

Materials for PSD meeting with Rick Hansen, March 2 @ 3pm

From: Evers, Charlene AFF:EX
s.15
To: Garnier, Jack AFF:EX, Norton, Chris AFF:EX
Cc: Oldham, Lisa E AFF:EX, Lange, Katie AFF:EX
Sent: March 1, 2021 11:01:49 AM PST
Attachments: 193640_MIN_IBN_Rick Hansen Foundation.docx

Hi all,

I think this BN request got confused between Rick Hansen's request for a meeting with MLP and the scheduled meeting with PSD as there are two directions under the one cliff. Regardless, this note will cover both requests – it just shows as note for Minister. 😊

Thanks!

Char

Charlene Evers
A/Senior Executive Assistant
Deputy Minister's Office
Ministry of Agriculture, Food and Fisheries
☎ 778 974-3844

Ministry of Agriculture, Food and Fisheries
BRIEFING NOTE FOR MINISTER FOR INFORMATION

Ref: 193640

Date: February 23, 2021

Title: Minister Popham meeting with Rick Hansen.

Issue: Rick Hansen would like to provide an update on accessibility initiatives for people with disabilities in B.C., and have a discussion regarding sturgeon and salmon conservation, fisheries, and aquaculture.

Background: Rick Hansen is the Founder of the Rick Hansen Foundation (RHF) and a passionate supporter of people with disabilities in Canada. Rick and his team are dedicated to raising awareness, changing attitudes, helping create accessible spaces, and liberating the potential of people with disabilities. Conservation of sturgeon and salmon ecosystems have also been a strong priority for Rick throughout his life. For over 20 years, Rick has been an advocate of environmental stewardship and has worked closely with government, scientists, enforcement, academics, and fishermen to ensure that these species have a healthy future. To ensure conservation of Pacific sturgeon and salmon species, he formed the Fraser River Sturgeon Conservation Society (FRSCS) and the Pacific Salmon Endowment Fund Society (PSEFS). Rick is the founding and current Chair of the FRSCS, past board chair of the PSEFS, past board member of the Living Rivers Trust Fund Advisory Group and helped lead the establishment of the Rivers Inlet Salmon Initiative.

The PSEFS was created in 2001 to manage a \$30M endowment fund. The Society is an integral part of the Pacific Salmon Foundation's (PSF) ability to maximize the impact of donor dollars as its support covers much of the Foundation's capacity and core costs. As a result, 90 percent of donations are allocated to fund grants and science-driven conservation projects.

The FRSCS brings together a diverse community of stakeholders with a focus on priority areas including mortality, habitat erosion, in-river fishery technology and recruitment of juvenile sturgeon. They have award-winning, volunteer-driven monitoring and assessment programs that track the population health and provide critical data for resource management. FRSCS also conducts public relations, communication initiatives and offers a curriculum based FRSCS Sturgeon Education Program.

First Nations Considerations: Rick Hansen is an Honorary Patron with the B.C. Aboriginal Network on Disability Society (1995–Present). First Nations make up a significant proportion of commercial fishermen in the province, as well as have economic interests in tidal sportfishing and aquaculture. Additionally, First Nations have strong cultural and social ties to salmon and the marine environment consecrated in a Constitutional right to harvest fish. About 31 percent of all commercial fishing jobs (including processing) are held by B.C.'s Indigenous Peoples.

Discussion: Mr. Hansen would like to provide the Minister with a brief update on the RHF's accessibility initiatives for people with disabilities in B.C. which will likely include conversation around better access for disabled people to go fishing. It is expected that the focus of conversation will be regarding sturgeon and all aspects of salmon including conservation, fisheries, and aquaculture.

Sturgeon:

As a freshwater species, sturgeon are a Provincial responsibility; however, the Province can only manage the portion of the population above the Mission Bridge as below that they are in the area designated by Fisheries and Oceans Canada (DFO) as "tidal", and the Province does not have jurisdiction. DFO is currently conducting a *Species At Risk Act* (SARA) listing review on Upper Fraser and Lower Fraser Sturgeon with participation from the Province. The Province has conducted several studies on impacts to juvenile sturgeon recruitment including spawning location data and the importance of substrate on juvenile sturgeon development. The knowledge gained from these studies will help inform future habitat restoration efforts.

The gillnet fishery has the largest impacts on sturgeon. Gillnet fishery is conducted through both commercial and First Nations fisheries which is regulated by DFO. Set-nets, gillnets and large-scale seine nets are

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believed to be the highest risk for mortality due to bycatch. The currently approved catch-and-release recreational sturgeon fishery provides approximately \$30M to the local economy annually and is regularly reviewed as it must not undermine recovery goals. In Spring 2019, the Province established regulated fishing closures on the three highest-value spawning sites with no catch-and-release fisheries allowed.

Pacific Salmon:

Mr. Hansen has expressed to provincial ministry staff his vision for a third party (non-government) to lead salmon recovery efforts, likely the PSF, and may advocate this vision to the Minister. The overall outlook for most Pacific salmon stocks in 2021 is expected to be very poor and similar to 2020 returns which was one of the lowest on record. Salmon returns will be highly variable, with an overall continued trend of reduced productivity, especially for southern salmon populations and chinook in all areas. Key factors include the poor conditions for ocean survival and impacts to rivers during freshwater rearing years. The Ministry of Agriculture, Food and Fisheries (AFF) has been in discussions with DFO regarding the provincial role in salmon hatcheries including mass marking of hatchery-reared salmon which would increase identification of hatchery fish and advance hatchery technologies to help mitigate risks to wild salmon.

Pacific salmon have been further impacted by the 2019 Big Bar rockslide which has impeded natural fish passage for several salmon species in the Fraser River. There has been tremendous collaboration between provincial agencies, DFO, First Nations and others in the work done at the landslide site, and B.C. will continue to play a strong collaborative role on this issue until its resolution.

On March 15, 2019, the Province of British Columbia and the federal government announced a joint commitment of \$142.85M over the next five years to protect wild salmon. The Province's \$42.85M investment in the B.C. Salmon Restoration and Innovation Fund (BCSRIF) is the largest provincial financial contribution to protect wild salmon in the past 20 years, and the Province recently announced its commitment to work with the federal government to double the size of the of this fund. BCSRIF is providing support for many wild salmon initiatives in B.C. with focus on high impact areas and priorities that align with the report from the B.C. Wild Salmon Advisory Council. To date, 41 projects have been approved totaling \$68.8M of funding with diverse locations, scale, and proponents, and all contribute to protecting and restoring wild salmon stocks and creating a more sustainable future for local communities and workers. B.C. and Canada are currently in the process of finalizing the next batch of proposals that are anticipated to be approved and funded by Spring/Summer 2021.

Suggested Response:

- **We appreciate all the work organizations such as the Fraser River Sturgeon Conservation Society and the Pacific Salmon Foundation do on behalf of wild Pacific salmon and sturgeon and for B.C. We all share a common goal and interest in protecting B.C. wild fish stocks.**
- **I appreciate and share your concern for wild salmon and sturgeon stocks in B.C. They are iconic species that provide tremendous opportunities for British Columbians, and this government will work to ensure those opportunities are maintained.**
- **The B.C. government is committed to protecting wild Pacific salmon and working with the industry and First Nations to ensure salmon farming is carried out in a safe and sustainable way that minimizes risks to wild populations.**
- **We are committed to helping restore abundant wild salmon stocks through development of a salmon strategy and look forward to working with key partners like the Rick Hansen Foundation and other key provincial partners.**

Contact: Kevin Romanin, Senior Policy Analyst for Fisheries, Aquaculture and Seafood 778-974-4884

SM ADM DM
 MT JLM TE

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FW: On behalf of Rick Hansen Foundation

From: Oldham, Lisa E AFF:EX <Lisa.Oldham@gov.bc.ca>
To: Evers, Charlene AFF:EX <Charlene.Evers@gov.bc.ca>
Sent: March 1, 2021 2:13:07 PM PST
Attachments: image002.png, 2019-Program-Summary-2-Pages_FRSCS Web Site.pdf, Nelson et al. 2020. Final Report. 2019 LFRWS MA Program_BMR24_20200617.pdf, SAR_LowerFraserWhiteSturgeon_Draft_v3.docx, image001.png

Hi Char,
Please see the following for Jen. Would you prefer I send to Chris directly?
Thank you,
Lisa

From: Nadine Jarry <s.22 >
Sent: March 1, 2021 2:04 PM
To: Oldham, Lisa E AFF:EX <Lisa.Oldham@gov.bc.ca>
Cc: Garnier, Jack AFF:EX <Jack.Garnier@gov.bc.ca>
Subject: RE: On behalf of Rick Hansen Foundation

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Hi Lisa,
Confirming that Rick will be joined by Tony Nootebos and Karl English, who are both experts on sturgeon and salmon conservation.

Please find attached materials ahead of tomorrow's meeting, as well as the agenda below:

1- Fraser River White Sturgeon

- Status of the fish
- Key threats
- Plans for creating a BC Watershed White Sturgeon Plan

2- Salmon Conservation - Need for a new transformational fisheries strategy in BC

- Aquaculture
- Watershed/habitat health
- Sustainable fisheries
- Quality science
- Co-creation with Federal/Provincial/Indigenous groups
- Update from Minister Jordan meeting

3- Certification and RHF School Program

Materials Attached:

1. Summary of the latest status of Lower Fraser White Sturgeon
2. Full report on status of Lower Fraser White Sturgeon
3. Most recent draft of the Recovery Potential Assessment – please note that the final report has not yet been published

Kind regards,

Nadine

Nadine Jarry

Senior Executive Coordinator

Office of Rick Hansen

C: s.22

From: Oldham, Lisa E AFF:EX [<mailto:Lisa.Oldham@gov.bc.ca>]
Sent: Wednesday, February 17, 2021 9:04 AM
To: Nadine Jarry <s.22 >
Cc: Garnier, Jack AFF:EX <Jack.Garnier@gov.bc.ca>
Subject: RE: On behalf of Rick Hansen Foundation
Attn RHF Staff: This is an external e-mail.

Excellent Nadine, zoom details remain the same

Thank you,
Lisa

From: Nadine Jarry <s.22 >
Sent: February 16, 2021 4:32 PM
To: Oldham, Lisa E AFF:EX <Lisa.Oldham@gov.bc.ca>
Cc: Garnier, Jack AFF:EX <Jack.Garnier@gov.bc.ca>
Subject: RE: On behalf of Rick Hansen Foundation

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Thanks Lisa,
No worries at all.
Yes, March 2 at 3:00pm works.
I'll get back to you on who will be joining with Rick.
Many thanks,
Nadine
Nadine Jarry
Senior Executive Coordinator
Office of Rick Hansen
C: s.22

From: Oldham, Lisa E AFF:EX [<mailto:Lisa.Oldham@gov.bc.ca>]
Sent: Tuesday, February 16, 2021 2:37 PM
To: Nadine Jarry <s.22 >
Cc: Garnier, Jack AFF:EX <Jack.Garnier@gov.bc.ca>
Subject: RE: On behalf of Rick Hansen Foundation
Attn RHF Staff: This is an external e-mail.

Hi Nadine,
The House duty schedule just came out for Session and unfortunately March 2 at 9:45am will not work, does March 2 at 3:00pm work?
Thank you,
Lisa

From: Oldham, Lisa E AFF:EX
Sent: February 16, 2021 12:10 PM
To: 'Nadine Jarry' <s.22 >
Cc: Garnier, Jack AFF:EX <Jack.Garnier@gov.bc.ca>
Subject: RE: On behalf of Rick Hansen Foundation

Hi Nadine,
Thank you for confirming, zoom details as follows. If you could please let me know who is attending the meeting with Rick.

Topic: Meeting with Rick Hansen
Time: Mar 2, 2021 09:45 AM Pacific Time (US and Canada)
Join Zoom Meeting

s.17

Meeting ID: s.17
Passcode: s.17

One tap mobile

s.17 Canada

Regards,
Lisa

From: Nadine Jarry <s.22 >
Sent: February 16, 2021 11:35 AM
To: Oldham, Lisa E AFF:EX <Lisa.Oldham@gov.bc.ca>
Cc: Garnier, Jack AFF:EX <Jack.Garnier@gov.bc.ca>
Subject: RE: On behalf of Rick Hansen Foundation

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Thanks Lisa,

March 2nd at 9:45am would be great.

Please let me know the best way for them to connect. Rick may have someone from his team attend as well, please let me know if anyone else will be joining as well.

Many thanks,

Nadine

Nadine Jarry

Senior Executive Coordinator

Office of Rick Hansen

C: s.22

From: Oldham, Lisa E AFF:EX [<mailto:Lisa.Oldham@gov.bc.ca>]

Sent: Friday, February 12, 2021 10:06 AM

To: Nadine Jarry <s.22> >; Garnier, Jack AFF:EX <Jack.Garnier@gov.bc.ca>

Subject: RE: On behalf of Rick Hansen Foundation

Attn RHF Staff: This is an external e-mail.

Hi Nadine,

Unfortunately none of those times work for PS Donnelly.

Is Rick available on any of the following dates and times.

February 23 at 1:00pm or 2:00pm

February 25 at 2:00pm or 2:30pm

March 2 at 9:45am

Thank you,

Lisa

From: Nadine Jarry <s.22> >

Sent: February 11, 2021 3:19 PM

To: Garnier, Jack AFF:EX <Jack.Garnier@gov.bc.ca>

Cc: Oldham, Lisa E AFF:EX <Lisa.Oldham@gov.bc.ca>

Subject: RE: On behalf of Rick Hansen Foundation

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Thanks Jack,

So sorry I missed your email during my absence.

Here is Rick's availability for 24th – 26th:

- Wednesday, February 24th between 11:00am – 12:00pm PST
- Thursday, February 25th between 9:00am – 10:30am PST

Please do let me know there are any times within those windows that would work.

Kind regards,

Nadine

Nadine Jarry

Senior Executive Coordinator

Office of Rick Hansen

C: s.22

From: Garnier, Jack AFF:EX [<mailto:Jack.Garnier@gov.bc.ca>]

Sent: Thursday, February 11, 2021 3:02 PM

To: Nadine Jarry <s.22> >

Cc: Oldham, Lisa E AFF:EX <Lisa.Oldham@gov.bc.ca>

Subject: RE: On behalf of Rick Hansen Foundation

Attn RHF Staff: This is an external e-mail.

Hi Nadine,

Just wanted to touch base on this, unfortunately tomorrow won't work anymore. Can we look at around the 24th to 26th?

Cheers,

Jack

Jack Garnier

Executive Assistant

Ministry of Agriculture, Food and Fisheries

Cell: s.22 | Email: jack.garnier@gov.bc.ca

From: Garnier, Jack AFF:EX

Sent: February 2, 2021 9:50 AM

To: 'Nadine Jarry' <s.22>

Subject: RE: On behalf of Rick Hansen Foundation

Hi Nadine,

Apologies for the delay. Would 9am on February 12th work?

Thanks,

Jack

Jack Garnier

Executive Assistant to Hon. Lana Popham

Ministry of Agriculture, Food and Fisheries

Cell: s.22 | Email: jack.garnier@gov.bc.ca

From: Nadine Jarry <s.22>

Sent: January 27, 2021 1:10 PM

To: Garnier, Jack AFF:EX <Jack.Garnier@gov.bc.ca>

Subject: RE: On behalf of Rick Hansen Foundation

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Thanks Jack,

Just wanted to check in regarding the status of the meeting request and also to provide some additional information.

For salmon conservation, the priorities for discussion will be:

- Clean, sustainable aquaculture
- A new transformational BC West Coast Salmon Strategy

For sturgeon conservation, the priorities for discussion will be:

- Habitat protection
- Adoption of sustainable fisheries

Please do let me know at your earliest convenience if there are any possible times for this meeting.

Kind regards,

Nadine

Nadine Jarry

Senior Executive Coordinator

Office of Rick Hansen

C: s.22

From: Garnier, Jack AFF:EX [<mailto:Jack.Garnier@gov.bc.ca>]

Sent: Thursday, January 14, 2021 9:13 AM

To: Nadine Jarry <s.22>

Subject: RE: On behalf of Rick Hansen Foundation

Attn RHF Staff: This is an external e-mail.

Hi Nadine,

Thanks for the information. I will add this to the list of meetings to be set up, and be in touch soon regarding a specific date.

Are there any more specifics surrounding salmon and sturgeon conservation that Rick would like to bring up?

Cheers,

Jack

Jack Garnier

Executive Assistant to Hon. Lana Popham
Ministry of Agriculture, Food and Fisheries
Cell: s.22 | Email: jack.garnier@gov.bc.ca

From: Nadine Jarry <s.22 >
Sent: January 13, 2021 2:14 PM
To: Garnier, Jack AFF:EX <Jack.Garnier@gov.bc.ca>
Subject: FW: On behalf of Rick Hansen Foundation

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Dear Jack,

I hope this email finds you well.

Your contact details were shared with me as the point of contact regarding Mr. Donnelly's schedule, and I am reaching out in follow up to a request for Rick Hansen and Mr. Donnelly to connect regarding salmon and sturgeon conservation.

Please do let me know at your earliest convenience what might be possible. I look forward to working with you to find a mutually convenient time.

Kind regards,

Nadine

Nadine Jarry

Senior Executive Coordinator
Office of Rick Hansen
C: s.22

From: Rick Hansen
Sent: Wednesday, December 16, 2020 8:59 AM
To: 'Fin.donnelly.mla@leg.bc.ca' <Fin.donnelly.mla@leg.bc.ca>
Cc: Nadine Jarry <s.22 >
Subject: On behalf of Rick Hansen Foundation

Dear Parliamentary Secretary Donnelly,

I wanted to congratulate you on your selection in the new role as Parliamentary Secretary for Fisheries and Aquaculture and wish you the very best with initiatives you will be undertaking on behalf of British Columbians.

I wanted to also express my gratitude for all that you have done to protect our West Coast waters. We are grateful to have you as a passionate advocate of our community and environment. I would love to discuss with you how we could bring a more collaborative and inter-government approach to salmon and sturgeon conservation in British Columbia. It's vital that we collectively work together to achieve healthy salmon and sturgeon populations and also ensure their ecosystems remain healthy for generations to come.

I understand Linda will be in touch with my assistant Nadine Jarry (cc'd) to schedule a meeting for us to connect as soon as possible. I look forward to continue discussing how best to move forward together. In the meantime, please accept my best wishes to you and your family for a happy and healthy holiday season.

Sincerely,

Rick

Rick Hansen, C.C., O.B.C.

Founder, Rick Hansen Foundation



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Lower Fraser River White Sturgeon Monitoring and Assessment Program 2019:

Summary of Sampling Results, Distribution, Growth, and Abundance Estimates
Derived From 24-Month Bayesian Mark Recapture Modelling



Prepared for:

Fraser River Sturgeon Conservation Society
Vancouver, BC

Prepared by:

Troy C. Nelson*, David Robichaud, Wendell Challenger, Karl K. English, Tony Mochizuki,
Tyler Thibault, and William J. Gazey†

LGL Limited
environmental research associates
9768 Second Street
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† W. J. Gazey Research, 1214 Camas Court, Victoria, BC, V8X 4R1



June 2020

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**Canadian Science Advisory Secretariat
Science Advisory Report 2020/nnn**

Pacific Region

RECOVERY POTENTIAL ASSESSMENT FOR LOWER FRASER RIVER WHITE STURGEON 2020

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Pacific Region

Sources of Uncertainty

Significant knowledge gaps related to the threats for Lower Fraser White Sturgeon were identified, including:

- the identification of important rearing habitats for juvenile sturgeon in the lower Fraser River;
- key drivers that affect juvenile sturgeon recruitment in the lower Fraser River;
- reliable estimates of sturgeon bycatch in lower Fraser River gillnet fisheries;
- reliable estimates of sturgeon caught and released by lower Fraser River anglers;
- limited information about illegal harvest in the lower Fraser River;
- limited knowledge around cumulative sub-lethal effects of capture events on survival and recruitment;
- limited knowledge on the effects of other threats and limiting factors on the population (e.g., pollution, predation, temperature); and
- the proposed candidate recovery thresholds are based on recent population levels because there is limited information about key factors affecting juvenile recruitment, population viability, and extinction risk.

Future Work

During the course of the regional peer review, several topics were identified for future work, including:

- Explore the relationship between other salmon species and juvenile recruitment;
- Sensitivity analysis on the effect of alternative growth curves on the ISAMR model;
- Additional data and analyses to relate age and length under more recent growth conditions;
- Currently ongoing juvenile monitoring program information should be incorporated into future analyses; and
- Maintain the annual monitoring and assessment program that has provided most of the information needed to assess status and trends for Lower Fraser White Sturgeon DU.

LIST OF MEETING PARTICIPANTS

Last Name	First Name	Affiliation
Allan	Dean	DFO Fisheries Management
Andrews	Trevor	Vancouver Fraser Port Authority
Ashley	Ken	BC Institute of Technology
Beamesderfer	Ray	Fish Science Solutions Inc.
Boothroyd	Maggy	DFO SARA
Burnett	Karen	DFO Fisheries Management
Challenger	Wendell	LGL Ltd.
Davies	Trevor	Province of BC
English	Karl	LGL Ltd.
Estrada	Kevin	Fraser Valley Angling Guides Association
Gertzen	Erin	DFO SARA
Grant	Paul	DFO Science
Hassan	Ahdia	DFO SARA
Komick	Nicholas	DFO Science
Koops	Marten	DFO Science
Korman	Josh	Ecometric Research
Laynes	Mark	Sport Fishing Advisory Board (SFAB)
Magnan	Al	DFO Science
McAdam	Steve	Province of BC
McCabe	Marlena	DFO SARA
Mueller	Barbra	DFO Resource Management
Nelson	Troy	Fraser River Sturgeon Conservation Society
Potyrala	Mark	DFO Fish & Fish Habitat Protection Program
Prevost	Ashlee	Lower Fraser Fisheries Alliance
Rhodes	Trevor	Province of BC
Robichaud	Dave	LGL Ltd.
Rosenau	Marvin	BC Institute of Technology
Schreier	Sarah	Fraser River Sturgeon Conservation Society
Schwindt	Colin	Province of BC
Werk	Dean	Sport Fishing Advisory Board (SFAB)
Witt	Andy	Province of BC

SOURCES OF INFORMATION

This Science Advisory Report is from the September 22-24, 2020 regional peer review on "Recovery Potential Assessment working paper for Lower Fraser River White Sturgeon 2020" prepared by Karl English, Wendell Challenger, David Robichaud and Josh Korman. All of the figures and tables presented in this report were copied from the working paper. Additional publications from this meeting will be posted on the [Fisheries and Oceans Canada \(DFO\) Science Advisory Schedule](#) as they become available.

- Burns, C.W., Robichaud, D., and English, K.K. 2020. Lower Fraser River juvenile White Sturgeon (*Acipenser transmontanus*) habitat assessment: year 1. Report for Fraser River Sturgeon Conservation Society, Vancouver, BC, and Vancouver Fraser Port Authority, Vancouver, BC.
- Challenger, W., English, K.K., Robichaud, D., and Nelson, T.C. 2020. Status of White Sturgeon in the lower Fraser River in 2019 derived using an integrated spatial and age mark recapture (ISAMR) model. Report for the Fraser River Sturgeon Conservation Society, Vancouver, BC, and BC Ministry of Forest, Lands, Natural Resource Operations, and Rural Development, Surrey, BC.
- COSEWIC (Committee on the Status of Endangered Wildlife in Canada). 2003. Update COSEWIC status report on the White Sturgeon *Acipenser transmontanus* in Canada. Committee on the Status of Endangered Wildlife in Canada, Ottawa, ON.
- COSEWIC. 2012. COSEWIC assessment and status report on the White Sturgeon *Acipenser transmontanus* in Canada. Committee on the Status of Endangered Wildlife in Canada, Ottawa, ON.
- DFO. 2014. Guidance on assessing threats, ecological risk, and ecological impacts for species at risk. Canadian Science Advisory Secretariat Science Advisory Report 2014/013. (Erratum June 2016).
- English, K.K., and Robichaud, D. 2020. Lower Fraser juvenile White Sturgeon monitoring program: using size-selective angling techniques, 2019-2020. Report for Fraser River Sturgeon Conservation Society, Vancouver, BC, and Habitat Conservation Trust Foundation, Victoria, BC.
- Hatfield, T., Cooper, T., and McAdam, S. 2013. Scientific information in support of identifying critical habitat for SARA-listed White Sturgeon populations in Canada: Nechako, Columbia, Kootenay, and Upper Fraser (2009). DFO Canadian Science Advisor Secretariat Research Document 2012/153.
- Mastrandrea, M.D., Field, C.B., Stocker, T.F., Edenhofer, O., Ebi, K.L., Frame, D.J., Held, H., Kriegler, E., Mach, K.J., Matschoss, P.R., Plattner, G.K., Yohe, G.W., and Zwick, F.W. 2010. Guidance note for lead authors of the IPCC fifth assessment report on consistent treatment of uncertainties. Intergovernmental Panel on Climate Change (IPCC).
- Nelson, T.C., Robichaud, D., Challenger, W., English, K.K., Mochizuki, T., Thibault, T., Rissling, J., and Gazey, W.J. 2020. Lower Fraser River White Sturgeon Monitoring and Assessment Program 2019: summary of sampling results, distribution, growth, and abundance estimates derived from 24-month Bayesian mark recapture modelling. Report for the Fraser River Sturgeon Conservation Society, Vancouver, BC.
- Robichaud, D., English, K.K., and Nelson, T.C. 2017. Annual movements of acoustic-tagged White Sturgeon in the lower Fraser River and its tributaries. Transactions of the American Fisheries Society 146: 611-625.
- Wood, C., Snee, D., McAdam, S., Korman, J., and Hatfield, T. 2007. Recovery potential assessment for White Sturgeon populations listed under the Species at Risk Act. DFO Canadian Science Advisor Secretariat Research Document 2007/003.

THIS REPORT IS AVAILABLE FROM THE:

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Pacific Region

Fisheries and Oceans Canada

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BRIEFING NOTE

Premier Meeting with Rick Hansen of the Rick Hansen Foundation Virtual Meeting

Briefing Note for Premier Meeting with Rick Hansen

What:

To discuss B.C.'s plans for sturgeon and salmon.

Who:

Rick Hansen is the Founder of the Rick Hansen Foundation and a passionate supporter of people with disabilities in Canada and the conservation of sturgeon and salmon ecosystems. He formed, and is the current Chair of, the Fraser River Sturgeon Conservation Society (FRSCS) and helped form the Pacific Salmon Endowment Fund Society (PSEFS) where he is a former board member.

Executive Summary:

Salmon:

- *The B.C. government is committed to protecting wild Pacific salmon and working with industry and First Nations to ensure salmon farming is carried out in a safe and sustainable way that minimizes risks to wild populations.*
- *The Province is committed to develop new strategies to protect and revitalize B.C.'s wild salmon populations, including by working to double the size of the Salmon Restoration and Innovation Fund, as led by Parliamentary Secretary Fin Donnelly. We will also be stepping up protection of fish habitat through our biodiversity strategy and the new Watershed Security Strategy.*

Sturgeon:

- *The FRSCS is a longstanding and trusted partner to B.C. Their advocacy and investment in action has been valued for over 20 years.*
- *In 2020, the Ministry of Forests, Lands and Natural Resource Operations (FLNR) provided a \$250k partnership grant to the FRSCS to assist the*

BRIEFING NOTE

Premier Meeting with Rick Hansen of the Rick Hansen Foundation Virtual Meeting

Province in conducting 2021 engagement with Indigenous Nations and stakeholders to inform a BC Fraser River Sturgeon Management Plan.

- *The Province will take recovery actions regardless of whether a Species at Risk Act (SARA) listing decision is made and is exploring enhanced management measures for both the freshwater and marine portions.*

Background:

Salmon: Mr. Hansen has a vision for a third party to lead salmon recovery efforts, likely the Pacific Salmon Foundation, and may advocate this vision. Most Pacific salmon stocks in 2021 are expected to be at similar record lows as seen in 2020. The Ministry of Agriculture, Food and Fisheries have been discussing with Fisheries and Oceans Canada (DFO) the provincial role in salmon hatcheries, mass marking of hatchery salmon, and the advance of hatchery technologies to help mitigate risks to wild salmon. DFO and the Province are concurrently working on strategies to mitigate impacts to wild salmon and assist in recovery.

Sturgeon: DFO is currently conducting a SARA listing review on Upper Fraser and Lower Fraser Sturgeon with participation from the Province. FLNR engage regularly with the FRSCS and are working collaboratively on a number of initiatives including a basin-wide Fraser Sturgeon management plan, a ghost net removal and prevention initiative, and juvenile and adult population monitoring.

Recommendations:

Emphasize provincial commitment to helping restore abundant wild salmon stocks through development of a salmon strategy, and that we look forward to working with key partners like the Rick Hansen Foundation.

Ministry of Agriculture, Food and Fisheries
BRIEFING NOTE FOR MINISTER FOR INFORMATION

Ref: 194041

Date: March 16, 2021

Title: Accessibility initiatives for people with disabilities and fisheries conservation

Issue: Rick Hansen would like to provide an update on accessibility initiatives for people with disabilities in B.C. and have a discussion regarding sturgeon and salmon conservation, fisheries, and aquaculture.

Background: Rick Hansen is the founder of the Rick Hansen Foundation (RHF) and a passionate supporter of people with disabilities in Canada. Rick and his team are dedicated to raising awareness, changing attitudes, helping create accessible spaces, and liberating the potential of people with disabilities. Conservation of sturgeon and salmon ecosystems have also been a strong priority for Rick throughout his life. For over 20 years, Rick has been an advocate of environmental stewardship and has worked closely with government, scientists, enforcement, academics, and fishermen to ensure that these species have a healthy future. To ensure conservation of Pacific sturgeon and salmon species, he formed the Fraser River Sturgeon Conservation Society (FRSCS) and the Pacific Salmon Endowment Fund Society (PSEFS). Rick is the founding and current Chair of the FRSCS, past board chair of the PSEFS, past board member of the Living Rivers Trust Fund Advisory Group and helped lead the establishment of the Rivers Inlet Salmon Initiative.

The PSEFS was created in 2001 to manage a \$30M endowment fund. The Society is an integral part of the Pacific Salmon Foundation's (PSF) ability to maximize the impact of donor dollars as its support covers much of the Foundation's capacity and core costs. As a result, 90 percent of donations are allocated to fund grants and science-driven conservation projects.

The FRSCS brings together a diverse community of stakeholders with a focus on priority areas, including mortality, habitat erosion, in-river fishery technology and recruitment of juvenile sturgeon. They have award-winning, volunteer-driven monitoring and assessment programs that track the population health and provide critical data for resource management. FRSCS also conducts public relations, communication initiatives and offers a curriculum-based FRSCS Sturgeon Education Program.

First Nations Considerations: Rick Hansen is an Honorary Patron with the B.C. Aboriginal Network on Disability Society (1995–Present). First Nations make up a significant proportion of commercial fishermen in the province, as well as have economic interests in tidal sportfishing and aquaculture. Additionally, First Nations have strong cultural and social ties to salmon and the marine environment consecrated in a Constitutional right to harvest fish. About 31 percent of all commercial fishing jobs, including processing, are held by B.C.'s Indigenous Peoples.

Discussion: Mr. Hansen would like to provide the Minister with a brief update on the RHF's accessibility initiatives for people with disabilities in B.C. which will likely include conversation around better access for disabled people to go fishing. It is expected that the focus of conversation will be regarding sturgeon and all aspects of salmon including conservation, fisheries, and aquaculture. So far in 2021, Mr. Hansen has already met virtually with several representatives from the Province including Deputy Minister Lori Wannamaker, Assistant Deputy Minister Eric Kristianson, Parliamentary Secretary Finn Donnelly, and Minister of Forests, Lands, Natural Resource Operations and Rural Development (FLNR), Katrine Conroy. He has also requested a meeting with Premier John Horgan, to which Ministry of Agriculture, Food and Fisheries' (AFF) staff are preparing a briefing note.

Sturgeon:

As a freshwater species, sturgeon are a provincial responsibility (FLNR lead). However, the Province can only manage the portion of the population above the Mission Bridge as below that they are in the area designated by Fisheries and Oceans Canada (DFO) as "tidal", and the Province does not have jurisdiction. DFO is currently conducting a *Species At Risk Act* (SARA) listing review on Upper Fraser and Lower Fraser Sturgeon with participation from the Province. The Province has conducted several studies on impacts to juvenile sturgeon

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recruitment including spawning location data and the importance of substrate on juvenile sturgeon development. The knowledge gained from these studies will help inform future habitat restoration efforts.

The gillnet fishery has the largest impacts on sturgeon. Gillnet fishery is conducted through both commercial and First Nations fisheries which is regulated by DFO. Set-nets, gillnets and large-scale seine nets are believed to be the highest risk for mortality due to bycatch. The currently approved catch-and-release recreational sturgeon fishery provides approximately \$30M to the local economy annually and is regularly reviewed as it must not undermine recovery goals. In spring 2019, the Province established regulated fishing closures on the three highest-value spawning sites with no catch-and-release fisheries allowed.

Pacific Salmon:

Mr. Hansen has expressed to provincial ministry staff his vision for a third party (non-government) to lead salmon recovery efforts, likely the PSF, and may advocate this vision to the Minister. The overall outlook for most Pacific salmon stocks in 2021 is expected to be very poor and similar to 2020 returns which was one of the lowest on record. Salmon returns will be highly variable, with an overall continued trend of reduced productivity, especially for southern salmon populations and chinook in all areas. Key factors include the poor conditions for ocean survival and impacts to rivers during freshwater rearing years. AFF has been in discussions with DFO regarding the provincial role in salmon hatcheries including mass marking of hatchery-reared salmon which would increase identification of hatchery fish and advance hatchery technologies to help mitigate risks to wild salmon.

Pacific salmon have been further impacted by the 2019 Big Bar rockslide which has impeded natural fish passage for several salmon species in the Fraser River. There has been tremendous collaboration between provincial agencies, DFO, First Nations and others in the work done at the landslide site, and B.C. will continue to play a strong collaborative role on this issue until its resolution.

The Province's \$42.85M investment in the B.C. Salmon Restoration and Innovation Fund (BCSRIF) is the largest provincial financial contribution to protect wild salmon in the past 20 years, and the Province recently announced its commitment to work with the federal government to double the size of the of this fund. BCSRIF is providing support for many wild salmon initiatives in B.C. with focus on high impact areas and priorities that align with the report from the B.C. Wild Salmon Advisory Council. To date, 41 projects have been approved totaling \$68.8M of funding with diverse locations, scale, and proponents, and all contribute to protecting and restoring wild salmon stocks and creating a more sustainable future for local communities and workers. B.C. and Canada are currently in the process of finalizing the next batch of proposals that are anticipated to be approved and funded by spring/summer 2021.

Suggested Response:

- **We appreciate all the work organizations such as the Fraser River Sturgeon Conservation Society and the Pacific Salmon Foundation do on behalf of wild Pacific salmon and sturgeon and for B.C. We all share a common goal and interest in protecting B.C. wild fish stocks.**
- **I appreciate and share your concern for wild salmon and sturgeon stocks in B.C. They are iconic species that provide tremendous opportunities for British Columbians, and this government will work to ensure those opportunities are maintained.**
- **The B.C. government is committed to protecting wild Pacific salmon and working with the industry, First Nations and DFO to ensure harvest is carried out in a sustainable way.**
- **We are committed to helping restore abundant wild salmon stocks through development of a salmon strategy and look forward to working with key partners like the Rick Hansen Foundation and other key provincial partners.**

Contact: Kevin Romanin, Senior Policy Analyst for Fisheries, Aquaculture and Seafood 778-974-4884

SM MT ADM JLM DM TE

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RE: Minister Popham meeting and updates

From: Nadine Jarry <s.22 >
To: Evers, Charlene AFF:EX <Charlene.Evers@gov.bc.ca>
Sent: March 23, 2021 3:42:08 PM PDT
Attachments: image001.png, image003.png, image006.png, image005.jpg, image004.png, image002.png

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Thanks so much Charlene,
Apologies in the delay in getting back to you.
Glad to hear we can still keep the time but should anything come up before then please let me know. We definitely understand that there are a lot of moving parts to Tom's schedule.

Kind regards,

Nadine

Nadine Jarry

Senior Executive Coordinator

Office of Rick Hansen

C:s.22

From: Evers, Charlene AFF:EX [mailto:Charlene.Evers@gov.bc.ca]

Sent: Tuesday, March 23, 2021 3:36 PM

To: Nadine Jarry <s.22 >

Subject: FW: Minister Popham meeting and updates

Attn RHF Staff: This is an external e-mail.

Hi Nadine,

And just like that, said conflict/meeting has been moved, so we can keep your meeting on March 25, 2-2:30.

Have a great afternoon!

Charlene

From: Evers, Charlene AFF:EX

Sent: March 23, 2021 9:09 AM

To: 'Nadine Jarry' <s.22 >

Subject: RE: Minister Popham meeting and updates

Good morning Nadine,

Unfortunately Tom now has a conflict on March 25 and I will need to reschedule. Will Monday, March 29 at 2:30pm work for Rick?

Thanks!

Charlene

From: Nadine Jarry <s.22 >

Sent: March 19, 2021 4:19 PM

To: Evers, Charlene AFF:EX <Charlene.Evers@gov.bc.ca>

Subject: RE: Minister Popham meeting and updates

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Hi Charlene,

Thanks so much for sending those options.

March 25 from 2-2:30pm would be great.

Please do send the calendar invite to s.22

invite for reference.

Rick is really looking forward to connecting with Tom next week.

Kind regards,

Nadine

with the details to connect, and include me on the

Nadine Jarry

Senior Executive Coordinator

Office of Rick Hansen

C: s.22

From: Ashley Matthews

Sent: Friday, March 19, 2021 4:01 PM

To: 'Charlene.Evers@gov.bc.ca' <Charlene.Evers@gov.bc.ca>; Nadine Jarry <s.22

>

Subject: FW: Minister Popham meeting and updates

Hi Charlene,

Thank you so much for your email. I am looping in Nadine who manages Rick's schedule and can assist with finding a mutually convenient date for Rick and Tom to meet.

I hope you have a lovely weekend,

Ashley

Ashley Matthews

Events Specialist, Office of Rick Hansen

Rick Hansen Foundation

M. s.22

E.s.22



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From: Evers, Charlene AFF:EX <Charlene.Evers@gov.bc.ca>

Sent: Friday, March 19, 2021 3:56 PM

To: Ashley Matthews <s.22

>

Subject: FW: Minister Popham meeting and updates

Attn RHF Staff: This is an external e-mail.

Good afternoon Ashley,

As per below, Rick has requested to meet with Tom next week, and Tom has agreed. The following are a couple of options that work for Tom:

March 23 – 9-9:30am or 9:30-10am

March 25 – 2-2:30pm

Please let me know which date/time will work best and I can send a meeting request.

Thank you!

Charlene

Charlene Evers

A/Senior Executive Assistant

Deputy Minister's Office

Ministry of Agriculture, Food and Fisheries

' 778 974-3844

From: Rick Hansen <s.22 >
Sent: March 18, 2021 5:26 PM
To: Ethier, Tom AFF:EX <Tom.Ethier@gov.bc.ca>
Subject: Minister Popham meeting and updates

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Hi Tom,
I hope you are keeping well.
I just wanted to express my gratitude for your help in securing the meeting with Minister Popham on March 25. In case you have any suggestions, please do let me know.
I would also like to give you an update on prior conversations with other BC representatives I have been meeting with, including BC Premier scheduled for tomorrow.
Please let me know if you have some time to connect early next week to further discuss.
Thanks for your help,
Rick
Rick Hansen, C.C., O.B.C.
Founder, Rick Hansen Foundation



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Re: Request for Meeting with Minister Popham

From: Nadine Jarry <s.22 >
To: Oldham, Lisa E AFF:EX <Lisa.Oldham@gov.bc.ca>
Cc: Evers, Charlene AFF:EX <Charlene.Evers@gov.bc.ca>
Sent: March 24, 2021 2:08:38 PM PDT
Attachments: image003.png, image002.jpg, image001.png

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Thanks Lisa,
The agenda is:
- BC Fisheries Strategy
- Aquaculture
- Sturgeon
Kind regards,
Nadine

From: Oldham, Lisa E AFF:EX <Lisa.Oldham@gov.bc.ca>
Sent: March 24, 2021 2:07 PM
To: Nadine Jarry <s.22 >
Cc: Evers, Charlene AFF:EX <Charlene.Evers@gov.bc.ca>
Subject: RE: Request for Meeting with Minister Popham
Attn RHF Staff: This is an external e-mail.

Hi Nadine,
Thank you for letting me know, if you could please share agenda it would be appreciated.
Thank you,
Lisa

From: Nadine Jarry <s.22 >
Sent: March 24, 2021 2:03 PM
To: Oldham, Lisa E AFF:EX <Lisa.Oldham@gov.bc.ca>
Cc: Evers, Charlene AFF:EX <Charlene.Evers@gov.bc.ca>
Subject: Re: Request for Meeting with Minister Popham

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Hi Lisa,
Hope you are doing well.
Confirming that Rick will be joined by Tony Nootebos, Senior Advisor for Programs and Development within the Office of Rick Hansen.
Please let me know if you would like an agenda to be shared in advance of the meeting.
Kind regards,
Nadine

From: Oldham, Lisa E AFF:EX <Lisa.Oldham@gov.bc.ca>
Sent: March 8, 2021 10:14 AM
To: Nadine Jarry <s.22 >
Cc: Evers, Charlene AFF:EX <Charlene.Evers@gov.bc.ca>
Subject: RE: Request for Meeting with Minister Popham
Attn RHF Staff: This is an external e-mail.

Hi Nadine,
Thank you for confirming, please advise who will be on the call with Rick.
Zoom details as follows:
Topic: Meeting with Rick Hansen

Time: Mar 25, 2021 11:30 AM Pacific Time (US and Canada)

Join Zoom Meeting

s.17

Meeting ID: s.17

Passcode: s.17

One tap mobile

Regards,

Lisa

From: Nadine Jarry <s.22>

Sent: March 5, 2021 3:25 PM

To: Oldham, Lisa E AFF:EX <Lisa.Oldham@gov.bc.ca>

Subject: RE: Request for Meeting with Minister Popham

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Thanks so much Lisa,

Yes, that timing works perfectly. Please do send the zoom details at your earliest convenience.

Many thanks,

Nadine

Nadine Jarry

Senior Executive Coordinator

Office of Rick Hansen

C: s.22

From: Oldham, Lisa E AFF:EX [<mailto:Lisa.Oldham@gov.bc.ca>]

Sent: Friday, March 05, 2021 2:53 PM

To: Nadine Jarry <s.22>

Subject: FW: Request for Meeting with Minister Popham

Attn RHF Staff: This is an external e-mail.

Hi Nadine,

Minister Popham is available to meet via zoom on March 25th at 11:30am.

Please advise if this works for Rick and I will send zoom details.

Thank you,

Lisa

From: Nadine Jarry

Sent: February 23, 2021 3:19 PM

To: Garnier, Jack AFF:EX

Subject: Request for Meeting with Minister Popham

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Hi Jack,

Hope this email finds you well.

Thank you very much for your assistance in securing the meeting with Rick Hansen and PS Donnelly for March 2nd.

We would also like to request a meeting with Rick Hansen and Minister Lana Popham to discuss salmon and sturgeon conservation as well.

Please let me know what might be possible with the Minister's schedule at your earliest convenience.

Rick will be also be meeting virtually with Assistant Deputy Minister Eric Kristianson on March 4th, Minister Katrine Conroy on March 5th, and Deputy Minister Lori Wannamaker on March 8th and wanted to ensure Minister Popham was aware.

Kind regards,

Nadine

Nadine Jarry

Senior Executive Coordinator

Office of Rick Hansen

C:s.22 | E,s.22



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ADVICE: Rick Hansen/Tony Allard email

From: Evers, Charlene AFF:EX
s.15
To: McGuire, Jennifer AFF:EX, Turner, Michael R AFF:EX
Cc: Norton, Chris AFF:EX
Sent: March 29, 2021 3:10:03 PM PDT
Attachments: FW: Cermaq's permit - Sea Lice Pesticide

Hi Jen and Mike,

Further to below and the attached email, Tom would like to know what your take is on this request? Should Tom take this meeting with Rick or should this be something PSD should be managing?

Tom did not discuss this with Rick at his March 25 meeting.

Thanks!

Char

From: Nadine Jarry <s.22 >
Sent: March 24, 2021 12:45 PM
To: Evers, Charlene AFF:EX <Charlene.Evers@gov.bc.ca>
Subject: Re: Minister Popham meeting and updates

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Hi Charlene,

We were wondering if it would be possible to extend the meeting with Tom and Rick tomorrow by 15-20min as they had also discussed inviting Tony Allard to join for an introduction.

If not possible under this short notice, could we set up a separate discussion for Rick, Tom, and Tony as soon as possible?

Many thanks,

Nadine

FW: ADVICE: Rick Hansen/Tony Allard email

From: Evers, Charlene AFF:EX s.15
To: Ethier, Tom AFF:EX
Sent: April 1, 2021 11:27:40 AM PDT

From: Turner, Michael R AFF:EX <Michael.R.Turner@gov.bc.ca>
Sent: March 30, 2021 8:39 AM
To: Evers, Charlene AFF:EX <Charlene.Evers@gov.bc.ca>; McGuire, Jennifer AFF:EX <Jennifer.Mcguire@gov.bc.ca>
Cc: Norton, Chris AFF:EX <Chris.Norton@gov.bc.ca>
Subject: RE: ADVICE: Rick Hansen/Tony Allard email

Hi,

I actually think this should be an ENV lead, or at least co-lead. This issue has come up in the past and ENV plays the key role of pesticide licensing.

Whether it should be DM or PSD.. I'd lean to PSD as this conversation will likely be less focused on the nuts and bolts of the permitting regime, and more about the political positions of Wild Salmon Forever in being against salmon farming.

But even if its just PSD, we will need materials from ENV to support.

Jennifer – you probably know the pesticide/discharge world better than I do, so will defer to you.

Thanks

Mike

From: Evers, Charlene AFF:EX <Charlene.Evers@gov.bc.ca>
Sent: March 29, 2021 3:10 PM
To: McGuire, Jennifer AFF:EX <Jennifer.Mcguire@gov.bc.ca>; Turner, Michael R AFF:EX <Michael.R.Turner@gov.bc.ca>
Cc: Norton, Chris AFF:EX <Chris.Norton@gov.bc.ca>
Subject: ADVICE: Rick Hansen/Tony Allard email

Hi Jen and Mike,

Further to below and the attached email, Tom would like to know what your take is on this request? Should Tom take this meeting with Rick or should this be something PSD should be managing?

Tom did not discuss this with Rick at his March 25 meeting.

Thanks!

Char

From: Nadine Jarry <s.22>
Sent: March 24, 2021 12:45 PM
To: Evers, Charlene AFF:EX <Charlene.Evers@gov.bc.ca>
Subject: Re: Minister Popham meeting and updates

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Hi Charlene,

We were wondering if it would be possible to extend the meeting with Tom and Rick tomorrow by 15-20min as they had also discussed inviting Tony Allard to join for an introduction.

If not possible under this short notice, could we set up a separate discussion for Rick, Tom, and Tony as soon as possible?

Many thanks,

Nadine

FW: Cermaq's permit - Sea Lice Pesticide

From: Evers, Charlene AFF:EX^{s.15}
To: Ethier, Tom AFF:EX
Sent: April 1, 2021 11:29:52 AM PDT

Further to the email I sent re: Rick Hansen's meeting request.

From: Evers, Charlene AFF:EX <Charlene.Evers@gov.bc.ca> **On Behalf Of** Ethier, Tom AFF:EX
Sent: March 24, 2021 8:50 AM
To: Evers, Charlene AFF:EX <Charlene.Evers@gov.bc.ca>
Subject: FW: Cermaq's permit - Sea Lice Pesticide
From: RMH <s.22>
Sent: March 23, 2021 1:43 PM
To: Ethier, Tom AFF:EX <Tom.Ethier@gov.bc.ca>
Subject: Fwd: Cermaq's permit - Sea Lice Pesticide

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Hi Tom

I am hoping to connect with you and Tony before I meet with the minister if possible.

Thanks

Rick

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From: Tony Allard <tony@hsinv.ca>
Sent: Tuesday, March 23, 2021 11:29 AM
To: George.heyman.mla@leg.bc.ca
Cc: Kelly.sather@gov.bc.ca; DM.ENV@gov.bc.ca; RMH
Subject: Cermaq's permit - Sea Lice Pesticide
Attn RHF Staff: This is an external e-mail.

Dear Minister,

I hope you're holding up okay during the pandemic. I can imagine how demanding your schedule is right now.

I'm reaching out regarding [this piece](#) on Cermaq requesting another three-year permit to dump sea lice pesticide into Clayoquot Sound waters. I want to be sure that this has been brought to your attention. It's deeply concerning.

Beyond the harm from the pollution, I can't help but wonder why this exercise is required if the farmers maintain that sea lice levels aren't harmful to the wild salmon population.

Our group, Wild Salmon Forever, is comprised of BC's business leaders who are committed to the sustainable closed containment aquaculture sector in order protect and restore wild salmon. We are very concerned by this permit application.

Please let me know when you can?

Many Thanks,

And best as ever.

Tony A

RE: Request from the Office of Rick Hansen

From: Nadine Jarry <s.22 >
To: Evers, Charlene AFF:EX <Charlene.Evers@gov.bc.ca>
Cc: Rhodes, Angie AFF:EX <Angie.Rhodes@gov.bc.ca>
Sent: May 27, 2021 9:37:53 AM PDT
Attachments: landbased-salmon-farming-short-form.pdf, landbased-salmon-farming-long-form.pdf

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Hi Charlene!

Hope you had a lovely long weekend as well.

Below is the agenda and please also find attached documents on land-based salmon farming – Tom might have already seen it previously but sharing it again for visibility.

1. Introducing Tony Allard to further discuss the salmon aquaculture in BC
2. Perspective of Tony Allard/Wild First on salmon aquaculture
3. Update on Federal government position
4. Update from Tom on the provincial perspective on salmon aquaculture
5. Federal government budget commitment on salmon for this year
6. Sturgeon conservation updates

Best,
Nadine

Nadine Jarry

Sr. Executive Coordinator, Office of Rick Hansen

Rick Hansen Foundation

C. s.22 | E. s.22

From: Evers, Charlene AFF:EX <Charlene.Evers@gov.bc.ca>

Sent: Wednesday, May 26, 2021 11:12 AM

To: Nadine Jarry <s.22 >

Cc: Rhodes, Angie AFF:EX <Angie.Rhodes@gov.bc.ca>

Subject: RE: Request from the Office of Rick Hansen

Attn RHF Staff: This is an external e-mail.

Hi Nadine,

Hope you had a great long weekend!

Are you able to provide us with list of topics that Rick and Tony would like to discuss next week? If you could please provide it to me ASAP that would be wonderful so we can prepare on this end.

Thank you!

Charlene

From: Nadine Jarry <s.22 >
Sent: May 18, 2021 4:52 PM
To: Evers, Charlene AFF:EX <Charlene.Evers@gov.bc.ca>
Subject: RE: Request from the Office of Rick Hansen

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Hi Charlene,

I will be offline for the rest of the week but will circle back with the agenda upon my return next week.

Best,
Nadine

Nadine Jarry

Sr. Executive Coordinator, Office of Rick Hansen

Rick Hansen Foundation
C. s.22 | E. s.22

From: Evers, Charlene AFF:EX <Charlene.Evers@gov.bc.ca>
Sent: Tuesday, May 18, 2021 3:05 PM
To: Nadine Jarry <s.22>
Subject: RE: Request from the Office of Rick Hansen
Attn RHF Staff: This is an external e-mail.

Hi Nadine,
Do you know the specific topics around fisheries and aquaculture that they wish to discuss?

From: Nadine Jarry <s.22>
Sent: May 18, 2021 1:35 PM
To: Evers, Charlene AFF:EX <Charlene.Evers@gov.bc.ca>
Subject: Re: Request from the Office of Rick Hansen

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Thanks Charlene!
Yes, those emails are correct.
Kind regards,
Nadine

Sent from my iPhone

On May 18, 2021, at 12:54 PM, Evers, Charlene AFF:EX <Charlene.Evers@gov.bc.ca> wrote:

Attn RHF Staff: This is an external e-mail.

Hi Nadine,
I will get that in the calendar and send out shortly. Are there any specific topics that Rick and Tony will be bringing forward for discussion?
Also, just to confirm the correct email addresses for Rick and Tony: s.22 and tony@hsinv.ca?
Thank you,
Charlene

From: Nadine Jarry <s.22>
Sent: May 18, 2021 12:08 PM
To: Evers, Charlene AFF:EX <Charlene.Evers@gov.bc.ca>
Subject: RE: Request from the Office of Rick Hansen

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Thanks so much Charlene,
No worries at all – really appreciate those options.
We would like to confirm June 2nd at 1:30pm. Please do send through the Teams meeting invite at your earliest convenience.
Kind regards,
Nadine

Nadine Jarry
Sr. Executive Coordinator, Office of Rick Hansen
Rick Hansen Foundation
C. s.22 | E. s.22

From: Evers, Charlene AFF:EX <Charlene.Evers@gov.bc.ca>
Sent: Monday, May 17, 2021 3:44 PM
To: Nadine Jarry <s.22>
Subject: RE: Request from the Office of Rick Hansen
Attn RHF Staff: This is an external e-mail.

Good afternoon Nadine,
My apologies for not getting back to you sooner. Tom has agreed to have a meeting with Rick and Tony and following are the times he is available:
May 25, 10:30-11am
June 1, 3-3:30pm
June 2, 1:30-2pm
Please let me know which date works best and I will send the coordinates for a Teams meeting.
Thank you!
Charlene

From: Nadine Jarry <s.22 >
Sent: May 6, 2021 2:44 PM
To: Evers, Charlene AFF:EX <Charlene.Evers@gov.bc.ca>
Subject: Request from the Office of Rick Hansen

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Hi Charlene,
Hope you are doing well.
Wondering if Tom Ethier might have some time over the next few weeks for a virtual meeting with Rick Hansen and Tony Allard to discuss aquaculture and fisheries.
Please let me know what might be possible at your earliest convenience.
Many thanks,
Nadine

Nadine Jarry

Sr. Executive Coordinator, Office of Rick Hansen

Rick Hansen Foundation

C. s.22 | E. s.22

<image001.png>

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<image002.png>

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<image003.png>

Materials for DM meeting with Rick Hansen and Tony Allard - June 2 @ 1:30pm

From: Evers, Charlene AFF:EX
s.15
To: Dale, Alec R AFF:EX
Cc: Norton, Chris AFF:EX
Sent: June 1, 2021 8:31:45 AM PDT
Attachments: landbased-salmon-farming-long-form.pdf, landbased-salmon-farming-short-form.pdf, 194918_DM_IBN_Rick Hansen and Tony Allard.docx

DM approved

Charlene Evers
Senior Executive Assistant to
Tom Ethier, Deputy Minister
Ministry of Agriculture, Food and Fisheries
☎ 778 974-3844



Land-based Salmon Aquaculture

an economic opportunity for British Columbia

extended presentation

Global Expansion of Land-based Salmon Farms

- Kuterra in Port McNeil pioneered viable land-based Atlantic Salmon
 - sparked a decade of global development.
- Globally over 70 farms in various states of development
- Significant IPO activity for the leading companies, billions of dollars deployed
- 18 large scale farms of 10,000 Mtons scale are in construction
- 11 large scale and 9 small scale farms have delivered first harvests to market
- Grieg – recognizing the opportunity – joint investments in two 3000MT facilities
 - Mowi and Leroy following too
 - <https://griegseafood.com/news/grieg-seafood-enters-joint-venture-for-post-smolt-and-land-based-salmon-farming->
- Investors have recognized
 - Existing ocean farming practices have globally has reached “carrying capacity” because warming oceans, algal blooms and low dissolved oxygen are becoming increasing problematic
 - Ideal global ocean farming locations are largely all allocated
 - Social licence preventing net-pen expansion and actually forcing contraction in certain regions
 - Salmon farmers have realized that land-based farming provides a reliable “farmed environment”
 - Alternative hybrid land/ocean and offshore farming technologies could also expand ocean farming
- British Columbia is missing this opportunity

IntraFish Report Highlights

Land-base Salmon: Aquacultures New Disrupter

- Over 70 projects globally, many financed and in construction, many just plans
- 18 farms providing fish to market, 11 of the facilities greater than 1000MT production
- Globally an acute shortage of skilled workforce is a major issue and a major barrier to success
- Significant investment inflows from private capital and institutional sources is occurring
- Nordic expertise and monies driving expansion
- Driven by global surge due to a huge gap between supply and demand in the salmon market

Major US Projects			
Project	Size (Planned Max Capacity)	Production	Investment /Backers
Atlantic Sapphire	220,000	First harvest 2020	\$275m
Whole Ocean	20,000	In development Operations 2022 First Harvest 2024	\$250m
Nordic Aqua Farms <i>east coast</i>	33,000	construction 2021	\$500m raised
AquaCon	100,000	Construction starts 2021	\$1Billion raised
Pure Salmon	20,000	planned	\$250m raised
AquaBounty	55,000	First Harvest 2020 Expansion Construction started	\$100m
AquaBanq	3,600	Construction complete 2021 First harvest 2022	N/A
West Coast Salmon	50,000	First Harvest 2024	N/A
Nordic Aqua Farms <i>west coast</i>	33,000	planned	\$500m raised

Recent News Clippings



Your monthly land-based salmon update

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Mowi and Leroy just upended land-based salmon farming

The segment has so far been a niche blazed only by risk-taking startups. That may be about to change.

Another land-based salmon farmer jumps on IPO bandwagon for funding

Smart Salmon is planning to list on the Oslo Stock Exchange's lower cap Euronext Growth by the second quarter of 2021.

Per Grieg-backed group becomes Norway's fifth land-based salmon IPO

Nutreco is among the investors taking a stake in Proximar Seafood, which is planning a project in Mount Fuji, Japan.

The Vision:- To Catalyze Land-based Salmon Farming in BC

- Supporting land-based salmon fish farming in B.C provisions
 - Expands and secures the farmed fish industry (sites and tonnage)
 - Continues to secure fish processing, transportation and fish feed industries
 - Increasing jobs
 - Increasing retained earnings in B.C.
 - Increasing profit margins for the industry and parent companies
 - Enables growth in an established but constrained industry sector
 - Reconciliation in Action by provisioning opportunity for First Nations

Land-based Salmon Farming – Two Economic Models

- Small scale < 1000MT– Superior Fresh (700MT) the leading example
 - 100MT – 500MT salmon farm coupled with aquaponics green house for vegetable production
 - Proven success case – rapid ROI and short time frame to first revenue
 - Investments are 1/50 of the mega scale facilities
 - Provides food security through geographically diversified locally grown produce and salmon
 - Economic multiplier when co-located with communities that have fish processing facilities that service the seasonal wild fisheries – seasonal to full time job transmission
 - Requires reliable hydro
 - Caveat – still requires technically astute workforce
- Large Scale > 5000MT+ farms comprised of modules of the 1000MT /3000MT /5000MT scale.
 - Atlantic Sapphire's Blue House 220,000MT facility is now shipping food fish to market from its first 8500MT module
 - Whole Ocean's 20,000MT planned facility in Maine
 - Significant investments > 100M\$
 - typically funded through private capital, investment banks and public IPO's
 - Many successful 1000MT+ modules now operating world wide
 - Scale is critical to success

British Columbia's Fading First Mover Advantages

- Low cost, low carbon intensity hydro
- Aquaculture trained workforce
 - a major factor for global competitors is the lack of qualified workforce
- Feed mills, fish processing and supporting industries all present and at scale
 - Leading feed research expertise for alternative diets at DFO and Taplow
- Fish health and veterinary science professionals trained and present
- Land-based salmon farm equipment and service suppliers already at scale due to land-based brood stock and stocking facilities
 - AKVA and ScaleAQ
- Perfect temperate coastal locations with ideal ground and ocean water temperatures support low cost operation
- Multiple brood stocks and genetic strains available and raised in farms
 - Steelhead, Atlantic salmon, Arctic Char and Coho and Sockeye
- Workforce training at VIU and UBC already in place
- Close to US market with low distribution costs

As with many industries the value of these first mover advantages becomes diminished as “industry clusters” form in other locations

B.C's Conflict Politics Signal We Are Closed for Business

- B.C needs to send a strong signal that we are open for business
- The wild vs. ocean farmed public conflict has signalled we are closed to investment
- Social licence is preventing net-pen expansion and actually forcing contraction in certain geographies (Washington state, Discovery Islands)
- Federal Discovery Island decision has
 - Downloaded job losses to the province – a non-just transition for the workforce
 - Dissuades further investment by the majors (Mowi, Cermaq, Grieg) which will ripple into adjunct industries such as feed mills and fish processing house which will refrain from ongoing capital improvement investments and R&D
 - Creates a perception that “signals the beginning of the end” with no material transition plan
 - Significant impact to coastal economies that could avalanche
 - will have an impact on the individual FN's whom have working agreements with Fish Farm Companies
 - Trudeau's documented private commentary¹ that land-based salmon farming is not viable slams the door on investment and encourages the majors to age out their farms and leave the province

A Strong Signal Supporting Land-based Aquaculture is Required

- If sent, it will help secure the current industry
- Promotes job growth in rural and First Nation communities in numerous geographical areas province wide
- Catalyzes entrepreneurial growth in support businesses by local entrepreneurs with modest financing

Land-based Aquaculture Industry Economic Outcomes

- The Fraser Basin Council sponsored report
RAS Atlantic Salmon Industry on Vancouver Island Financial Model & Economic Impact Analysis
Dr Edwin Blewett Mr Stuart Nelson
Counter Point Consulting
- Base-case financial model paints a picture of an industry with the following parameters:
 - 50,000 tonnes of annual Atlantic salmon production, comprised of individual farms operating at a 3,000 tonne scale.
 - A capital cost of \$1.1 billion to set-up the industry.
 - \$400 million in annual revenue.
 - \$208 million in production (variable) expenses, \$28 million in fixed (overhead) expenses, and \$97 million in combined depreciation, interest, and income taxes.
 - Annual net income of \$79 million for the farming sector.
 - Annual processing, trucking, and sales & marketing charges associated with handling the farmed salmon production totaling \$114 million per year.
- The base-case financial model utilized the BC Input-Output Model (BCIOM) to assess the economic impacts — direct, indirect, and induced — associated with this level of industrial activity.

A Strong Signal Supporting Land-based Aquaculture is Required

- Results – significant returns for B.C

RAS Atlantic Salmon Industry on Vancouver Island Financial Model & Economic Impact Analysis

Dr Edwin Blewett Mr Stuart Nelson

Counter Point Consulting

Economic Impacts from Ongoing Farm and Processing Operations (\$millions)				
	Direct	Indirect	Induced	Total
Expenditures	\$515	\$290	\$32	\$837
GDP	\$211	\$116	\$20	\$348
Jobs	1413	1080	191	2,685
Employment	1465	1094	173	2,732
Household Incomes	\$59	\$69	\$15	\$142
Tax Revenues	\$40	\$26	\$3.2	\$70

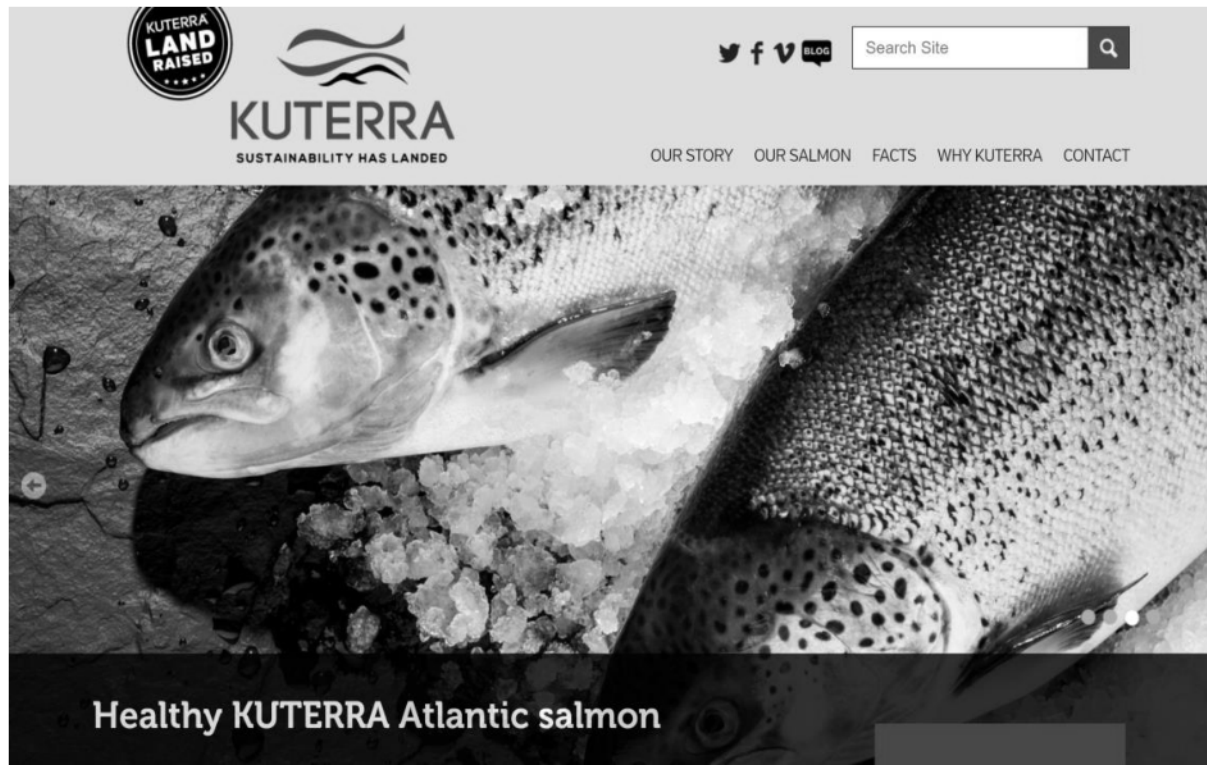
One Time Economic Impact due to Construction (\$millions)				
	Direct	Indirect	Induced	Total
Expenditures	\$1028	\$574	\$77	\$1678
GDP	\$72	\$286	\$47	\$407
Jobs	765	2,762	463	3,989
Employment	858	2,974	418	4,250
Household Incomes	\$59	\$212	\$36	\$307
Tax Revenues	\$49	\$56	\$56	\$113

BC has Significant Success

- B.C has significant success land-base fish farming stories to celebrate and build upon, notably
 - Kuterra Atlantic Salmon
 - Taste of BC, Steelhead
 - Miracle Springs, Steelhead, Artic Char
 - Target Marine, Coho and Sturgeon
 - Sumas Lake Live Tilapia
 - Pr Aqua, Land-base farm architecture and construction
 - Organic Ocean Sustainable seafood distributor
- East Coast for Reference
 - Sustainable Blue - 1000MT Nova Scotia
 - Cape d'Or Sustainable Seafoods 226Mt
 - Aquabounty

Local Canadian Successes - *Kuterra*

- Kuterra – the farm that inspired global change
 - The first commercial scale land-based salmon production facility in North America and the second in the world
 - Open-source farm – knowledge shared globally
 - Proved biological, technical and economically viability
 - Industry questions were answered and myths busted
- Conceived by The SOS Marine Conservation Foundation and built in partnership with the 'Namgis First Nation, SDTC, DFO, Tides Canada (Make way), Ritchie Foundation and the Province of B.C
- Achieves 250MT/year of premium grade fish, total sales to date 2.5 million pounds and growing
- Now leased and operated by Emergent Holdings as a training and R&D facility for its planned Maine US 20,000 MT facility – *the province has an opportunity to invite them to invest in B.C*



- PR Aqua is a world leading aquaculture design and technology provider.
- A single source provider, supplying a broad range of services that include:
 - Project planning and engineering design
 - Delivery of specialty equipment
 - Construction management & Startup and training services
- Designer of the Kuterra land-based salmon Farm in Port McNeill on Vancouver Island.
 - the **first** commercial scale land-based salmon production facility in North America and the **second** in the world
- PR Aqua is the lead process design and technology provider to a 20,000 MT land-based salmon farm currently being developed in Maine.



Local Canadian Successes - *Land-based Salmon Farms in BC*

Blue Star Foods Corp. Signs Term Sheet to Acquire Taste of BC Aquafarms, Inc.
Acquisition Would Signify a Strategic Investment into the Recirculating Aquaculture Systems (RAS) Industry

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Miracle Springs - Mission

- 100Mt production 50% Artic Char 50% Steelhead
- Genetic brood stock of both species
 - Key to building an industry
- Provides food fish production for the white table cloth restaurant market
- Provides eggs and fry production for other production companies



Positive Activity in B.C

- BlueStar
 - Upcoming NYSE IPO raising \$50 Million
 - Funds fully directed for development in BC.
 - Securing property now for farm expansion.
 - One site in negotiation and two others in progress.
 - 1,500MT farm development starts April 2021.
 - 21,000 MT production by 2028 ~\$500 million of investment.
- Gold River Aquafarms actively seeking investment for 3000MT farm in Gold River
- Miracle Springs – expanding land-based salmon facility for 150-200MT of production

Organic Ocean – sustainable sea food distributor

Intercity, Sea Agra, Blundel, Seven Seas industry scale distributors

- Organic Ocean distributes sustainable wild harvest and responsible cultured sea food
- Organic Ocean observe that for seafood distributors, land-base salmon has customer appeal for
 - Land raised seafood typically has a milder flavour profile
 - Fish texture is firm due to quality animal welfare conditions
 - Healthier – free from therapeutants, antibiotics, pesticides, growth hormones
 - Most Sustainably ranked – Seafood Watch, Ocean Wise
 - Minimal local environmental impact
- And retailers, food service and processors appeal for
 - No Kudoa, less spoiled waste fish
 - Shorter supply chain yielding fresher fish
 - Eliminate marine based pollution
 - Most sustainably ranked
 - Stable pricing – year round availability



Enabling B.C Via Policy Incentives – Key Recommendations

- Promote open for business to global community
 - Encourage Companies like Atlantic Sapphire, Blue Star and Emergent to invest locally by actively inviting them
 - Offer tax exemptions, access to crown land invest and workforce training credits at VIU and UBC for personnel
- Expedite permitting and environmental assessment process
 - Currently a long process up to 2 years with no assured outcome – undermines investor confidence
 - Land-based farms have a low environmental impact – they are good to go
 - the need for a clear (who has jurisdiction - BC or feds), stable and timely regulatory regime is also critical key point for investment that should be driven home
 - Goal permits issued in less than 2 months
- Push Feds for rapid adoption of the Salmonid Alternative Production Technologies Working Group's May 21, 2020 report and recommendations
- Champion access to global genetic seed/egg for Atlantic Salmon in closed containment
- Enable Reconciliation in Action
 - Advance UNDRIP and Free Prior and Informed Consent by facilitating FN partnerships in land-based farming
 - Extend development of land-based in partnership with FN's throughout the province
 - Addresses economic development needs for FN employment
 - Signal to all FNB's of BC another substantial step to further advance protection of wild salmon across the Province and thus advancing Food Security enjoyment of constitutionally protect ted aboriginal rights
 - Create a co-managed (FN & BC Gov) governance entity that ensures aquaculture companies stable longitudinal agreements and ensure farm de-commissioning is prefunded should the venture fail.
 - Provides mutually assured confidence to investors and First Nations alike.

Enabling B.C Via Policy Recommendations (i)

- BC investor tax credit for farm investments – similar to the high tech program
 - Appropriate for the Superior Fresh small scale model farm
 - Enables local investors to engage
 - Pushes investment into rural populations not tech centric city populations
- Consider joint supportive funding with the federal government for aquaculture business development funding
 - Similar to what has just been announced on the east coast
 - Similar to the joint funding of the Salmon Restoration program
 - Appropriate for the Superior Fresh small scale model farm which builds both fish and vegetable food security on the coast
- Offer Crown land at low or lease free until profitability or time window expiration
 - (5-8% of capital required is land costs)

Enabling B.C Via Policy Recommendations (ii)

- Create an Aqua-(agri)-culture development bank much like what was done for the chicken industry to fund the small farm model and encourage local entrepreneurs
- Support re-training programs to extend provincial expertise and provide a future employment pathway for Discovery Island workers
- Build a trade/apprenticeship land-based Aquaculture technologist program
- Provide access for fish farmers to the suite of financial tools such as loan guarantees, income stabilization, and business risk insurance available to terrestrial farmers
- Commission / invite bids for discovery island projects for large scale and small scale land-based farms from international companies and investors
- Potential market size, opportunity for a grown in BC marketing strategy (similar to VQA for wine), that could encompass the wild commercially fishery as well (i.e. land raised complements vs competes with wild fishery)

B.C's Kobayashi Maru Moment

No-Win scenario defined by

- Net pen industry in retraction
- Wild fishery diminished /closed
- Sport fishery closed
- Job and industry losses appear inevitable with potential to avalanche towards 2025
- BC / Canada closed to business

Change the playing field - Change the rules

- Immediate time frame (0-1 year)
 - Promote cultured seaweed FN and community farming – fast job creation
 - Promote wild fishery, farmed salmon and land-base salmon production volumes to be integrated into the processing and transportation sector to sustain ancillary jobs
 - Utilize VIU and UBC to retrain and apprentice Discovery Island workforce
- Short time frame (0-3 year)
 - Catalyze land-base salmon aquaculture
 - Incent small scale coupled salmon and aquaponic faculties for communities
 - Caveat:- committed and technically astute workforce essential
 - Incent the majors to invest in large scale land-based as net-pen infrastructure ages out
- Long time frame (present and onward)
 - invest in wild salmon rehabilitation to rebuild wild fisheries

Discussion

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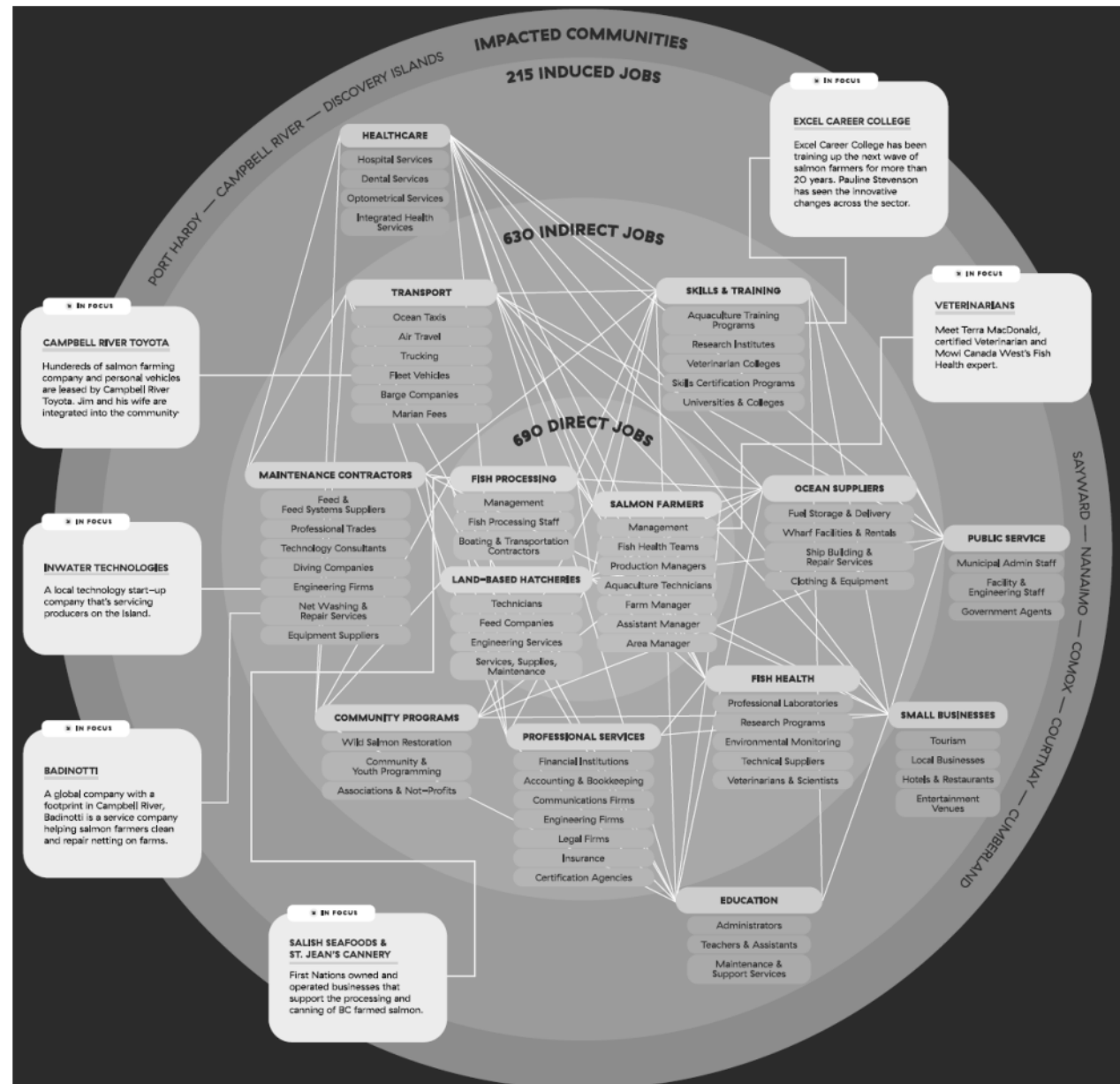
Pamela Goldsmith Jones

Former MP Liberal Party 2014-2018

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Land-based Salmon Farming Fills The Central Job Void

Taken from the BC
Salmon Farmers
blast radius
infographic





Land-based Salmon Aquaculture

an economic opportunity for British Columbia

An Entrepreneurial Approach

A Global Overview

- Over 70 projects globally, many financed and in construction, many just proposals
- Significant IPO activity for the leading companies, billions of dollars deployed
- Significant investment inflows from private capital and institutional sources is occurring
- Nordic expertise and monies driving expansion
- 18 large scale farms of 10,000 MT scale are in construction
- 18 farms providing fish to market, 11 of the facilities greater than 1000MT production
- Globally an acute shortage of skilled workforce is a major issue and a major barrier to success
- Driven by global investment surge due to the gap between supply and demand in the salmon market

Major US Projects			
Project	Size (Planned Max Capacity)	Production	Investment /Backers
Atlantic Sapphire	220,000	First harvest 2020	\$275m
Whole Ocean	20,000	In development Operations 2022 First Harvest 2024	\$250m
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Mowi & Grieg



Your monthly land-based salmon update

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Mowi and Leroy just upended land-based salmon farming

The segment has so far been a niche blazed only by risk-taking startups. That may be about to change.

Another land-based salmon farmer jumps on IPO bandwagon for funding

Smart Salmon is planning to list on the Oslo Stock Exchange's lower cap Euronext Growth by the second quarter of 2021.

Per Grieg-backed group becomes Norway's fifth land-based salmon IPO

Nutreco is among the investors taking a stake in Proximar Seafood, which is planning a project in Mount Fuji, Japan.

Benefits of Land-based Salmon Aquaculture

1. Allows BC to maintain and grow salmon production volumes
2. Supports BC's existing aquaculture supply and support companies
3. Creates and retains jobs in traditional production areas for skilled aquaculture workers
4. Creation of "at scale" industry would generate a significant construction boom of hundreds of millions of dollars
5. Reconciliation in Action by addressing FN concerns and enabling FN and rural community economies

B.C's Advantages

- Low cost, low carbon intensity hydro
- Aquaculture trained workforce
- Feed mills, fish processing and supporting industries all present and at scale
- Fish health and veterinary science professionals trained and present
- Land-based salmon farm equipment and service suppliers already at scale due to land-based brood stock and stocking facilities
- Regional compatibility with existing salmon farming industry and support businesses
- Perfect temperate coastal locations with ideal ground and ocean water temperatures support low cost operations
- Brood stocks and genetic strains for multiple species are available in B.C
 - Steelhead, Atlantic salmon, Arctic Char and Coho and Sockeye
- Workforce training at VIU and UBC already in place
- Close to US market with low distribution costs

The Economic Case

1. Land-based salmon farming is demonstrably profitable
2. Viable in BC and in regions affected by net-pen reductions
3. Sustains jobs and retains sectoral expertise and knowledge in B.C
4. Increases retained earnings in B.C.
5. Enables growth in an established but constrained industry sector
6. Critical to act now to capture global investment flows that are occurring into land-based aquaculture in other jurisdictions

Two Economic Models

Large Scale (10,000 tonnes+) – Farms with multiple 1,000 to 3,000 tonne modules

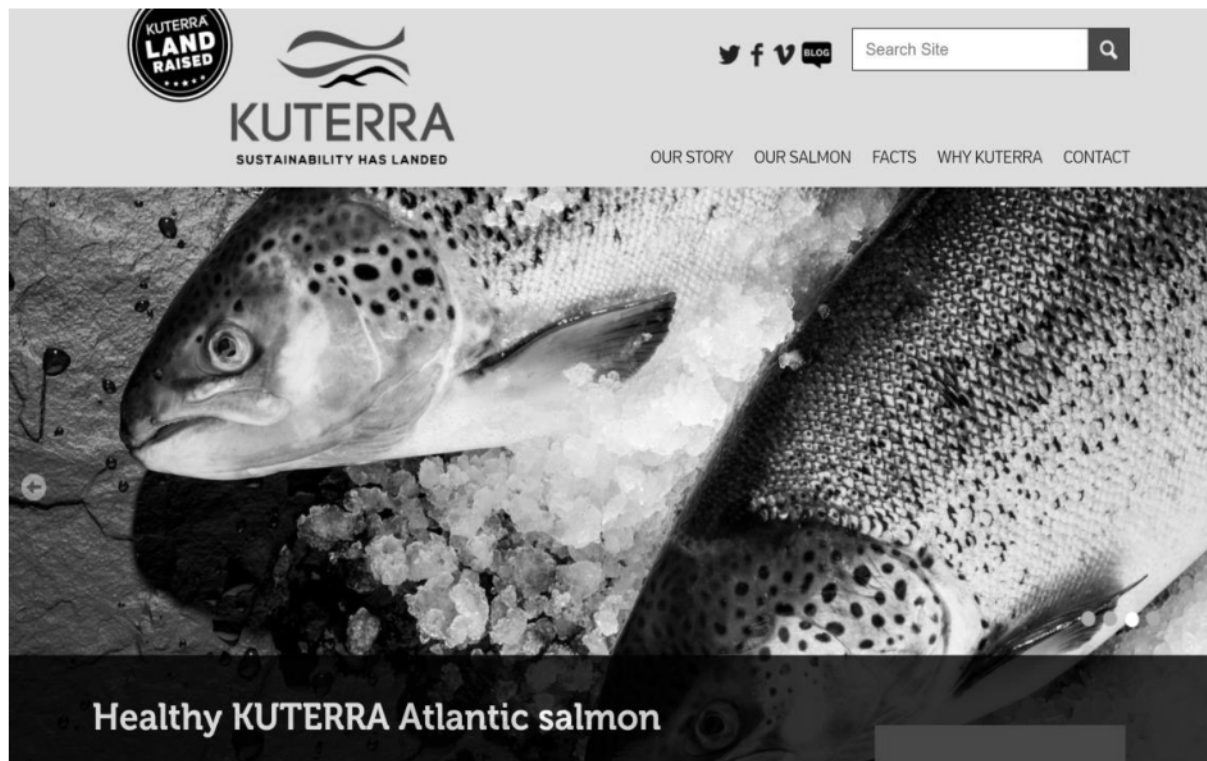
- Atlantic Sapphire's Blue House 220,000 ton facility now shipping food fish to market
- Whole Ocean's 20,000 tonne facility in Maine is permitted and construction pending 2021
- Typical investment amount: Over \$100 million USD
- Scale is critical to success

Small scale (100-1,000 ton) – Superior Fresh (Wisconsin) is leading example

- Salmon farm coupled with aquaponics greenhouse for vegetable production
- Proven success case – rapid return on investment and short time frame to first revenue
- Typical Investment at this scale: \$5 - 20 million USD

Kuterra

- Kuterra – the farm that inspired global change
 - The first commercial scale land-based salmon production facility in North America and the second in the world
 - Open-source farm – knowledge shared globally
 - Proved biological, technical and economically viability
 - Industry questions were answered and myths busted
- Achieves 250MT/year of premium grade fish, total sales to date 2.5 million pounds and growing
- Now leased and operated by Emergent Holdings as a training and R&D facility for its planned Maine US 20,000 MT facility – *the province has an opportunity to invite them to invest in B.C*

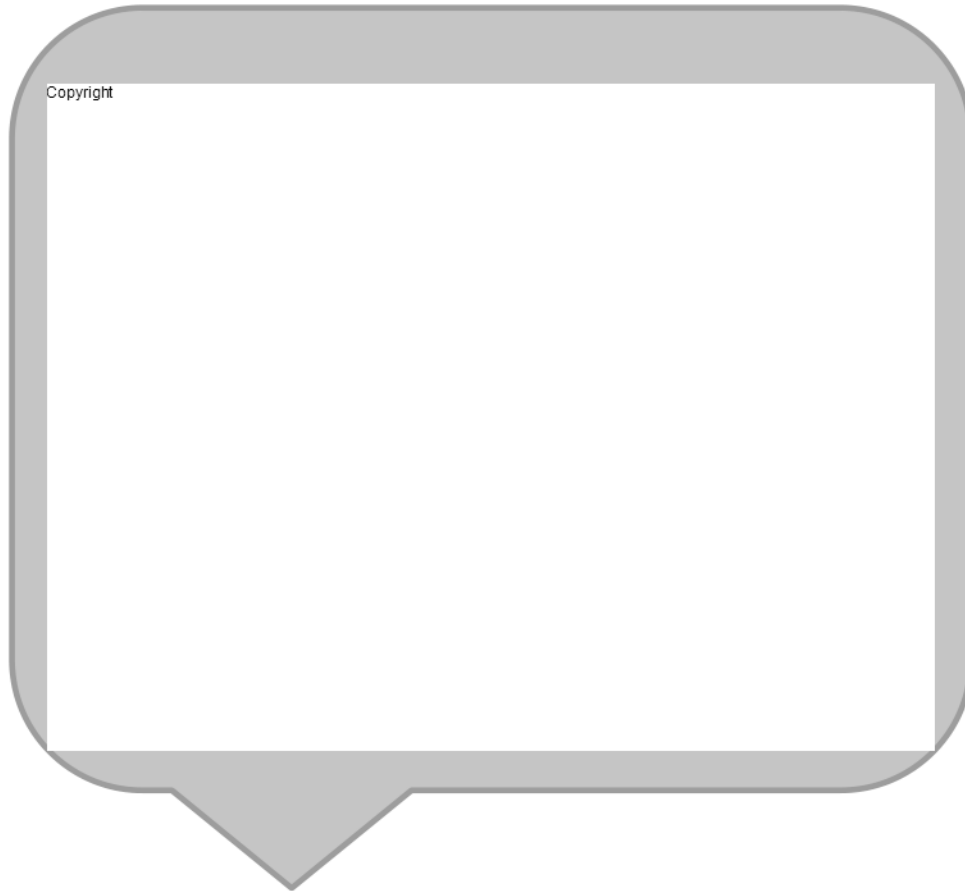


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 - Delivery of specialty equipment
 - Construction management & Startup and training services
- Designer of the Kuterra land-based salmon Farm in Port McNeill on Vancouver Island.
- PR Aqua is the lead process design and technology provider for the 20,000 MT land-based salmon farm currently being developed by Emergent Holdings (Whole Oceans) in Maine.



A B.C Success Story

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Positive Activity in B.C

- BlueStar
 - Upcoming NYSE IPO raising \$50 Million
 - Funds fully directed for development in BC.
 - Securing property now for farm expansion.
 - One site in negotiation and two others in progress.
 - 1,500MT farm development starts April 2021.
 - 21,000 MT production by 2028 ~\$500 million of investment.
- Gold River Aquafarms actively seeking investment for 3000MT farm in Gold River
- Miracle Springs – expanding land-based salmon facility for an additional 150-200MT of production
- Established nucleus, the foundation of growth

Key Recommendations

- Promote “open for business” to global community
- Expedite permitting and environmental assessment process
 - Joint FLINRO (Province) and DFO responsibility
- Expediate Federal and Provincial Investment Incentives
 - Introduce investor tax credits – similar to the technology sector
 - Government loan guarantees, broadening provincial sales tax (PST) exemption, accelerated capital cost allowances, Scientific Research & Experimental Development (SRED) tax credits,
 - Seed a Community Futures Fund that is specific to the adoption of alternative production systems.
 - Provide access for fish farmers to the suite of financial tools such as loan guarantees, income stabilization, and business risk insurance that is available to terrestrial farmers.
- Push Feds to adopt the Salmonid Alternative Production Technologies Working Group’s May 21, 2020 Report and Recommendations
- Champion access to global genetics for Atlantic salmon in land-based farms
- Enable Reconciliation in Action

Next Steps

- Immediate time frame (0-1 year)
 - Promote cultured seaweed FN and community farming – fast job creation
 - Promote wild fishery, farmed salmon and land-based salmon production volumes to be integrated into the processing and transportation sector to sustain ancillary jobs
 - Utilize VIU and UBC to retrain and apprentice Discovery Island workforce
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 - Caveat:- committed and technically astute workforce essential
 - Incent the majors to invest in large scale land-based as net-pen infrastructure ages out
- Long time frame (present and onward)
 - invest in wild salmon rehabilitation to rebuild wild fisheries

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Ministry of Agriculture, Food and Fisheries
BRIEFING NOTE FOR DEPUTY MINISTER FOR INFORMATION

Ref: 194918

Date: May 28, 2021

Title: Meeting with Rick Hansen and Tony Allard

Issue: Rick Hansen and Tony Allard wish to provide updates and discuss their interests in salmon aquaculture, and wild salmon and sturgeon conservation in British Columbia.

Background: Tony Allard is the President of Wild Salmon Forever (WSF) and the owner and proprietor of Good Hope Cannery Lodge, a private sport-fishing lodge in Rivers Inlet. Mr. Allard also supports the Pacific Salmon Foundation (PSF) and the Salish Sea Marine Survival Project (SSMSP). He has made multiple large donations to fund initiatives and research into declining wild salmon populations, including pledging \$250,000 to the SSMSP. Mr. Allard has been an outspoken critic of salmon aquaculture in B.C. and brought that position to his appointment as a member of the Ministry of Agriculture's Advisory Council on Finfish Aquaculture (MAACFA) through 2017-2018

Rick Hansen is the founder of the Rick Hansen Foundation and a passionate supporter of people with disabilities in Canada and the conservation of sturgeon and salmon ecosystems. He formed, and is the current Chair of, the Fraser River Sturgeon Conservation Society (FRSCS) and helped form the Pacific Salmon Endowment Fund Society (PSEFS) where he is a former board member. Rick has recently discussed the need for improved accessibility to angling opportunities, including infrastructure investments of the Freshwater Fisheries Society of B.C. and the Rec Sites and Trails program. Mr. Hansen and the FRSCS are strong and passionate advocates for sustainable management of fish, with a focus on sturgeon and salmon. Mr. Hansen regularly meets with both Federal and Provincial elected officials and staff. The primary focus typically is advocacy for changes to restore and sustain salmon and sturgeon, with fishing accessibility needs as another primary topic. In 2020, the Ministry of Forests, Lands and Natural Resource Operations (FLNR) provided a \$250K partnership grant to the FRSCS to assist the Province in conducting 2021 engagement with Indigenous Nations and stakeholders to inform a B.C. Fraser River Sturgeon Management Plan.

Rick Hansen and Tony Allard have provided an agenda of topics they wish to discuss in the meeting:

- Introducing Tony Allard to further discuss salmon aquaculture in B.C.;
- Perspective of Tony Allard/Wild First on salmon aquaculture;
- Update on federal government position;
- Update from Tom on the provincial perspective on salmon aquaculture;
- Federal government budget commitment on salmon for this year; and
- Sturgeon conservation updates.

First Nations Considerations: One third of fish harvesting jobs are in First Nation communities and 78 percent of B.C.'s farmed salmon production comes from areas covered by economic and social

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partnerships with First Nations. In B.C.'s four largest salmon farming companies, 30 percent of the jobs are staffed by First Nations.

Discussion:

Salmon Aquaculture: Tony Allard and Wild Salmon Forever have been long-time proponents of removing open net-pen salmon farms from B.C. waters. In the current context of the federal 2025 Transition Plan, Broughton Implementation, and Discovery Islands decision, there is increased public attention to the notion of removing salmon farms. While there are uncertainties around the specifics of any future transition, land-based aquaculture and Recirculating Aquaculture Systems (RAS) usually feature in discussions and will likely be raised by Mr. Allard and Mr. Hansen.

High capital cost remains the single most significant barrier to developing land-based closed-containment systems to produce market-size Atlantic salmon as profitability is dependent on large economies of scale. Current estimates suggest the capital cost to build a RAS system is between \$7 to \$14 million per metric ton (mt) of production for sites producing 5,000 to 10,000 mt respectively. In contrast, the capital cost of a net-pen is estimated at \$2.3 million per mt. The Ministry of Jobs, Economic Recovery, and Innovation (JERI) is a partner in efforts to raise awareness and investment in the RAS and land-based aquaculture sectors in B.C.

Pacific Salmon: Mr. Hansen has previously expressed to provincial ministry staff his vision for a third party (non-government) to lead salmon recovery efforts, likely the PSF, and may advocate this vision once again. DFO and the Province are concurrently working on strategies to recover wild salmon populations through restoring their habitats, hatcheries, and other means. These efforts include working to double the size of the B.C. Salmon Restoration and Innovation Fund (BCSRIF). Effort will be taken to step up protection of fish habitat with the Watershed Security Strategy and habitat themes within the provincial salmon strategy. Outreach and engagement on the strategy is expected to occur over the coming months.

Sturgeon: As a freshwater species, sturgeon are a provincial responsibility (FLNR lead). However, the Province can only manage the portion of the population above the Mission Bridge as below that they are in the area designated by Fisheries and Oceans Canada (DFO) as "tidal", and the Province does not have jurisdiction. DFO is currently conducting a *Species at Risk Act* (SARA) listing review on Upper Fraser and Lower Fraser Sturgeon with participation from the Province.

The currently approved catch-and-release recreational sturgeon fishery provides approximately \$30M to the local economy annually and is regularly reviewed as it must not undermine recovery goals. In spring 2019, the Province established regulated fishing closures on the three highest-value spawning sites with no catch-and-release fisheries allowed.

Suggested Response:

- **B.C. recognizes the value of wild Pacific salmon stocks and their importance to commercial and recreational user groups, and all First Nations and British Columbians.**
- **B.C. is keen on hearing any insights Mr. Allard may have from his recent discussions with the Nations and the federal government regarding wild salmon and aquaculture.**
- **The B.C. government supports the evaluation and use of innovative technologies like**

closed containment to explore new markets and build on B.C.'s reputation as a provider of great-tasting, sustainable seafood.

- **B.C. is actively working towards new initiatives to assist salmon recovery. We look forward to working with partners like the Rick Hansen Foundation and Wild Salmon Forever.**

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