afraid, to participants, but I
37 wonder if I might just take you to those minutes
38 and ask you just to identify them? I won't go in
39 great detail to them.

40 MR. WALLACE: Mr. Lunn, the first set of minutes is the
41 Science Management Board minutes of October 13 and
42 14, 2005, which is list 4 on the additional --
43 number 4 on the additional documents.

44 Q Dr. Watson-Wright, these are the minutes of the
45 first meeting of the Science Management Board?

46 A Yes.

47 Q And just the first paragraph says:

1 The newly-formed Science Management Board
2 (SMB) is responsible for identifying issues
3 of importance to the achievement of the
4 mandated objectives of the Department,
5 selecting and assessing departmental and
6 government-wide priorities needing science
7 support, and providing strategic direction of
8 the work planning of DFO science.

9
10 A Yes.

11 Q And then the next paragraph sets out the intention
12 to have this board meet twice a year. Is that
13 what, in fact, occurred?

14 A Yes, it did, throughout the time we were
15 undergoing the science renewal, and it worked very
16 well, because in one meeting the board would
17 accept or approve some of the documents that we
18 would show them, and then set out what we would be
19 bringing back for the next management board
20 meeting.

21 The nice thing about it was that it was the
22 first time that senior management, a small group
23 of senior managers, had the chance to talk only
24 about science and about what scientists needed and
25 science issues for a whole day. And, in fact, the
26 first one was for a day and a half. And they were
27 very, very good discussions. The membership
28 included the deputy, they included the ADM of
29 Fisheries Management and Oceans, myself, of
30 course, two regional directors general, one from
31 the east, one from the west. At the very first
32 meeting we had one senior scientist, but we
33 increased that to two, and also the chair of the
34 science sector's external science advisory
35 council. So those are all listed there.

36 MR. WALLACE: Thank you. Mr. Registrar, may we mark,
37 please, the minutes of the Science Management
38 Board meeting of October 13th and 14th, 2005, the
39 inaugural meeting, as the next exhibit, please?

40 THE REGISTRAR: Exhibit 37.

41
42 EXHIBIT 37: Science Management Board Minutes
43 of Meeting, October 13 and 14, 2005

44
45 MR. WALLACE: Thank you.

46 Q Now, the board met again on January 23rd, 2006; is
47 that correct?

7
Wendy Watson-Wright
In chief by Mr. Wallace

1 A That's correct.

2 Q And that was the second meeting?

3 A Yes, it was.

4 MR. WALLACE: Mr. Registrar --

5 A What we were -- the timing of the meetings varied
6 among years, largely because we were trying to
7 line up before the departmental planning process,
8 but it didn't work as well as we had hoped. So
9 the January was the earliest one that we had in --
10 the 2006 meeting was the earliest we ever had, and
11 after that it sort of went spring and fall.

12 MR. WALLACE: May I mark the minutes from January 23rd,
13 2006, please, as the next exhibit?

14 THE REGISTRAR: Number 38.

15

16 EXHIBIT 38: Science Management Board Minutes
17 of Meeting, January 3, 2006
18

19

19 MR. WALLACE: Thank you.

20 Q And you've - just as a general question, Dr.
21 Watson-Wright - you've reviewed the minutes of the
22 meetings we have, and I think there are about
23 eight of them, six of them?

24 A Yes.

25 Q And they accurately reflect what occurred at those
26 meetings?

27 A They do.

28 Q Thank you. Then the next meeting that board held
29 was in the fall of 2006, October the 4th, and may
30 I direct you to those minutes, please?

31 A Yes.

32 Q And again, that is in line with what was intended
33 and these minutes reflect what occurred at that
34 meeting?

35 A They reflect what occurred at the meeting. The
36 only thing I would say is that it may be a bit
37 confusing. Although these minutes and at that
38 meeting we talked about the five-year research
39 plan, in fact, this is -- was the five-year
40 research agenda that's being referenced here.

41 Q Okay. So the --

42 A And --

43 Q -- reference at number 3 should be the five-year
44 research agenda?

45 A Yes. But we didn't come up with that nomenclature
46 until a little bit later.

47 Q I wonder, then, and it's noted in there that -- in

1 the minutes, that this is the first of its kind of
2 DFO science. Can you explain that, please?
3 A Well, as far as I know, there had never been a
4 research agenda, or a five-year research agenda
5 put together prior to that. That's what I was
6 told. I can't prove that beyond the shadow of a
7 doubt, but those who had been around much longer
8 than I indicated that it hadn't been done before.
9 Q And --
10 A That may be, again, though, because, as I say, in
11 the past it was with fisheries management
12 predominantly, and maybe there wasn't felt that
13 there was a need.
14 Q So am I correct that this process that we're going
15 through, here, demonstrates an intention to put
16 through basically long-term plans for setting
17 priorities for science and establishing the
18 relationship between science and the decision-
19 makers in DFO?
20 A Yes, definitely. I would say it was an attempt to
21 bring more organization into a priority setting
22 and into planning, and to improve the relationship
23 between -- and the understanding and the
24 communication, between the science sector and the
25 client sectors and senior management within the
26 department. I think the relationship was always
27 there but, of course, we can always improve
28 relationships.
29 Q Thank you, Dr. Watson-Wright. Before we -- I
30 think just for sequence, there's a reference, and
31 I'll come back to the agenda in a moment. How
32 does the agenda relate to the Ecosystem Science
33 Framework in Support of Integrated Management?
34 What was the order of things? Which came first?
35 A The Ecosystem Science Framework came first, if I'm
36 not mistaken.
37 Q I'm just looking at --
38 A I'm quite certain it did.
39 Q The agenda is said to be 2007 to 2012. The
40 Science Framework seems to be copyrighted 2007.
41 So just, you know, we'll come back to --
42 A Yeah.
43 Q -- the framework in a moment, but I wanted just to
44 keep it sequentially, if we can mark the Ecosystem
45 Science Framework in Support of Integrated
46 Management, as the next exhibit.
47 THE REGISTRAR: 39.

9
Wendy Watson-Wright
In chief by Mr. Wallace

1 THE COMMISSIONER: Mr. Wallace, I'm sorry, I'm just a
2 little bit lost --

3 MR. WALLACE: Okay.

4 THE COMMISSIONER: -- with the exhibits that you're
5 marking.

6 MR. WALLACE: All right. May I back up, Mr.
7 Commissioner? I did not back up the document for
8 the Science Management Board which reference was
9 first made to the -- to the research plan, which
10 Dr. Watson-Wright corrected as being the research
11 agenda. So let's back up and mark as the next
12 exhibit, please, the Science Management Board
13 Minutes for October the 4th, 2006.

14 THE REGISTRAR: So that will be marked as Exhibit 39.

15
16 EXHIBIT 39: Science Management Board Minutes
17 of Meeting, October 4, 2006
18

19 MR. WALLACE: Thank you.

20 THE COMMISSIONER: Could you just go back to Exhibit 36
21 and just clarify for me what the documents are
22 that you've been marking? I have, as Exhibit 36,
23 A Framework for the Future; is that correct?

24 MR. WALLACE: Correct.

25 THE COMMISSIONER: And then 37 is a set of minutes?

26 MR. WALLACE: Yes, for October of 2005; 38 is minutes
27 for January 2006; 39 are the minutes for October
28 2007 -- sorry, October 2006.

29 That meeting introduced the five-year
30 research agenda wrongly described as the research
31 plan --

32 A Right. Yes.

33 MR. WALLACE: That's where the reference first comes,
34 so let's mark the Research Agenda as the next
35 exhibit, then, please, the Five-Year Research
36 Agenda, 2007 to 2012.

37 THE REGISTRAR: Number 40.

38 MR. LUNN: Do you have a number in our list of
39 documents?

40 MR. WALLACE: It's Tab 3 of the original list.

41 MR. LUNN: Thanks.

42
43 EXHIBIT 40: Fisheries and Oceans Canada:
44 Five-Year Research Agenda (2007-2012)
45

46 MR. WALLACE: Okay, I'm going to, now, complete the
47 references to the Science Management Board

10
Wendy Watson-Wright
In chief by Mr. Wallace

1 minutes. We'll come back to the framework -- the
2 Ecosystem Framework in a moment.

3 The next Management Board minutes that I have
4 are for April 19th of 2007. Again --

5 A April...?

6 MR. WALLACE: April 19th, 2007.

7 A Yes, correct.

8 MR. WALLACE: This is at number 7, Mr. Lunn, on the
9 additional list.

10 Q And was that the next meeting of the Science
11 Management Board, following the --

12 A Yes, it was.

13 Q -- October 2006?

14 A Yes.

15 MR. WALLACE: May that be marked as the next exhibit,
16 please?

17 THE REGISTRAR: Number 41.

18

19 EXHIBIT 41: Science Management Board Minutes
20 of Meeting, April 19, 2007

21

22 MR. WALLACE:

23 Q The Science Management Board met again on October
24 11th, 2007; is that correct?

25 A Yes. Yeah.

26 MR. WALLACE: And may those minutes, please, be marked
27 as the next exhibit?

28 THE REGISTRAR: Number 42.

29

30 EXHIBIT 42: Science Management Board Minutes
31 of Meeting, October 11, 2007

32

33 MR. WALLACE: Thank you. Then we have -- the next set
34 of minutes I have is April 22nd, 2008.

35 A Correct.

36 Q And again, that is the next meeting of the Science
37 Management Board?

38 A Yes, it was.

39 MR. WALLACE: And may those minutes, please, be marked
40 as the next exhibit?

41 THE REGISTRAR: Number 43.

42

43 EXHIBIT 43: Science Management Board Minutes
44 of Meeting, April 22, 2008

45

46 MR. WALLACE: And we have the Science Management Board
47 minutes for November 28th, 2008, as the next

11
Wendy Watson-Wright
In chief by Mr. Wallace

1 document.

2 A Correct.

3 MR. WALLACE: May that be marked as the next exhibit?

4 THE REGISTRAR: Number 44.

5

6 EXHIBIT 44: Science Management Board Minutes
7 of Meeting, November 28, 2008

8

9 MR. WALLACE: And we have a meeting on April 17th,
10 2009, of the Science Management Board. That's --

11 A Yes.

12 MR. WALLACE: -- the next one.

13 THE REGISTRAR: Number 45.

14

15 EXHIBIT 45: Science Management Board Minutes
16 of Meeting, April 17, 2009

17

18 MR. WALLACE: Exhibit 45, thank you. And the final
19 notes -- minutes I have are from the Science
20 Management Board, October 27th, 2009.

21 A Correct.

22 THE REGISTRAR: 46.

23

24 EXHIBIT 46: Science Management Board Minutes
25 of Meeting, October 27, 2009

26

27 MR. WALLACE:

28 Q Now, is that the last meeting that you attended,
29 Dr. Watson-Wright?

30 A Yes, it is.

31 Q Thank you. If I may, then, going back to the
32 substance of the work of the committee and the
33 development of the science program, the next
34 document I'd like to ask you about, Dr. Watson-
35 Wright, is an Ecosystem Science Framework in
36 Support of Integrated Management, a document
37 copyrighted in 2007. Can you please explain the
38 genesis of this document, please?

39 A Yes. Well, going back to the minutes of the first
40 Science Management Board meeting, the board
41 decided there were two overriding priorities for
42 the science sector. One, was to move into,
43 really, in an organized fashion, to move into
44 ecosystems science. Traditionally, we, as many
45 others, had been conducting our work along the
46 lines of an issue by issue basis or on a species
47 by species basis, and it was becoming evidence not

1 just in Canada, but worldwide, that really there
2 are so many interconnections that one cannot
3 really conduct natural science in that way. So we
4 were instructed by the board to produce an
5 ecosystem science framework and, as well, we were
6 instructed to focus on human resources. So,
7 really, the ecosystem science framework in support
8 of integrated management was developed as a result
9 of that board meeting. It was led by the senior
10 scientist in Ottawa, Jake Rice, and it was put
11 together by the scientists, really, within the
12 department. Other scientists, of course, were
13 contacted, but I would say that the product was
14 just about -- or the process was equally as
15 important as the product. Scientists within the
16 department had been saying for quite a while that,
17 you know, we really do need to do this more
18 holistic science.

19 So as I said, it's a move away from single
20 activity management to integrated science for
21 ecosystem-based management, and I believe that you
22 already have, perhaps, talked about that a little
23 bit or will. In order to manage, in an integrated
24 way, the science produced has to be done in an
25 integrated way. So it includes priorities for a
26 foreign ecosystem-based approach to the science
27 including, you know, setting objectives,
28 developing ecosystem indicators, risk-based
29 frameworks, and all of the things that are in the
30 document.

31 It took a while, a number of months, to
32 produce the document, but I think it has stood the
33 test of time and includes reference to climate
34 variability, biodiversity and all the issues that
35 areas till facing the department now.

36 MR. WALLACE: Thank you, Dr. Watson-Wright. May this
37 be marked as the next exhibit, please? This is A
38 New Ecosystem Science Framework in Support of
39 Integrated Management.

40 THE REGISTRAR: Number 47.

41
42 EXHIBIT 47: A New Ecosystem Science
43 Framework in Support of Integrated Management
44

45 MR. WALLACE: Thank you.

46 Q Dr. Watson-Wright, just a couple of questions.
47 This came from the very first meeting of the

1 Science Management Board, the instruction to --

2 A Yes.

3 Q And you described this as "We were," I think you
4 said, "We were instructed by the board to," so a
5 couple of questions --

6 A Well --

7 Q So can you --

8 A We were proposing it.

9 Q So the board proposes -- so the board is advisory,
10 not directing; is that correct?

11 A Well, it was a decision-making board in the
12 beginning. I think in the end it kind of morphed
13 into something that would then take things to the
14 departmental management committee. But in the
15 beginning, yeah, instructed is probably a little
16 strong. It was agreed that we should do this
17 because, in fact, the science sector and our
18 clients were all agreeing that this would be a
19 good thing to do.

20 Q Thank you. Now, if I may ask you, please, to go
21 to page 5 of this document, and I have a specific
22 question about number 8 on the list of ecosystem
23 science framework, the description of it says, at
24 number 8, under the heading, "Knowledge access and
25 special management methodologies", and there are a
26 number of specific tools and elements which are
27 described there, but this one I just wanted to ask
28 about it as an example of something that I'm
29 curious about. It says:

30
31 Currently, the department's ability to
32 implement an ecosystem science approach is
33 limited. Data do not exist for many aquatic
34 habitat features and populations of
35 importance, and in some cases, information
36 may exist but not be organized in ways that
37 allow DFO Science to access it efficiently
38 and systematically.

39

40 A Hmm.

41 Q That sounds, to me, to raise two questions that
42 I'd like to ask you about in this new program of
43 ecosystem science to support ecosystem management.
44 The first is, there's a reference to the need for
45 resources, at least I read it that way, and
46 another question about -- it raises another
47 question about the state of science and science's

1 ability to grapple with issues on an ecosystem
2 basis, I wonder if you could just address how
3 realistic an ecosystem-based approach is, given
4 the issues of the state of science and resources?

5 A Thank you. This doesn't refer just to DFO
6 science, by the way; this is in terms of data not
7 existing for some aquatic habitats. An example
8 could be some of the freshwater species at risk
9 where there's very little information to go on,
10 and in some cases, the information that may exist,
11 it might be in the database of one individual
12 scientist somewhere in a university somewhere, so
13 it's not accessible to us. That was the reference
14 to that.

15 I do think it's realistic. It's not easy,
16 but it's absolutely realistic and necessary to try
17 to put all the information together for a given
18 ecosystem in order to be able to make predictions,
19 projections as to what might happen. We're
20 ignoring 80 percent of the data in favour of
21 focusing on one species. I don't think that's
22 helpful, and we've learned that, that there are so
23 many interactions that we don't know about. We
24 have to try.

25 This is not specific to Canada, either. It
26 does mention it internationally, the scientific
27 community -- international science community is
28 trying to develop the necessary knowledge, and
29 every country is actually struggling with this
30 right now, and with integrated marine special
31 planning as well. So there's a whole
32 international community that's working on this,
33 and I would say it behoves us to continue to
34 improve upon it. We can't just give up and say,
35 "Oh, it's just too hard."

36 In terms of resources, actually, usually,
37 we're much more blunt about asking for resources.
38 I don't notice it in this particular paragraph.
39 But, you know, there's never enough science, and
40 so resources -- resources are always an issue.
41 But it -- I think, perhaps later, we could talk a
42 little bit about the partnering initiative and in
43 trying to include all those that have relevant
44 information in the scientific discussion, so not
45 limiting ourselves to the department.

46 Q Thank you. And there are -- perhaps that's what's
47 referred to at the top of the next page, page 6,

1 where you make the note:
2

3 DFO Science needs to tape into any relevant
4 databases they do not already hold. If the
5 information exists but has not been made
6 available, usable databases must be created.
7

8 Were there resources to create new databases?

9 A Well, in fact, we did put aside, within the
10 science sector and in the context of review and
11 renewal, we did put aside some resources for data
12 management. DFO science had passed -- they had
13 approved a data management policy I think just
14 prior to when I came back to the department, but
15 it was not being implemented evenly across the
16 country, and we did have databases that didn't
17 talk to each other, we had some regions that
18 hadn't really gotten into the data management
19 versus others. So as a sector, we set aside
20 resources, we established a national data
21 management committee, they put together a plan
22 and, in fact, worked very hard over a number of
23 years to make sure all the databases were
24 compatible with each other and to make sure that
25 scientists are entering data into the databases.
26 It's a huge challenge, because it's, you know,
27 data management is not as sexy as research, so
28 it's -- but it's absolutely, absolutely essential.

29 Q Thank you. And do I take it from that, that, in
30 your view, progress was made on this direction set
31 out in the framework in 2007, in the last couple
32 of years you were involved?

33 A Yes, I believe there was fairly good progress
34 made.

35 Q The next paragraph, on page 6, talks about not --
36 not the compatibility of databases, but the
37 existence of information at all, which is:

38
39 Where essential habitat information does not
40 exist, appropriate methodologies for
41 collecting and using the information must be
42 developed and implemented. These tasks are
43 challenging, but crucial to the ecosystem
44 science approach.
45

46 A Right.

47 Q Can you comment on the success of advancing that

1 crucial step?

2 A Well, again, I wouldn't have as much concrete
3 information on that, but the focus on habitat,
4 certainly there was an enhanced focus on habitat
5 given many of the projects, for example, oil sands
6 projects, projects for dredging, or anything like
7 that. There was more of a focus put on habitat
8 over the years. That wasn't because of anything I
9 did, that was just because science and the client
10 sector recognized it as a necessity, and in order
11 to assist decision-makers...

12
13 (BACKGROUND NOISE)

14
15 MR. WALLACE:

16 Q Dr. Watson-Wright, can you hear us?

17 A Yes, I can hear you.

18 Q You're now showing up as a question mark,
19 unfortunately, on the screen, but we can --

20 A Oh, I'm sorry, I think I -- I -- there.

21 Q That's all right, we can -- I think we can proceed
22 just on the audio version. That would be -- we
23 should carry on, if that's all right?

24 A I can see myself; I can't see you.

25 Q Okay. Just so -- a specific out of the framework
26 document, Exhibit 47, if I may direct you to page
27 13 of that document, Dr. Watson-Wright. Oh,
28 you're back.

29 A Yes.

30 Q There are some examples given of DFO activities
31 placed in an ecosystem context, and I noticed that
32 of the half dozen examples, four, perhaps, are
33 relevant directly to what we're looking at. I
34 wonder if you could just comment - page 13 - on
35 the relationship of the ecosystem management to
36 the four issues that I'm referring to, the second
37 one being the Wild Salmon Policy in 2007. You
38 identify this as an area that must be -- a policy
39 that must be addressed in science advice in an
40 ecosystem context. Then the others, the
41 aquaculture and environmental impacts.

42 I'm wondering if you could just comment about
43 the ecosystem basis for science in each of these
44 four areas?

45 A Well, beginning with the cod recovery, which isn't
46 -- the northern cod, in particular - some
47 populations have recovered to a certain extent -

1 but just the fact that since 1992 we have never
2 gotten back to the level of the northern cod where
3 they used to be, in the absence of fishing,
4 suggests that it's not one cause and one effect,
5 and essentially that's what ecosystem science is
6 talking about and that's what ecosystem-based
7 management is based upon.

8 We really do need to understand more of
9 what's going on in terms of predator/prey
10 relationships, in terms of oceanic conditions and
11 the like. So just to figure out what are all the
12 factors that are influencing, in this case it
13 would be cod, but in other cases it could be a
14 number of species. And clearly, the, you know,
15 the habitat, the environmental conditions, the
16 human activities, we don't know, for example,
17 although there's no fishing up there, there seems
18 to be lots of ships going by, and is that having
19 any impact? That's only a personal conjecture and
20 it's not scientifically-based at all, but it's
21 just to say that we really need to try and get a
22 handle on everything that might be impacting on
23 the target or what we're looking at.

24 And the same thing would be with the Wild
25 Salmon Policy and the science to support that. If
26 there's anything more complex than the life
27 history of all the different species of pacific
28 salmon and all they have to go through, where they
29 go, and I -- I've never seen it. I don't really
30 think people should ever talk about rocket
31 science, as I've mentioned to you previously,
32 because rocket science is pretty simple compared
33 to biological science and I would say, in
34 particular pacific salmon science.

35 The aquaculture and environmental impacts, of
36 course, the same thing. It's a two-way street.
37 You can't do anything in the aquatic environment
38 without impacting and, likewise, the aquatic
39 environment would influence what's going on with
40 what's there. So there's a fair amount of work
41 going on in near and far afield effects of
42 aquaculture, what's the impact of the
43 environmental, for example, harmful algal blooms,
44 an aquaculture species, and, you know, taking the
45 whole ecosystem into consideration.

46 And it would be similar for the others, the
47 pathways and effects, in terms of in-water

1 activities, largely freshwater, but just sort of
2 following the path of habitat impacts.

3 There are always cascading events, and I
4 think as we see more of the events and as they
5 cascade, then you kind of figure out, yeah, it's
6 not just one thing that leads to one other, it's
7 life and everything around is impacted.

8 And the oil and gas exploration and
9 development in the north, of course, there's a
10 great need, in terms of the north, given that it
11 is, currently, in terms of the Arctic Ocean, it
12 is, along with this other notion, one of the least
13 impacted oceans in the world right now, and we
14 have an opportunity here to protect it, or prevent
15 it from becoming impacted as other oceans have
16 been. And so I believe that there needs to be
17 great care taken in that, taking into context the
18 whole ecosystem and the fact that people's lives
19 depend upon the ocean.

20 Q With each of these six, and I was strictly
21 focusing on the four that relate to the terms of
22 reference of this inquiry, they all end up, each
23 of these narratives end up with an acknowledgment
24 of the requirement to look at these things in an
25 ecosystem way and identify -- so it's identified
26 as a need and the complexity is acknowledged.

27 Did the science branch put in place specific
28 programs to achieve the ecosystem information
29 results that were described here as being
30 necessary?

31 A I'm not sure I understand your question, but
32 certainly we did put in place -- I mean, these
33 given as examples for this particular document.
34 But as we go through the other documents, you will
35 see that we did put into place seven ecosystem
36 research initiatives and one climate change
37 science initiative across the country in order to
38 attempt to do ecosystem science, and those are
39 described in one of the other documents, I think,
40 that we will come to, the research plan, in fact.

41 Q All right. Well, let's now, then, turn to the
42 research -- the five-year research plan, and Mr.
43 Lunn, that's --

44 A Do you want the agenda or the plan?

45 Q Well, you mentioned the plan. Should we -- the
46 agenda we've marked as an exhibit. We can
47 certainly go to that. That's the next document in

1 time from the framework. Will we find the
2 establishment of programs there?
3 A Yes.
4 Q So then let's --
5 A The research agenda did precede the research plan.
6 Q Correct.
7 A It took us about a year to put that together and,
8 again, the process was extremely important. It
9 was led by one of the Pacific Region scientists
10 and, again, Dr. Jake Rice from Ottawa, but
11 included -- by the end of it, it included just
12 about everybody in the department, not just the
13 science sector.
14 The 10 research priority areas --
15 Q Okay, so we're --
16 A -- were established.
17 MR. WALLACE: Just for reference, Mr. Lunn, we're
18 looking at the Five-Year Research Agenda, which is
19 marked as an exhibit.
20 Q And those 10 items start on page 7. Yes, please.
21 Sorry to interrupt.
22 A So the 10 are: fish population and community
23 productivity, which would include stock
24 assessment; the habitat; the climate change
25 issues; ecosystem assessments and management
26 strategies; aquatic invasive species and aquatic
27 animal health, and aquaculture sustainability; the
28 ecosystem effects of energy production;
29 operational oceanography, which really refers to
30 now forecasting and forecasting ocean events; and,
31 of course, the emerging and enabling technologies
32 for regulatory and policy responsibilities.
33 These were -- there were a number of
34 workshops, there was a number of events, and a lot
35 of interaction to come up with these, and the
36 wording was very important. Once we came up with
37 a draft, in fact, myself, and my senior director
38 general, who was in charge of the science renewal,
39 went across the country and met with regional
40 management committees to go through the draft
41 research agenda and to seek feedback.
42 And as I say, that took a number of months to
43 put this together. In the end, the very last
44 draft went to every single person in science in
45 the department. And I see you're online and I'm
46 not, somehow.
47 Q We can still hear you.

- 1 A And ultimately it was approved by the science
2 management board and by the departmental
3 management committee. There.
- 4 Q Hello.
- 5 A Oh, so you're back.
- 6 Q Yes. But we were listening to you throughout.
- 7 A Okay. That's what I thought.
- 8 Q Okay, thank you. You were describing the process
9 for putting the agenda in place. Can you just
10 describe what the purpose of this was, to
11 establish what the priorities for the research
12 plan which follows; is that -- am I correct --
- 13 A Yes.
- 14 Q -- on that?
- 15 A Yes, that's correct. And could I just back up and
16 explain something?
- 17 Q Please.
- 18 A It's important to understand that research is just
19 one of the five functions that are undertaken by
20 the science sector of DFO. It's an important
21 function, but it's one. And the others are
22 important as well, the others being we undertake
23 monitoring, data management we've already
24 mentioned, provide scientific advice, and then
25 also come up with some products and services.
26 The Parks and Services have been largely in
27 the past related to Canadian Hydrographic Service
28 charts, tide tables and whatnot but, in fact, more
29 and more some of the documents that are produced
30 are considered products and services from the rest
31 of science as well.
32 So in this particular case, we're talking
33 only about the research agenda and not the science
34 agenda.
- 35 Q Thank you, that's very helpful. Continuing on,
36 then, with the research agenda, the next step was
37 to produce a five-year research plan.
- 38 A Yes.
- 39 Q And I'm referring to that document at Tab 4, Mr.
40 Lunn. This, I take it, is intended to implement
41 the agenda with specific projects for the five-
42 year period; is that correct?
- 43 A That is correct. The research plan, in fact, was
44 pretty much where the rubber hits the road, in
45 terms of the research agenda, and what the
46 research plan talks about is it has an overview of
47 20 key science initiatives and how they relate to

1 each other in terms of working toward ecosystems
2 and science. So I've mentioned that there were
3 seven ecosystem research initiatives put in place,
4 one in each region and two in central Arctic.
5 They were on the Newfoundland Shelf, the Gulf of
6 Maine, and the Northumberland Strait, the Lower
7 St. Lawrence Estuary, Lake Ontario, Beaufort Sea
8 Shelf, and the Strait of Georgia.

9 And I think that the ecosystem research
10 initiative in the Strait of Georgia is
11 particularly relevant for this commission. That
12 began a couple of years ago, and I don't have the
13 preliminary data coming out of that, but I'm sure
14 it will be -- it should be interesting.

15 The climate change science initiative I
16 mentioned. This was done on a national basis to
17 address national research priorities, including
18 prediction of climate change in Canadian waters,
19 trying to understand the impacts of climate change
20 on aquatic ecosystems, anticipating merging
21 issues. And then their hope was also to work with
22 other sectors and others to look at potential
23 socioeconomic impacts.

24 And there are three main themes in that.
25 One, is the role of oceans in regional climate.
26 We know that oceans control the global climate.
27 But how can we then get those models down to a
28 regional basis so they have more meaning for the
29 person living on the coastline.

30 Also, the impacts of climate change on
31 ecosystems composition, and it's quite interesting
32 that some species are impacted in a different way
33 from others, and that would include looking at the
34 structure and functions of the ecosystem, and then
35 looking at emerging issues that could impact
36 ecosystems health. One of the emerging issues
37 could be, for example ocean acidification, which
38 is a very large issue around the globe.

39 Then the research plan also talks about the
40 12 centres of expertise that had been put in place
41 over -- beginning maybe in 2004, I think the first
42 one. These are largely -- I think there are 12,
43 all together. Ten of them are virtual centres of
44 expertise, and two of them are geographically
45 based. But the COEs were put together to bring
46 together the expertise across Canada, within the
47 department, predominantly, on particular areas.

1 The first one was the Centre for Offshore
2 Oil, Gas and Energy Research, out of the Bedford
3 Institute, in Halifax, and that's what they focus
4 on, is oil, gas and energy research and the
5 impacts on the aquatic environment. And, in fact,
6 the director of that COE was very heavily involved
7 in work in the Gulf of Mexico this past summer,
8 related to the BP oil spill.

9 Different COEs, they have different issues
10 now, so approach things differently. The one for
11 the Arctic, in fact, is more of a coordinating
12 COE. We also have one for marine mammals, which
13 brings together all the marine mammal researchers
14 across the country. And those are noted in the
15 document.

16 The two geographically-based COEs, one is on
17 pesticides, and that's based in Winnipeg, and that
18 COE deals mainly with the Pest Management
19 Regulatory Agency, working on priority pesticides
20 and looking at their impacts on aquatic organisms.
21 And the other one would be the Biotechnology
22 Research COE, which is centred in West Vancouver
23 and led by Bob Devlin, and that's located only
24 there, although he certainly collaborates
25 internationally.

26 So the focus on the COEs, the focus of all of
27 this, is on teamwork and collaborative mechanisms,
28 and with a slight change in governance, meaning
29 through the COEs, in an attempt to balance
30 national and regional priorities.

31 Q Thank you, Dr. Watson-Wright. And just if I may
32 refer you to -- first, perhaps we could just mark
33 this as the next exhibit, the five-year research
34 plan, 2008 to 2013?

35 THE REGISTRAR: Exhibit 48.

36
37 EXHIBIT 48: Fisheries and Oceans Canada,
38 Five-year Research Plan (2008-2013)

39
40 MR. WALLACE:

41 Q At page 3, Dr. Watson-Wright, the second paragraph
42 describes what this plan is intended to do, in
43 terms of a -- its role in establishing the
44 priorities with carrying out particular projects.
45 It says:

46
47 This plan provides a rationale for **what**

1 research is conducted in support of priority
2 areas, especially ecosystem-based management,
3 and **how** this research will be delivered to
4 ensure federal and departmental priorities,
5

6 and so on.

7 A Mm-hmm.

8 Q It says it's a living document to guide DFO
9 Science through the next five years. It describes
10 20 initiatives, and concludes, the next sentence:
11

12 It is expected that both the Research Agenda
13 and this accompanying Research Plan will be
14 revisited and revised accordingly in five
15 years to ensure changing priorities are
16 adequately addressed.
17

18 Now, was it the intention of this document,
19 then, that it would set the scene for the research
20 to be conducted by DFO for that five-year period?

21 A Well, this isn't all the research that's done in a
22 department. This is more related to the ecosystem
23 science. Of course, the traditional fisheries
24 research carries on and sort of the day to day
25 research that's needed does carry on. But no,
26 this was more the broad -- the ecosystem-based
27 research that the department would undertake.
28 And, of course, it hasn't been revised yet,
29 because it's only been two years, and it takes --
30 it takes a while to get geared up and then to
31 start, actually, the work and getting the results.
32 But I would suspect that it would be revisited
33 within, you know, the next year and a half or so.

34 Q Okay. So it suggests, here, that it would be
35 revisited and revised in five years. You're
36 suggesting that's an ongoing reconsideration?

37 A Well, I guess it will depend on how things are
38 going, and that's what the National Science
39 Directors' Committee generally looks at. The
40 intent is for a yearly report on all of these
41 things, and there was a yearly -- to be a yearly
42 meeting whereby all the COEs come together, the
43 heads of the ecosystem research initiatives and
44 the climate change science initiative, along with
45 the national science directors, and in our first
46 meeting I think it included the regional science
47 managers as well.

1 So it's through those, you know, taking stock
2 annually of how things are going that one would
3 decide, "Well, do we want to tweak this a little
4 bit or not." I wouldn't think, you know, it's not
5 a case of, "We're going to stop this and start
6 something new," it's probably more of a tweaking.
7 But in that way it would be evergreen, and maybe
8 it will happen that someone sees an absolute need
9 to begin another one of these ecosystem research
10 initiatives in another particular area for a
11 particular reason.

12 Q May I take you to page 18 of the plan? It seems
13 to be quite directive. It says:

14
15 What Research Will be Conducted Under This
16 Plan?

17
18 DFO Science is committed to addressing
19 priority areas identified in the [agenda] and
20 providing advice and support for ecosystem-
21 based management. Research priorities and
22 timelines will be developed within each
23 region but will be coordinated nationally...

24
25 That wasn't what I intended to read. Thank you.
26 It's the paragraph at the top of page 20,
27 beginning there:

28
29 This Research Plan communicates our research
30 priorities and approaches to achieving them
31 from senior DFO Science managers to DFO
32 Science staff. DFO Science will ensure all
33 research projects maximize integration and
34 harmonization with other DFO Science
35 functions, especially its monitoring programs
36 and collaborations with partners, and this
37 will require substantial planning.

38
39 Now, are you aware, Dr. Watson-Wright,
40 whether this plan has, in fact, been followed and
41 that the -- been used to integrate and harmonize
42 with other DFO Science functions?

43 A Well, certainly that was -- it was. I believe it
44 probably still is. I think once, you know, once
45 folks get going on this they get quite
46 enthusiastic. But there was certainly a focus,
47 for example, on the data management side. And as

1 I mentioned, sometimes it's a little more
2 difficult to get scientists to focus on the data
3 management, but that was very consciously planned
4 in here, and I believe that, yeah, no, the intent
5 certainly was to integrate and to promote
6 collaboration and to bring others in through
7 whatever mechanism. So I can't speak to this day,
8 in particular, but it seemed to be going well by
9 the time I left.

10 Q Thank you. Now, you mentioned earlier, Dr.
11 Watson-Wright, that another element of the agenda
12 was to deal with the human resources strategy, and
13 I wonder if I might just direct you to a document
14 called, "The National Human Resources Strategy For
15 the Science Sector, Fisheries and Oceans Canada,
16 April 2007", and ask you just to comment on that
17 strategy and what was the impetus behind it?

18 A Well, again, we would come back to the October of
19 2005 Science Management Board, and we spent half
20 of that meeting discussing human resources and the
21 challenges that would be faced by the science
22 sector in the near future. There was a
23 recognition of the demographics, whereby in the
24 research science community at least 50 -- 48
25 percent, I think, were eligible to retire by 2011;
26 68 percent of the executive in the science sector
27 were eligible to retire; and the engineers, as
28 well, which are more related to Canadian
29 Hydrographic Service, that was around almost 50
30 percent.

31 So there was a recognition that we needed to
32 start rejuvenating. We had been stagnant for a
33 number of years, largely due to resource
34 constraints, but it was felt that we absolutely
35 had to start bringing in new blood. And, in
36 addition, we had to be thinking about what type of
37 researcher we would want, given the emphasis on
38 ecosystem science and integration and
39 collaboration, it was absolutely essential that we
40 try to bring in, you know, collaborative-type
41 scientists. I think largely the science community
42 has gone that way, but in the past it wasn't
43 always as collaborative as it is these days.

44 So the HR strategy, again, was put together
45 as a result of that first meeting. It is focused
46 on four pillars of recruitment, retention,
47 development and representation. Representation

1 meaning diversity in terms of hiring. And we did
2 undertake, immediately -- we were able to put
3 aside some resources to start a recruitment for
4 research scientists, was the beginning, and we
5 were able to bring in, I think, 15 in the end.
6 Recruitment takes a fair amount of time in the
7 public service, although the public service of
8 Canada now looks like light speed compared to the
9 speed that things move at in UNESCO - that's not a
10 criticism, it's just a statement.

11 And we carried on from there. There was an
12 action plan put together, which shows up within,
13 in the context of the strategy document, and it
14 has moved on from there, and as far as I know it's
15 going quite well.

16 One thing we did do, which seemed to work
17 fairly well, was to initiate what we called a
18 knowledge-transfer initiative, whereby older, more
19 experienced scientists who were going to retire,
20 we were able to bring in a young person. If that
21 was an area of expertise that we wished to keep,
22 we were able to overlap the younger person with
23 the older person going out, and I think that
24 worked quite well.

25 Part of the strategy, also, was to recruit at
26 a higher than attrition rate over the -- well, at
27 that time it was the next few years. I'm not sure
28 if that was actually accomplished, but there has
29 been rejuvenation within the science sector. And
30 by the time I left, in visiting some of our
31 institutes, it was really, really nice to see
32 these young people - we could always use more -
33 but it was really nice to see, and they're
34 enthusiastic and energetic, and it really boosted
35 the morale, I would say, and is boosting the
36 productivity as well.

37 MR. WALLACE: Thank you, Dr. Watson-Wright. May this
38 be marked as the next exhibit, please, Mr.
39 Registrar?

40 THE REGISTRAR: Number 49.

41
42 EXHIBIT 49: National Human Resources
43 Strategy for the Science Sector, Fisheries
44 and Oceans Canada, April 2007
45

46 MR. WALLACE: The next document I would like to refer
47 you to, Dr. Watson-Wright, is Policy on

- 1 Collaborative Agreements with Non-Government
2 Organizations. This is at Tab 3 on the additional
3 list, Mr. Lunn.
- 4 Q Are you familiar with this document, Dr. Watson-
5 Wright?
- 6 A Well, I am, now. It's not a science document.
7 That's a departmental document. But clearly
8 science collaborates a lot, and we had put
9 together our own framework for collaboration,
10 although I don't have it and I couldn't find it.
11 But clearly the science sector would follow any
12 departmental agreement policy. In this particular
13 one, it's just -- it's for collaboration with non-
14 governmental organizations.
- 15 Q Yes.
- 16 A So this would apply to all sectors in the
17 department, not just to science.
- 18 Q And it's your recollection, then, that there was a
19 different protocol for science, or did science
20 follow this?
- 21 A Well, it's not a different protocol, it's just
22 that our collaboration framework included not just
23 NGOs, but it included universities. For example,
24 it included the private sector, it -- it was just
25 more of a framework; it wasn't a policy.
- 26 Q Right.
- 27 A And it had -- and guidelines were put together.
28 In terms of getting into collaborative
29 arrangements for science, we wouldn't have done
30 something that was not in agreement with overall
31 departmental policy, but it's just that our
32 framework was related specifically to science.
- 33 MR. WALLACE: Okay. Now, I'd like to mark this as an
34 exhibit as well, Mr. Registrar, please.
- 35 THE REGISTRAR: Number 50.
- 36
- 37 EXHIBIT 50: Department of Fisheries and
38 Oceans: Policy on Collaborative Arrangements
39 with Non-Government Organizations
40
- 41 MR. WALLACE: Thank you. Finally, if I could take you
42 to the document entitled, "A Framework for the
43 Application of Precaution in Science-Based
44 Decision Making About Risk", and if I may, that's
45 at Tab 6, Mr. Lunn.
- 46 Q Dr. Watson-Wright, are you familiar with this
47 document?

Wendy Watson-Wright
In chief by Mr. Wallace

1 A Yes, I am. This is kind of a bible document in
2 the Government of Canada. It was put together
3 just before, I think, I came back to DFO, but it
4 really set the stage for a lot of the work that
5 was subsequently done within the department on the
6 precautionary approach.

7 MR. WALLACE: May I ask, then, Mr. Registrar, to have
8 this marked as the next exhibit?

9 THE REGISTRAR: Number 51.

10

11 EXHIBIT 51: Government of Canada: A
12 Framework for the Application of Precaution
13 in Science-Based Decision Making About Risk
14

15 MR. WALLACE: Please excuse me for a moment. Thank you
16 very much, Dr. Watson-Wright. Those are the
17 documents I wanted to ask you about. It's now
18 quarter to 10:00 here. I wonder, what is your
19 availability, Dr. Watson-Wright? Are you
20 available for a bit longer, or should we take a
21 short break?

22 A No, I'm fine.

23 THE COMMISSIONER: Mr. Wallace, I was going to suggest,
24 while we have the technology working, we should
25 keep going.

26 MR. WALLACE: Keep going.

27 THE COMMISSIONER: May I just ask you to perhaps
28 clarify for me and the other counsel in the room,
29 the witness has used the term "ecosystem science"
30 and I wanted to make sure I understood what she
31 meant by that in terms of whether it's a formal
32 branch of the science community, or whether she is
33 making reference to some other title or
34 recognition of a combination of sciences that
35 might be labelled "ecosystem science", just so I
36 understand what she's addressing when she used
37 that term, and she used it several times.

38 MR. WALLACE: Thank you.

39 Q Dr. Watson-Wright, were you able to hear that
40 question?

41 A Yes, I think it's, what am I talking about when I
42 say "ecosystem science"?

43 Q Yes, please, if you would -- could you respond,
44 please, to the Commissioner's question?

45 A Yes. In fact, there is an ecosystem science
46 directorate, but when I was using the term I was
47 really referring to science that attempts to look

1 in an ecosystem-basis, meaning in a geographical
2 location, for example, let's say the Strait of
3 Georgia as an ecosystem, what are all the
4 processes and species and everything that's going
5 on in that particular ecosystem that could be
6 affecting, in this case, Fraser River sockeye?

7 So it's rather than just following the, you
8 know, the physiology or the biology of the salmon,
9 which has been done in the past, to look at
10 everything that could possibly be impacting on the
11 returns of this particular species, rather than
12 focusing on -- but the ecosystem, in this case,
13 the focus on the commission is on that species.
14 Ecosystem science, though would be looking at all
15 the species in there and what's going on and
16 what's impacting each other.

17 Does that make any sense?

18 THE COMMISSIONER: Yes, it does. I just want to try
19 and tie that back into your -- into the document
20 that Mr. Wallace put to you when you made
21 reference to the research plan, and whether you
22 can take me, perhaps, to some part of that
23 document which would reflect just what you said
24 about your meaning of ecosystem science; in other
25 words, where is it identified or articulated in
26 that fashion somewhere in that document?

27 A The research plan?

28 THE COMMISSIONER: If that's a convenient document for
29 you, or another document, if you would find a
30 reference that you might take me to in one of the
31 other exhibits that have been marked.

32 MR. WALLACE: Perhaps the "A New Ecosystem Science
33 Framework", Exhibit 47?

34 A I think the -- I'm just trying to bring that up.
35 It might be easier with some of the examples of
36 the ecosystem research initiative, I think, to
37 explain it.

38 THE COMMISSIONER: All right.

39 A So I'm looking at the Five-year Research Plan.

40 MR. WALLACE: That's Exhibit 48.

41 A And, for example, when it refers to the Strait of
42 Georgia ERI, it's focusing on the area between
43 Johnstone Strait and the mouth of Juan de Fuca,
44 and talks about the focus of many resource
45 management and scientific issues, and you would
46 certainly know that better than I. And also the
47 fact that it's facing significant stresses, such

1 as climate change, invasive species.

2 So the attempt, here, is to -- there are
3 three major themes that have been outlined, and
4 that is trying to understand how the ecosystem
5 works, trying to identify the drivers of change
6 that will most likely determine future conditions,
7 and then analyze the future responses to the
8 system under those influences.

9 So the research and the -- that is planned
10 and that is being undertaken within this ERI, is
11 looking at three major research priorities. One
12 is what's controlling the productivity in the
13 Strait of Georgia, the timing, what, you know,
14 what are the mismatches and how important are they
15 in the timing of physical and biological processes
16 within the Strait of Georgia, and then resilience,
17 meaning, you know, what properties does the
18 ecosystem provide in terms of resilience against
19 major disruption and collapse of the system.

20 Now, how the scientists are actually going to
21 do that I would not attempt to try to tell you. I
22 would suggest that the scientists would be best to
23 tell you exactly how they would be going to do
24 that.

25 MR. WALLACE:

26 Q Are those Parisian bells?

27 A Yes, they are, actually. And about in eight
28 minutes the Eiffel Tower will be sparkling.

29 Q Dr. Watson-Wright, I wonder if perhaps the
30 Commissioner's question might also be addressed by
31 the New Ecosystem Science Framework where there
32 appears to be a definition of ecosystem science on
33 page 1?

34 THE COMMISSIONER: What exhibit is that, Mr. Wallace?

35 MR. WALLACE: That's Exhibit 47.

36 A Yes.

37 Q Thank you.

38 A Much better articulated than I do.

39 MR. WALLACE: Hardly. Mr. Commissioner, I have no
40 further questions for Dr. Watson-Wright, at this
41 point. If Dr. Watson-Wright is prepared to carry
42 on, perhaps, with the technology staying in place
43 and everybody here, perhaps we could just carry
44 on?

45 A Yes, I can do that.

46 MR. WALLACE: Mr. Taylor?

47

1 CROSS-EXAMINATION BY MR. TAYLOR:
2

3 Q Mitchell Taylor. And Dr. Watson-Wright, am I
4 appearing on your screen now?

5 A You are, indeed.

6 Q I think I am. All right. Perhaps I could ask
7 you, as a starting question or first question, to
8 turn to the definition that Mr. Wallace just
9 referred you to, and you said that it looks pretty
10 good.

11 Can you unpack what it's saying there, and
12 perhaps what I'll refer to as layman's language,
13 explain what the definition is telling us or
14 saying?

15 A Well, it is saying, essentially, that it's no good
16 to look at one species or one particular human
17 activity or to limit the research or science
18 that's being done in an ecosystem context to one
19 thing. You have to look at the interrelationships
20 of activities, species, occurrences, events, in
21 order to understand the ecosystem and in order to
22 be able to make predictions, and in order to be
23 able to advise management so that they can make
24 decisions or regulations or whatever.

25 Q Then when what I will call the whole of the
26 ecosystem approach or --

27 A Sorry, I can't hear you.

28 Q Sorry, I pushed the button by mistake. Once
29 someone -- a scientist has looked at the whole of
30 the ecosystem, or taken a whole ecosystem approach
31 to the work that they're doing, can you say, then,
32 how you would tie that back to a particular
33 species that might be of interest in a given
34 situation?

35 A I could speculate, but really, I think that there
36 are witnesses you will be interviewing, in terms
37 of scientists --

38 Q Okay.

39 A -- who would be able to articulate it much better
40 than I.

41 Q All right. That's fine. I think you've really
42 laid this out well, but is there anything you want
43 to add in this area to what are the merits of an
44 ecosystem science-based approach?

45 A Well, the merits, and going back to the northern
46 Cod issue, for example, are just that unless we're
47 looking -- I think in the past, you know, certain

1 scientists were focused on certain areas, had
2 certain expertise, and let's say we were out doing
3 some monitoring, they would focus only on what
4 responded to their particular interests and the
5 rest of the data would go unused.

6 I think, you know, for example, in terms of
7 acoustics and looking at fish, or looking at the
8 habitat, those who wanted to look -- the fish
9 biologists would look only at the fish and not pay
10 attention to what's happening with the habitat,
11 and vice versa. But when you put the two
12 together, you could find some very interesting
13 relationships.

14 So I think it's an attempt to do that. I
15 mean, there are any number of things going on in
16 the world today, and in the oceans in particular,
17 that are going to impact the ecosystem and the
18 species of interest, and in terms of -- there's -
19 it's just so complex that it's so interesting, and
20 it's critical to look at the relationships as much
21 as we can. I mean, we're only human, but I think
22 we are getting better, and we are getting better
23 technologies in order to be able to understand
24 things.

25 One of the technologies I know you heard
26 about was in terms of tracking the salmon to a
27 certain point up through the Strait of Georgia
28 until they get into the open ocean. Without that
29 technology, years ago we had no idea what was
30 going on. The other is the ability to look at
31 things through satellite and be able to compare in
32 terms of phytoplankton blooms with what may be
33 happening with the productivity of species.

34 So I think as we become more sophisticated
35 and as we look into it more closely, it is
36 apparent that we may have missed many things in
37 the past, either because of a lack of technology
38 or a lack of trying to put all the pieces
39 together, and I think time is telling us and
40 nature is telling us that that won't work, that
41 nature is nature and one thing affects another,
42 and therefore we need to be trying to understand
43 it.

44 Q Dr. Watson-Wright, as I hear you, I think you're
45 suggesting a number of things, two of which I want
46 to suggest to you and see if I've got it right,
47 and one is that things or animals or fish in an

1 ecosystem interact and have interrelationships
2 with other things and other parts of the
3 ecosystem, there's a complex interaction going on;
4 is that one of the things you're suggesting?

5 A Yes.

6 Q And are you also suggesting that if you do not
7 have a whole ecosystem or whole of ecosystem look
8 or approach that you might miss things that are
9 important and should not be missed?

10 A Yes. Yes, I believe that. Now, when would you
11 ever have a whole ecosystem perspective? That's
12 the issue, I guess. So we need to do as much as
13 we can in terms of gathering information.

14 Q Now, Mr. Wallace took you through quite a number
15 of documents and they were explained by you for
16 the Commissioner. I understand that the objective
17 behind all of that work and the approaches set out
18 in those documents, was to, if you like,
19 structure, focus and prioritize the work being
20 done by the science sector; is that, generally
21 speaking, what their objective was?

22 A Yes. I haven't heard those particular words used,
23 but that, essentially, is what we were trying to
24 do. We were trying to become more organized, yes,
25 structured, we -- to provide guidance. We were
26 trying to work as a national team, recognizing
27 regional issues, and have a means of prioritizing
28 the various demands or requests from the varying
29 clients and, as I said, with the increase in
30 legislation to which we had to respond, it just
31 became more and more complex.

32 Q Now, as of the fall or thereabouts of 2009, which
33 is when your tenure was coming to an end and you
34 were moving to your current role with UNESCO, can
35 you say, as of that time, the fall of 2009, how
36 you saw science fitting in with -- fitting into
37 the department and the role of science in the
38 department as of that point? Or, put another way,
39 with the work that you'd put in place and the
40 processes you'd put in place, what had you seen
41 accomplished by roughly the fall of 2009?

42 A Well, it may have been my imagination, but I did
43 feel that there was a much better understanding of
44 the role of science within the department than
45 when I first got there, or at least it was more
46 apparent to me. I did feel that I wasn't sort of
47 the lone voice in the wilderness, saying, "What

1 about science?" because certainly the client
2 sectors and the regional directors general, not
3 because of me, but they definitely understood we
4 need to be making science -- we're a science-based
5 department and we need to make sure that our
6 management decisions are based on science and
7 based on the best science.

8 I think that the communication between
9 science and the client sectors and between, I
10 guess, across the regions, was improved, and I,
11 you know, science was seen as an equal partner and
12 very much needed within the department.

13 Q Mr. Wallace asked you some questions about
14 partnering and so forth with outside agencies.
15 Are there protocols that were put in place that
16 governed the partnering or collaboration with
17 outside agencies?

18 A Yes. Of course, the department and the Government
19 of Canada has protocols, but also science did and,
20 as I said, I don't have any of those documents.
21 But we did put a focus on partnering, because, for
22 one thing, we don't -- the department doesn't have
23 all the expertise within the department that it
24 may need for a particular issue. There are some
25 excellent researchers certainly within Canada in
26 the university system, in some cases within the
27 provinces, and internationally, whereby DFO can
28 work with these people on issues of importance to
29 the DFO mandate.

30 And then in addition, of course, in terms of
31 resources, in some cases outside partners would
32 have more of an ability to bring in outside
33 resources to assist or, in some cases, the
34 scientists would be able to access resources. As
35 an example, one of our researches was very
36 effective in working with the United States
37 Environmental Protection Agency and was able to
38 work on issues that were of interest to them but,
39 more importantly to us, of interest to Canada and
40 to DFO. And so with all those sorts of things,
41 many of the scientists are fairly entrepreneurial,
42 given the opportunity, and it was always with the
43 understanding that there can be no conflict of
44 interest and it has to go according to Government
45 of Canada policy and guidelines. But it's
46 necessary. It's all about collaboration.

47 Q Earlier, Mr. Wallace asked you and took you

1 through -- asked you about and took you through
2 some of the Science Management Board ecosystem
3 minutes, and they've been marked as an exhibit.
4 And you spoke to some of this, but is there
5 anything more or anything concrete that you want
6 to say about what was achieved as a result of the
7 Science Management Board process that you put in
8 place as part of your focusing and prioritizing of
9 the science work?

10 A Well, again, I think what was achieved was, number
11 one, there was much better -- there was much more
12 interest, understanding and, I guess, support for
13 the need for science and, as well, the issues
14 facing science, among the senior cadre of the
15 department. Two, I think that all the documents
16 that you've seen that have come out of that
17 initiative really did sort of set the stage and
18 gave guidance to science within the department and
19 also allowed others to see what we were trying to
20 do and where we were going.

21 So I think just having -- the major thing
22 would be having others understand and wish to see
23 more science and also be supportive and
24 understanding of what we're trying to do. When I
25 came back to the department, I think I mentioned
26 to you, I was told that science is a big black
27 box. We know the money goes in, we don't see it
28 come out, we don't know what you do. So I thought
29 that was a bit of an issue, and I would like to
30 think that at least it's maybe grey, now, instead
31 of black and, with any luck, it's quite
32 transparent.

33 Q All right. Thank you, Dr. Watson-Wright.

34 THE COMMISSIONER: Mr. Taylor, I wonder if you could
35 just, while you're on your feet, consider asking
36 this witness, with regards to these exhibits,
37 well, in particular not the minutes so much, but
38 the documents you've been referring to and Mr.
39 Wallace has been referring to, is there some
40 formal process within the department for actually
41 adopting these documents as official departmental
42 policy, what the protocols are when these kinds of
43 documents are created, if you find that
44 convenient?

45 MR. TAYLOR: Yes, happy to, Mr. Commissioner. And Mr.
46 Commissioner will clarify, if I don't get all of
47 the elements of this question into this.

- 1 Q Did you hear Mr. Commissioner speaking, Dr.
2 Watson-Wright?
- 3 A I think he was asking, is there a process whereby
4 these become departmental policies?
- 5 Q Yes. I might unpack it a little bit, or break it
6 down this way. I believe the question is: Is
7 there a process within the Department of Fisheries
8 and Oceans where the --
- 9 A I can't hear you.
- 10 Q Sorry. Is there a process within the Department
11 of Fisheries and Oceans for these documents that
12 we've seen to be formally adopted and, if so, are
13 they being formally adopted by the science sector
14 or the department as a whole, and with all of
15 that, what is their status once they've gone
16 through any of these processes for adoption?
- 17 A Well, the documents that you're seeing that relate
18 to science renewal were approved by the Science
19 Management Board, so that's the deputy level and
20 that's as high as it goes within the department.
21 They are not necessarily -- they aren't policy
22 documents. They're plans and agendas and
23 frameworks and things like that. And so that I
24 would say that they have been approved at the
25 highest level and by the department, not just by
26 science.
- 27 Q Do you know whether they go before the deputy's
28 management committee, I think is the proper name?
- 29 A Well, we had -- they certainly did, and the
30 departmental management committee was made aware
31 of these documents. At some point, we may have
32 actually taken some of them to the departmental
33 management committee. At the beginning, we
34 didn't. I think it may have changed, but I, quite
35 frankly, can't say for certain. But every member
36 of the departmental management committee was
37 involved, for example, with the approving the
38 research plan and having input -- research agenda
39 and having input into it. The Framework for the
40 Future, yes, it was approved by the Science
41 Management Board. It was mainly a guidance
42 document, though, for science. So there were kind
43 of -- they're not all the same, they're not all
44 equal documents, but I believe they would be
45 considered official documents of the department.
- 46 Q Is there a means - and this is going beyond Mr.
47 Commissioner's question - was there a means,

1 during the time you were in the department, for
2 communicating these documents to the members or
3 the employees of the science sector, including, in
4 particular, the scientists?
5 A Oh yes, they certainly went on -- they are on the
6 website, and the regions -- the regional directors
7 would have ensured that - at least I believe they
8 did - ensured that their scientists knew about
9 these. In some cases, they were circulated by
10 email. But largely, when these sorts of things
11 were approved, it would be through the National
12 Science Directors' Committee that they would then
13 be disseminated. So that includes the directors
14 general in Ottawa, as well as each regional
15 director of science in the six regions.
16 MR. TAYLOR: All right. Thank you. Are there aspects
17 of your question, Mr. Commissioner, that have been
18 left untouched as yet?
19 THE COMMISSIONER: No. Thank you very much, Mr.
20 Taylor, and thanks to the witness.
21 A Could I say one more thing, though? As we move --
22 as we were moving through science renewal and
23 through the Framework for the Future, I,
24 personally, I don't know how many presentations I
25 made to science staff across the country on what
26 we were trying to do and what the framework looked
27 like and where we were trying to go. That's not
28 to say that everybody listened, or that I actually
29 got my point across, but it was -- I believe that
30 the sector tried very hard to make sure that the
31 staff, all the staff, were engaged and made aware
32 of where we were trying to go.
33 MR. TAYLOR:
34 Q Just finally, Dr. Watson-Wright, and just to have
35 it clearly on the record, when you left and when
36 your successor arrived, Mr. Wallace has touched on
37 this, of course, but you formally left in December
38 of 2009, and --
39 A Yes.
40 Q -- moved from Ottawa to Paris; is that right?
41 A Yes, that's correct.
42 Q And practically speaking, by about October of
43 2009, you were easing your way out of your
44 fisheries position and into your UNESCO position;
45 is that right?
46 A Well, not exactly, although I -- some documents
47 that you have shared with me I note that I did not

1 sign them off because I happened to be away at
2 that particular period, but I was still very much
3 working on DFO issues right up until the time that
4 I left. In fact, I think the week before I left I
5 and the deputy minister gave a presentation to the
6 deputy minister's committee on climate change,
7 energy and environment on the issue of the ocean's
8 role in climate change, and also ocean
9 acidification and what an issue it is.

10 So yes, I was trying to get things in order,
11 but I hadn't moved out already, by any means.

12 Q All right. Now, you know that Dr. Mithani as your
13 successor, is ADM Science and Oceans, right?

14 A That's correct.

15 Q And I think this is not controversial, but is it
16 your understanding that she came into her position
17 as your successor in March of 2010?

18 A It was February or March, I'm not sure which.

19 MR. TAYLOR: All right. Thank you, Dr. Watson-Wright.

20 A You're welcome.

21 MR. WALLACE: Mr. Commissioner, I suggested, this
22 morning, that we might break at this point to
23 allow participants to consider some of the
24 documents that were only provided yesterday, and
25 also to allow Dr. Watson-Wright to carry on with
26 her evening activities, but that would require
27 coming back tomorrow when Dr. Watson-Wright is
28 available again at half past 8:00 to give the
29 participants an opportunity to ask her questions.
30 That would also give me the opportunity to canvas
31 the participants to determine what their best
32 guess is on time. The disadvantage is, it means
33 Dr. Watson-Wright having to do this again tomorrow
34 evening and us having to do it again tomorrow
35 morning, but I suggest that may be the best way to
36 proceed, but I'm in your hands, or I'm happy to
37 hear from participants. And perhaps Dr. Watson-
38 Wright is available to carry on, and if any
39 participant is willing to begin cross-examination
40 now, this might work as well.

41 THE COMMISSIONER: Well, first, Dr. Watson-Wright, may
42 I ask you if it is convenient for you to
43 participate as a witness again at the same time
44 tomorrow?

45 A Yes, I can do that, Mr. Commissioner.

46 THE COMMISSIONER: Thank you very much. Then may I ask
47 any of the participants' counsel if they would

1 like to ask some questions at this point, or
2 whether they prefer all to await the opportunity
3 tomorrow? By their silence, I assume that their
4 preference is tomorrow; is that a fair assumption?

5 All right, Mr. Wallace, it appears that your
6 proposal seems to be the most convenient for all
7 concerned.

8 MR. WALLACE: And during the course of the day, I'll
9 determine what the time limits look like and
10 communicate that to Dr. Watson-Wright, and she'll
11 have it tomorrow morning when she gets to work.

12 THE COMMISSIONER: All right. Dr. Watson-Wright, thank
13 you very much for making yourself available today
14 and being willing to do so again tomorrow. I'm
15 grateful for that convenience on your side.

16 A You're very welcome.

17 THE COMMISSIONER: Mr. Wallace, then you wish to take a
18 break at this point?

19 MR. WALLACE: I suggest that, yes, Mr. Commissioner.

20 THE COMMISSIONER: Thank you very much.

21 MR. WALLACE: Thank you, Dr. Watson-Wright.

22 THE REGISTRAR: The hearing will now recess for 15
23 minutes.

24 A So I'm going to sign off?

25 MR. WALLACE: Thank you.

26 A Thank you.

27 MR. WALLACE: Thank you very much.

28 A You're very welcome.

29
30 (WITNESS STOOD DOWN)

31
32 (PROCEEDINGS ADJOURNED FOR MORNING RECESS)

33 (PROCEEDINGS RECONVENED)

34
35 THE REGISTRAR: The hearing is now resumed.

36 MR. WALLACE: Thank you, Mr. Commissioner. I didn't go
37 through the formalities this morning of
38 identifying myself, Brian Wallace, Commission
39 Counsel, for the record, and with me is Associate
40 Commission Counsel Meg Gaily, and our Assistant,
41 Jon Major.

42 Mr. Commissioner, we now have the balance of
43 the Science Panel available. Mr. Bevan and Mr.
44 Sprout have already been affirmed from their
45 appearance earlier this week. I would ask the
46 registrar, please, to affirm the other three
47 witnesses.

1 THE REGISTRAR: I will now affirm the remaining three.
2 That will be Dr. Mithani, Dr. Laura Richards, and
3 Mr. Cass.
4 Do you solemnly affirm that the evidence to
5 be given by you to this hearing shall be the
6 truth, the whole truth and nothing but the truth?
7 Dr. Mithani?
8 DR. MITHANI: I do.
9 THE REGISTRAR: Dr. Richards?
10 DR. RICHARDS: Yes, I do.
11 MR. CASS: I do.
12 THE REGISTRAR: Would you state your full name, please.
13 DR. MITHANI: Siddika Mithani.
14 THE REGISTRAR: I need you to speak up, please.
15 DR. MITHANI: Siddika Mithani.
16 THE REGISTRAR: Thank you.
17 DR. RICHARDS: Laura Jean Richards.
18 THE REGISTRAR: Thank you.
19 MR. CASS: Alan Joseph Cass.
20 THE REGISTRAR: Thank you. Counsel.
21 MR. WALLACE: Mr. Commissioner, we have a technical
22 glitch with bringing up documents. I think that
23 we can start with some purely oral testimony, but
24 at some stage we are -- in the next few minutes we
25 may run into a problem if Mr. Lunn isn't back with
26 his backup yet.
27 THE COMMISSIONER: Just for my convenience, if you
28 could have the witnesses each spell their names
29 for me, that would be helpful.
30 MR. WALLACE: Thank you very much. Dr. Mithani, could
31 you spell your name.
32 DR. MITHANI: It's S-i-d-d-i-k-a, M-i-t-h-a-n-i.
33 MR. WALLACE: Dr. Richards.
34 DR. RICHARDS: Yes. Laura Richards, L-a-u-r-a, R-i-c-
35 h-a-r-d-s.
36 MR. WALLACE: Mr. Cass.
37 MR. CASS: Alan Cass, A-l-a-n, C-a-s-s.
38 THE COMMISSIONER: Thank you.
39 MR. WALLACE: Thank you. I am reminded that Mr. Taylor
40 wished to raise a preliminary matter.
41 MR. TAYLOR: Mitchell Taylor, Mr. Commissioner. It's
42 about documents. We received a set of documents
43 yesterday from the Conservation Coalition through
44 Commission Counsel, and we received a set of
45 documents from the Aquaculture Coalition through
46 Commission Counsel.
47 The Conservation Coalition's came to us at

1 about 1:30 yesterday, and the Aquaculture
2 Coalition's came to us at about five o'clock
3 yesterday, meaning because I was here I saw them,
4 as did Mr. Wallace, about 5:30 yesterday or so.

5 Now, I'm raising this now because I am
6 seeking a ruling from Mr. Commissioner, if you are
7 prepared to give one now, on the use that may or
8 may not be made of these documents. The reason I
9 am rising now is if there isn't clarity now, but
10 it only comes about after someone tries to put
11 these documents to witnesses, I will have been in
12 the position of having asked my questions not
13 knowing whether they're in or out, and so will
14 counsel for some other participants, including the
15 Province, and Mr. Blair for the Salmon Farmers.

16 The documents in the main, as I see them,
17 relate to aquaculture, and scientific evidence to
18 do with aquaculture.

19 The objection I have is that those documents
20 from those two coalitions came late -- too late,
21 in my view; secondly, that these witnesses are not
22 the right witnesses to deal with them, in any
23 event; thirdly, they're off topic, because they
24 delve into aquaculture and what you will be
25 hearing when it comes time to deal with
26 aquaculture, the intense scientific and other
27 debate that exists over aquaculture, but we're off
28 topic for that right now. It's just not the time,
29 even beyond these not being the right witnesses.
30 And then fourthly, that wrapping all of that up
31 and putting it together, it would be unfair and
32 prejudicial both to individual witnesses here to
33 have these documents put to them, and to some of
34 the participants as organizations, including the
35 Government of Canada, to have these documents
36 being put now. They are, if you like, cherry-
37 picked documents on the point.

38 The witnesses, who as I say are not the right
39 witnesses, although they are scientists, all save
40 -- three of them are, but they're not the right
41 witnesses for this expertise, and this is too
42 little, too late, not the right witnesses, not the
43 right time, we're off topic, and it's unfair to
44 put cherry-picked documents to witnesses at this
45 point when with proper preparation and the right
46 witnesses this can all be done later and in the
47 context of having the full suite of scientific

1 papers and so forth that should be put to the
2 right witnesses.

3 So I am objecting to documents that you
4 haven't seen, but I'm objecting now because
5 otherwise I am going to be faced with asking
6 questions not knowing what the state of play is.

7 There is a broader question that some of the
8 counsel have been discussing, and that has to do
9 with not just the order of go, in terms of
10 questioning, but -- and Mr. Wallace is, I
11 understand, going to be speaking to counsel about
12 that at some point, but also the timeliness and
13 sort of plucking and putting documents in at the
14 last minute, that it's going to have to be
15 addressed as we move forward, I think. But for
16 now I am dealing with these documents
17 specifically.

18 THE COMMISSIONER: Just a general remark, Mr. Taylor,
19 before other counsel speak. I don't know, of
20 course, the documents you are speaking about. Mr.
21 Wallace and his associates have been preparing to
22 lead these witnesses initially, and then of course
23 you will have an opportunity to do so, as well.

24 I think insofar as these documents are
25 concerned, it would be appropriate for me to, at
26 the very least, hear from Commission Counsel with
27 regard to these documents. You make the point
28 that it's too little, too late, not the right
29 witnesses, and so on. I don't know what
30 Commission Counsel's position is in that regard.
31 He may not be in a position to address the points
32 you've just made now, because both of you
33 obviously have just - I gather from your comments,
34 I haven't heard from him - had a chance to look at
35 these documents. So it seems to me it's really
36 something I need to know from Commission Counsel
37 in terms of is it too little, too late, are these
38 the right witnesses, are there witnesses who will
39 be coming that could address these documents, and
40 so on and so forth, before I would be in a
41 position to rule on your points that you have just
42 made.

43 MR. TAYLOR: Of course. I appreciate that, and I think
44 that's a good idea, Mr. Commissioner. Just to
45 clarify, and you said I haven't looked at the
46 documents which that is perfectly correct in the
47 sense of studying the documents. I have eyeballed

1 the documents, is what I can say.

2 THE COMMISSIONER: No, I took your comments to be that.

3 MR. WALLACE: Thank you. Mr. Commissioner, I, too have
4 gone through the documents briefly. There are, I
5 think, 32 documents in the first list from the
6 Aquaculture Coalition and then subsequently last
7 evening another, I think, three, that I have not
8 looked at. And there are, I think three from the
9 Conservation Coalition, which came earlier in the
10 day yesterday.

11 I e-mailed to all counsel this morning,
12 probably too late for them to read it before they
13 arrived here at 8:30, and in that e-mail I said
14 that I had -- it would -- that my position was
15 that this was not the appropriate time to produce
16 these documents because of the lack of timeliness,
17 both -- and principally because it would be unfair
18 to the witnesses in particular and the other
19 participants in their preparation.

20 Secondly, it offends our rules that
21 require reasonable notice.

22 I also made the point that the documents
23 appeared to me all to relate to aquaculture in
24 some detail, and they were various published
25 articles.

26 And I pointed out that aquaculture has a
27 dedicated period of time in this inquiry. We
28 would have an opportunity to prepare for it in a
29 methodical way, and it didn't seem to me that this
30 was the panel of witnesses to whom these documents
31 should be put. And further, that if it turned out
32 through the aquaculture piece that some of these
33 questions were properly put to the witnesses we
34 have here now, we have the intention of recalling
35 a, what I might call, an executive DFO panel at
36 the end of the hearings to clean up exactly that
37 sort of loose end. And if there was a witness
38 here today who wasn't scheduled to be on that
39 panel, we would certainly consider recalling a
40 witness for that purpose.

41 So that was my take on the documents, that
42 basically there is prejudice and an
43 inappropriateness in hearing from it now. In my
44 submission, there is no prejudice to leaving it
45 until aquaculture, and seeing how it develops
46 later.

47 There may be other participants who may wish

1 to weigh in before Mr. Leadem and Mr. McDade
2 should have an opportunity, as well.

3 THE COMMISSIONER: Sorry, Mr. Leadem, you were about to
4 stand.

5 MR. PROWSE: I was up already, Mr. Commissioner, if I
6 might.

7 THE COMMISSIONER: Oh, I'm sorry, Mr. Prowse. I
8 apologize.

9 MR. PROWSE: Yes, so Clifton Prowse for the Province of
10 British Columbia.

11 Mr. Commissioner, I support the objection
12 made and the position of Commission Counsel. The
13 volume of paper that we're talking about I can't
14 physically describe because I couldn't eyeball
15 them, because they crashed my e-mail and they
16 crashed the printer. Some of them are long
17 studies that are very -- are huge scientific
18 documents. And I think that Mr. Leadem and Mr.
19 McDade will have ample opportunity to advance
20 these documents at a later stage of the
21 Commission.

22 The later stage, I think we're talking about,
23 looks sometime in April or May of next year. I
24 assume that there will be several days made
25 available and that there is going to be contested
26 evidence and the whole nine yards. I think of it
27 as being a trial within a trial. But I think it's
28 very important that that trial start in April and
29 that's the time when this be dealt with, rather
30 than documents coming in incidentally through
31 witnesses. And so I support the position of Mr.
32 Taylor and Commission Counsel.

33 MR. BLAIR: Alan Blair for the B.C. Salmon Farmers
34 Association, also speaking in support of the
35 remarks made by Mr. Taylor.

36 On the issue of lateness of disclosure, those
37 of us who have BlackBerrys just received four more
38 attachments at 10:10 this morning, and I doubt
39 that we've even eyeballed those, and they're from
40 the same group of documents.

41 THE COMMISSIONER: Mr. Leadem.

42 MR. LEADEM: For the record, Leadem, initial, T.,
43 appearing as counsel for the Conservation
44 Coalition.

45 Firstly, let me say that I regret that we're
46 taking up valuable time at the Commission to deal
47 with this issue that would better be a -- would

1 better be addressed by some concordance amongst
2 counsel. Some of the difficulties that we've been
3 experiencing, I think are better dealt amongst
4 ourselves, rather than bringing them to air in
5 front of the Commissioner.

6 Having said that, now that it's been raised,
7 there are a number of difficulties with respect to
8 documents, not just from my clients, and not just
9 from Mr. McDade's clients, but other participants,
10 as well as Commission counsel, being visited upon
11 us at the last minute. And the case in point is
12 that we received many documents late in the day
13 that were sent to us from the actual Commission
14 Counsel.

15 Now, the problem that I see is that we are in
16 this process and that we're not quite sure how
17 it's all evolving.

18 The documents that I intend to rely upon in
19 cross-examination are not necessarily -- although
20 on the face of it they appear to be aquaculture
21 documents. They don't necessarily -- are on
22 aquaculture, per se, but they're on as a case
23 study with respect to how science is addressed and
24 how science is used.

25 And I think it's rather presumptuous, with
26 all due respect, for counsel to say that they
27 think that this is somehow -- that it's
28 presumptuous for them to suggest that they know
29 they can intuit what my cross-examination is all
30 about. I should be allowed to pursue my cross-
31 examination in the direction that I see. And if
32 there's objections taken at that time, then they
33 can be dealt with at that time.

34 MS. SMITH: Thank you, Mr. Commissioner, Lyndsay Smith
35 on behalf of Areas B and D.

36 I support Mr. Leadeam's position and, in my
37 respectful submission, to curtail cross-
38 examination on the basis suggested by Mr. Taylor,
39 runs the risk of this Commission being deprived of
40 evidence relevant to the terms of reference, and
41 in my respectful submission that's the place to
42 look. And the objection should be in the normal
43 course, on a case-by-case basis, so that we aren't
44 in a position where evidence is either not
45 elicited or we're in a situation where witnesses
46 are being recalled.

47 And I echo my learned colleague's submissions

1 with regard to an even playing field with regard
2 to late disclosure. We're being deluged with
3 documents and some of them are coming late. And
4 so, in my respectful submission, that objection is
5 weak and perhaps not an adequate basis to deprive
6 the Commissioner of the evidence potentially
7 available.

8 THE COMMISSIONER: Thank you.

9 MR. McDADE: Well, Mr. Commissioner, I --

10 THE COMMISSIONER: You have to identify yourself, sir.

11 MR. McDADE: It's Greg McDade, for the --

12 THE COMMISSIONER: Thank you.

13 MR. McDADE: -- Aquaculture Coalition.

14 THE COMMISSIONER: Thank you.

15 MR. McDADE: I must say I think I agree with Mr.

16 Leadem. I frankly don't understand the objection
17 at this point. And you may be, since you haven't
18 seen the documents and don't know what the issues
19 are, you may be under a misapprehension about the
20 purpose of them.

21 Let me say that most of the documents that we
22 provided notice of are in fact DFO documents, some
23 of them right off the website, or documents that
24 have been referred to many times, Reports to the
25 Standing Committee on Fisheries. There are a
26 number of Science reports that do relate to
27 aquaculture, but that would be a small percentage
28 of the documents.

29 When I say I don't know what the objection
30 is, I think somebody is misunderstanding what our
31 questions are before we've even asked them. We're
32 in an odd position with the rules that have been
33 imposed on us. We've been told we have to give
34 notice of documents, even though they're in
35 Ringtail, even though they're DFO documents, we've
36 been asked to give notice of them in advance of
37 cross-examination in the event we may refer to
38 them. And we've endeavoured -- maybe we took that
39 too literally, but we've endeavoured to try and do
40 that, to try and plan out one's cross-examination
41 before the evidence is even presented, and give
42 all the list of documents, which we may or may not
43 refer to in cross-examination, to give people as
44 much advance notice as they can. And I'm just
45 trying to do that in as good faith as I can.

46 It's not that I want to examine the documents
47 in detail, and there may be a better time to do

1 that. But it may be that there are questions in
2 which some of these documents may be relevant to
3 the answer. So it's just simply a precautionary
4 approach to looking at full cross-examination.
5 And I don't think objections to those kinds of
6 documents should be made until the question is
7 asked.

8 What I understood today was about, was about
9 science and risk, and how the -- how the
10 Department prioritizes its science matters.
11 That's what I intend to cross-examine on.

12 Now, the fact that the particular documents
13 that I'm interested in all relate, or many of them
14 relate to aquaculture, should be no surprises.
15 That's what my clients -- that's the position
16 they're coming from. I would -- I would suggest
17 that would apply to every participant in the room,
18 that the documents that they'll want to cross-
19 examine on, if they're not wasting the
20 Commission's time, would be documents that are
21 relevant to the points that they're going to make
22 to you at the end of this hearing.

23 But the general nature of the discussion
24 today is -- I intend to respect that. Now, to
25 say, though, that you can discuss science and risk
26 without discussing aquaculture would be as
27 artificial as saying that you could discuss it
28 without discussing salmon, or without discussing
29 fish habitat, or without -- surely, science and
30 risk applies to all of these matters.

31 And if we're to get beyond the very generic
32 and bureaucratic evidence of we're integrating
33 this and doing that, surely we need to look at
34 what actually is happening in that relationship.
35 And here we have the senior people from DFO, and
36 like I did yesterday, in terms of asking questions
37 about organization from an aquaculture
38 perspective, I'd like to ask questions about
39 priority setting and the policy approach to
40 science in Ottawa from an aquaculture perspective.

41 If I'm not going to be allowed to ask
42 questions about that because it relates to
43 aquaculture, I should just sit down and go home.

44 Now, if I am going to be allowed to ask
45 questions about it, then it seems to me I should
46 respect the Commission's request that we give some
47 advance notice of those documents that we're

1 intending to refer to. These documents, most of
2 them are already in Ringtail, or -- or readily
3 available to others.

4 Now, in terms of the length of notice,
5 though, I do think there's a matter here that you,
6 Mr. Commissioner, have to address. I'm hearing
7 complaints about the fact that we gave some notice
8 about some documents on Monday, and an additional
9 three yesterday, as because we didn't get notice
10 of half of the documents that were put in as
11 exhibits today -- in fact, more than half of the
12 documents that were put in as exhibits to you
13 today were not provided to us until yesterday
14 during the hearing, when we didn't see them till
15 last night, hundreds of pages of documents. All
16 of the documents that were provided over the last
17 two days to you didn't come to us from the
18 Commission until Friday night.

19 Now, if we're going to prepare -- and I
20 wasn't complaining about that, that comes with the
21 nature of trying to do the Commission. I accept
22 Commission Counsel's statements when he says
23 they're doing the best they can and they're
24 getting the documents to us as fast as they can,
25 and I'm prepared to work late to be able to deal
26 with that. But there can't be two standards here.
27 If we're not getting the documents until Tuesday,
28 people can hardly -- people can hardly object to
29 the fact that we don't give our response documents
30 until Tuesday.

31 Cross-examination has a purpose, and if the
32 participants here are going to be able to assist
33 you, our role has to be respected. And neither --
34 if we're going to be asked to give our documents
35 with more notice, then surely we have to expect
36 that the witnesses that come before you will
37 produce their documents ahead of time, as well, an
38 equal amount. Ideally, that's how this matter
39 will work as we start rolling.

40 If we get witness statements and witness
41 documents a week ahead of time, then of course we
42 can prepare a response three or four days ahead of
43 time. But if we get all the witness statements
44 and the witness documents the day before they
45 testify, then I think it's really unfair to hear
46 objections that we didn't produce our documents at
47 the same time. If I have to wade through those

1 hundreds and hundreds of pages of documents to be
2 able to cross-examine, then it's not unfair for me
3 to present documents that I want to use in cross-
4 examination.

5 We have a -- we have a database here that's
6 now approaching many hundreds of thousands of
7 documents that we're all having to deal with.
8 This is difficult. But I think it's totally
9 unfair to make this objection at this point.

10 But let me come back to my main point. I
11 think people misunderstand what we're trying to do
12 with these documents.

13 THE COMMISSIONER: I have your main point, Mr. McDade.

14 MR. McDADE: Thank you.

15 THE COMMISSIONER: Thank you very much.

16 Mr. Taylor, before I hear any further
17 submissions, I just wanted to -- and I think we
18 are taking up some valuable time here from witness
19 availability. I wanted to pick up on the
20 sentiment that Mr. Leadem expressed, and that is
21 that I think this is a matter that at least
22 initially can be handled well by counsel
23 collaborating around the subject matter of
24 timeliness and use of documents.

25 Secondly, it would be, I think, more rational
26 for me to, if I have to give a ruling, give it in
27 the context of a specific document put to a
28 specific witness. At that time I will at least
29 have some directed submissions with regard to the
30 fairness issue and the appropriateness issue
31 regarding that question and that document at that
32 time.

33 I think there are ways in which I can deal
34 with issues around timeliness and subject matter
35 and appropriateness, that would at least put on
36 the record the question and put on the record the
37 document, and I can deal with it in different ways
38 in terms of ensuring that the question is not lost
39 and the document will be fleshed out and there
40 will be an opportunity for all counsel in the room
41 to deal with the matter at hand. But I am
42 somewhat concerned about dealing with rulings in a
43 vacuum.

44 MR. TAYLOR: A couple of points, if I may, Mr.

45 Commissioner. Firstly, I understand there's 32
46 documents that came from Mr. McDade last night,
47 and they didn't come Monday, as he said, they came

1 last night to us as participants. I can't speak
2 to when he sent them to the Commission. I can
3 only speak to when we got them, because everything
4 goes through the Commission. Of those 32, I'm
5 told that or understand that only 12 of them are
6 in Ringtail. And as a general point, we've seen
7 little very documentation in Ringtail from any
8 other participants besides ourselves, and there's
9 some from the Province, as well. But that's not
10 today's issue.

11 I take your point, Mr. Commissioner, that Mr.
12 Leadem has suggested it could be dealt with
13 amongst counsel. I note that neither Mr. McDade
14 nor Mr. Leadem spoke with me or had any approach
15 towards me before they just sent over these
16 documents, even though we've been sitting 20 feet
17 apart for the last four days. This came as a
18 complete surprise to me when I got back to the
19 office, and it seems to me incumbent on them,
20 knowing full well that there's going to be issues
21 about this, that they would have spoken with me.
22 But if it is your preference as I hear you, for
23 counsel to speak at the lunch break, we can do
24 that and see what, if anything, comes of this.

25 But with all of that, there will be a range
26 of documents, of course, but in the main a lot of
27 the documents, and the main concern is this is
28 nothing but a back-door attempt to put in
29 scientific papers that ought properly to be put to
30 witnesses other than these ones, at a time other
31 than now.

32 But with that, I hear your point that it's
33 difficult for you to be dealing with it in a
34 vacuum. I think that this, unless we can do
35 something in talking, it will all come up again,
36 it sounds like, sometime later this afternoon or
37 tomorrow, and we'll have to deal with it then.
38 And if we go in that way, depending on what the
39 outcome of that is, of course, re-examination may
40 be longer than shorter, and we may -- well, we'll
41 just have to see how it goes, I suppose, at that
42 point.

43 THE COMMISSIONER: Thank you, Mr. Taylor. Mr. Wallace.

44 MR. WALLACE: Thank you, Mr. Commissioner. Two good
45 things happened as a result of that break. The
46 documents that the technical -- the technical
47 glitch we had has been corrected, so we ought to

51

PANEL NO. 4

Siddika Mithani

In chief on qualifications by Mr. Wallace

In chief by Mr. Wallace

1 be able to proceed. And we learned Mr. McDade's
2 application of the precautionary principle in a
3 legal context.

4

5 EXAMINATION IN CHIEF ON QUALIFICATIONS OF SIDDIKA

6 MITHANI BY MR. WALLACE:

7

8 Q I wonder if I may address you, Dr. Mithani.

9 You're currently the ADM Science at DFO?

10 A That's correct.

11 Q And you have come to this position only in

12 February of this year?

13 A That's correct.

14 Q Prior to that you were with Health Canada and had

15 been there since 1997 in several positions,

16 including Director General, Veterinary Drug

17 Directorate, 2005-2007, and as Associate Assistant

18 Deputy Minister of Health Products and Food Branch

19 from 2007 until this year?

20 A That's correct.

21

22

23 EXAMINATION IN CHIEF BY MR. WALLACE:

24

25 Q I have a couple of questions that I'd like to

26 address to you at this point, Dr. Mithani. You

27 have heard Dr. Watson-Wright this morning describe

28 a number of documents, well, essentially a process

29 and a focus for Science, which as I hear her has

30 been underway since about 2005, and there are two

31 aspects to it. And I would like to first of all

32 ask you about the process that was established by

33 those documents, and ask you to comment on the

34 status of that direction of the process, being the

35 setting of a five-year framework, and a five-year

36 plan, and then specific projects which were

37 intended to carry on through 2013, and as I heard

38 Dr. Watson-Wright this morning, subject to

39 tweaking, were the roadmap for Science through the

40 period we're in now.

41 I wonder if you could comment, please, on

42 where that program is.

43 DR. MITHANI: Thank you very much. Mr. Commissioner, I

44 did hear Dr. Wendy Watson-Wright and I -- from my

45 perspective, the work that has been done since

46 2005 as described by Dr. Wendy Watson-Wright has

47 been very appropriate. What needed to be achieved

1 with respect to the understanding of Science
2 within the Department, has certainly been
3 achieved. What Dr. Wendy Watson-Wright and the
4 team had done in terms of providing a mechanism
5 for establishing research Science priorities,
6 would be exactly the way that any ADM would have
7 moved forward. And I think that the process will
8 not change.

9 I think if you -- if you look at some of the
10 work that is currently being done, in order to
11 ascertain as we move forward what our Science
12 priorities -- our research Science priorities are
13 going to be, it is -- it is a similar process
14 which is both top-down and bottom-up, where there
15 is engagement with scientists in terms of the
16 areas that they would identify as research
17 priorities. It would go through a similar process
18 where there would be engagement with the National
19 Science Directors Committee, and as well the
20 approval of these research Science priorities from
21 the Departmental Management Committee.

22 It's really important from my perspective, as
23 I come into this -- this particular role as the
24 new kid on the block, to look at and to ensure
25 that the Science priorities are clearly aligned
26 with the strategic outcomes. And as we look at
27 Science Renewal, which is what Dr. Wendy Watson-
28 Wright had done, we are now at a stage where it's
29 time to look at how those Science priorities need
30 to be aligned with the strategic outcomes.

31 So I think that what we are trying to do now
32 is the initial work of renewal has been done,
33 we've looked at Science capacity. That's what Dr.
34 Wendy Watson-Wright did, and my role now is to
35 take that beyond just the renewal and look at how
36 we can align appropriately as we look at Science
37 research priorities.

38 Q Dr. Watson-Wright this morning described the work
39 of the Science Management Board, and we in fact
40 have minutes of all of the meetings, I think, of
41 that Board up until 2009. Has that Board met
42 since?

43 DR. MITHANI: No, the Science Management Board has not
44 met since 2009, and again the reason has been, as
45 Dr. Wendy Watson-Wright articulated very clearly,
46 that there was a purpose, there was a focus. The
47 Science Management Board was really looking at a

1 strategic direction. We are there now.

2 What we now need to do is to go one step
3 further, identify what the Science priorities need
4 to be, to actually validate them and say is this
5 where we still need to be? Has anything changed?
6 Does it need tweaking? And I think that Dr. Wendy
7 Watson-Wright did talk about the tweaking.

8 So we haven't met yet because what you need
9 to do, from my perspective, is you have to be very
10 clear on the kind of advice, recommendation that
11 you would want from a Science Management Board.
12 And at this point in time there's work underway in
13 looking at exactly what we would want to bring the
14 Science Management Board for, and what kind of
15 advice we would want from that Board so that we
16 can move forward.

17 So again it's a question of validation,
18 looking at where our Science priorities, what we
19 want to tweak, and then bring them back in again
20 and talk about validation and then have the
21 approval process just as Dr. Wendy Watson-Wright
22 had articulated.

23 Q Dr. Mithani, perhaps it's semantics, but could you
24 explain to me or to the Commissioner, please, the
25 difference between the strategic direction and the
26 priorities. As I understand you, you say that the
27 strategic direction is in place and now it's time
28 to reconsider priorities. Is that the -- I don't
29 -- it strikes me as perhaps a contradiction there,
30 but that may be my misunderstanding of the words.

31 DR. MITHANI: Thank you for the question, Mr.
32 Commissioner. It's not a contradiction. It's
33 clearly looking at how we move beyond the
34 priorities. So what Dr. Wendy Watson-Wright at
35 the time had done was established certain
36 priorities, certain Science priorities. And what
37 the next step is, is to look within those
38 priorities and further refine those priorities so
39 that we have some good tangible deliverables in
40 terms of what Science needs to do when we move
41 forward.

42 Q I wonder if we could just look at some of the
43 specifics that the way the Science strategy had
44 developed through Science Renewal, as I understand
45 Dr. Watson-Wright, the first step was a Framework
46 for the Future, which is -- if you could bring
47 that up. What's the exhibit number, Mr. Lunn?

1 MR. LUNN: Exhibit 36.

2 MR. WALLACE:

3 Q Can you tell the Commissioner how that document
4 fits in the current directions of science at DFO.

5 DR. MITHANI: Mr. Commissioner, the document on the
6 Framework for the Future is still as relevant now
7 as it was five years ago. It is a framework
8 document for the future that clearly talks about
9 the Science priorities and, you know, the work
10 that really needs to be done as we look at Science
11 in the future. So this, from my perspective, is a
12 document that is still relevant, as is the
13 Research Agenda, and as is the Research Plan.
14 It's looking at how we refine them as we move
15 forward.

16 Q There's specific reference to the Science
17 Management Board in the Framework for the Future
18 document. Do I take it then that the Science
19 Management Board hasn't been terminated, it's just
20 resting?

21 DR. MITHANI: Absolutely. It has certainly not been
22 terminated, Mr. Commissioner. We will be going
23 back to the Science Management Board once we have
24 done our background in terms of the refinement
25 that I've talked about.

26 Q And I gather, then, so substantively again as I
27 understand the documents and Dr. Watson-Wright
28 this morning, the direction of Science advice and
29 research in the Department is to an ecosystem
30 science approach, which is the focus of the
31 framework document, Exhibit 47. Am I -- do I
32 understand you to say that that document is still
33 the guiding document for the approach to Science
34 at DFO?

35 DR. MITHANI: It will absolutely remain as the guiding
36 document for Science in DFO.

37 THE COMMISSIONER: I'm sorry, Mr. Wallace. Which
38 document are you now talking about?

39 MR. WALLACE: The document I just referred to, Mr.
40 Commissioner, is Exhibit 47, "A New Ecosystem
41 Science Framework".

42 THE COMMISSIONER: Thank you.

43 MR. WALLACE:

44 Q As I understand the hierarchy of documents, we
45 started with the document 36, which is "A
46 Framework for the Future", then the Ecosystem
47 Science Framework is an overall, overarching

1 document, and then we go to a Five-Year Research
2 Agenda and a Five-Year Research Plan. And I
3 wonder, Dr. Mithani, if I could just ask you about
4 those two plans. Can you -- are they still
5 operating documents? I know we're still within
6 the timeframe contemplated by each.

7 DR. MITHANI: They are, Mr. Commissioner. They are
8 still operating documents. But as you know, that
9 they are -- they have a limited time limit with
10 respect to one -- one is dated, you know, 2007-12,
11 the other one is 2008-13. And science is such
12 that you've got to do some of the work right now
13 in order to be ready to look at how those
14 documents may need to be refined in that period.
15 And as Dr. Wendy Watson-Wright herself pointed out
16 that, you know, it doesn't -- it doesn't take a
17 couple of months to refine these types of
18 documents. There is a lot of work involved in
19 looking at a five-year research agenda and a five-
20 year research plan. So some of the groundwork is
21 being done right now, and when it comes to, you
22 know, 2011 for the agenda, and perhaps the same
23 timeframe for the research plan, we will be
24 working on these particular documents to see how
25 we can refine them further.

26 Q So that was my next question was to be, what is
27 Science doing now by way of refining those
28 priorities, and what -- do I understand that you
29 expect to have replacements for these three
30 documents a year or so from now?

31 DR. MITHANI: I would expect that these documents will
32 be refined in -- within the next couple of years.
33 So certainly, yes, and that would be based on the
34 work that is currently underway.

35 And I'd like to point out that, Mr.

36 Commissioner, about two, three weeks ago we had a
37 brainstorming visioning session with about 15
38 scientists that for a day and a half where we
39 really looked at the Science priorities, and so we
40 -- we went back to the Five-Year Research Agenda
41 and looked at the ten priorities, did a bit of
42 brainstorming in terms of are these the right
43 Science priorities. And within these priorities,
44 were there some that were more important than
45 others, where things -- had things changed a
46 little bit, did we need some tweaking.

47 So some of that work was done in those -- in

1 that day and a half and the scientists are still
2 debating, deliberating, going back and forth in
3 trying to identify exactly what they feel the
4 Science priorities need to be for the next five to
5 ten years.

6 And I just want to elaborate a little bit on
7 some of the discussions, if I may, that happened
8 at these meetings -- at this meeting. We talked
9 about priorities in -- Science priorities in three
10 buckets. So the first bucket was the science that
11 was currently being done right now, and people
12 would be asking for more science within that
13 science area. And the themes that came out were
14 charting, Arctic baseline, invasive species,
15 aquaculture, is information and science that our
16 clients and our clients happen to be other sectors
17 within the Department of Fisheries and Oceans that
18 are asking for this science right now, that will
19 be asking even in the future.

20 The second area of science that was really
21 identified as science that's being asked for right
22 now but the questions are going to get more
23 complex. And that area what was identified as one
24 of a few was habitat and some of the habitat
25 issues. So the fact that the scientists
26 recognized that we haven't been able to quantify
27 the habitat issues in terms of the value of
28 productivity and biodiversity would be another
29 area.

30 And a third area was people not asking for
31 this science right now, but in the next five years
32 it's going to be a real priority for Canadians.
33 It's going to be a policy priority for Canadians,
34 And there were two that really struck me. One was
35 hazard preparedness, so really looking at hypoxia,
36 ocean acidification, biohazards, tsunamis, and
37 how, you know, what would -- what would the risks
38 be. And the analysis of risks around those
39 biohazards was going to be very important in the
40 next five years to come.

41 And the other one was the whole idea of
42 ecosystem science and the fact that you really
43 needed to look at cumulative effects, and what
44 does Science need to do in order to prepare for
45 factoring in cumulative effects. So, for example,
46 climate change with resource exploitation, the
47 risk analysis that needs to go with it. You know,

1 some of the work that needs to be done in terms of
2 what would the tradeoffs be. Can human use and
3 biodiversity coexist, and if it does coexist, what
4 kind of risk analysis we need to do for those.

5 So a lot of discussion happened there. This
6 was very, very preliminary, and there will be
7 more. But what it allowed us -- what it allowed
8 me from a Science perspective is looking at those
9 ten priorities and everything that we discussed
10 was actually within those ten priorities. But it
11 provided us more focus on, you know, when we look
12 at Science, what is it that we need to do in the
13 next five years.

14 Q Dr. Mithani, DFO provided us with a list, it's
15 number 14, it's just a list of I think 15 names.
16 And my question is are these the people -- it's in
17 the -- document 14 in the original. Number 14 on
18 a list of 13. It's simply a PDF list of names and
19 I could just read them. That's it.

20 MR. LUNN: I think maybe --

21 MR. WALLACE: That's it. That's it.

22 Q Can you see the -- can you highlight that. Thank
23 you. Are these the attendees at your meeting,
24 which I think was a week or two ago?

25 DR. MITHANI: Yes, that's correct.

26 Q And these are -- are these all departmental
27 scientists?

28 DR. MITHANI: Yes, they are.

29 Q So these are all DFO employees and they all work
30 in the Science Sector in various parts?

31 DR. MITHANI: Yes, they are.

32 Q And this was the group that you brought together
33 to discuss the priorities that you've been
34 speaking about?

35 DR. MITHANI: Yes.

36 Q This is really an ad hoc group, it's -- does it
37 have any role, any decision-making, what is the --
38 what are the results of this deliberation?

39 DR. MITHANI: This was an -- this was an ad hoc group,
40 it was -- it was a group that we had put together.
41 What I had done was I had picked a Regional
42 Director who had just been appointed, who was
43 previously a scientist within the organization and
44 was a Regional Director. So I certainly had the
45 regional perspective. And I had Jake Rice, who is
46 our National Headquarters Research Scientist, who
47 had been extensively involved in the development

1 of the research agenda, the research plan, the
2 ecosystem document that Dr. Wendy Watson-Wright
3 had talked about. And so we brought together a
4 group of people, and it was really an ad hoc
5 group.

6 And there was -- there were two purposes for
7 this. One was for me to be able to speak to the
8 scientists, to look at what, you know, how -- how
9 they were feeling about the Science priorities,
10 what was happening. And the second was to have a
11 bit of a brainstorming in terms of let's look at
12 the long term. We have to look at long term.
13 We've got to identify the policy priorities that
14 may not be at the forefront right now, but that
15 will be very important. Because Science foresight
16 is going to be very important in the future.

17 When we look at policy development, policy
18 development in government takes about three years.
19 But in order for Science to inform policy, Science
20 needs to start much earlier on, because otherwise
21 the science will not be aligned to the policy
22 development. So it was really an opportunity to
23 look at some of these big issues, and the two, as
24 I said, that struck me were the cumulative effects
25 that is absolutely something that we need to do.
26 And the hazard preparedness was another one that I
27 think is important that we need to focus on as we
28 move forward.

29 However, this is not cast in stone. And as
30 we have talked about and as Dr. Wendy Watson-
31 Wright talked about, there are many opportunities
32 for dialogue for refinement for approval. And
33 this has to come to DMC, the Directorate -- I
34 mean, the Departmental Management Committee in
35 order for these to be approved.

36 So it's really one of those ad hoc groups,
37 bringing them together, having a bit of
38 brainstorming session, and then really looking at
39 how we can integrate the other scientists so that
40 everybody has a voice in the way we move forward.

41 MR. WALLACE: Perhaps, Mr. Registrar, you could mark
42 this, the list of scientists who attended the ad
43 hoc...

44 Q How do we describe this? How would you describe
45 this group?

46 DR. MITHANI: I would just say a group of scientists
47 who came to the brainstorming session.

1 Q In October of 2010.

2 DR. MITHANI: That's right.

3 MR. WALLACE: Could this be marked as the next exhibit,
4 please.

5 THE REGISTRAR: Exhibit number 52.

6

7 EXHIBIT 52: List of DFO scientists who
8 attended the October 2010 brainstorming
9 session

10

11 MR. WALLACE: Thank you.

12 Q Are there minutes of this meeting, will there be a
13 report, has there been a report?

14 DR. MITHANI: There has been no report, Mr.

15 Commissioner. There have been no minutes. This
16 is -- this was, as I said, really a brainstorming
17 session. But we will be looking at a slide deck
18 that the scientists are preparing, you know, to
19 come up with these three priorities as I
20 explained, three areas of science. So that's
21 still underway. And as you probably know,
22 scientists, it's very hard for them to deliberate
23 and come to a consensus on how the slides would
24 look. So clearly there is some back and forth
25 right now.

26 Q Is this intended to replace the Science Management
27 Board?

28 DR. MITHANI: Absolutely not. I mean, as I have
29 mentioned earlier, that the Science Management
30 Board had a role to play in 2005 till about 2009,
31 and we will reconvene the Science Management Board
32 once some of this background is done for -- for
33 again, advice, recommendations, as any Science
34 Management Board would do.

35 Q So the result from -- of the ad hoc meeting, then,
36 was identification of three specific priorities, I
37 think you mentioned. Could you repeat them?

38 DR. MITHANI: Yes. I mean, there were obviously more
39 within those three priorities that I have talked
40 about, and I've talked about three areas of
41 Science and some priorities within those areas of
42 Science that clearly struck me as the newcomer
43 within the Department of Fisheries and Oceans. So
44 the three areas were science that's currently
45 being done that people will ask more from us, and
46 I mentioned a few themes there. The second was
47 the science that we are doing right now that

60

PANEL NO. 4

Laura Richards

In chief on qualifications by Mr. Wallace

1 people want, but the questions are going to get a
2 lot more complicated, and therefore we need to
3 keep our eye on those. And the third was really
4 the Science foresight, where, you know, our
5 clients are not asking for this right now, but
6 it's going to be very important and when they ask,
7 we will have to be ready with at least some
8 information in order to inform those policy
9 priorities at -- at that time.

10 MR. WALLACE: Thank you, Dr. Mithani.

11
12 EXAMINATION IN CHIEF ON QUALIFICATIONS OF LAURA
13 RICHARDS BY MR. WALLACE:

14
15 Q I wonder if I might go to you, Dr. Richards. You
16 are the Regional Director of Science for the
17 Pacific Region, correct?

18 A Yes, that's correct.

19 Q And you have a Ph.D. in Zoology from UBC, a
20 Master's also from UBC, and a Bachelor of Science
21 from Dalhousie, correct?

22 A Yes, that's correct.

23 Q You have been with DFO since 1982, where you
24 started as a postdoctoral fellow at the Pacific
25 Biological Station.

26 A Yes, that's correct.

27 Q From 1983 to 1997 I understand you worked as a
28 research scientist at the Pacific Biological
29 Station in ground fish research?

30 A Yes.

31 Q And you became Division Head of Stock Assessment
32 for the Science Branch of the Pacific Region in
33 1997 and held that until 1998?

34 A Yes, that was a one-year position.

35 Q In 1998 you became Acting Regional Director of
36 Science for the Pacific Region and became Regional
37 Director in 2002 and you have held that position
38 since?

39 A Yes, that's correct, Mr. Commissioner.

40 Q You are also, I understand, an Adjunct Professor
41 at the UBC Fisheries Centre and have been for
42 about 15 years? It says 1995 here.

43 A Yeah, I think that's correct. I'm just hesitating
44 because that really is more titular. I have not
45 been very active in working at all with University
46 of British Columbia.

47 Q And you are the head of the Canadian delegation to

61

PANEL NO. 4

Laura Richards

In chief on qualifications by Mr. Wallace

Al Cass

In chief on qualifications by Mr. Wallace

1 the North Pacific Marine Science Organization?

2 A Yes, that's also known as PICES, and that was, I
3 believe one of the organizations that was working
4 with you on one of your research papers. But I am
5 the head of the Canadian delegation to that
6 organization. In fact, that organization just met
7 last week, Mr. Commissioner, and I was elected
8 Vice-Chair of that organization.

9 MR. WALLACE: Congratulations. I am going to ask some
10 questions about the science peer review process
11 within DFO and I am going to ask -- introduce Mr.
12 Cass, as well, at this point.
13

14 EXAMINATION IN CHIEF ON QUALIFICATIONS OF AL CASS BY
15 MR. WALLACE:

16

17 Q Mr. Cass, you have a B.Sc. in Zoology from UBC,
18 and a Master's in Environment and Management from
19 Royal Roads; is that right?

20 A Yes, that's correct.

21 Q You are the -- you are a Biologist with the
22 Division Management in the Salmon and Freshwater
23 Ecosystems of DFO Science; is that correct?

24 A That's not correct.

25 Q Okay.

26 A I had in the past worked with that division and
27 have moved on.

28 Q And you are now...?

29 A In between working with that division that you
30 mentioned, Mr. Commissioner, I chaired the -- what
31 has been known as PSARC, Pacific Scientific Advice
32 Review Committee, from 2002 till February of this
33 year.

34 Q Thank you. You became -- in '85 you became head
35 of the Assessment and Forecasting Program, Stock
36 Assessment Division, at the time of the creation
37 of the Pacific Salmon Commission and the Pacific
38 Salmon Treaty?

39 A That's correct.

40 Q And you held that position until 2002 when you
41 took on the position of PSARC?

42 A That's correct.
43

44

44 EXAMINATION IN CHIEF BY MR. WALLACE:

45

46 Q I want to now ask some questions of Dr. Richards
47 and Mr. Cass, as you prefer to answer them, about

1 the Science advisory processes and the peer
2 review. And the first document I would direct you
3 to is the DFO Science Advisory Process Framework,
4 which is number 7 in the list, Mr. Lunn. Thank
5 you.

6 This is taken from the DFO website,
7 describing the Science Advisory Process Framework.
8 Dr. Richards, is this an accurate reflection of
9 the process?

10 DR. RICHARDS: Yes. This is a national process and so
11 this document was produced through the National
12 Office. I believe it is accurate, but I'll let Al
13 speak to it -- Mr. Cass speak to this.

14 MR. CASS: To my knowledge it's accurate, certainly up
15 to February 2010, which I stopped being active in
16 this. But my understanding is it's an accurate
17 reflection of the process.

18 MR. WALLACE: Thank you. I wonder if I could have this
19 marked, Mr. Registrar, as the next exhibit.

20 THE REGISTRAR: That will be Exhibit 53.

21
22 EXHIBIT 53: DFO Science Advisory Process
23 Framework
24

25 MR. WALLACE:

26 Q This is a very open-ended question, but I wonder
27 if I could ask the two of you just to describe for
28 a room full of lawyers and, more importantly, for
29 the Commissioner the purpose of the process and
30 how it works.

31 DR. RICHARDS: Yes, certainly, Mr. Commissioner. I
32 think the purpose of this process is really to
33 provide a formal peer review mechanism, and as
34 part of that, following through on the SAGE
35 principles, which were identified, I believe,
36 around 2000. And as part of those principles,
37 which are articulated within this document, it
38 does point to the need for science to be, you
39 know, first of all, an early warning system, to
40 make sure that we have the best science that's
41 available, to make sure that we are transparent in
42 our process, and inclusive of different points of
43 view. As well, you know, that we include
44 precaution as in part of our advice, that we do go
45 through -- that we are transparent and that we do
46 do a review process.

47 And the intent of this process was try to

1 formalize some of those principles within the way
2 that we operate. And so it was really intended
3 that we would have for where we needed to provide
4 a formal advice for certain kinds of decisions,
5 and for where we had warning and had arranged
6 opportunities to have feedback from other --
7 others within the Department, in terms of where
8 advice and where decisions were going to be
9 needed, that we had a formal process where we
10 could convene scientists, we would have them
11 prepare papers, we could convene a peer review
12 group that would include others even outside of
13 DFO to make sure that we included and heard from
14 all points of view on the science.

15 And then went through a formal review process
16 to validate that this was the best possible
17 science, that we made sure that if there was a
18 disagreement, we had an opportunity to record
19 alternative points of view, so that we could then
20 articulate and formalize and have recorded the
21 advice that was -- the formal advice from this --
22 from Science on a specific issue that was posed to
23 us.

24 And perhaps I'll ask if Mr. Cass wants to add
25 anything.

26 MR. CASS: No, I think that's a good reflection of the
27 -- the overall intent of the process of peer
28 review.

29 Q Thank you. Can you explain what is meant by the
30 SAGE principles, and I think they're set out in
31 the document. But what is the basis of those,
32 where do they come from and what authority do they
33 carry?

34 DR. RICHARDS: Yes, Mr. Commissioner. This was a group
35 -- in fact, I'm sorry I can't recall the exact
36 name of the group, but the SAGE stands for Science
37 Advice for Government Effectiveness. This was an
38 external advisory committee that was made into
39 government, not just -- I believe to the Science
40 and Technology Group, not to DFO. But it did
41 provide a bit of a discussion about in fact why do
42 we need science within government, and what is the
43 role of science within government.

44 MR. WALLACE: So if I may take you to the next
45 document, which is the Operational Guidelines for
46 Science Special Response Processes, that document
47 is number 8 on your list.

1 Q Can you explain this document, please.

2 DR. RICHARDS: Yes, Mr. Commissioner. I think it was
3 recognized that there were times that might arise
4 when mainly for reasons of timing we did not have
5 the opportunity to go through the formal process
6 that I just referenced. In particular, we may not
7 have had the opportunity to provide formal working
8 papers, to go through the formal peer review
9 process. It does involve, I should have explained
10 -- if I go back a bit, it does involve writing
11 some documents, which are then tabled at a certain
12 time in advance in order that they can go through
13 a review. And sometimes there may be some urgency
14 around a question and that there isn't the
15 opportunity to prepare a very thorough research
16 document, nor the adequate time to do that review
17 in terms of the timelines which were set forward
18 in terms of our process. So there was a national
19 decision that we would develop another process
20 that could be used where we needed to provide
21 advice more urgently in certain kinds of
22 circumstances.

23 Now, in fact I can say that my recollection,
24 specifically we've only used this case once, and
25 that was in a case where we were trying to provide
26 advice to another department, and where Fisheries
27 and Oceans Canada was not the -- was not the
28 decision-maker. We were trying to provide advice
29 on some contaminant issues to Environment Canada.

30 So in fact I think what we have -- although
31 we have this as an opportunity, we prefer to use
32 the formal thorough process whenever we have --
33 and to try to speed up the work to make that
34 formal process work, rather than going through the
35 special response process.

36 MR. WALLACE: I wonder if this could be marked as the
37 next exhibit, please, Mr. Registrar.

38 THE REGISTRAR: Exhibit 54.

39 MR. WALLACE: The Operational Guidelines for Science
40 Special Response Processes. The -- sorry, the
41 exhibit number?

42 THE REGISTRAR: 54.

43 MR. WALLACE: Thank you.

44
45 EXHIBIT 54: Operational Guidelines for
46 Science Special Response Processes (SSRP)
47

1 MR. WALLACE:

2 Q These are two different processes, then, am I
3 correct, that the PSARC process includes within it
4 a prioritization of the work to be looked at, and
5 then the process that, as you say, a more rigorous
6 peer review process whereas the SSRP process
7 applies to issues that come up outside of the
8 normal course of those priorities.

9 DR. RICHARDS: Yes, Mr. Commissioner. The way that we
10 have this operationalized within the Department is
11 that in fact PSARC has undergone a bit of a name
12 change because we were trying to ensure national
13 consistency. So we now have the Centre for
14 Science Advice, which is sort of -- is a new name
15 for what we had called PSARC. And if we have
16 questions under the Special Science Response, it
17 would also be managed through the same sort of
18 Secretariat office, where all the other formal
19 process would also take place.

20 Q Thank you. The next document I'd refer you to,
21 Dr. Richards, is the Procedure in the Development
22 -- I'm sorry, Procedure for the Development of the
23 Annual CSAS Peer Review Schedule. Can you tell us
24 about that process, please.

25 DR. RICHARDS: Maybe I will pass this off to Mr. Cass,
26 who was the regional chair for this. This again
27 describes a national process, and this would have
28 been done -- Mr. Cass would have been sitting as a
29 member of the national committee that would have
30 developed the national schedule and the wording
31 initially for some of the messaging that was sort
32 of sent out and the process here.

33 As well, this would have been discussed
34 through the National Science Directors Committee,
35 so it would have been prepared by this group, and
36 then put through the National Science Directors
37 Committee for overall approval in terms of the
38 process. But I think I'll ask Mr. Cass just to
39 speak to it, because he was the person in the
40 region who sort of operationalized this.

41 Q Thank you.

42 MR. CASS: Okay. So this, my involvement of this, Mr.
43 Commissioner, started at the national level in
44 2008. This document, I believe was finalized and
45 as Dr. Richards said, approved by the -- at the
46 national level. But the intent of this really is
47 to have a formal process by which we prioritize

1 from a long list of both regional and national
2 requests that come to Science from other sectors,
3 so that we had an open and transparent way of
4 prioritizing and assess what the, if you like, the
5 importance of the issue might be, and there are
6 some defined risk areas by which we've set out to
7 assess what the risk of not doing a particular
8 request for Science advice might be. But also to
9 recognize that there is a capacity issue in our
10 ability within Science, and perhaps resources and
11 collaboration with others outside of DFO in terms
12 of achievability of a particular request that
13 comes to Science.

14 So it really is a way to set out a consistent
15 national method for prioritizing requests that we
16 receive and to arrive at a schedule that is then
17 approved nationally, and then publicly available
18 on the national CSAS site. And that usually
19 occurs, or at least follows a call from, in the
20 case of the regions, from the Regional Director of
21 Science, to the other Regional Directors, to
22 provide a request through what's called the
23 Request Form, or Request for Advice Form, that
24 lays out the objectives, rationale, timing,
25 urgency, importance of the particular issue.

26 And then that call-out usually occurs, or now
27 I believe occurs in the fall of this year. So,
28 for example, around now or perhaps as early as
29 September there would be a call to Regional
30 Directors within this Region, for example, to
31 start preparing requests that would be sent to the
32 Centre of Science Advice office sometime in the
33 New Year. And I'm not sure what has happened this
34 year, but sometime at say after Christmas,
35 January-February.

36 And then there is within Science a review of
37 the list of requests in terms of using this
38 prioritization framework, if you like, based on
39 the five risk areas. There is a review to
40 understand the importance of the issue, and the
41 capacity or achievability of the -- of the request
42 as it comes.

43 And so -- and then there is a -- within our
44 Region here, we have a Regional Management
45 Executive Committee whose function now is to
46 review the list that has been assessed by Science
47 in terms of its importance as we see it, and as

1 the capacity within Science to review and approve
2 the list, and that then becomes the -- if you
3 like, the business plan for conducting the
4 assessments within Science over one or possibly
5 two years.

6 And so that's -- that's the intent of this
7 particular document, and but ultimately to arrive
8 at a schedule of assessment projects and
9 (indiscernible - background noise) based on the
10 priorities set.

11 MR. WALLACE: Thank you, Mr. Cass. Mr. Registrar, may
12 we mark the Procedure for the Development of the
13 Annual CSAS Peer Review Schedule as the next
14 exhibit, please.

15 THE REGISTRAR: Number 55.

16
17 EXHIBIT 55: Procedure for the Development of
18 the Annual CSAS Peer Review Schedule
19

20 MR. WALLACE:

21 Q Do I understand that the way advice, scientific
22 advice - this will be a gross oversimplification -
23 but the way it's developed is Science puts out --
24 invites the various consumers of scientific advice
25 within the Department for areas that -- or
26 projects that they wish to have pursued. Is that
27 step one?

28 DR. RICHARDS: Yes, Mr. Commissioner. As Mr. Cass
29 mentioned, what we would do on an annual basis is
30 that I would send out a call to my colleagues on
31 the Regional Management Committee and ask them
32 where they would need advice and what questions
33 they would need from Science over the next year,
34 or preferably longer. Because some of these
35 things take more time than just one year to
36 develop, and it's very useful if we can have more
37 notice. Because some of them may actually require
38 additional research, rather than just pulling
39 together existing knowledge. So that's -- yes, so
40 that is the -- the basic process that would be
41 followed.

42 Q Thank you. And then you receive the request and
43 then prioritizing is done by Science?

44 DR. RICHARDS: Well, yes and no. When we receive the
45 requests, Mr. Commissioner, the first thing that
46 we would normally do would be to try work with the
47 requestor to make sure that the question is --

1 that we understand the question, that it's
2 articulated and framed in a way which leads itself
3 to -- to an answer. You know, sometimes the
4 questions can be posed in ways that are not very
5 clear and we want to make sure that the intent,
6 that really is clear. So we will do some work
7 with the requestor to make sure that we understand
8 it.

9 We then need to look at the full array of
10 questions in light of, as Mr. Cass mentioned, we
11 -- or I think he mentioned, that we do have a
12 scheme to prioritize those various requests, that
13 we would look at in concert also with the capacity
14 within Science to deliver. You know, if all the
15 requests were on the same theme, for example, we
16 only have certain individuals who could prepare
17 those requests, and so we need to look at it in
18 the context of the workload of staff that makes
19 sense to be doing that.

20 Now, I might also say we didn't mention that
21 some of those requests, in addition to others
22 within the Regional Management Committee, or my
23 other colleagues, some of the requests may also
24 come up through Science itself, where we want to
25 make sure, for example, if there's some questions
26 around methodology, that those would be -- Science
27 needs to do that. We need to have that peer
28 reviewed. So Science -- the Science Sector itself
29 could also be one of the requestors of advice.

30 Furthermore, some of the questions, when we
31 look through these, really are more national in
32 scope than regional in scope. And in those cases
33 we would then have -- you know, Mr. Cass would
34 have discussions with his national counterpart and
35 some of those things may then be put through a
36 national peer review process, instead of a
37 regional peer review process. Because we want to
38 make sure that we have it best situated to get the
39 best advice, and make sure that we have an
40 opportunity for the widest scope of points of
41 view. And recognizing, you know, that decisions
42 need to be nationally consistent to the extent
43 possible.

44 So we would go through and try to prioritize.

45 We'd also look at, you know, if something
46 could not be done for workload, or sequencing
47 reasons, or the data weren't available in one

1 year, it could be put on to the schedule for next
2 year. But we would -- also would try to, you
3 know, to make sure that we do that with a
4 prioritization, that prioritization would then be
5 reviewed through, as Mr. Cass mentioned, a
6 regional committee that would then look and make
7 sure that we've got the appropriate balance
8 correctly, that the advice from one -- from one
9 requestor isn't getting more undue weight relative
10 to another. So that we have those tradeoffs
11 reviewed and we make a decision at that level
12 about how to go forward.

13 Q Thank you, Dr. Richards. Those are the
14 considerations that we find at Exhibit 53, where
15 from the describing the Science Advisory Process
16 Framework, there are nine considerations listed,
17 starting on page 4. Thank you. So those are the
18 considerations that go into that prioritization.

19 DR. RICHARDS: I think -- excuse me, Mr. Commissioner.
20 I think that those are not -- those are -- those
21 are certainly the background and those are the
22 context. I think in terms of the prioritization
23 itself it may be more about, you know, the urgency
24 of getting advice on certain issues, the perceived
25 risk that is involved. If something is a low
26 risk, it may have a lower weight than a high risk
27 area. So I think these are sort of general
28 considerations about whether something would make
29 it onto the list. But in terms of then
30 prioritizing the list, we would look at, you know,
31 other factors that would be involved.

32 Q Thank you. The next document I would ask you to
33 look at, Dr. Richards and Mr. Cass, is the Pacific
34 Science Advice Review Committee Terms of
35 Reference, and perhaps, Mr. Cass, I should put
36 this to you. These ones are -- can you have a
37 look at those. That's at Tab 10, Mr. Lunn. Can
38 you advise us if those are the current Terms of
39 Reference, or at least from your involvement?

40 MR. CASS: Okay. Now, I think the original Terms of
41 Reference that were developed as far as back as
42 1999, so there's been amendments to the existing
43 Terms of Reference over time to keep pace with the
44 changes that have occurred over time since 1999.
45 And my sense of this is that it is -- lags a bit
46 behind some of the changes that we've made, the
47 tweaking that -- the tweakings that we've made in,

1 say, the last five years, and the roles that the
2 Senior Management Committee, the Regional
3 Management Executive Committee plays, and in terms
4 of the roles of participants at meetings. But
5 generally they reflect the -- overall the
6 structure, organizational structure of the --
7 MR. WALLACE: Perhaps -- I still have a couple of more
8 questions on this, Mr. Cass, but perhaps we can
9 mark this as the next exhibit, the Pacific Science
10 Advisory Review -- sorry, Pacific Scientific
11 Advice Review Committee Terms of Reference.
12 THE REGISTRAR: Number 56.

13
14 EXHIBIT 56: Pacific Scientific Advice Review
15 Committee Terms of Reference
16

17 MR. WALLACE:

18 Q Mr. Cass, perhaps you might just briefly take us
19 through the -- the refinements of that process,
20 how -- how has it evolved and what are the
21 highlights of the process today.

22 MR. CASS: At the time that I became Chair of PSARC, if
23 you like, in 2002, these were the -- these were
24 the guidelines, if you like, or the terms of
25 reference for the PSARC process.

26 Now, really I think some of the changes
27 started in 2005, some of the significant changes
28 started in 2005 in terms of the role of the -- Mr.
29 Commissioner, the role of the Regional Management
30 Executive Committee. And the role was
31 reformulated in 2005 and 2006, I believe, a
32 Decision Paper was presented to the Regional
33 Management Committee for adoption. And the role
34 was changed really to emphasize the need to
35 prioritize or have a process to prioritize a
36 growing list, if you like, of requests. And as
37 has been already mentioned in Dr. Wendy Watson-
38 Wright's presentation this morning, the diversity
39 of requests has expanded, starting in the --
40 around 2000, mid-2000, 2005, if you like, to pick
41 a date.

42 The role -- or sorry, the diversity of
43 requests expanded beyond the traditional role of
44 providing science advice for Fisheries management
45 to a range of other issues, in particular to the
46 **Species at Risk Act** where the focus moved from
47 managing fish stocks to -- to advising in terms of

1 the legal obligations on the -- on the health of
2 species that were considered by COSEWIC to be
3 endangered, if you like, or threatened. So that's
4 one example of an area where the diversity has
5 expanded. Other areas are in dealings with the
6 **Oceans Act**, if you like, the ecosystem approach
7 that already has been mentioned.

8 So there was a range of -- and environmental
9 issues through -- there was a range of expanding
10 requests that resulted in a change in the way, as
11 has been mentioned, the way that we prioritize
12 requests. So that was one issue that was -- that
13 had changed is formalizing these requests.

14 We had started to do that within the Pacific
15 Region, if you like, ahead of the -- what was
16 arrived at nationally in the previous exhibit, I
17 believe, on -- on the CSAS National Framework for
18 setting the schedule. So the second -- so (1) we
19 reformulated the role of PSARC -- or sorry, of the
20 Regional Management Executive Committee.

21 We also emphasized full participation of all
22 of people invited to PSARC meetings, so that
23 everybody had equal rights in terms of their
24 emphasis or their -- their role at PSARC meetings.

25 And but in 2007 we -- Mr. Commissioner, we
26 started to think about how we open up the -- or at
27 least make more transparent the way in which we
28 prioritize PSARC requests within the Pacific
29 Region. So that's been a change, if you like, Mr.
30 Commissioner, from the original Terms of
31 Reference, or at least up to 2005, 2006.

32 And then of course the prioritization method
33 or scheme, if you like, was taken on nationally to
34 give national consistency across different
35 regions.

36 So I would say the two areas where these
37 particular Terms of Reference don't reflect the
38 current procedure, if you like, are the role of
39 RMEC, R-M-E-C, and the way in now which we
40 prioritize PSARC requests.

41 Q RMEC, tell me who is responsible for that and what
42 the acronym means.

43 MR. CASS: Sorry. Yeah, RMEC is -- the acronym is
44 Regional Management Executive Committee, chaired
45 by the Regional Director General. Its members
46 consist of the other Regional Directors, and so --
47 and maybe others may want to expand on this, but

1 its function was to --

2 Q We did hear about it before, I just wanted to --

3 MR. CASS: All right.

4 Q -- put it into this context. But it's a -- it's a
5 committee chaired by the Regional Director
6 General. It's (indiscernible - overlapping
7 speakers).

8 MR. CASS: That's correct.

9 Q Now, a couple of the matters you just referred to
10 are referred to in two more documents, which I'll
11 just put to the two of you. And the first is the
12 "Policy Governing Public Participation in the
13 Pacific Scientific Advice Review Committee",
14 that's a document which was amended in 2005 and it
15 seems to have involved both you, Mr. Cass and you,
16 Dr. Richards. Do you agree that you were -- that
17 reflects the public participation that Mr. Cass
18 was just describing?

19 MR. CASS: That's correct, Mr. Commissioner.

20 DR. RICHARDS: Yes, that's correct. That was the
21 policy that we had at that time. However, as Mr.
22 Cass just mentioned, there have been some more
23 recent changes to that policy. I believe that
24 document talks about two classes of participants,
25 one with observer status and one with full
26 participatory rights. At this point we have tried
27 to eliminate the observer status and have everyone
28 who is present at the meeting have full
29 participatory rights. So that is one change from
30 the document which is currently here.

31 MR. CASS: Maybe just to add, Mr. Commissioner, the
32 reason we have an observer status, or one of the
33 reasons is that in large part participants are
34 invited because of their -- their role is to be
35 objective and to bring with them some expertise
36 and knowledge on the particular subject that's
37 being reviewed. But they are invited as
38 individuals. They don't represent a particular
39 agency, like industry for example, but they're
40 invited as individuals. So that's the basis on
41 which they accept the invitation to the meeting.

42 There may be others that wish to observe the
43 deliberations, the review of the -- of the -- of
44 the PSARC meetings, but who are recognized or
45 within themselves are to be representatives of
46 other groups. So they're not there as individuals
47 perhaps, but they want to observe the -- the

1 meeting proceedings, but are still there as --
2 perhaps not as experts on the issue, but as -- as
3 representatives of other groups.
4 MR. WALLACE: Thank you. Perhaps the Policy then could
5 be marked as the next exhibit, the Policy
6 Governing Public Participation in PSARC from 2005.
7 THE REGISTRAR: Number 57.

8
9 EXHIBIT 57: Policy Governing Public
10 Participation in the Pacific Scientific
11 Advice Review Committee (amended 2005)
12

13 MR. WALLACE:

14 Q And then the next document I would take you to,
15 Dr. Richards, the Regional Management Committee
16 Decision Paper of April 2006, which I think
17 reflects the change that Mr. Cass just mentioned.
18 Is that correct?

19 DR. RICHARDS: Yes, that's correct, Mr. Commissioner.

20 MR. WALLACE: And that's -- if that could be marked,
21 then, as the next exhibit.

22 THE REGISTRAR: Number 58.
23

24 EXHIBIT 58: Regional Management Committee
25 Decision Paper of April 2006
26

27 DR. RICHARDS: Mr. Commissioner, that document also
28 includes some other comments that we referenced
29 earlier about how we can work within the Region to
30 make sure that we develop the appropriate list for
31 advice, and also how we then can bring it back and
32 have discussion at the Regional Management
33 Committee so that we can make sure that we inform
34 everyone later about what the results of those
35 decisions were. So there are multiple pieces
36 within this particular note.

37 MR. WALLACE:

38 Q Thank you. If I may direct you, Dr. Richards, to
39 the Decision Paper entitled -- this is a Regional
40 Management Committee Decision Paper entitled
41 "Prioritizing PSARC Requests" which appears in the
42 information at the bottom of the page to have been
43 dated June 1st, 2007. Can you identify that
44 Decision Paper for us, please?

45 DR. RICHARDS: Yes, Mr. Commissioner. This particular
46 paper, I think Mr. Cass already -- we've already
47 touched on this. The issue here is that we were,

1 as in fact mentioned by Dr. Wendy Watson-Wright,
2 having many requests for advice within -- for the
3 Science Sector, and we needed to have a way that
4 we could fairly and clearly prioritize amongst
5 those requests. So within Pacific Region we
6 developed a bit of a framework which is laid out
7 here, which in fact Mr. Cass largely developed,
8 and that was agreed on as a way to move forward.
9 So we'd have some kind of structure around which
10 to identify all the requests and put them in a
11 logical order and sequencing, so that we can make
12 sure that we did address the issues which were of
13 the highest priority, and also had an opportunity
14 to work where we had requests from -- from
15 different of the other Regional Directors. We had
16 a way to partition this in a fair way so that we
17 can make sure that we did address the highest
18 requests across -- across the range of sectors,
19 not all within one sector. So that was really the
20 purpose of this.

21 And then it was this process which was then
22 taken up nationally and led to a more refined
23 version, which is now used for setting priorities
24 at the national level.

25 MR. WALLACE: Thank you. May I have the June 1st, 2007
26 Regional Management Committee Decision Paper
27 entitled "Prioritizing PSARC Requests" marked as
28 the next exhibit, please.

29 THE REGISTRAR: That will be 59.

30 MR. LUNN: Mr. Wallace, there are five attachments with
31 that document. Did you want to mark those, as
32 well?

33 MR. WALLACE: May I get back to you on that. I don't
34 actually -- I don't have them in my book, so...

35 DR. RICHARDS: Yes. Mr. Commissioner, those
36 attachments are just sort of a work-through
37 example about how the prioritization process would
38 actually work. So it was really intended as more
39 background illustration as an example.

40 MR. WALLACE: Just then I would include them within the
41 exhibit. Thank you.

42
43 EXHIBIT 59: June 1st, 2007 Regional
44 Management Committee Decision Paper entitled
45 "Prioritizing PSARC Requests" with five
46 attachments
47

1 MR. WALLACE: Now, Mr. Bevan and Mr. Sprout, you were
2 introduced to the Commissioner earlier in the
3 week, so I won't do that again. I have a couple
4 of specific questions and then a general one for
5 each of you.

6 THE COMMISSIONER: Mr. Wallace, I wonder if I could --
7 I apologize for interrupting.

8 MR. WALLACE: Not at all.

9 THE COMMISSIONER: Just before you move on to Mr. Bevan
10 and Mr. Sprout, just for clarification on my part,
11 I believe one of the witnesses that you addressed
12 questions to talked about the Centre for Science
13 Advice, and just where does that fit within the
14 documents that that references? It may just be a
15 name change.

16 The other couple of matters, one witness
17 mentioned "capacity". Where does that fit within
18 the evidence and documents you've introduced
19 through these witnesses?

20 And thirdly, I'm a little confused. I
21 understood they were talking about requests for
22 projects from within DFO, but perhaps they're also
23 talking about requests for projects from, I think
24 one witness said "other sectors", and it wasn't
25 clear to me what that meant.

26 MR. WALLACE: Thank you, Mr. Commissioner. Let me just
27 then address those questions to any of the
28 panellists.

29 Q Dr. Richards, the Centre for Science Advice...

30 DR. RICHARDS: You know, as Mr. Commissioner indicated,
31 that really is a name change. There was a -- in
32 fact, it was -- the change was earlier at the
33 national level, and so nationally there was a
34 decision to call -- to have a Secretariat that was
35 called the Centre for Science Advice, and within
36 Pacific Region we were a little slow in picking up
37 that terminology, because we liked the name PSARC
38 so much. So we were -- but it was essentially
39 it's the same process and so now we have within
40 the last year really formally adopted the name
41 CSAS in Pacific, so we would be called Centre for
42 Science Advice Pacific. But effectively, that is
43 the same as PSARC, we were just slow in picking up
44 that terminology.

45 Q So C-S-A-C (sic) is the national --

46 DR. RICHARDS: Well, the Centre for Science Advice
47 Secretariat, is the --

1 Q CSAS. Yes.

2 DR. RICHARDS: Okay.

3 Q And then CSAP is what PSARC has evolved into, but
4 you can understand why they preferred PSARC.

5 The next question, Dr. Richards, one of the
6 issues I think you mentioned that you look at in
7 determining what to take on by way of projects is
8 capacity, so perhaps you might comment on that.

9 DR. RICHARDS: Yes. Well, and I think this might be
10 linked back to the discussion with Dr. Wendy
11 Watson-Wright this morning on the Science HR
12 strategy, Human Resources strategy, where we
13 recognize that, you know, we do have -- it's very
14 skilled but also limited workforce, and we need to
15 be -- you know, if we have questions that are all
16 in the same subject area, our expertise is spread
17 over quite a wide range of subject areas. And in
18 one particular area we may only have one, or maybe
19 none, or maybe a very few people with expertise.
20 And if all the questions are on that one subject,
21 we cannot overload that one individual to do all
22 that work. So there may be a capacity issue
23 around addressing these questions that we would
24 need to reflect in our scheduling and the timing
25 of the issues that would be able to deliver. So
26 we would look at the prioritization piece of these
27 requests. We'd also look at the Science ability
28 to deliver on that.

29 Now, if we have certainly in the context of
30 where -- if we know these things are coming well
31 in advance, we could possibly hire other people to
32 take on some of that workload. But if it's a very
33 short-term request and it's a very specialized
34 technical area, we may not be able to do that. So
35 that is factored in, but it's all in the context
36 of ensuring that we are trying to deliver on
37 really what are the highest priorities.

38 Q Thank you. And the Commissioner's final question
39 was as to whether PSARC entertains requests for
40 projects other than from within DFO.

41 DR. RICHARDS: Mr. Commissioner, the process is really
42 defined to address questions that come for advice
43 from within DFO. So that is really what its
44 intent is.

45 Q Thank you. Mr. Sprout, I see from the minutes of
46 the Science Management Board that you were
47 involved, I think, in all of those meetings. I

1 wonder if you had anything to add to what Dr.

2 Wendy Watson-Wright mentioned this morning.

3 MR. SPROUT: Well, I was involved from 2005 to 2007.

4 It's a two-year rotating Chair for -- there's two

5 RDGs on the -- on the Board, one from the West

6 Coast representing the -- one from the West and

7 from the East. And the individuals are in place

8 for two years and they're replaced by a

9 counterpart. So I was in for a couple of years.

10 Then my counterpart in Central and Arctic sat in

11 for two years, and then I came back in at the end

12 of the -- I think 2009.

13 In terms of my general comments, I thought it

14 was a -- it was a very good decision by Wendy

15 Watson-Wright and then Deputy Larry Murray to

16 bring together a Science Management Board. I

17 thought that because at a very senior level in the

18 Department we really needed to focus on the

19 strategic direction of Science. And we needed to

20 have time when we weren't being interrupted by

21 BlackBerrys, we weren't dealing with a crisis or

22 an emergency of the day, which typically is how

23 the DMC functions. You're inundated by

24 challenges, and you're distracted. What I found

25 hugely beneficial about the SMB was a day, or a

26 day and a half, or two days of focus on Science.

27 and kind of talking about the long-term and what

28 are the issues that potentially are going to drive

29 decision-making in the Department, and what do we

30 think Science can contribute to and what are the

31 areas we should focus in on. So I was a very

32 enthusiastic supporter of the SMB as initially

33 conceived. Certainly for the two years that I

34 first sat on it.

35 Q Thank you. Mr. Bevan, you're here because you're

36 a consumer of Science and you've heard a lot about

37 the process of prioritizing and how so from your

38 perspective do you get involved at all in the

39 establishment of priorities that have been

40 discussed this morning?

41 MR. BEVAN: Only as a member of SMB. I was involved in

42 some of the discussions of the SMB and we were

43 looking at refocusing, as noted by Dr. Wendy

44 Watson-Wright and Dr. Mithani. We have a shift

45 away from single focus and single user to multiple

46 users. So there was a need of the Science

47 Management Board, and I was involved as the ADM of

1 Fisheries and Aquaculture Management at the time.
2 I recognize that we're not going to be the only
3 users, and recognize as well that our old focus on
4 one species had been a real problem. And the best
5 example of that was when we ignored oceanographic
6 shifts of a huge scale and couldn't factor those
7 into how we managed cod. We ended up continuing
8 fishing patterns that would not -- were not
9 sustainable, because we didn't understand the
10 risks posed by the changing ecosystem and the
11 price has been very large indeed for that.

12 So we -- I was part of those discussions that
13 talk about broadening out our focus, not being so
14 fixed on one piece of science, but rather having
15 broader.

16 And we also have a lot of discussions at
17 Headquarters between Resource Managers and the
18 Science people, to talk about what kind of
19 questions can be posed to Science. Because we
20 don't want to ask the old kind, which was: How
21 much fish is there? How much can I put in for a
22 total allowable catch? We wanted to find a
23 different way to pose questions to Science, and we
24 also had to have that kind of dialogue so that we
25 knew that we weren't asking unanswerable
26 questions, and that there was a reasonable
27 question being posed that was useful to
28 management, but also could be efficiently and
29 effectively answered by Science.

30 So that's the kind of involvement I had. I
31 didn't get into the region-by-region priority
32 setting at all.

33 Q Thank you, Mr. Bevan. Dr. Richards, there has
34 been mention of the Science -- National Science
35 Directors Committee, can you just advise us,
36 please, about that, what that group does.

37 DR. RICHARDS: Well, yes, and perhaps Dr. Mithani would
38 like to speak to that, as well. But from my
39 perspective, the National Science Directors, it's
40 a committee which is chaired by the Assistant
41 Deputy Minister of Science, or now Oceans and
42 Science. It includes on it all the Regional
43 Directors of Science, so my counterparts across
44 the country, as well as the key Director Generals
45 from the National Headquarters.

46 It's an opportunity to discuss items that
47 need to be addressed nationally by the Science

1 Sector, to talk about the priorities, to discuss
2 new programs, to discuss various issues and
3 particularly around the human resources and the
4 financial aspects that we need to discuss. It's
5 also an opportunity to ensure national
6 consistency, where in a lot of cases we need to
7 ensure that we have national consistency in our
8 approaches.

9 So it's -- there's -- the agendas tend to be
10 quite long and quite diverse within a number of
11 different items, mainly dealing with just the
12 administration of the Science organization, as
13 well as with key program elements within that.
14 But maybe Dr. Mithani would like to add something.

15 Q Yes, please.

16 DR. MITHANI: Thank you very much, Mr. Commissioner. I
17 just want to echo some of the things that Laura
18 Richards has said about -- about the National
19 Science Directors Committee. It meets every two
20 to three months and it's an excellent venue to
21 bring some of the national issues together, while
22 recognizing that there are some unique regional
23 issues that will probably come to the forefront
24 because we start off by looking at -- within each
25 region, what are some of the things that keep the
26 Regional Directors up at night. So people can
27 hear about various regional issues that are --
28 that are currently things that people are working
29 on.

30 So it is for national consistency, it is an
31 attempt to try and get some good -- some best
32 practices together. It's looking at a sort of
33 coherent approach to some of the science that we
34 do. It's really getting people together to talk
35 about human resources strategies, to look at areas
36 of expertise. So there is a lot that is covered.

37 We actually have these committee meetings on
38 a regular basis because it's really important for
39 National Directors to come together with Ottawa to
40 talk about these things because they are
41 important.

42 Q Just one very general question left for you, Mr.
43 Bevan and you, Mr. Sprout. Throughout these
44 hearings we will, I am sure, be faced with the
45 intersection between Science and management, the
46 advice received. We've heard about how the advice
47 is formulated and priorities developed. Do you

1 have any general observations about how processes
2 for distilling, receiving and acting on scientific
3 advice, first of all, nationally and secondly in
4 the region, or is it -- is it all going to be ad
5 hoc. Is there a process there that I might learn
6 about.

7 MR. BEVAN: No, there is a process. For taking
8 decisions, particularly ones that go to the
9 Minister, there's the process of developing a
10 briefing note, a memorandum for the Minister.
11 Affixed to that there will be some documentation
12 that might be looked at by the Minister, or looked
13 at by the Minister's staff. And then attached to
14 that there will be the Integrated Fisheries
15 Management Plan. And in all of that there will be
16 reference to the Stock Status Reports, in the case
17 of some fisheries. But in the case of Science
18 there will be reference in the memo itself to the
19 advice that would be needed to be considered by
20 the Minister in terms of harvest rates on weak
21 stocks, in terms of the drivers of the
22 implementation of the plan in the coming season,
23 and relevant to coho and chinook and weak stocks
24 such as Cultus, et cetera. Those then are
25 discussed with the Minister. A decision is taken,
26 and that then goes back out to the Region.

27 I should say that all of this material comes
28 from the Region. It's originated in the Region.

29 There is some dialogue between Region and
30 National Headquarters. We'll have the West Coast
31 Resource Managers will be talking with the people
32 developing the note, as well there will be -- the
33 note will go through an approval process to go to
34 the Minister. It will involve the managers,
35 certainly, but it will also involve signoff by
36 Science, and once everyone is satisfied with the
37 content of the note, it goes to the Minister for
38 consideration.

39 So it does incorporate Science and I am sure
40 that Paul Sprout will be able to provide you with
41 more of the detail on this process that's
42 undertaken in the region.

43 Q Thank you. Mr. Sprout?

44 MR. SPROUT: If I could, I'd like to speak to the first
45 part of your question. I think David has covered
46 off the other aspect, which is the intersection of
47 Science and management. And I'm interpreting your

1 question quite broadly, management being fisheries
2 management. It could include all sorts of other
3 aspects of management.

4 Q Indeed (indiscernible - overlapping speakers).

5 MR. SPROUT: In my view, this morning, what you've
6 heard is the formal processes the Department has
7 put in place to effectively channel and use the
8 resources it has against the Science priorities
9 that it has identified, and there are various
10 national documents that were discussed by Wendy
11 Watson-Wright, and then there are regional
12 documents that have been elaborated on briefly by
13 my two colleagues here in the Region.

14 But I think to get to your question, you need
15 to also think about other inputs, which I don't
16 think have been discussed so far today. Because
17 in this -- in the Region, we have meetings and
18 processes where we meet with different clients.
19 So we meet with commercial fishermen, recreational
20 fishermen, First Nations. We meet with
21 environmentalists. We have meetings that talk
22 about habitat and so forth. All of those
23 exchanges involve usually discussions around
24 issues, or concerns, and frequently related to
25 Science. And therefore you're exchanging and
26 you're conversing, and as DFO people, both
27 scientists and fishery managers, you're bringing
28 that back into your formal processes, for example,
29 in Science.

30 So, for example, in this Region, when we --
31 when I chair the Regional Management Executive
32 Committee, which is the committee that tries to
33 sort of prioritize the -- the limited capacity of
34 Science to do everything into a list that can be
35 done, the Regional Directors that are around that
36 table with me are talking about some of the
37 perspectives that their clients are providing.
38 And they're advocating or encouraging certain work
39 in certain areas.

40 So in Fisheries Management, for example, Sue
41 Farlinger, when I was the RDG, when she was the
42 Director of Fisheries Management, might make an
43 argument for we need to do a chinook stock
44 assessment work because we have problems with
45 Fraser River chinook, and First Nations are
46 flagging this issue, as are other parties, and so
47 this is an important priority. Then someone else

1 might say, well, this is a priority, a different
2 client. And what we're trying to do is to come up
3 with a list at the end of the day that allows the
4 capacity of Laura's people to be met, but not
5 exceeded.

6 And so I think this informal input haven't
7 been reflected today -- and I can go on.

8 We have not talked about international treaty
9 arrangements. I was the former head of Canada's
10 delegation for the Canada/U.S. Pacific Salmon
11 Treaty. So in that process, which has a very
12 significant Science phase, we're interacting with
13 our American colleagues, with Canadian
14 participants, including recreational fishermen and
15 First Nations and others, and we're talking about
16 Science issues. And again that comes back into
17 the process of the Department.

18 so I wanted to speak about that intersection
19 because I really believe that the description
20 today was fine, but it does not -- it's not
21 comprehensive. It's not as broad as in fact all
22 the inputs that I perceive and see that influence
23 Science ultimately and the decisions the
24 Department eventually takes on what are the
25 Science priorities of the Department.

26 Q Thank you. Mr. Bevan?

27 MR. BEVAN: If I could just add something, and just to
28 point out that when we talk about Science, there's
29 a tendency to focus on the researchers or on the
30 sectors and organization. But there's an awful
31 lot -- it's a science-based Department, so there's
32 an awful lot of people engaged in activities that
33 could be seen as science.

34 For example, in the Habitat Program there are
35 many Habitat biologists. They're engaged in
36 determining if there's a harmful alteration or
37 destruction of fish habitat. They don't
38 necessarily all go to Science with questions. So
39 it may be simple enough that the biologist there
40 in that program will make that kind of
41 determination and doesn't need to refer questions
42 to Science.

43 We also have in this Region biologists
44 associated with Resource Management. So again
45 there's people with a science background
46 conducting science-type activities, that are not
47 included in this kind of process because they're

1 operational and they're operating from within a
2 sector that's not Science.

3 So I just wanted to point out that there's
4 more to it than just what's in the process we've
5 been discussing this morning.

6 MR. WALLACE: That's very helpful. Are there any last
7 comments from anyone on the panel?

8 Mr. Commissioner, those are my questions for
9 this panel, and it's just coming up to half past
10 12:00.

11 THE COMMISSIONER: Right. It's been a long morning and
12 I think it's appropriate for a break.

13 But perhaps after the lunch break, just
14 briefly, Mr. Wallace, and again this is just for
15 my understanding from this group of witnesses,
16 when they talk about -- there's been a lot said in
17 the last couple of days about ecosystem and how
18 that concept works its way through these documents
19 and in the actual day-to-day activities of the
20 DFO. But to the extent that other government
21 departments are considering ecosystem issues, for
22 example in the Natural Resource area, or in the
23 environmental field, Environmental Assessments,
24 and so on, what is the crossover between the work
25 that's being done by employees of DFO with others
26 who may be engaged in similar activities across
27 the government spectrum where there's some
28 interrelationship.

29 And it would just be helpful for me to know,
30 because I think most of everything they've said so
31 far seems to be in-house. Mr. Sprout described a
32 process in-house of conversations and dialogues,
33 but is there any conversation and dialogue that
34 would overarch all of the activities that
35 government is engaged in when it comes to the
36 ecosystem. So that would be helpful for me just
37 briefly, if they can. If it's not convenient,
38 that's fine. But if they can, that would be
39 helpful.

40 MR. WALLACE: Thank you.

41 THE COMMISSIONER: We'll take the break, then. Thank
42 you.

43 THE REGISTRAR: The hearing is now adjourned until 2:00
44 p.m.

45

46 (PROCEEDINGS ADJOURNED FOR NOON RECESS)

47 (PROCEEDINGS RECONVENED)

1 THE REGISTRAR: The hearing is now resumed.

2 MR. WALLACE: Good afternoon, Commissioner Cohen.

3 Brian Wallace, Commission counsel. Just before we
4 get to the question you left with the panel, Mr.
5 Commissioner, I just want to remind participants
6 and counsel that the Commission, by its terms of
7 reference, can only publish things simultaneously
8 in both official -- make public things
9 simultaneously in both official languages -- not
10 doing well in even one of them.

11 As a result, the transcripts which you get on
12 a daily basis are -- you receive under the
13 undertaking of non-disclosure. That undertaking
14 pertains until we are able to publish them on our
15 website, which we are doing as quickly as we can,
16 but they require translation before we do that, so
17 I would just ask that you treat the transcripts,
18 until they're on our website, the same way as you
19 do the documents which you receive through the
20 discovery process.

21 That's different from the exhibits. We've
22 come to the conclusion that the exhibits are not
23 things being published by the Commission, so we
24 are not translating exhibits. They are published
25 on the -- posted on the website when they are
26 filed. The policy and practice reports, and in
27 due course the science reports, we are
28 endeavouring to translate before they're presented
29 here as evidence, so they are ready to go on the
30 website when they're produced here.

31 I just would confirm that tomorrow morning,
32 we do have at least three participants have
33 indicated the likelihood that they will have
34 questions for Dr. Wendy Watson-Wright, so the
35 possibility that you might not be -- it might not
36 be necessary to be here at 8:30 is gone. We will
37 be here at 8:30 tomorrow morning.

38 Which brings us to your question, Mr.
39 Commissioner, to the panel which I have in a very
40 summary form, and I would just put it to you,
41 which I'm sure you have a better grasp of it than
42 I do.

43
44 EXAMINATION IN CHIEF BY MR. WALLACE, continuing:

45
46 MR. WALLACE: It's the interrelationship of DFO science
47 and other governmental departments with interests

1 in the same areas such as the Ministry of the
2 Environment and others. So perhaps we'll start
3 with you, Mr. Bevan.

4 MR. BEVAN: Thank you. There are indeed some
5 interdepartmental committees, Mr. Commissioner,
6 that do deal with the science question. There's
7 the Science and Technology Committee which is
8 actually led by Deputy Minister Dansereau, and
9 there's also the Climate Change/Environment
10 Committee. Those, however, talk about
11 coordination at a very high level, so the work
12 that would then result, coming out of that, would
13 not necessarily translate into something that
14 would inform management decisions at DFO.

15 There's also been the International Polar
16 Year, and there's some northern strategy that
17 brings together activities of several departments,
18 but again, those are very high level and are not
19 useful in determining whether or not or what
20 specific impacts there would be on productivity
21 relevant to fisheries.

22 So if we know, for example, oceans are
23 warming or this acidification, the question is
24 what does that mean in terms of risks, and how do
25 we manage those risks, then, I think that takes
26 more specific attention from inside the Department
27 of Fisheries and Oceans Science.

28 Q Thank you, Mr. Bevan. Dr. Richards?

29 DR. RICHARDS: Yes, thank you, Mr. Commissioner.
30 Certainly on our program level, we do have
31 collaborations with other departments because we
32 recognize that we need that other expertise to
33 make a fully rounded program, and that we also,
34 within Fisheries and Oceans, have expertise that
35 can contribute.

36 For example, we do have agreement with
37 Environment Canada particularly on global climate
38 modelling since we have the expertise on the ocean
39 side. We have two or three oceanographers that
40 are working very closely with scientists at
41 Environment Canada on the global climate
42 modelling. So there are pieces like that where we
43 work with interactions where needed to make sure
44 that we have a fully-rounded picture, can put that
45 fully-rounded picture and share our expertise
46 across departments where required.

47 Q Thank you. Any other comments in response to the

1 Commissioner's question?

2 Thank you, Mr. Commissioner. This would
3 bring us to the Government of Canada.

4

5 CROSS-EXAMINATION BY MR. TAYLOR:

6

7 Q Continuing for the moment, if I may, with the
8 Commissioner's question, as I heard it, and if
9 I've not got the Commissioner's question quite
10 right, I'll put it as my own question, then.

11 Underlying the question, I think, was an
12 interest in knowing what processes are there and
13 means are there government-wide to have
14 collaboration and consistency within government on
15 the science side and, at the same time, to avoid
16 duplication; in other words, synergy and
17 leveraging to build off each other and to avoid
18 doing over again what's done before.

19 Maybe I'll start at the regional level. Is
20 there anything more that you would like to say on
21 that, Dr. Richards?

22 DR. RICHARDS: Well, yes, Mr. Commissioner. Where
23 appropriate, we can enter into memorandums of
24 understanding with other departments. We would
25 normally do that on a project-specific basis where
26 we want to work on a specific project, to
27 collaborate, to share expertise. But most of this
28 really is done on a project-specific basis except
29 for a few cases, as I mentioned, where we actually
30 have staff that are co-located with Environment
31 Canada, for example.

32 Q Is there anything, Mr. Cass, that you would add to
33 that in terms of different federal government
34 departments pulling together or sharing either
35 research or information and sharing advice,
36 perhaps, even, science advice?

37 MR. CASS: Mr. Commissioner, the only thing I can add
38 is we have had occasion where we've invited a
39 representative of science from different
40 departments; in particular, Environment Canada.
41 Other than that, I have no knowledge on other --

42 Q All right. Mr. -- I'm sorry, Dr. Richards?

43 DR. RICHARDS: Yes, sorry, I just forgot to mention an
44 extremely important collaboration which is perhaps
45 relevant, which is at the Institute of Ocean
46 Sciences. We actually have the Pacific Geoscience
47 Centre which is in the same facility, so in this

1 case, we have a very strong connection that's
2 being built between Natural Resources Canada and
3 Fisheries and Oceans Canada, because we have both
4 our oceanography group and their geoscience group
5 which are co-located. Because of that co-
6 location, we do have other synergies that are
7 really relevant to the whole system of, you know,
8 how we work together and share across ecosystems,
9 and they're bringing their mapping, their
10 expertise on the ocean floor into our expertise in
11 the ocean water column.

12 In addition, at the Institute of Ocean
13 Sciences, we have one scientist from Environment
14 Canada, who is also co-located there, who is
15 working on the birds. So we have something from
16 the atmosphere, the ocean and the ocean floor all
17 co-located, which really does help with those
18 synergies. So, you know, that is a main mechanism
19 that we use for integration.

20 Q Mr. Sprout, on this same topic, and as the
21 Regional Director General until approximately June
22 of this year, do you have anything to add in this
23 vein? And that is from your perspective as
24 Regional Director General, the working together of
25 federal departments in either preparing science
26 advice, doing science research, sharing
27 information and that sort of thing?

28 MR. SPROUT: I don't think I have anything substantive
29 to add other than to say that there are numerous
30 collaborative agreements between the department --
31 other federal departments with provincial
32 government that are typically project-related.
33 They're around an issue.

34 I have nothing further to add as well to the
35 other point I thought the Commissioner asked which
36 was: Is there something over-arching on
37 ecosystem-based science that cuts across all
38 departments? I'm not aware of that. Others here
39 may wish to speak to that, but I thought that was
40 a point that the Commissioner had raised, so I
41 would add that from my perspective.

42 Q All right. Maybe on that first -- sorry, Mr.
43 Bevan, it looked like you wanted to add something.

44 MR. BEVAN: Yes, I would add that we have a joint
45 project with NARCAN on mapping the extent of the
46 continental shelf. That's not directly related to
47 the fish or ecosystem at large, but it does

1 provide another data source.

2 I think the one where we do have more
3 collaboration is on the climate change question,
4 but again, that's at a high level. It doesn't
5 really help inform specific management decisions.

6 Q NARCAN, that would be Natural Resources Canada,
7 would it?

8 MR. BEVAN: That's correct.

9 Q And the collaboration on climate change is with
10 what department?

11 MR. BEVAN: With -- Environment is key, but it's with a
12 variety of departments.

13 Q Dr. Mithani, do you have anything to add to either
14 -- well, mainly the question as to what
15 collaboration or coordination or other cross-work
16 there is between federal departments?

17 DR. MITHANI: Sure. Thank you very much. Mr.
18 Commissioner, first of all I want to just confirm
19 what Mr. Sprout has talked about with respect to
20 the fact that there isn't a government of Canada
21 framework for ecosystem science as it exists right
22 now, but there are certainly lots of tables where
23 there is science policy integration.

24 So where Mr. Bevan has talked about the
25 Deputy Ministers' committees on the climate and
26 science and technology, we do have similar
27 Assistant Deputy Minister committees on science
28 and technology that involves Environment Canada,
29 Natural Resources, Health Canada and other
30 science-based departments. We've also got
31 something called the Northern Committee or the
32 Arctic Committee where there is also the inclusion
33 of INAC, which is Indian and Northern Affairs as
34 well as the Department of National Defence. We
35 meet on a regular basis to talk about some of
36 those science policy linkages and issues that
37 touch all our interests.

38 Q Dr. Mithani, I'm not sure if this relates to the
39 same committee that Mr. Bevan was speaking of or
40 not, but are you aware of a Deputy Minister
41 committee on science, and is that the same one Mr.
42 Bevan was speaking of?

43 DR. MITHANI: Yes, it is. It's the Science and
44 Technology Committee that Deputy Minister
45 Dansereau is champion of.

46 Q Yes. And you anticipated my question which is
47 there's a concept of champions within the federal

1 civil service, is there?

2 DR. MITHANI: Yes, there is.

3 Q And can you just elaborate on what you said about
4 champion and the Deputy's role?

5 MR. BEVAN: The Deputy is there to lead the discussion
6 of the Deputy Ministers and to chair that process
7 as champion. So it's to bring to the group, or
8 through a particular process, various issues for
9 discussion.

10 Q Okay. Thank you. Now, for the Commissioner's
11 benefit and perhaps so that it's perhaps all on
12 one page, there's a couple of acronyms used this
13 morning that I just want to see if we can be clear
14 for everyone what they are. There's RMC, and
15 maybe I'm looking to Dr. Richards or Mr. Sprout on
16 this. But you'll be familiar with RMC. Can you
17 just say what that is?

18 DR. RICHARDS: Yes. Mr. Commissioner, RMC stands for
19 Regional Management Committee, so that is the
20 committee that is chaired by the Regional Director
21 General and includes basically most of the direct
22 report to the Regional Director General and deals
23 with management issues in the region.

24 Q And you're a member of that, are you, Dr.
25 Richards?

26 DR. RICHARDS: Yes, I am a member of that committee.

27 Q Then there's also -- I think I've got the letters
28 right -- RMEC?

29 DR. RICHARDS: Yes. That stands for the Resource
30 Management Executive Committee and basically that
31 is also chaired by the Regional Director General.
32 I also sit on that committee.

33 Basically what that committee does is it's
34 the committee which -- there has been some change
35 in function of that committee over time.
36 Previously, that committee used to receive the
37 Science advice, but at this point, we have a much
38 more direct link now to the Science advice being
39 passed and communicated. So, at this point, the
40 function of that committee is really to address
41 the prioritization of annual requests for advice,
42 and to agree on what the priorities are so that we
43 have -- agree amongst the committee so that
44 science has a list of priorities and a list of
45 agreed documents that it will prepare for advice
46 for the coming year.

47 So that's currently the main function of that

1 committee.

2 Q Are you able to approximate the time or year when
3 there was a change from what you were describing
4 as a role it used to have to a slightly different
5 role now?

6 DR. RICHARDS: I think it was in the mid-2000, so
7 around 2005.

8 Q All right. There has been reference in the
9 evidence from this panel and from Dr. Watson-
10 Wright to science research and Science advice.
11 The words, of course, are different, one from the
12 other, but I expect that there's probably, within
13 the Science sector, a difference in meaning
14 attached to those. Maybe I'll start with Dr.
15 Richards. You've got your mike on I can see. Can
16 you just speak to that, and then I'll go to Dr.
17 Mithani.

18 DR. RICHARDS: Yes, certainly. I think the reference
19 is really -- and Dr. Watson-Wright described it
20 this morning. We're putting the overall framework
21 document for how we're going to proceed in
22 Science. We needed to have some way to divide it
23 up into pieces that we could address. So it was
24 really an attempt just to divide it up into pieces
25 that we could address. So it was really an
26 attempt just to divide it up and so that we could
27 more simply and clearly explain the work that
28 science does.

29 So as was described this morning, there are
30 number of different functions within the Science
31 program. One of them was monitoring, one was data
32 management, one was research, one was advice and
33 the other was development of products and
34 services. Obviously these are all linked. You
35 need to do the monitoring and the data management
36 in conjunction with the research, will then lead
37 to the advice and will lead to the products and
38 services.

39 So, really, in terms of advice, we're
40 thinking of the formal endpoint, the more formal
41 process of developing -- writing advisory
42 documents, going through the review process.
43 However, in order to have developed those
44 documents, there would have to have been research,
45 and there would have to have been data management
46 and monitoring to get the data on which that
47 advice would have been generated.

1 Q Okay. Dr. Mithani, did you want to speak to that?
2 DR. MITHANI: I would just add that clearly the process
3 continues to remain the way it is, Mr.
4 Commissioner. But, in addition to that, we are
5 now looking at how the Science sector can really
6 be proactive in being able to look at the science
7 needs of the future, and some of the work that we
8 will be doing now and beyond is really identifying
9 those areas and being able to work on them right
10 now so that when those big policy questions come
11 into play, Science will be ready with the
12 information to ensure that good policy decisions
13 and good policy development takes place.

14 Q Now, moving on, part of one of the Commissioner's
15 questions this morning had to do with what's meant
16 by "sector", and it's a term that's been used a
17 fair bit and will continue to be, I expect. Can
18 we just see -- have clarity on the use of the word
19 "sector", Mr. Bevan?

20 MR. BEVAN: Yes, and I can understand the confusion,
21 because we use it in several different ways. But
22 relevant to our own organization, sector is
23 something like the Ecosystem and Fisheries
24 Management is a sector. It's headed by an ADM, in
25 that case by a senior ADM and an associate ADM.
26 They have certain functions that they oversee in
27 conjunction with the regions.

28 Another example would be, let's see, like
29 Science and Oceans would be a good example because
30 there, there's a mirror in the regions to some
31 extent. So there's a relationship between the
32 ADMs and the Regional Directors, and that's how we
33 organize ourselves, if you recall back to the
34 organization charts. The Deputy had a number of
35 ADMs reporting to her, and each one of those would
36 head a sector.

37 Q So the -- am I understanding you to say that
38 sector is used in the sense of unit with both
39 headquarters and unit within the regional office.

40 MR. BEVAN: That is generally correct. There are some
41 differences. With the reorganization, there is no
42 longer, for example, a direct link in the region
43 that would mirror the Ecosystem and Fisheries
44 management, because it's broader. So there are
45 Regional Directors of FAM, Fisheries and
46 Aquaculture Management, which is a component of
47 the Ecosystem and Fisheries Management sector, and

1 there's a relationship between them and the ADMs'
2 staff.

3 So there's a Director General of Resource
4 Management in the Ottawa organization, in the
5 Ecosystem and Fisheries Management sector, and
6 they have a direct relationship with the Directors
7 of Resource Management. There's a Director
8 General of Conservation and Protection, and has a
9 direct relationship with the Regional Directors of
10 C&P, Conservation and Protection in the region.

11 So there is a relationship that exists
12 between people in the Ottawa organizations and in
13 the regions. But it's not always the case that
14 the regions are organized exactly along the same
15 lines as Ottawa. So, for example, there might be
16 a Regional Director of Science, and another
17 Director of Oceans, that both of those would have
18 a relationship with Ottawa.

19 Q All right. So, at the regional level, Dr.
20 Richards, would it be correct to refer to your
21 unit as the Science sector in the region? Is that
22 how you call yourselves, a sector?

23 DR. RICHARDS: Well --

24 Q Or do you call yourself a section or unit or what?
25 I'm just trying to get at the word "sector".

26 DR. RICHARDS: Yes, unfortunately I think -- sorry, Mr.
27 Commissioner. I think our language does get a
28 little confusing, and even in the region it's very
29 confusing.

30 Technically within the region, I would be
31 called a branch. But in terms of the broader
32 context in dealing with the group in Ottawa, we
33 would call it the sector. So it's -- I'm sorry,
34 it is a bit more confusing. But technically, our
35 regional organizational unit would be called a
36 branch.

37 Q Okay.

38 MR. BEVAN: Just to make it really confusing, of
39 course, if we're talking about sectors in
40 industry, that's a different nomenclature, so that
41 would be recreational, aboriginal or commercial.
42 We sometimes just say, okay, those are different
43 sectors, et cetera. So we are rather loose with
44 our language.

45 But internally, it means that there's a
46 sector head, an ADM in Ottawa, responsible for a
47 group of activities that are part of the process

1 that contributes to the strategic outcomes. They
2 are not always mirrored in the regions, but there
3 are people in the regions that aggregate up to the
4 Ottawa sector. So, for ecosystems and fish
5 management, it includes Fisheries and Aquaculture
6 Management, it includes the issue of salmon
7 enhancement and it includes the habitat and Small
8 Craft Harbours programs. They all report to the
9 sector, one way or the other, up through to the
10 sector head in Ottawa.

11 Q All right. Thank you. So just summing up, then,
12 when you hear the word "recreational sector",
13 that's a sector with a small "s", I take it.

14 MR. BEVAN: That's correct. It has nothing to do with
15 the organization inside DFO.

16 Q All right. And then we've heard from one there's
17 formal sectors within the Department.

18 Dr. Mithani, can you elaborate - and I don't
19 think there's been too much said already -
20 elaborate on the role of Science at headquarters,
21 the Science sector at headquarters, of which you
22 are the head, with the regional work.

23 DR. MITHANI: Thank you for the question. Mr.
24 Commissioner, the role of Science in headquarters,
25 first of all, Science is a delivery program, so
26 the role of Science in the Department of Fisheries
27 and Oceans is to provide information and objective
28 advice to the sectors within the Department of
29 Fisheries and Oceans. So here we are talking
30 about objective advice that comes from the
31 research, the information, the monitoring, the
32 data management that is being done within the
33 Science sector. So, from that perspective, we are
34 a service organization that actually delivers a
35 service to the sectors within the Department of
36 Fisheries and Oceans.

37 Q And then how do you relate and interact with Dr.
38 Richards and other people in the Pacific Region,
39 for example, in concrete terms or day-to-day work
40 if I could put it that way.

41 DR. MITHANI: We have several mechanisms through which
42 there is a close relationship between the
43 headquarters and various regions. The first
44 mechanism is that of the National Science
45 Directors' Committee. As I said, it meets every
46 two or three months where we do talk about best
47 practices, we do talk about regional issues, we

1 talk about consistency across the country. We
2 talk about national issues as well. That's the
3 one.

4 There is also a connection or a partnership,
5 a linkage, between the various directorates within
6 the Science sector, so if it wasn't complicated
7 enough, based on what you heard just previously,
8 within the sector we have directorates, so at this
9 point in time, I have four directorates. One is
10 the oceans directorate, the other is the ecosystem
11 science directorate, the third is the science
12 strategic interaction or integration directorate,
13 and the fourth is the Canadian hydrographic
14 services.

15 All these directorates are headed by a
16 Director General. There is a relationship between
17 those Director Generals and the various -- their
18 counterparts across the region. So when issues
19 come up, there is an interaction between Director
20 Generals and Regional Directors. There is the
21 National Science Directors' Committee.

22 Also, what we have now implemented in the
23 last month are bilaterals, bilateral meetings or
24 teleconferences that happen between Regional
25 Directors and myself so that we are all kept in
26 the loop in terms of the unique issues that happen
27 within regions and that headquarters is linked
28 effectively.

29 Q All right. Dr. Richard, you have a working
30 relationship, I take it, with one or more of the
31 Director Generals that Dr. Mithani just referred
32 to?

33 DR. RICHARDS: In fact, I hope I have a good working
34 relationship with all of them, and I do talk to
35 all of them quite regularly, depending on the
36 issue that comes up. So the telephone works very
37 well. We're also in very regular email
38 correspondence.

39 Q The Commissioner has heard something about the
40 matrix management model already, but bringing it
41 home to your work, Dr. Richards, and your branch
42 or sector, as it's sometimes called, can you
43 explain, from an operational sense, how it works?
44 How do you relate and work with and report to and
45 through, on the one hand, Ms. Farlinger now, Mr.
46 Sprout before, and it sounds like multiple
47 Directors General and Dr. Mithani.

1 DR. RICHARDS: Yes, certainly. I realize it's quite
2 complicated, Mr. Commissioner, and it's sometimes
3 complicated for us as well. But basically, the
4 Regional Director General in the region, Pacific
5 Region, is my direct supervisor, so I am directly
6 accountable to that person. At the start of every
7 year, I develop an accord with that person, and
8 that has certain expectations on deliverables for
9 each year. We go and review those at mid-year and
10 at year-end.

11 Through the Regional Director General, I also
12 sit on the Regional Management Committee which is
13 an opportunity for me to then talk to all of my
14 colleagues, my counterpart Regional Directors in
15 Pacific Region, and an opportunity to interact
16 with them and to hear their views and to have a
17 joint dialogue on various issues.

18 Also, the region has other committees besides
19 the Regional Management Committee to focus on more
20 specific issues such as the Strategic Directors
21 Committee, which is a subset of the Regional
22 Management Committee, but that's used to discuss
23 and have a bit more focus and opportunity to
24 discuss certain policy-type related issues.

25 There's also the Operations Committee which
26 is also a subgroup of the Regional Management
27 Committee, and on that committee, we would focus
28 it more on sort day-to-day operational issues that
29 we need to discuss.

30 So that's part of it.

31 Q And just picking up on something that Dr. Richards
32 said, Mr. Sprout, she said that you, up until
33 June, Ms. Farlinger now, is her direct superior.
34 Is that because the Regional Director General, the
35 role that you recently had, is the person
36 accountable for the delivery of federal government
37 services within a given region and, in this case,
38 the Pacific Region and for the Department of
39 Fisheries and Oceans? That is, you were
40 accountable for all of that work within British
41 Columbia and the Yukon?

42 MR. SPROUT: That's correct. I'm ultimately
43 accountable for the implementation of the policies
44 and programs and activities consistent with the
45 resources we receive.

46 Q And then at one and the same time, the subject
47 area expertise, science, which is what we're

1 talking about right now, of course has a real need
2 and desire to be working with and in conjunction
3 with the Ottawa science people.

4 MR. SPROUT: Yes. Earlier this week, we explained the
5 matrix model of the Department of Fisheries and
6 Oceans, and so you have the ADMs of the sectors in
7 Ottawa who have the functional responsibility,
8 which is the policy direction. The regions have
9 the responsibility to implement that direction
10 within the resources received. The Directors that
11 report to the RDG take the policy direction and,
12 within the resources, implement that direction.
13 They're accountable for their activities within
14 their area of responsibility, as I am more broadly
15 within the entire region.

16 Q Thank you. Mr. Cass, turning to publication by
17 scientists, you've spoken of the peer review
18 process at some length this morning, and that
19 comes into play in this question, which is: Can
20 you briefly explain the practice and protocols
21 within the Department of Fisheries as it relates
22 to Department of Fisheries scientists publishing?

23 MR. CASS: I can comment, Mr. Commissioner, on the
24 publications and documents that would emerge from
25 the peer-review process which is distinct from
26 other publications in peer-reviewed journals that
27 aren't part of DFO's peer-review process for
28 advice.

29 But we have a number of products in the peer-
30 review process that are outcomes of meetings, and
31 one of them is called a research document which is
32 a finalized version of -- Mr. Commissioner, a
33 finalized version of a working paper which is a
34 draft submission to the PSARC, which is now CSEP
35 (phonetic) Committee, and if that's approved and
36 based on revisions following the review, then that
37 becomes a research document which is, in fact --
38 could be a rather intensive technical document
39 that presents the information as far as the
40 analyses and results and recommendations.

41 Then there is also -- and that is authored by
42 the key people who actually did the analysis and
43 write the report, the research document.

44 Q All right.

45 MR. CASS: Sorry, then there is also -- I'll just
46 finish up. Then there's also what's called the
47 Science Advisory Report, which is a DFO product.

1 It's not authored by an individual, but that one
2 is now emerged as the key document which
3 summarizes the advice that goes forward from the
4 reviews.

5 There are proceedings documents which are
6 essentially now minutes of the individual review
7 meetings. But those are documents that come from
8 the peer review process.

9 Now, Dr. Richards, Mr. Commissioner, might
10 want to comment on other functions that scientists
11 undertake as far as publications go.

12 Q Yes. Can you take it broader, then, Dr. Richards?
13 I understand Mr. Cass to have spoken to
14 publications that are DFO documents that are
15 authored by scientists. Moving beyond that, are
16 there practices and protocols that apply?

17 DR. RICHARDS: Yes, Mr. Commissioner. In terms of the
18 way that Science functions, we do have
19 international peer-review journals and scientists
20 are expected to publish regularly in those
21 journals. In fact, those -- that publication
22 practice is sort of factored into their promotion,
23 their career advancement process.

24 But in terms of that publication, the normal
25 procedure would be that there would be a review
26 mainly for quality and also just to ensure that
27 things are, to some extent, that we've walked a
28 bit of a line between the science and what's done
29 in Science and whether there's some stepping over
30 in a policy. Certainly scientists are free to
31 work on their science, and we would encourage them
32 to publish that work. But there is a -- it does
33 tend to be a minor review of that prior to
34 submission to the journal that would be done by
35 someone in my direct reporting line, not myself.

36 MR. TAYLOR: All right. I should perhaps mention, Mr.
37 Commissioner, that the panel of witnesses have a
38 total of four binders, two sets of two binders in
39 front of them which are the documents that the
40 Commission has been circulating around which are
41 exhibits that were put in this morning and earlier
42 this afternoon. Some of the witness members of
43 the panel, I understand, find it easier to have
44 paper in front of them, so that's what those
45 binders are.

46 Now, Mr. Sprout, I want to -- I thought they
47 did. They do now. Thank you, Mr. Registrar.

1 Q Mr. Sprout, I'd like to have you, if you would,
2 drawing on your years of experience through the
3 2000s as the Regional Director General, an
4 associate before that, I recall you came into that
5 role in 2003. Drawing on your years of experience
6 in the region, can you briefly describe for the
7 Commissioner how Science advice has been used by
8 fisheries managers in this region to address and
9 deal with the management of Fraser sockeye? So
10 I'm trying to see if you can bring this home to
11 some of the particular interest and topics that
12 the Commissioner will be wanted to get at.

13 MR. SPROUT: Well, it would be used in a variety of
14 ways. If I could just pause for a moment and
15 explain how the cycle of fisheries management
16 works, very briefly.

17 There's a pre-season forecast that typically
18 takes place a year to two years before the fish
19 come back. Then a fishing plan is developed prior
20 to the season beginning. Then the fishery occurs
21 in the season and then the fishery is evaluated at
22 the end of the season and the fisheries
23 populations are assessed at the end of the season
24 as they are assessed during the season. So that's
25 a snapshot of the fishery process. I could
26 elaborate in much detail.

27 During that process that I've just described,
28 Science is involved in every step. So, for
29 example, Science, at the very initial part of the
30 process where we're doing the forecast, will
31 provide a forecast. So that forecast will go
32 through a peer-review process along the lines that
33 Mr. Cass explained and will eventually be provided
34 to the Department to the various fishery
35 management officials and the various sectors, and
36 I mean outside sectors, now, commercial,
37 recreational and so forth, and will ultimately
38 become the formal basis under which we will
39 forecast the return for sockeye in that particular
40 year.

41 Now we move to the planning process. So now
42 we're trying to develop what we call the
43 Integrated Fisheries Management Plan. So that's
44 the plan that says, okay, with this forecast, what
45 are the scenarios that we're going to apply to
46 harvest Fraser River sockeye? What are the
47 conservation objectives? What are the restraints

1 that we need to apply to assure ourselves that
2 we're following our policies, wild salmon policy,
3 precautionary approach, et cetera.

4 Again, Science would be participating in that
5 process. They may have been asked to provide
6 answers to some of the questions that I've just
7 framed. They would be potentially participating
8 in the integrated process with the other sectors,
9 recreational, commercial and First Nations, but
10 they would be part of that process to develop the
11 IFMP.

12 Now, I'm going to move into the in-season.
13 So now the fish are coming back from the North
14 Pacific. They're entering into British Columbia
15 waters, top end of Vancouver Island, the bottom
16 end of Vancouver Island. Now we have procedures
17 in place to assess those populations. We have
18 boats that we charter. Those are typically
19 commercial boats. They go out and they catch fish
20 at a certain spot at a certain time, and then that
21 information, then, becomes the basis to calculate
22 how many fish are coming back. So Science would
23 be involved in that working with the Pacific
24 Salmon Commission, which I understand you will be
25 going into a lot of detail in a couple of weeks on
26 the harvesting side, so I will not describe that
27 relationship in detail, other than to say that
28 there's a relationship and our Science people are
29 involved.

30 Okay. Now the fish are coming back, they're
31 being assessed. Now we're fishing the fish.
32 Openings are being held, fish are being caught,
33 and you're recalculating the run size now, because
34 based on the catch in the commercial fisheries, or
35 the other fisheries, you're re-estimating the run.
36 This is a dynamic system. Every day you're -- and
37 possibly by hour -- you're revising the runs. So
38 Science is involved in that, working with
39 colleagues in the Pacific Salmon Fisheries
40 Commission.

41 Now, as the season -- the fishing season
42 concludes, the fish now are moving onto the
43 spawning grounds. Here we will move into our
44 stock assessment mode where our scientists and
45 biologists and technicians are enumerating the
46 fish on the spawning grounds. There are
47 significant enumeration techniques that you will

1 probably be exposed to later which I will not go
2 into detail that Science leads.

3 Then finally, we will do an evaluation of how
4 well the season went, what happened. We forecast
5 this, what happened at the end of the day in terms
6 of catch, return, exploitation rate and numbers of
7 spawners. Science will be involved in that
8 assessment as well.

9 Then the cycle that I've just described,
10 which is a one-year cycle is repeated the next
11 year and the next year and the next year, so that
12 is done every year.

13 On top of that, Science also looks more
14 strategically at longer term. It looks at the
15 Fraser returns over a period of time to take into
16 context trends in returns. So not just annual
17 changes, but changes over time. So Science will
18 do modelling work around that and all of the
19 information that they have along these lines will
20 inform the fishery managers, inform the integrated
21 advisory processes I spoke of, and then
22 potentially becoming incorporated into the IFMP
23 plans for any particular year.

24 Now, this is a light overview of the role of
25 Science. I can go into much more detail. I can
26 also describe other advisory processes, that I
27 have not gone into detail, that Science
28 participates in, that Laura Richards referred to
29 very briefly. But I'll take a cue if you wish me
30 to do that.

31 Q Okay. Well, just -- I think I will have a couple
32 of questions on that, but before we go there, may
33 I ask, from your time as Regional Director
34 General, how important was the Science input or
35 involvement, as you put it, in the fisheries
36 management work that you've just described?

37 MR. SPROUT: It's foundational. We have to figure out
38 how many fish are going to come back. We have to
39 figure how many fish we should catch, how many
40 fish should be allowed to escape, and we have to
41 understand as well as we can how the fish are
42 behaving.

43 The bulk of what I've just described would be
44 generated by our Science staff.

45 Q Now, Mr. Bevan, at one or more junctures along
46 this one-year cycle that Mr. Sprout has described,
47 does this science work that's going on in the

1 region in one form or another, come up to the
2 national level and engage you and others at that
3 level, you being formerly the Assistant Deputy for
4 fisheries management essentially, and now moved to
5 Associate Deputy.

6 MR. BEVAN: Yes, there's two -- a few points.

7 Generally, there's work done, as Paul Sprout
8 mentioned, on the assessment after the season, so
9 that's something that we're aware of and keep
10 track of, but there's also a forecast for the
11 coming season. We don't like going to the
12 Minister with a great tome. The Integrated
13 Fisheries Management Plans are quite dense
14 documents. We don't like going there with a short
15 time frame for the Minister to consider things,
16 and present the Minister with all sorts of
17 difficult choices on a very short timeline.

18 So there's a tendency for us to seek input
19 from the region -- or they provide us with the
20 material, and that is founded on science, but it
21 also will say these are the types of choices you,
22 as the Minister, are going to have to make when
23 the time comes for approval of the Integrated
24 Fisheries Management Plan.

25 It will outline some of the challenges. It
26 could be conservation imperatives for various
27 species, coho, chinook, salmon, Cultus Lake being
28 a good example of sockeye salmon.

29 So it'll outline the general types of
30 decisions that the Minister will be having to take
31 as well as what's expected in terms of the kinds
32 of challenges and opportunities that the fishing
33 season is likely to represent.

34 Then closer to the time for the fishery to
35 commence, we go to the Minister with a more
36 detailed decision note, and ask the Minister to
37 approve the Integrated Fish Management Plan, but
38 more importantly, from a science point of view at
39 that particular level, is the need to, say, we
40 must take the following actions to conserve co-
41 migrating weak stocks of coho and chinook on the
42 west coast of Vancouver Island or Cultus Lake
43 sockeye, for example.

44 There'll be a number of those issues that we
45 need to get the Minister to decide on so that that
46 then, in season, the managers will have direction
47 from the Minister as to what parameters they're to

1 manage the fishery to.

2 All of that, again, the forecast note -- or
3 the what's coming in this season as well as the
4 IFMP, those are all founded on Science advice.

5 Q Thank you. And, Mr. Sprout, were the processes
6 that you described, and then Mr. Bevan expanded on
7 from the Ottawa side, in place for the 2009
8 season?

9 MR. SPROUT: Yes, they were.

10 Q Now, there's been some talk of -- oh, before we go
11 to this, you spoke of some processes that you had
12 in place, Mr. Sprout, to do with Science, vis-à-
13 vis management of Fraser sockeye, I think it what
14 you were getting at. Can you briefly outline what
15 processes you're referring to?

16 MR. SPROUT: I was speaking of two levels of processes.
17 One is there are really fundamental questions
18 around what are your conservation objectives on
19 the Fraser River, what are the exploitation rates
20 you should apply, and so forth.

21 So the Department in the region has initiated
22 a process to answer some of those questions and
23 work with various groups. Mr. Cass, or possibly
24 Laura, would be in a better position to address
25 that particular aspect. So that's one set of
26 processes.

27 The set of processes that I'm most familiar
28 with are the processes like the Regional
29 Management Committee, the Operations Committee,
30 the Regional Management Executive Committee that
31 we've already talked -- Resource Executive
32 Committee we've already talked about, Strategic
33 Directions Committee, these are all committees
34 that Science sits on that are internal to DFO
35 where Science is participating in the decisions of
36 the region, and bring into the regional decision-
37 making process their perspective from Science.

38 That gets juxtaposed or added from Regional
39 Directors from Habitat and Oceans, from policy,
40 from fisheries management and -- because what I
41 think is really important is that Science needs to
42 be integrated into the process. It's not
43 isolated. It's not of itself. It's part of a
44 bigger framework and it needs to be considered
45 along with other inputs.

46 So that's what I was referring to in more
47 detail, and Mr. Cass could explain better than I

1 the conservation-related processes that I referred
2 to.

3 Q All right. Mr. Cass, Mr. Sprout has deferred to
4 you on the conservation-related processes.

5 MR. CASS: Mr. Commissioner, one example, I suppose,
6 that I had been involved with, is the -- and Mr.
7 Sprout indicated that the Science and, in this
8 case, fish management is an integrated process.
9 Science has been involved over the course of, I
10 would say, probably seven or eight years now in a
11 -- here's another acronym -- in what's been called
12 the Fraser River Sockeye Spawning Initiative,
13 which is really, as Paul Sprout was alluding to, a
14 way to develop a rules-based system for
15 determining, based on the abundance of, in this
16 case, Fraser sockeye that's returning or estimated
17 in season, a rule that allocates, based on that
18 estimate of abundance, what the harvest rate
19 applied to that would be.

20 It's not -- Science's involvement has not
21 been in terms of allocation of what would be
22 estimated to be the catch for a given year, but
23 certainly in terms of developing conservation
24 strategies and -- that is compliant with, as has
25 been spoken to already today, the precautionary
26 approach, but also to the principles in the wild
27 salmon policy.

28 So Science has been involved with the
29 modelling work that Paul Sprout talked about and
30 has been clearly integrated in the development of
31 a policy for harvest strategy for Fraser sockeye.
32 That has been an inclusive process, stakeholder-
33 driven, that, as I said has gone on for some years
34 now, and driven by eliciting objectives from
35 various stakeholders in multiple workshops that
36 have occurred over the past seven or eight years.
37 So that's an example -- a good example, I think,
38 of where Science has integrated with a process for
39 managing Fraser sockeye.

40 Q Okay. Thank you. We've heard something about
41 Cultus sockeye, and no doubt we'll hear more.
42 You're all familiar with that. I'll put this
43 question to the panel and then see who best
44 amongst you see who you think best to answer it.

45 But I'd like for someone to describe how the
46 scientific advice has been used by the Department
47 with regard to conserving and rebuilding the

1 Cultus Lake sockeye. This of course is a sockeye
2 that -- there was, as I understand it, a decision
3 taken not to put it under **SARA** but to instead use
4 the **Fisheries Act** to address some issues about
5 that particular stock. So who best amongst you to
6 speak to how Science advice was used and, if you
7 like, a real example sort of way, by the
8 Department to -- worked into the conserving and
9 rebuilding of that stock.

10 DR. RICHARDS: Okay. Mr. Commissioner, I will begin
11 the answer to that question, and I think my
12 colleagues then can elaborate.

13 Certainly at that time, we realized that we
14 did need to have more information around this
15 particular stock. We did --

16 Q What is that time, just to interrupt for a moment?
17 Approximately.

18 DR. RICHARDS: Mid-2000s.

19 Q Thank you.

20 DR. RICHARDS: And so, as part of that, we did generate
21 some proposals for some additional work. Those
22 proposals were then put into a national funding
23 strategy for funding that was received under the
24 "Species at Risk", and there were a number of
25 additional projects that were then undertaken, and
26 the results of those projects to then feed into
27 how we could rebuild and opportunities to rebuild
28 for the Cultus Lake stock.

29 When we started this, there was -- certainly
30 were a lot of information gaps. We were certainly
31 lacking some very specific information, for
32 example, information on some of the competing
33 species for juveniles -- or sockeye within the
34 lake itself, how they interact. Where there ways
35 that we could improve the survival success of the
36 -- you know, the egg to the fry to the smolt stage
37 of the juvenile sockeye.

38 We also did some improvements on actually
39 counting the returns. We put in a fence at
40 Sweltzer Creek, which is on the -- which is the
41 stream that feeds into Cultus Lake, so that we
42 could measure both the number of adults and get
43 better counts of those going in, and also the
44 smolts getting out.

45 I think there were a few others. Perhaps Mr.
46 Cass could speak to some additional pieces.

47 MR. CASS: Well, there's, I guess, two processes if you

1 want to call them that. There's -- there has been
2 a Cultus -- I might have the word wrong here --
3 but Cultus Conservation Working Group that has
4 been working over several years now to develop and
5 assess the impact of various projects that are
6 aimed at trying to rebuild the Cultus sockeye. As
7 Laura alluded to, in particular a within-lake
8 fishery, if you like, predator control fishery,
9 for a lack of a better series of words, to assess
10 the effect of removing a particular voracious
11 predator in the lake, pike minnow, and so that's
12 one element.

13 There is also a number of -- and there's some
14 other programs that are involved with that as
15 well, trials, for example, to remove Eurasian
16 milfoil; hatchery supplementation to kick-start,
17 if you like, the wild population, to raise the
18 number of juveniles leaving the lake, to increase
19 the chance of rebuilding, recovering the stock in
20 a reasonable time frame.

21 There has been several peer-review processes
22 that have occurred within DFO's PSARC framework.
23 The latest was in May, I believe, this year. So
24 there has been sort of ongoing Science involvement
25 with attempting to assess the recovery potential
26 of Cultus sockeye that obviously has included
27 changes to the fishery regime by reducing the
28 harbour strait (sic) on the component of the
29 fishery that would intercept Cultus sockeye. So
30 that's --

31 MR. TAYLOR: Thank you. That's helpful. Does any
32 other panel member want to add anything to what's
33 been said to do with Cultus sockeye and Science?
34 No? All right. Thank you.

35 I have three more questions, Mr.
36 Commissioner, which of course have sub-questions
37 to them. It's three o'clock. Do you want me to
38 push on or take a break?

39 THE COMMISSIONER: I wonder if I could just ask you to
40 perhaps explore, if you think it convenient, just
41 one query, Mr. Taylor, before we break. It comes
42 out of, I think, essentially what Mr. Cass and Mr.
43 Sprout have been talking about, but it's this: In
44 Mr. Spout's description of the pre-, during and
45 post-fishery -- and he was fair. He said he was
46 giving an overview. He wasn't giving all the
47 detail.

1 But where in that -- because this came up in
2 the description of what was called an exclusive
3 program regarding stakeholder-driver initiatives.
4 I think you were talking about Cultus at that
5 point.

6 But where in that pre-, during and post-
7 fishery is there stakeholder involvement in the
8 process of examination, investigation and
9 ultimately decision-making by DFO around the
10 openings and so on? You touched on it. And in
11 fairness to you, you were giving an overview, but
12 you didn't mention anything about exchange or
13 interchange between the stakeholders and DFO.

14 MR. SPROUT: No. And so I will now cite each aspect of
15 the cycle pre, during and post. There are
16 advisory processes in which Science, fisheries
17 management, other departmental sectors or programs
18 are working directly with other constituents from
19 the recreational, First Nations,
20 environmentalists, commercial, to discuss first of
21 all the forecast. Then to do the fishing planning
22 which produces the fish -- which produces the
23 scenarios around how the fishery might operate
24 based on estimations of what might come back.

25 Then, in season, there's a fishery advisory
26 process that meets -- on the case of the Fraser
27 River it's called the Fraser Panel -- and that
28 panel meets sometimes every day, certainly every
29 week through the course of the season. The season
30 typically begins sometime toward the middle of
31 June and terminates sometime toward the beginning
32 of September.

33 Then post-season, the information from the
34 season that's past plus the information from the
35 spawning ground assessments that's underway, then
36 it's provided back to the advisory processes that
37 then determine how the season went relative to
38 what was expected, and that's where the
39 discussions will occur with the various groups
40 that I've just outlined in terms of their views
41 and opinions on how the season went.

42 Now, Mr. Commissioner, what I've described is
43 just the tip of the consultation, because
44 supporting what I've just described, if I could
45 just go on now to talk about First Nations. I
46 said that there is a process to involve First
47 Nations in the pre-season forecast. They're

1 involved in the in-season fishery process on the
2 Fraser Panel, and they're involved in post-season.

3 But additionally, below that level, we have
4 numerous interactions at a bilateral basis with
5 First Nations communities up and down the Fraser
6 River, and outside the Fraser, outside the Fraser
7 River in areas the where First Nations have a
8 strong presence and have typically harvested
9 Fraser sockeye, like, for example, in Johnstone
10 Strait.

11 So we have bilateral discussions that are
12 going on at the community level with those groups.
13 That information is used to various extents in the
14 advisory processes that are occurring in-season
15 and post-season where the participation by First
16 Nations is more limited.

17 Further, we have separate discussions in
18 addition to the bilateral consultations I just
19 spoke of with First Nations, with First Nations
20 organizations. At the organizational level, like
21 for example, the Fisheries Council, which is a
22 regional body, someone like myself will meet with
23 them and some of the questions that may come up at
24 that organizational meeting are questions on
25 Fraser River salmon, which may then get referred
26 back to a community, or referred to a workgroup
27 comprised of First Nations and DFO to work on a
28 particular issue that arises.

29 On the commercial side, we have commercial
30 advisory processes throughout the coast. They are
31 commercial advisory processes that are tied into
32 each gear group and each gear area, so there's
33 seine, gillnet and troll. We also have advisory
34 processes that bring them all together, seine,
35 gillnet and troll, in one process.

36 We also have recreational processes
37 throughout the coast where we meet geographically
38 with different First -- recreational groups
39 throughout the coast and then bring them all
40 together in one group called the Sport Fishery
41 Advisory Board.

42 And finally, we have one process where we
43 bring representatives from each of the three main
44 components plus environmentalists together into an
45 integrated process where we go through the pre-
46 season forecast, the in-season plan -- the
47 preparation of the IFMP, and components of those

1 four groups are involved in the Fraser panel
2 discussions, and finally involved in the post-
3 season evaluation.

4 The consultation arrangements we have in the
5 Pacific Coast are numerous, they're comprehensive,
6 they're designed to provide as much input as
7 possible into the plans, into the execution of the
8 fishery, into the evaluation, notwithstanding all
9 the controversy around them.

10 Q I think it's implicit in what you're saying, Mr.
11 Sprout, but in all of what you've been describing,
12 is the science work that's been done, being fed
13 into the advisory and consultative processes that
14 you're speaking of, that is, being shared with the
15 people you're consulting with and the advisors and
16 so forth?

17 MR. SPROUT: As I remarked on earlier when this
18 question was put to me, the science is
19 fundamental. The science provides the forecast.
20 Science works and provides information which
21 ultimately becomes decisions on exploitation rate,
22 harvest rate, escapement goals.

23 Q And that science is part of the information being
24 shared in the consultative and advisory processes,
25 is it?

26 MR. SPROUT: Yes.

27 MR. TAYLOR: Thank you. Does that answer your
28 question, Mr. Commissioner?

29 THE COMMISSIONER: Yes, thank you very much, Mr.
30 Taylor. We'll take the break now.

31 THE REGISTRAR: The hearing will now recess for 15
32 minutes.

33
34 (PROCEEDINGS ADJOURNED FOR AFTERNOON RECESS)
35 (PROCEEDINGS RECONVENED)
36

37 THE REGISTRAR: The hearing is now resumed.

38 THE COMMISSIONER: Mr. Taylor?

39 MR. TAYLOR: Mitchell Taylor, Commissioner, continuing
40 with questions.

41
42 CROSS-EXAMINATION BY MR. TAYLOR, continuing:
43

44 Q Panel, and I'll let you decide amongst yourselves
45 who best to answer this, there was mention made
46 this morning, and it was Mr. Bevan, I think, that
47 there are biologists and scientists pocketed

1 around the Department of Fisheries in the Pacific
2 Region other than those in the Science sector.
3 And he spoke of, in very brief terms, some of what
4 they -- who they are and what they do. Without
5 going into detail, is there one of you, or one or
6 more of you that can give a capsulized statement
7 of what scientists are there other than in the
8 Science sector, and what do they do? I'm talking
9 about the Pacific Region.

10 MR. SPROUT: Well, my understanding in terms of David's
11 question is are there other biologists in the
12 Pacific Region that are not part of the Science
13 branch or part of the Science sector?

14 Q Yes.

15 MR. SPROUT: Is that the question?

16 Q Yes.

17 MR. SPROUT: And the answer to that is yes. So there
18 are biologists in habitat, principally. So in our
19 Habitat and Oceans Group, which is a branch which
20 is part of this -- now of the Science sector,
21 which combines science and oceans, in that group,
22 we have a number of people with biological degrees
23 and their job is to, in the case of habitat, to do
24 assessments of habitat in relationship to
25 developmental proposals. A developmental proposal
26 might be the construction of a road near a creek,
27 the construction of a bridge over a river, or
28 major developmental proposals like mining
29 development and other activities of major
30 consequence, run-of-the-river hydro development.
31 In all cases, we have biological staff biologists
32 who are part of the Habitat group who undertake
33 the assessments that are necessary to determine
34 whether, in fact, the developments comport, or
35 not, with our policies or environmental
36 legislation and ultimately to provide advice or
37 decisions. So that's a significant group.

38 We also have biologists in our Oceans group.
39 These people are principally involved in
40 consultations around the establishment of marine-
41 protected areas and the advancement of the oceans
42 agenda more broadly, which has a number of sub-
43 components besides the one I just noted. And we
44 have some staff in there that have biological
45 degrees or biological accreditation.

46 We may, as well, but I am not positive, have
47 biologists in our Policy Sector and in some of the

1 other -- our Policy Branch, which is part of the
2 Policy Sector, or others, but the principal one, I
3 think, is the one I mentioned, and I'll just defer
4 to my colleagues here if they've recalled others.
5 Oh, Fish Management, yeah, right.
6 Q All right. That's helpful, thank you.
7 MR. SPROUT: Okay.
8 Q Dr. Richards, I don't think this has been said yet
9 in evidence so I'll ask the question. In
10 approximate terms, how many employees are there in
11 the Science Sector of the Pacific Region?
12 DR. RICHARDS: In terms of people equivalents, that is,
13 you know, parts of people adding up to a full year
14 of work within the sector --
15 Q Sometimes called an FTE, or a full-time
16 equivalent --
17 DR. RICHARDS: Sometimes --
18 Q -- in Federal civil service terms?
19 DR. RICHARDS: -- that -- yes, that's correct, Mr.
20 Commissioner. So in terms of FTE equivalents, we
21 have -- formally, we have 466 as our formal number
22 that we have within the sector. Of that number,
23 about 120 or so of that are staff that would be
24 part of our matrix organization and working in the
25 area offices under area directors. So then in our
26 matrix organization, they would not be reporting
27 up through me, but they would be reporting more to
28 area directors, who would then have a direct line
29 reporting relationship to the Regional Director
30 General.
31 Q But those are not people that Mr. Sprout was
32 speaking of a moment ago, are they?
33 DR. RICHARDS: That's correct. They would be formally
34 part of the Science Sector.
35 Q All right.
36 DR. RICHARDS: But they're not actually part of Science
37 Branch so it does get, unfortunately, a little bit
38 confusing in terms of our terminology.
39 Q And in general terms, what are they doing?
40 DR. RICHARDS: Those are staff who are largely doing
41 the programs on the salmon enumeration so those
42 are the people who are out in the field collecting
43 data on numbers of returning sockeye, for example,
44 and working -- and being part of the consultations
45 that Mr. Sprout described, working within their
46 communities and within their various offices and
47 regions. Also, they're very active in providing

1 advice through various committee processes such as
2 various of the committees under the Pacific Salmon
3 Treaty.

4 Q All right. And so there's 120 of your 466, or so,
5 that are in area offices --

6 DR. RICHARDS: Mm-hmm.

7 Q -- and then the rest are where?

8 DR. RICHARDS: The rest are located within the Science
9 Sector, itself, and the -- sorry, within the
10 Science Branch, and those, we have four
11 laboratories. The Institute of Ocean Sciences,
12 the Pacific Biological Station, the West Vancouver
13 Laboratory, and the Cultus Lake Laboratory. And
14 in addition, we have a few staff that I mentioned
15 earlier are located at some other sites, for
16 example, a few staff who are located -- co-located
17 with Environment Canada on campus at the
18 University of Victoria in the Centre for Climate
19 Modelling and Analysis. We also have a group of
20 staff who are on campus at Simon Fraser
21 University, and that is one of the groups that is
22 working on the Fraser -- doing Fraser-related
23 research.

24 Q Okay. And of the four main locations you spoke
25 of, and I think we all know, and the Commissioner
26 will know, where Cultus Lake is, the West Van.
27 facility is near the Capilano -- it's on the
28 Capilano River, isn't it?

29 DR. RICHARDS: No, it's not, but it is located on
30 Marine Drive, in West Vancouver, about halfway
31 down to Lighthouse Park.

32 Q Then the Pacific Biological Station is the one at
33 Nanaimo?

34 DR. RICHARDS: Yes, that's correct, it's in Nanaimo.

35 Q And Institute, and I'll get the name slightly
36 wrong, of Ocean Sciences, is in Pat Bay, near
37 Sidney, on Vancouver Island?

38 DR. RICHARDS: Yes, that's correct, Mr. Commissioner.

39 Q Of your 466 people, approximately, how many are
40 scientists?

41 DR. RICHARDS: Okay. Mr. Commissioner, within the
42 organization, we have different classifications of
43 personnel. The scientist classification requires
44 that staff have a PhD, and their position is one
45 which their level is based on -- incumbent based,
46 it's based on their experience and their
47 knowledge, their expertise and past service.

1 We have, approximately, 55, about 55 within
2 that category. Now, we have other staff in a
3 biologist category who also may or may not have
4 PhDs, but they may have higher degrees.

5 Q And they'll definitely have a science degree?

6 DR. RICHARDS: They will definitely have a science
7 degree.

8 Q And how many of them?

9 DR. RICHARDS: I'm sorry, I don't have the exact number
10 of that.

11 Q Well, approximate is fine.

12 DR. RICHARDS: I'm --

13 Q Not coming to mind?

14 DR. RICHARDS: Well, I just haven't seen the numbers.
15 I think, basically, what we have in our -- of that
16 group, we have the main bulk of the individuals,
17 probably 75 percent in the organization will be
18 within three categories. The scientist category I
19 just mentioned. We also have a category that we
20 call technicians that are in a label called EG,
21 and those individuals require some kind of
22 specific technical expertise, but do not require a
23 degree. They do require some other formal
24 training. And then the biologist category. And
25 probably, the bulk of the remainder of the staff
26 are in those three categories.

27 We do have some staff in other categories
28 that are more involved in, say, the oceanographic
29 program or the Canadian Hydrographic Services.

30 Q All right. Thank you. I think I'm hearing you
31 saying, if I could sum up, that about 75 percent
32 of your 466 people are either scientists with a
33 PhD, or biologist category, or technician
34 category?

35 DR. RICHARDS: I think that's approximately correct.

36 Q That's fine. And this is a question of Dr.
37 Mithani or Mr. Bevan, just in ball park terms, and
38 I think there's been some evidence on this before,
39 but how many employees are in the Department as a
40 whole, and how many employees are in the Science
41 Sector?

42 MR. BEVAN: There's, approximately, 10,500, or
43 thereabouts because, as you can appreciate, that
44 number is in constant flux.

45 Q Right.

46 MR. BEVAN: But it's around that level, 10-and-a-half
47 to 11,000. I'll let you --

1 DR. MITHANI: And the Science Sector, across the
2 country and headquarters would be about 1,700.

3 Q All right. And Dr. Mithani, that 1,700, does that
4 include the 466 that Dr. Richards just spoke of?

5 DR. MITHANI: Yes. Yes, it does.

6 Q Thank you. Now, I won't ask you to go into
7 detail, Dr. Mithani, but is it the case that there
8 is collaboration between the Department of
9 Fisheries and Oceans and not only other government
10 departments, but also with universities and with
11 other governments outside of the Federal
12 government, and with other countries?

13 DR. MITHANI: Thank you for your question. Mr.
14 Commissioner, one of the things that Dr. Watson-
15 Wright had talked about, and that same element
16 does continue even right now, is that external
17 partnerships are extremely important for us. So
18 when I talk about -- when I talked earlier about
19 the brainstorming visioning session that we had
20 with the scientists, one of the things that was
21 very clear was that all the science that we
22 needed, that the Department needed, clearly could
23 not be done by DFO and that external partnerships
24 were going to be very important and are very
25 important.

26 So as we did the exercise in looking at some
27 of the areas that we will need to look at with
28 respect to science needs, we also looked at the
29 important partnerships that either we will have to
30 develop or that have already been developed. So
31 that included institutions within Canada,
32 universities, other government departments,
33 similar -- our counterparts, government
34 counterparts in other countries. So this is
35 something that is very important in terms of the
36 science that is going to be generated in order to
37 meet the science needs of the Department.

38 Q Okay. Thank you. Dr. Richards, are there
39 scientists within the Pacific Region that are
40 specifically doing research and giving science
41 advice on agriculture?

42 DR. RICHARDS: Yes, Mr. Commissioner.

43 Q And are those scientists people other than the
44 individuals who are on this panel that you're
45 with?

46 DR. RICHARDS: Yes, Mr. Commissioner.

47 Q And you're not one of the people that --

1 DR. RICHARDS: No, Mr. Commissioner, at this point in
2 my career, unfortunately, I cannot do science
3 myself so I am a science manager.

4 Q All right. And you're aware, are you, that those
5 other scientists' names have been given to the
6 Commission and are going to be coming forward
7 later to give evidence about science in the
8 context of aquaculture?

9 DR. RICHARDS: Yes, Mr. Commissioner, I'm aware that
10 many of those staff, in fact, quite a large number
11 of staff have already been interviewed by
12 Commission counsel and I expect that several of
13 those, at your discretion, will be called as
14 witnesses.

15 Q All right. Thank you, Panel members, those are my
16 questions. Mr. Commissioner.

17 THE COMMISSIONER: Thank you, Mr. Taylor.

18 MR. WALLACE: Thank you, Mr. Commissioner. The next
19 person who I have on my list, working numerically,
20 takes me to the Salmon Farmers Association, Mr.
21 Blair?

22 MR. BLAIR: Good afternoon, Mr. Commissioner, members
23 of the Panel. Mr. Commissioner, with the
24 Commissioner's permission, I'd like to go later in
25 the batting order. That's related to the issue
26 this morning regarding document production and the
27 objections which may be made if some of the
28 documents which my friends have indicated they
29 wish to tender -- I'd like to be able to follow
30 that, if I may?

31 THE COMMISSIONER: Very well.

32 MR. BLAIR: Thank you.

33 MR. WALLACE: Mr. Commissioner, that takes us to Mr.
34 McDade, for the Aquaculture Coalition.

35 MR. McDADE: It's Gregory McDade for the Aquaculture
36 Coalition. I'll have a few questions for the
37 Panel in respect of the management of the Science
38 Division and in respect of questions relating to
39 how you deal with risk and prioritizing risk.
40

41 CROSS-EXAMINATION BY MR. McDADE:
42

43 Q Perhaps we could go first to the five-year
44 research agenda. That might be the most
45 convenient place to start.

46 MR. BEVAN: Which exhibit number is that, Mr. McDade?
47 I'm sorry.

1 Q I'm looking for it.

2 MR. LUNN: I have Exhibit 40.

3 MR. McDADE:

4 Q Exhibit 40. That would be the one. Like Mr.
5 Taylor, who wanted to ask his questions in a real-
6 world environment around Cultus Lake, I'd like to
7 ask you -- I'd like to focus a little bit on how
8 these research priorities play out in something
9 like aquaculture or fish disease. I wonder if we
10 could turn to page 8 of that document. There's a
11 heading, "Aquatic Animal Health." Are we on the
12 right page? Sorry?

13 MR. LUNN: We're on the printed page 8.

14 MR. McDADE:

15 Q Let me see where we're at, here. I seem to have a
16 different version. Part 6, it must be a few pages
17 later. There we go. "Aquatic Animal Health,"
18 yes. So this is the document you were discussing,
19 or that we've heard both the witness and the Panel
20 discuss. Maybe my questions might best be aimed
21 at Dr. Richards.

22 Now, this isn't specific to aquaculture, this
23 is generally the question of fish disease.

24
25 Disease outbreaks can have major ecological
26 effects on aquatic resources and severe
27 impacts on sustainability of aquaculture
28 species.

29
30 That's the statement made there. I take it you
31 agree with that statement? Yes?

32 DR. RICHARDS: Yes, Mr. Commissioner, that is the
33 statement that is in the approved document.

34 Q Well, the question of disease could be -- I'm just
35 -- in terms of the various risks, diseases of
36 major -- can't -- could have major catastrophic
37 impacts upon salmon stocks, could it not?

38 DR. RICHARDS: Mr. Commissioner, I think we know that
39 diseases are an event that can have a catastrophic
40 effect on any natural population, including trees
41 and humans.

42 Q And in fact, disease is one of the potential risks
43 that the Department indicated for the 2009 sockeye
44 decline; is it not?

45 DR. RICHARDS: I think, Mr. Commissioner, the -- we're
46 referring to some work that was done and which we
47 -- in terms of exploring different possibilities

1 of potential causes of the decline, we did
2 identify that disease was a possible contributor.

3 Q Well, a major contributor; isn't that right?

4 DR. RICHARDS: Well, I think at this point, we are not
5 willing to say which -- what actually was the
6 cause of the decline. That's what this Commission
7 is about. So it's -- I'd say it's a potential
8 contributor. We do not know at this point.

9 Q Yes, and my questions aren't going to trying to
10 answer that question, just to identify that that's
11 a fairly high-level risk; wouldn't you agree?

12 DR. RICHARDS: Well, it certainly depends on the scope,
13 you know, and whether -- certainly, we can have
14 disease agents present in a population without
15 leading to disease. We can have disease in a
16 population without making things sick or without
17 causing -- leading to mortality. So it really
18 does depend a lot on the context.

19 Q Well, is this the reason that you were planning,
20 in 2007, to do major work -- well, it was one of
21 your priority areas for research, right?

22 DR. RICHARDS: Mr. Commissioner, the priority here, in
23 part, relates to the National Aquatic Animal
24 Health Program, which is a program where Fisheries
25 and Oceans is a contributor to that program. The
26 program is actually being run by the Canadian Food
27 Inspection Agency. And so that is one of the
28 major drivers behind this program, and the program
29 is also very much related to diseases that could
30 be related to implications for Canadian trade.
31 The program was not designed so much to deal with
32 natural or local diseases, it was more, really,
33 related to trade issues.

34 Q Well, would it be related to aquaculture
35 operations?

36 DR. RICHARDS: It could be related to aquaculture
37 operations or to other operations where we had
38 diseases that were identifiable in the -- by an
39 international organization whose name I can't
40 pronounce and who -- but it was -- really, a lot
41 of the focus around this has been -- well, have
42 been linked to, say, trade issues. And also, I
43 suppose, the other side of this, too, is that we
44 are providing support for work that's done in our
45 hatcheries in terms of our enhancement program.
46 So that is the other piece of it that DFO was
47 interested in.

1 Q When you say trade issues, trade in what?

2 DR. RICHARDS: Trade in fish products.

3 Q Salmon, for one?

4 DR. RICHARDS: All fish products.

5 Q Yes, but so maybe I'm asking this in the wrong
6 order. Let me ask you, when it says "Priority
7 areas for research," the first bullet:

8

9 Identifying the causal agents of emerging
10 diseases that may compromise the health of
11 ecologically and commercially significant
12 wild and cultured aquatic organisms.

13

14 What research was that supposed to be?

15 DR. RICHARDS: Well, as I mentioned, most of this
16 research is done under our -- a program for
17 national aquatic animal health. And if we follow
18 through, this is from the research agenda, if we
19 follow into the research plan, you can also see
20 that there has been a centre of expertise that was
21 identified to try to really lead this program
22 nationally and to address this work. And that
23 centre is based out of the -- our lab in Moncton,
24 New Brunswick.

25 Q Well, can you give me any specific examples of the
26 kind of research that you would have been
27 referring to there?

28 DR. RICHARDS: This is not -- I'm sorry, Mr.
29 Commissioner, this is not my, really, area of
30 expertise.

31 Q Oh, I see. Okay.

32 DR. RICHARDS: I think you will be talking to some
33 scientists later who can give you a very good
34 description of this program. The technical names
35 of these diseases are not my area of expertise,
36 I'm sorry.

37 Q Let's go to the next bullet, "Assessing the
38 viability and movement of natural pathogens
39 between cultured and wild aquatic animals." Do
40 you know what kind of aquatic animals we are
41 talking about there? Would that be salmon?

42 DR. RICHARDS: I think, yes, certainly it could be
43 salmon. The salmon is certainly one of the
44 species that we were working on.

45 Q And why was that a priority area at the time?

46 DR. RICHARDS: Well, this was put together -- you know,
47 this was put together in about 2005, and at that

1 time, we certainly were doing work. We certainly
2 were doing work on our pink salmon aquaculture
3 program, which is probably what you're referring
4 to in the Broughton as one issue. I think,
5 certainly, there have been lots of identification,
6 also, of issues that had come up where there could
7 be transfer from wild fish to aquaculture fish and
8 that certainly had been raised, as well, as an
9 issue.

10 Q If I could go to the next item, then, number 7,
11 "Sustainability of aquaculture," if we could go to
12 the priorities, the first bullet under "Priority
13 Areas of Research," there, is also --

14 DR. RICHARDS: Mm-hmm.

15 Q

16 Investigating disease transmission bi-
17 directional between wild and cultured stocks
18 and developing aquaculture vaccines.

19
20 Can you say why that was a priority area for
21 research?

22 DR. RICHARDS: Well, as I mentioned, certainly, we have
23 -- we had certainly initiated, at this point, some
24 of the work that was being done on the Broughton
25 and so we were very much aware of that. There was
26 certainly some interest in developing vaccines,
27 but I'm not explicit. I'm sorry, I can't give a
28 definite answer on this because I wasn't
29 necessarily involved in this research area at the
30 time.

31 Q Does one of the other panellists have an answer
32 for that, why that was a priority area?

33 DR. RICHARDS: I think this probably could be
34 addressed, as I mentioned earlier, by some of the
35 other scientists who are very engaged in the
36 Aquaculture Program, and I certainly understand
37 that there will be opportunities to call those
38 witnesses later.

39 Q Yes, well, I'm not so much interested in what the
40 scientists were doing, but we're here, on this
41 Panel, to talk about --

42 DR. RICHARDS: Mm-hmm.

43 Q -- risk and management of the science. Why was
44 this identified as a priority area?

45 DR. RICHARDS: Well, I mean, I think the process that
46 Dr. Wendy Watson-Wright described this morning
47 about how this document came into being is that

1 the process of this was that it was very much --
2 pretty much a bottom up -- quite a bit of a
3 bottom-up driven. I think there was -- a lot of
4 ideas were put forward, and these were really put
5 down, I think, as examples, rather than the intent
6 that these would be the actual areas that we'd be
7 focussing on.

8 The document was developed by consultations
9 with the scientists. There was consultations
10 across the country on scientists -- with the
11 scientists. There -- so certainly, there was lots
12 of opportunity for input and I think what we were
13 really focussing on was the main issues, rather
14 than these very specifics, and I think that these
15 were sort of given as examples, but perhaps not
16 intended to be sort of definitive.

17 Q These bullet points are simply examples of many
18 other areas of research, is that what you're
19 saying? Am I misunderstanding?

20 DR. RICHARDS: They are examples of things which could
21 be done within this program which were
22 illustrative of the issues around aquaculture at
23 the time.

24 Q But it says "Priority Areas for Research." You're
25 saying it's just illustrative?

26 DR. RICHARDS: Yes.

27 Q So what I'm ultimately going to drive to and ask a
28 number of times, I think, is what factor does risk
29 play, and the consequences of being wrong, play in
30 choosing which science -- where to put your
31 research priorities?

32 DR. RICHARDS: Well, I -- perhaps I could go back to
33 the discussion we had earlier this morning, too,
34 when we were talking about the science advice and
35 how we deal with the questions around science
36 advice. And within that framework, we certainly
37 were looking at the risk and the importance of the
38 consequences of decisions in terms of choosing
39 which areas that we would look at. So I think
40 risk is something which is factored into what we
41 would do, and factored into how we would identify
42 priorities.

43 Q Well, was the Department aware, in 2005, when this
44 was being developed, that a disease in sockeye
45 salmon could have quite catastrophic consequences?

46 THE COMMISSIONER: Mr. Blair?

47 MR. BLAIR: Mr. Blair. For the record, Alan Blair for

1 the B.C. Salmon Farmers. I'm rising to object.
2 I'm objecting on a number of grounds, Mr.
3 Commissioner. We were told that this was an
4 introductory panel into DFO science. We know we
5 have an aquaculture session coming up later. The
6 Panel has indicated in various ways since Mr.
7 McDade started, and each and every one of his
8 questions have been about and against the
9 aquaculture industry that I represent. And the
10 panel members have said that the questions were
11 outside their area of expertise, not really
12 involved in the research area, should be addressed
13 later by other scientists. We're now getting into
14 specifics of the aquaculture industry and specific
15 events, specific conclusions that Mr. McDade is
16 putting to this panel and, in my view, it's
17 outside what this panel should be discussing based
18 on how it was represented by Commission counsel.
19 The purpose of this is an overview, introductory
20 panel so I object to the line of questioning.

21 MR. McDADE: I think it's a very generic and
22 appropriate question, Mr. Commissioner.

23 THE COMMISSIONER: Any other counsel wish to make a
24 submission? I'm content that to the extent these
25 witnesses can answer the question within their
26 area of knowledge, they ought to answer the
27 question. To the extent that it involves others
28 within the Department who have, perhaps, either
29 expertise or better knowledge to provide that
30 answer, then they should say so. Carry on, Mr.
31 McDade.

32 MR. McDADE:

33 Q So let me go back to that question, then. The --
34 was the Department aware that a disease in salmon
35 would have -- could have catastrophic effects?

36 MR. BEVAN: I'll just respond in general. There is an
37 Integrated Risk Management Committee at DFO. That
38 evaluates risks at a high level and looks at what
39 mitigation should take place. Certainly, at that
40 time, there was concern that there was a risk
41 perception, and I would say perception because
42 there were people who were indicating that they
43 felt that there was a very high risk posed by
44 aquaculture, and that helped to then create a
45 situation where we felt that there had to be some
46 attention paid to various accusations that were
47 being put forward. We had to know whether or not

1 there was any evidence to support the claims that
2 were being put forward and the -- therefore, there
3 were questions posed to various Science people on
4 those issues.

5 I think what you're suggesting is that there
6 is a catastrophic risk that is evident, and we, in
7 evaluation of whether discussions with Science
8 folks did not identify that, but we did identify
9 the need for continuing research to deal with the
10 perception that exists.

11 And what we've been challenged with is the
12 need to prove a negative. So we have a claim that
13 something's happening, and when we don't find the
14 evidence that supports it, we still have the need
15 to continue on. It may be that there are issues.
16 This Commission will, no doubt, have something to
17 say on this whole issue, but while I can't speak,
18 and I don't know that the Panel members can speak
19 to specific reaction to that, I can say that we
20 had discussions around the issues that were being
21 raised in the public domain, and that there were
22 questions posed to Science as a result of that.
23 So -- but I don't know the underlying individual
24 research projects that may have arisen from that
25 process.

26 Q Well, let me see if I understand your answer. Are
27 you saying that the reason, in this document, that
28 it says that you're going to investigate disease
29 transmission between wild and cultured stocks was
30 not about the Department thinking there was a real
31 risk, but it was about solving public perception?
32 Is that what you're saying?

33 MR. BEVAN: No, I'm saying there is a real risk that
34 was there. We've had real problems with oyster
35 aquaculture and wild stocks. We've had other
36 species that have been implicated in this. So
37 there is a real risk. We investigated on the
38 potential concerns as we have to. We must ensure
39 that the risks that were being claimed were, in
40 fact, there and mitigation had to be taken, or
41 they -- if they -- we couldn't find a clean link,
42 then we had to have the evidence to demonstrate
43 that to the public.

44 It's a huge debate, Mr. Commissioner, that
45 you'll be dealing with more specifically, and we
46 recognize that debate and have had some -- or have
47 had questions posed to Science in order to satisfy

1 ourselves that the risk was being managed. And
2 certainly, in some areas, as I said, we have had
3 to restrict movements of various aquaculture
4 products and various other products, not salmon in
5 this case, where there was a danger of taking
6 disease and moving it around. So that's been
7 real, and the salmon side, we've had questions
8 posed relevant to disease and lice that we have to
9 pose to Science in order to satisfy ourselves that
10 we understand the risk. And we have seen there's
11 a raging debate, and that will be more --
12 considered in more detail later on.

13 Q Well, now, in your answer, you've introduced the
14 question of public perception and public debate.
15 I don't recall you asking about -- I don't recall
16 asking about that. Did the Department do this
17 science or identify this priority because the
18 outside public identified this as a priority or
19 because this was a real risk and a real danger?

20 MR. BEVAN: I said there's real risk and real danger,
21 we've experienced it in other species. We have
22 not seen a -- we have seen that there's a
23 potential for impact, obviously, on wild salmon
24 stocks. Whether or not the predicted outcomes
25 that were presented by some in the public domain
26 of huge declines in various other species of
27 salmon, we didn't see that being supported by the
28 evidence we had and the empirical evidence would
29 also appear not to bear that out, but we had to go
30 and do the investigation.

31 In other words, we didn't share the same
32 perception of risk and the -- that others did.
33 And when we say risk perception, that's a valid
34 part of risk management. It's what we can deal
35 with in terms of probability of something
36 happening and the consequences of something
37 happening and, therefore, you have to take steps
38 in managing the risks. But also, it's not just
39 the probability, it's the perception that the risk
40 is going to happen, as well. That's a second part
41 of it. You just don't do it based on a
42 mathematical formula, you have to deal with the
43 whole thing.

44 So we didn't have the empirical evidence to
45 indicate that there was a huge problem about to
46 happen, but we did have to respond to the fact
47 that if the other people doing the studies were

1 right, then we had to satisfy themselves (sic)
2 that that's the case and take the action. And if
3 they weren't right, then I think we had to satisfy
4 ourselves to that effect, as well, because of the
5 potential consequences. And I know that that will
6 be a part of the discussions later on.

7 MR. McDADE: I see Mr. Wallace is standing.

8 MR. WALLACE: Thank you. Mr. Commissioner, it's four
9 o'clock. If I may just ask the witnesses to bear
10 in mind that the way that this is being conducted,
11 the Commissioner's asked that when witnesses are
12 being cross-examined, that they do not discuss
13 their evidence with anyone else, and presumably,
14 you'll be relieved of that burden not long into
15 tomorrow. So thank you very much.

16 THE COMMISSIONER: Yes, do I understand, Mr. Wallace,
17 that we're on at 8:30 tomorrow morning?

18 MR. WALLACE: Thank you. There appear to be 40
19 minutes, or half an hour to 40 minutes' worth of
20 questions that people have indicated for Dr. Wendy
21 Watson-Wright at 8:30, and I'd suggest we deal
22 with that and then plan to start the live session
23 at 10 o'clock.

24 THE COMMISSIONER: We'll start the live session after
25 that session. And Mr. McDade, you'll continue on
26 tomorrow morning, then?

27 MR. McDADE: Yes.

28 THE COMMISSIONER: Thank you very much, sir. Thank
29 you.

30 THE REGISTRAR: The hearing is now adjourned until 8:30
31 tomorrow morning.

32
33 (PROCEEDINGS ADJOURNED TO NOVEMBER 4, 2010,
34 AT 8:30 A.M.)
35
36

37 I HEREBY CERTIFY the foregoing to be a true
38 and accurate transcript of the evidence
39 recorded on a sound recording apparatus,
40 transcribed to the best of my skill and
41 ability, and in accordance with applicable
42 standards.
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Karen Hefferland
47

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11 _____
12 Pat Neumann
13 Registered Court Transcriber
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28 _____
29 Diane Rochfort
30 Registered Court Transcriber
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33

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44 _____
45 Irene Lim
46 Registered Court Transcriber
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