

**Analysis of “Strategic Questions” posed by Fisheries and Oceans Canada
for the Development of a Regulatory Framework for B.C. Aquaculture**

January 2010

B.C. Aquaculture Regulations Analysis of Strategic Questions

The First Nations Fisheries Council would like to acknowledge Teresa Ryan for researching and reviewing material and drafting the following document. It is intended for the benefit of the First Nations Fisheries Council to serve as guidance for discussions related to a regulatory shift for aquaculture jurisdiction on the BC coast. Edits were made by the Council in order to make the document succinct and consistent in formatting with other Council reports. This version is focused specifically on the regulatory structure strategic questions. More time is needed to synthesize and digest the strategic planning elements associated with the national NASAPI process.

Any errors or omissions are unintentional. The following is based on information generally available to the public.

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Executive Summary

The aquaculture industry in B.C. is currently undergoing a shift in jurisdiction from provincial to federal jurisdiction as a result of a February 2009 B.C. Supreme Court ruling in *Morton*. This shift creates a window of opportunity for B.C. First Nations to play a key role in related negotiations to influence the development of a new regulatory framework and associated policy. With this in mind, B.C. First Nations supported two resolutions in the fall of 2009, which empowered the First Nations Fisheries Council (FNFC) and the Leadership Council's Aquaculture Working Group (AWG) to work together to forward the interests of B.C. First Nations within the field of aquaculture. One of the resolutions, the *B.C. First Nations Statement of Solidarity on Aquaculture*, outlines four key areas in which First Nations request active involvement. These areas are: farm siting; the science that guides the industry; monitoring and compliance; and day-to-day management.

In November 2009, Fisheries and Oceans Canada (DFO) released the *Federal BC Aquaculture Regulation & Strategic Action Plan Initiative Discussion Document* ("the Discussion Document") to inform the processes moving forward. The document contains 27 'strategic questions' to invoke discussion and solicit information for the formation of new regulations. Thirteen of these questions related directly to the development of the new regulatory framework for B.C., and the remainder relate to another national initiative which is in a concurrent process, the *National Aquaculture Strategic Plan Initiative* (NASAPI). Fisheries and Oceans Canada has indicated that they hope to focus feedback on the regulatory framework development around Discussion Document and the feedback received from the strategic questions.

The purpose of this document is to provide information and analysis of the strategic questions posed in the Discussion Document by exploring possible implications of these questions for B.C. First Nations, providing background, analysis, and possible issues to consider when communities respond to the questions. The analysis of the Fisheries Council had led to the conclusion that the regulatory framework will potentially constitute an infringement to Aboriginal title and rights. The proper right-holders therefore need to be aware of the possible implications of the question and should carefully consider the feedback they provide. This document attempts to provide summarized relevant information for B.C. First Nations to assist them in meaningfully providing feedback to Canada on the strategic questions.

Some of the summarized content from the Discussion Document may not reflect the depth of content which is required for a full and detailed response on specific issues (i.e., Pollution Prevention Measures, Introductions & Transfers, etc.). Some issues clearly require additional information and analysis. Where possible, relevant information from other jurisdictions is profiled. Conclusions are drawn from the analysis approach and recommendations are provided. Additional discussion questions are also posed to stimulate further dialogue and consideration.

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Introduction

The discussion document "Federal B.C. Aquaculture Regulation & Strategic Action Plan Initiative" prepared by Fisheries and Oceans Canada (DFO) addresses two distinct issues related to aquaculture. The first part - Federal B.C. Aquaculture Regulation – relates to the change in jurisdiction and management control of aquaculture in B.C. as required by the B.C. Supreme Court's decision in *Morton v. British Columbia (Agriculture and Lands)* (2009 BCSC 136). The second part of the document relates to the *National Action Strategic Action Plan Initiative (NASAPI)*, which is a Canada-wide initiative to establish a Strategic Action Plan for aquaculture.

Generally one would assume that the strategic action planning (which includes things like growth targets for industry and the identification of species with high potential) would follow the development and implementation of policies and regulatory frameworks. In this case, however, input is being sought on the regulatory framework and the strategic action plan simultaneously, while Canada is discouraging any discussions relating to governance or aquaculture management policy. These distinctions will likely cause confusion in the consultation process. Due to the tight timeframes put forward by Canada for the changeover, discussions are occurring simultaneously with First Nations, both at aggregate and bilateral levels, and with third party stakeholders and other interested parties.

The following text presents an analysis of the strategic questions posed in the Fisheries and Oceans Canada (DFO) Discussion Document. Each question is addressed independently. The analysis is summarized in the conclusions section with specific recommendations for consideration by B.C. First Nations.

1.0 POLICY RATIONALE

In the Discussion Document DFO puts forward the following proposed "vision" for aquaculture.

A Vision for Aquaculture in Canada

As a world leader, Canada's aquaculture sector is committed to upholding public confidence by continuing to develop vibrant, innovative and sustainable technologies and practices that are environmentally and socially responsible, economically prosperous and internationally competitive.

DFO Strategic Question 1: Vision

Does the proposed Vision appropriately address the principal challenges within the industry?

The vision statement as presented may be consistent with aspirations of the industry but it does not adequately outline the responsibility of the government to uphold its legal obligations

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and to providing the institutional infrastructure necessary to manage the industry. The aquaculture sector has numerous industry associations (Aboriginal Aquaculture Association, Canadian Aquaculture Industry Association, B.C. Salmon Farmers Association, B.C. Shellfish Growers Association) who advocate for industry.

At the present time “public confidence” on the aquaculture industry has not been effectively evaluated (e.g., Mazur, 2004). The B.C. Pacific Salmon Forum (2009) was tasked with providing recommendations for increasing “public confidence in fisheries management generally, and aquaculture in particular, in the marine environment” (p. 25; among other things). To have “public confidence implies that public trust is established through (at minimum) improved public perceptions, governance (including knowledge transmission), regulatory oversight, and effective communication”. Therefore, in order for the vision of upholding public confidence, public confidence should first be meaningfully evaluated.

Although in the past aquaculture management has largely focused on support for the industry, the development of the new regulatory framework provides an opportunity to strengthen and link the other part of DFO’s mandate, which is to protect aquatic and marine environments. The vision for aquaculture should first and foremost reference that the context for the management for aquaculture is within a management framework that, first and foremost, is concerned with the protection of the environment.

Actions that are taken to develop, change and/or implement policy based on research results have implications for potential infringement on Aboriginal title and rights. The recent legal opinion completed by Ratcliff & Company for the First Nations’ Fisheries Council highlights the Crown’s legal duty to consult with and accommodate First Nations in respect of policies that may impact asserted or proven aboriginal rights. Participation in research and design and scientific investigation is a long-standing aspiration for First Nations. At present there are no dedicated mechanisms or funding in Canada to specifically support First Nations in an independent investigation of science and research questions related to aquaculture.

The strategic question asks if the vision appropriately address challenges within the industry.

Recommendation: A recommended alternative vision would be: As a world leader, Canada is committed to protecting aquatic environments, upholding obligations to First Nation people, increasing public confidence, and facilitating aquaculture sector prosperity by continuing to advance innovative and sustainable technologies and promoting regulatory compliance for environmentally sound, socially responsible, and economically competitive industry performance.

Suggested Revisions:

- Priorities re-ordered to reflect the mandate of DFO (protection/conservation of aquatic environment first, followed by Crown’s legal obligations)
- Direct mention to the Crown’s obligation to First Nations

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The steps listed in the discussion document are tasks that require continued engagement of First Nations with appropriate infrastructure and scheduling. First Nations are entitled to respond to the results of the legal and policy analysis by DFO and DOJ prior to drafting the legal text of the regulatory framework as part of genuine and negotiated consultation. The Government of Canada (2007) Cabinet Directive on Streamlining Regulation states:

“Departments and agencies are also to work with First Nations, Inuit, and Métis communities and peoples; national, regional, and local Aboriginal organizations; and Aboriginal governments and ensure that they meet all obligations that may exist in relation to rights protected by section 35 of the Constitution Act, 1982.”(p. 4)

The aquatic environment has long been a source of jurisdiction conflict between Aboriginal people and Canada. First Nations and court decisions have advised Canada the issue of aquaculture is certainly one, which requires comprehensive consultation. DFO, however, did not receive direction from Cabinet on this issue until October of 2009, a full eight months after the *Morton* case decision. With DFO’s decision to have a new federal regulatory framework implemented by December of 2010, the current schedule for discussions presents a significant liability risk to Canada if Aboriginal title and rights are not appropriately considered. First Nations in B.C. were effectively given a period of about 3 to 4 months to provide input into this important process, which inhibits the ability for First Nations rights to be appropriately considered.

Discussion point: Is the timeframe provided reasonable to effectively engage First Nations in consultation on the aquaculture regulatory shift?

The discussion document is largely presented as regulatory change intended to replace s. 26(2)(a) of the *BC Fisheries Act*, ss. 1(h) and 2(1) of the *Farm Practices Act (Right to Farm) Act*, the *Aquaculture Regulation* (except cultivation of marine plants) and the entirety of the *Finfish Aquaculture Waste Control Regulation*.

Judge Hinkson in the *Morton* decision stated:

[198] The absence of sufficient legislation to regulate fish farms could well be more harmful to the public than the perpetuation of the impugned legislation, until the federal government has an opportunity to consider additional legislation of its own (2009 BCSC 136).

Creating new or changing existing federal legislation requires rigorous process. For some time now the federal government has been trying to update the *Fisheries Act*. Given that ‘fisheries’ regulation generally falls under the *Fisheries Act*, and Judge Hinkson finds the harvesting of farmed fish an act of fishing, it may not be clear how regulation may meet the threshold of a legislation process. Due both to possible impending changes to the *Fisheries Act*, and the tight timeframes for the development of the regulatory framework, a new regulatory framework should have built into it a period of review, perhaps after five years. This would provide a reference point for an evaluation of initial regulatory control and the adequacy of the *Fisheries Act* regulation approach.

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***Recommendation:** The regulation should stipulate a timeframe to facilitate regulatory transition and evaluate its efficacy.*

The context of the discussion document is similarly introduced to "...focus discussion and stimulate robust dialogue... generating input regarding the possible structure and content of a B.C. aquaculture regulation...(and) scope of the strategic action plans." (p. 4). Given that the discussion document is focused on B.C., it is likely that separate regulations for each area of aquaculture production may have its own regulation (i.e., B.C., P.E.I., N.B., etc.), meaning this is an opportunity for a "made in B.C." approach. The key message however is the strategy will be a "living blueprint" that will evolve where regulation/legislation is permanent.

2.0 Scope of a Federal B.C. Aquaculture Regulation

<p><i>Strategic Question 2: Principles of a Federal Aquaculture Regulation for B.C.</i> Is there anything that you would add to or delete from these principles?</p>

The Scope of change envisaged to establish an efficient, transparent and predictable aquaculture regulation appears to summarize some type on evaluation that is not described in the discussion document.

The discussion document Table 1 items may reference an internal federal government approach to aquaculture regulation, and/or across other federal departments for authorizations, or just DFO. The aquaculture industry requires authorizations from other agencies for specific activities (i.e., administering SLICE treatments if needed) and delayed delivery of authorizations has presented significant increased risks. Arsenault *et al* (2002) produced a useful diagram to depict Canada's federal regulation (Appendix 1). Several federal Acts are applicable to the aquaculture industry including: *Canada Shipping Act*; *Canada Shipping Act, 2001*; *Canadian Environmental Assessment Act*; *Coastal Fisheries Protection Act*; *Department of Fisheries and Oceans Act*; *Financial Administration Act*; *Fisheries Act*; *Fisheries Development Act*; *Fisheries Improvements Loan Act*; *Fishing and Recreational Harbours Act*; *Freshwater Fish Marketing Act*; *Great Lakes Fisheries Convention Act*; *Navigable Waters Protection Act*; *Oceans Act*; and the *Species at Risk Act*.

The Discussion Document states: "...DFO is working with appropriate federal regulatory agencies, including Environment Canada and the Canadian Food Inspection Agency, to consider the development of a new federal aquaculture regulatory regime to govern aquaculture production in B.C."

***Discussion point:** Since all federal agencies have the same high degree of legal obligation to First Nations, will there be separate consultation processes specific to their agency mandate regarding aquaculture regulation and addressing Aboriginal title and rights?*

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Discussion point: How will the federal government coordinate multi-department and agency requirements within the stated objective of developing a “designed regime with more consistent regulation & policies while still managing significant risks?”

DFO proposes a series of principles in the discussion document.

DFO Proposed Principles:

1. Consistency with the *Fisheries Act* mandate to support the protection of fish and fish habitat, the proper management and control of fisheries including aquaculture, and pollution prevention;
2. Consistency with DFO's mandate for developing and implementing policies and programs in support of Canada's scientific, ecological, social and economic interests in oceans and fresh waters;
3. Consistency with the DFO's aquaculture management objectives regarding the sustainable growth of the industry:
 - to create the conditions for the Canadian aquaculture industry to succeed and contribute to the creation of long-term jobs and economic prosperity in rural and coastal communities;
 - to create a level regulatory playing field for the aquaculture industry nationally;
 - to develop long-term strategic solutions to support the responsible growth of the sector based on a strong regulatory environment and sound science; and
 - to build public confidence in the Government of Canada's management of the sector;
4. Timeliness of having a regulatory regime in place given the BCSC-imposed date of February 2010;
5. Opportunities to reduce administrative burdens and improve cost efficiencies for government and industry where other criteria are not compromised;
6. Opportunity to modernize the regulation of the aquaculture sector by:
 - recognizing the contribution of aquaculture to sustainable use of aquatic resources;
 - incorporating risk management measures; and
 - demonstrating transparency effectiveness, and efficiency in regulation; and
7. Efficient and timely engagement of industry, First Nations and other aboriginal groups, governments and other stakeholders in the design of the new regulation.

Principles are often intended as foundational elements. The *Fisheries Act* and the *Department of Fisheries and Oceans Act* outline the mandate for DFO to “impose” regulation for the aquaculture sector. Other laws and legal criteria will be relevant to developing the “general approach” to federal regulation of aquaculture in B.C. The content of principles, similarly to the content of the developing aquaculture regulatory framework, should be consistent with acceptable principles for other fisheries or industries operating in a marine environment.

From a First Nations' perspective the most obvious principle missing in this outline is the need to acknowledge and reference that nothing in the new regulatory framework or strategic plan will negatively affect First Nations Aboriginal rights which are explicitly protected under Section 35 (1) of the *Constitution Act*. While this may seem self-evident, the management of aquaculture will be fraught with the potential for the infringement of Aboriginal rights, and both for clarity with First Nations and as a message to industry and other stakeholders, it should be made immediately and abundantly clear that the principles for a federal aquaculture regulation for B.C. will respect and accommodate aboriginal rights protected by the Canadian

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Constitution. It should be noted that Aboriginal traditional territories, Indian Reserves and Crown Lands subject to treaty negotiations extend along the entire length of the B.C. coast and through associated waterways.

Recommended addition: The Government of Canada recognizes the existence of Aboriginal rights and title to the marine environment, waterways, and natural resources within B.C.

As previously noted, both the province and the federal government have recognized that Aboriginal title and rights exist in British Columbia. The Canadian Constitution also protects aboriginal rights. It would seem to be reasonable, therefore, that the development of new aquaculture regulation creates an opportunity to explicitly deal with the question of aboriginal title in a concrete and innovative manner. This, along with associated responsibilities and roles in decision-making, would appear to be most pressing issue within the scope of the new regulation, along with concerns that the regulations adequately protect the aquatic environment and fisheries resources.

First Nations have articulated their intent to be fully engaged in the change of jurisdiction over the aquaculture industry by recognizing international declarations and affirming at least seven principle statements (as outlined in the *Statement of Solidarity on Aquaculture* and the *Statement of Jurisdiction on Aquaculture* (both 2009)). First Nations have alerted the federal government that they expect to be dealt with on a government-to-government basis with respect to the jurisdictional shift in aquaculture management. First Nations in B.C. expect to be dealt with in a manner that recognizes the *New Relationship*, the *First Nations-Federal Crown Political Accord on the Recognition and Implementation of Title and Rights*, and the *Transformative Change Accord* in addition to the *United Nations Declaration on the Rights of Indigenous Peoples*. These more recent instruments are in addition to the recommendations of the Royal Commission on Aboriginal Peoples that were intended to lead to an improved quality of life for First Nations people.

DFO -Pacific Region faces chronic issues of underfunding, and the implementation of a new regulatory framework will significantly burden already reduced divisions leading to increased risk liability. The institutional architecture to administer aquaculture regulation and maintain efficient program delivery at the B.C. level requires a commitment from the government to rationalize the department structure, coordination, implementation and delivery mechanisms (i.e., assessments, enforcement, monitoring, evaluation, etc.) including new source funding. First Nations in B.C. expect to be a part of the new management regime, and this explicitly includes an expectation that adequate funding will be provided on a long-term basis. If this approach is not captured in the principles for developing the regulatory regime, it would then exemplify a huge opportunity cost to First Nations, the federal government, and the industry.

Recommended addition: The Government of Canada recognizes the need to facilitate development of collaborative institutional capacity for First Nations to effectively participate in the management of aquaculture in B.C.

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***Recommended addition:** Canada will only sanction the operation of the aquaculture industry if it is committed to providing adequate funding to Department of Fisheries and Oceans and other federal or provincial departments or ministries tasked with associated responsibilities.*

A regulatory regime needs to be effective, transparent, consistent and responsive. Ineffective risk management can lead to catastrophic outcomes for species, habitats and ecosystems. A core function of a regulatory regime should be based on the ability to evaluate and manage risk. A precautionary management approach is widely accepted as an essential principal basis for sustainability. The DFO discussion document principles do not clear on evaluating and managing risk.

***Recommended addition:** Canada's aquaculture regulatory regime will incorporate a precautionary approach to identifying, assessing and managing risk and regularly evaluate risk management metrics and their results for minimizing or eliminating risk.*

2.2 Application

DFO Question 3: Application

Is there anything that you would add to or delete from the scope of the activities that would be managed under the proposed regulation?

DFO has entered into the process of developing the regulatory regime with a focus on the *Fisheries Act* although other acts may provide suitable vehicles for implementation, such as the *Coastal Fisheries Protection Act*, *Fishing and Recreational Harbours Act* and the *Oceans Act*. The *First Nations Statement of Solidarity on Aquaculture* outlines four main areas in which First Nations want to be involved, and these four areas contain complexity both for the items and the scale for the engagement envisaged. For potential or existing aquaculture operations local First Nations should enjoy direct and substantive engagement, including equity principles in ownership, management, and regulation.

***Recommendation:** The regulations need to include a scoping statement which recognizes a governmental role for First Nations in the management of aquaculture which is different in nature than those of industry, non-governmental organizations, etc., which is related to their proven and asserted rights which are Constitutionally protected.*

The intent of First Nations to be meaningfully engaged in aquaculture includes the need to consider two distinct levels of engagement across three scales of participation. These include administrative/**architecture** and the day-to-day operations/**management** components. There are three geographic scales to consider, including: B.C. wide, coastal/regional/area, and within

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a local First Nations' territory. In order to effectively engage First Nations in the components at the various scales, additional work will need to be done on the vision and approach desired by First Nations across B.C.

First Nations SCALE	Regulatory Architecture	Day to Day Operations Management
B.C.-Wide	High level communication, policy, and template development, facilitate program development and implementation, topic research	BC aquaculture operators adhere to Federal law, regulation and policy
Regional/Area	Collaboration, monitoring, contribution to BC wide, subject research	Federal regional policy implementation, compliance monitoring
Local First Nation	Participatory compliance monitoring, investigative research, technology trials, production	Corporate, Impact Benefits Agreements

The Aboriginal Aquaculture Association proposes an operational framework geared towards environmental sustainability. It envisions farm-specific Codes of Practice and environmental compliance protocols based on area and regional considerations. This approach is intended to build upon industry sector codes, regulatory compliance frameworks, and corporate management. Program delivery is presented with a 3-tiered operational structure, namely Regional, Area, and farm-based.

The discussion document suggests the scope "would be limited to aquaculture activities within the boundaries of British Columbia...". This is an appropriate scope although the definition of 'aquaculture' requires some clarification. Many First Nations have been trying to promote engagement in hatchery operations (including captive broodstock rearing, etc.) and ocean ranching for many years. If this regulation is not going to cover these areas DFO should consider explicitly developing a separate regulation dealing with these issues.

The language of the regulation should also carry sufficient authority and flexibility to address a full range of activities for implementation and the emergence of innovation. It would also be helpful if the regulation clarified any special opportunities which can/should exist for First Nations engagement in the industry or ability to influence the outcomes of various industry-related decisions based on their title and rights. An example of this would be related to applications for aquaculture operations to take wild stock from the marine environment. This type of request may have the potential to affect asserted rights of First Nations, and as a matter of course in exercising its due diligence DFO should require discussion with local First Nations on these issues prior to authorizing these removals. Similarly, special note needs to be made within the regulations that not only should certain occurrences (escapes, by-catch, use of chemicals, etc.) trigger required reporting to government, but should also require notification to local First Nations.

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2.3 Licences and Licence Conditions

The content of regulations for managing aquaculture was not addressed by the court decision but instead the authority to regulate. The conditions of license may be similar to the previous province license requirements.

Strategic Questions 4 and 5: Conditions of Licence:

Are there items that should be added or deleted from this proposed list of licence conditions?

What type of activities should be ticketable offences instead of, or in addition to being subject to prosecution?

The proposed license regulation appears to follow similar approaches to those used by B.C. to manage aquaculture. It is likely that DFO has borrowed heavily from the previous approach both because of the fast-track approach required by the current timelines, and because industry will likely be looking for minimal changes or infringements on its current mode of operation. One of the most significant changes which should be incorporated into the new regulatory regime is the explicit role for First Nations in the various aspects of aquaculture management (siting, management, science, and monitoring & compliance). For example, a condition of license which should be required is an “aboriginal tenure permit” or proof of First Nations engagement and approval in the application in question.

Recommendation: *Aquaculture licenses should only be issued where an aboriginal tenure permit has been issued or where there is proof of engagement and approval of all First Nations in whose territory the application lies.*

Tsilhqot'in Nation v. British Columbia, 2007 BCSC 1700 warned governments that tenure and policies could be struck down. The *Indian Act* band council system carries considerable challenges, particularly in regard to government interactions and revenue streams. Challenges faced by First Nations are many including recognition of the many facets of Aboriginal/Native tribes' prior to contact, including traditional government. Unfortunately the archaic administration of the *Indian Act* may provide obstacles related capital assets. Wilson (2008) notes a 1943 British Columbia Indian Reserves Mineral Resources Agreement established a formula for mining revenues split 50% to the federal government in trust for the band and 50% for the province, excluding mineral taxes. These types of scenarios should serve to inform consideration for developing mechanisms that actually provide benefit to First Nations for resource use in their territory. Each First Nation is competently aware of the distinction between administration through a band council and the traditional territory upon which title and rights are intimately bundled and entwined.

Licensing and conditions of licensing should also explicitly include reference to Aboriginal participatory equity in ownership, management, monitoring, mitigation, closure and

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remediation spanning the full life-cycle of aquaculture operations and management from application procedures to revenue investments.

***Recommendation:** Work should be completed to look at the most effective mechanisms for engaging First Nations in discussions with aquaculture companies about how they would like to structure agreements and working relationships. These agreements may well benefit from some level of standardization across the industry on the Pacific Coast. The standardization should be explicit for helping to structure accommodation/compensation.*

The duration of license or condition of expiry are not described in the discussion document. One item that should be considered is the specified time limit for licenses and what degree of scrutiny do licenses come under when they are considered for renewal. Time duration often has direct impact on fee schedule.

***Recommendation:** Should be amended to include more direct reference to the process for license renewal, roll over and/or license time duration.*

It will no doubt be difficult for First Nations to provide detailed feedback on the scope of the regulations within the timeframes provided. The information about the licences and licence conditions provided in the DFO discussion document is complex and much of it relates to very specific information about the elements of aquaculture which should be managed and the mechanisms for implementing that management.

The language of the regulation should carry sufficient authority and flexibility to address a full range of activities for implementation and the emergence of innovation. The focus must have clarity to apply to multidimensional situations, particularly with regard to First Nations. Two key considerations for First Nations with respect to license conditions should be: 1) transparency, and 2) flexibility. The information with respect to licenses relates to multiple and complex issues of management and reporting. It is essential that the flow of this information take place in a transparent manner. In addition, as First Nations' capacity develops and as science with respect to aquaculture evolves, First Nations will want to ensure that there is enough flexibility built into the license conditions to allow for the inclusion of new requirements and changes to reflect and incorporate adaptive management.

***Recommendation:** The license conditions need to be designed to maximize transparency and the flexibility to make amendments in accordance with the development of an adaptive management approach.*

The discussion document notes that there is a suggested maximum fine of \$1,000 per ticketable offence, for the contravention of the license conditions. This suggested penalty would not provide much of an incentive for compliance. It is also unclear in the discussion document what is proposed as a ticketable offence as opposed to conviction under the

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Fisheries Act. Contravention subject to prosecution carries considerable responsibility to elicit compliance. First Nations may want to consider recommending that the license conditions and the enforcement tools available be strengthened to ensure compliance.

***Recommendation:** DFO needs to clarify the enforcement element of the licence conditions. A \$1000 fine is not adequate for a breach of licence conditions. Contravention of most of the licence conditions should be subject to prosecution.*

It is also clear that the current functions by DFO are not inclusive of the types of monitoring that would be required to ensure compliance with license conditions. It is important that DFO build a strong monitoring and compliance element into its aquaculture management capacity, and also that it foster the training and utilization of First Nations who live on the ground where the activities of aquaculture take place, as a core part of the enforcement regime.

Mitigation is a topic that has not been thoroughly considered in the licence conditions. The language of the license conditions should stress that operators are responsible for taking all steps necessary to mitigate risk.

2.4 Pollution Prevention Measures (*Fisheries Act* s. 36)

Strategic Question 6: Deleterious Substances

Are there other categories of substances that should be managed under section 36 of the *Fisheries Act*?

It should be noted that Section 35 to 43, Fish Habitat Protection and Pollution Prevention, in the *Fisheries Act* are more extensive than what is currently being presented in the discussion document. The pending Canadian Science Advisory Secretariat "Aquaculture Pathways of Effects" report (in progress) is a critical source of information related to this topic.

Discussion note: Can DFO release additional information related to the CSAS Pathways of Effects and how they might relate to aquaculture, so that this information can be available to First Nations to consider as a part of their review?

The field of pollution prevention, especially for finfish aquaculture, is of key importance, and should be subject to further discussion and policy development with the opportunity presented of moving the management of aquaculture to federal jurisdiction. Fish waste regulation by B.C. did have some established thresholds for various deposition limits which would be useful to examine. Also, the results of research by various B.C. institutions (i.e., Centre for Aquaculture & Environmental Research, Centre for Shellfish, etc.), the BCPSF Research Program, and the CSAS APOE should be reviewed for clarifying pollution prevention measures. The BCPSF Research Program included a project to develop the Finite Volume Coastal Ocean Model (FVCOM) that can depict trajectories of the movement of water currents and dispersion effects of several water quality characteristics. This is a relatively new tool that should be expanded for universal use in evaluating site conditions and assimilative capacity.

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***Recommendation:** DFO, with its First Nations partners, industry, and other stakeholders, should review the current state of science with respect to pollution associated with aquaculture, in order to develop regulations that reflect the most complete science information available today.*

In general, pollution prevention measures should be premised on introductions of foreign material into the environment that cannot be assimilated into non-toxic components having appropriate thresholds by which to measure lethal and sub-lethal effects and provide remediation measures. Pollution prevention measures in aquatic environments are often met with conflict between DFO and Environment Canada, which can result in confusion about which department is handling different aspects of monitoring and enforcement.

***Recommendation:** Canada should recommend that for the purposes of aquaculture management, DFO and its partner First Nations have the jurisdiction to monitor, enforce, and charge under Sections 35 – 43 of the Fisheries Act relating to pollution.*

***Recommendation:** A full investigative program is needed to conduct research on items such as those summarized above, and develop thresholds for monitoring the environment as well as reporting on environmental indicator performance.*

The toxicology issues related to aquaculture feeds, faeces and feed waste products are appropriate for consideration under the B.C. Aquaculture regulation section 36 of the *Fisheries Act*. Changes in the delivery of feed and feed composition have reduced volume and concentrations of substances that may be perceived to be harmful. Additionally, given the high cost of feed supply and delivery to some aquaculture schedules, the manner of feeding practices has improved significantly over time. The key is to have clarity with regard to *toxicology* in order to assess potential risk to the environment.

Discussion point: Clarity is needed to determine whether aquaculture feeds and feed waste products contain toxic elements that pose pollution risk, and if so, to assess in a complete way what constitutes acceptable levels of risk.

It is not clear that the regulations, as currently outlined, with respect to mechanisms for administering pollution prevention provisions of the *Fisheries Act*, are adequate to address questions of potential risk.

2.5 Notification & Reporting

Strategic Questions 7 and 8: Notification & Reporting

What information/documentation should be kept by companies and to what level of detail?

What information should the Department make reportable to the public, recognizing that such requirements must be in accordance with the *Privacy Act*?

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Food security is a priority issue for First Nations. The aquaculture industry in general is very sophisticated in terms of tracking its product through the supply chain. Health Canada and Canadian Food Inspection Agency have established documentation and reporting mechanisms that will continue to apply to a federally regulated B.C. aquaculture industry. All producers should be required to comply with traceability mechanisms.

Aquaculture and its related impacts are an area where First Nations (and others) would like to see better performance reporting. The BCPSF report (2009) recommended "All resource industries, including salmon farming, must be required to share pertinent information with British Columbians in keeping with their use of a public resource" (p. 15). A transparent regulatory regime should require some element of compliance reporting on a periodic basis, both to the regulatory authorities, to First Nations, and to the public.

Discussion Point: The data that are often difficult to obtain are those data sets that provide information on impacts to the environment. Developing the appropriate level of monitoring tools to facilitate effective environmental monitoring requires adequate data sets for researchers.

The regulations should outline the requirement that aquaculture companies provide regular Compliance Reports; performance, benchmark and threshold monitoring results; and new innovation/ improved technology should be applied to minimize risk reduction.

The only elements of information/documentation which should be restricted, due to the Privacy Act, would be material that which would give others a competitive advantage with respect to the conduct of business. The types of information outlined in the discussion document should all be information that would be tracked and which would be publicly available.

Requirements for immediate reporting should include the item listed with the addition of any non-targeted or unauthorized bycatch.

Recommendation: Notification requirements should also extend to instances of non-target and unauthorized by-catch.

Requirements for notification and monitoring, in a number of cases, should be subject to strict timeframes and operators should be subject to harsh penalties if they fail to comply.

2.6 Enforcement

Strategic Question 9: Enforcement

Are the powers of enforcement, as identified above, appropriate to the objectives of the aquaculture regulation?

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With respect to enforcement it is essential that Canada determine the reasonable requirements related to the monitoring and compliance of aquaculture and that these activities be adequately funded on a stable, long term basis. This should include a component for the training and ongoing costs associated with Aboriginal Enforcement Officer (Guardian, water-keeper, etc.) programs which should have some explicit roles with respect to these functions.

Discussion question: What role does Conservation & Protection have with other environmental monitoring compliance agencies?

Recommendation: *The structure and funding for enforcement need to include adequate base resources for outlined activities and also need to include an Aboriginal Enforcement Officer component.*

2.7 Inspections & Audits

The discussion document notes the opportunity to identify "classes" of persons outside the Department who may be authorized to conduct on-site inspections and verify compliance. Clarification is required related to Inspections & Audits including how many layers of regulatory compliance should be contemplated.

The designation of "classes" of persons will have to consider the obligation of Canada to meet its various obligations, including the need to respect and accommodate First Nations rights and title. Inspections and audits should be conducted with consistency to regulation and within a structure that provides accountability. A framework is needed to provide measurable criteria with which to evaluate and to provide certainty to operators and investors.

Recommendation: *DFO needs to work with First Nations to develop various classes of persons to be involved in inspection and audit function of aquaculture.*

It is not clear which section this recommendation would relate to, but there has been concern that some people who work in the aquaculture industry are afraid of alerting government to violations because they are afraid of losing their jobs. There has been a suggestion that aquaculture regulation incorporate the requirement that employees of aquaculture facilities be afforded "whistle-blower protection." This could include requiring aquaculture-related companies to provide corporate protection for employees who come forward with concerned relating to violations of licensing conditions. In addition Canada may want to consider a monetary reward system for people who provide information which leads to a prosecution related to aquaculture – much like the popular 'crime-stoppers' program- where people can also choose to remain anonymous.

Recommendation: *DFO should require aquaculture-related businesses to implement whistle-blower protection practices into their management. Canada should also*

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consider a system where information leading to the prosecution of a company would result in cash rewards being paid.

2.8 Attestations

Strategic Question 10: Attestations of Regulatory Compliance & Monitoring Results

Should verification of regulatory compliance and monitoring history be made available to others upon request by the license holder?

In an era of increased transparency, it would seem evident that DFO should be able to report to a third party on the record of an aquaculture operator. This would be clear where that operator is applying for participation in a certification program. It seems in the discussion document that the attestation part of the regulations only contemplated reporting on positive performance. Consideration should also be given to instances where companies have performed poorly and under what conditions this information should also be released.

***Recommendation:** In the spirit of enhanced transparency and accountability DFO should also consider making information on the performance of various operators available on a regular basis as a part of a regular audit of the industry.*

2.9 Fees

Strategic Question 11: Fees

What would be an appropriate fee structure for aquaculture licences?

The nature of aquatic resources licenses in Canada has proven to be one of the most contentious areas of Canadian history (Newell, 1993; Harris, 2008; and others). Context in the discussion document for this question is limited to one line: "The proposed regulation can be expected to include a fee structure for licences." What are the options to discuss?

The above section in this document on conditions of license is relevant for this strategic question as well. The fee structure must take into account the use of the environment most importantly. An aquaculture operation will inevitably take up some defined area of space on the surface and below the waters of that surface. The license fee could be proportionate to that space and the continuous use of that space. In the alternative, it could be based on the process of establishing a business enterprise that requires conditions of operations that will be regulated.

The previous provincial aquaculture license fee schedule was divided by license for Crown land and license for private land fees in addition to production based on dollar value estimated. Considerations for a new fee schedule should include production value based on fish production volume. It should also consider time duration relative to environmental risk.

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Part of the challenge is to reduce redundancy and unnecessary administration requirements. Aquaculture operations that are sited properly without substantive environmental risk and are effectively engaged in regulatory compliance as measured through performance based outcomes could maintain a fee scale commensurate with license privilege to operational use of the space. Applying for an aquaculture operations license may be considered separately from using the aquatic environment space. The new regulatory regime is premised on the use of the aquatic environment without reference to land except for the Aboriginal and/or provincial tenure associated to the aquatic space. The operations in that aquatic space potentially remove its availability for other uses. The space could be rented from First Nations on a square-footage basis with rent separate from license fee structure. This rent-use could be part of an Impact Benefits Agreement (IBA).

***Recommendation:** Considerations for a new fee schedule should relate to elements of risk and risk mitigation, with higher risk aquaculture paying proportionally higher fees.*

DFO notes that a part of their objective is to reduce redundancy and unnecessary administration requirements. This also needs to be considered within a risk management framework. If operations proposed are clearly low impact and low risk then there should be opportunities to minimize administration requirements. When activities are carried out which are deemed to be higher risk additional reporting requirements should be triggered.

Aquaculture operations that are sited properly without substantive environmental risk and are effectively engaged in regulatory compliance as measured through performance based outcomes could maintain a fee scale commensurate with license privilege to operational use of the space. Applying for an aquaculture operations license may be considered separately from using the aquatic environment space.

The new regulatory regime is premised on the use of the aquatic environment without reference to land except for the Aboriginal and/or provincial tenure associated to the aquatic space. The operations in that aquatic space potentially removes its availability for other uses. This has the potential for infringement of First Nations rights and title and the licencing and fee regime needs to take this potential infringement into account within the fee structure for aquaculture.

***Recommendations:** Spatial fees for aquaculture should include a component which relates to the infringement of First Nations' rights and title and which incorporates a tenure payment directly to local First Nations.*

Additional areas which should be considered relate to fees for applications & siting, management, science, and monitoring and compliance. The activity of aquaculture triggers the need for government and First Nations to build and maintain a capacity in each of these areas. Costs associated with this infrastructure need to be considered as a cost of doing business for industry. The aquaculture industry licence could be based on the species growth cycle for the fish being farmed in the aquatic environment. This might mean different schedules for

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different species. What ultimately works for the industry, government, and First Nations must be carefully considered.

The BCPSF noted that “in 2000 the costs of an individual salmon farm site application could reach \$8,000. On-going regulatory costs would range from \$972 to \$5,630 for tenure rent, plus taxes of approximately \$800. Today an individual site application costs between \$100,000 and \$300,000, plus annual compliance and environmental monitoring costs of approximately \$60,000 per site. Annual required sea lice treatment can add a cost between \$100,000 and \$250,000 annually depending on the size of the fish on the farm site” (p. 6, BCPSF, 2007).

Discussion Point: *First Nations should consider their input relating to fee schedules for aquaculture including considerations relating to the restrictions to holding capital assets through the Indian Act, and the need to develop capacity and capability at various scales (local, area/region, and B.C. wide).*

2.10 Policies & Guidelines Supporting the Regulations

Strategic Questions 12: Policies & Guidelines

Is there anything that you would add to, or delete from, the proposed list of policies and guidelines that would support the implementation of the regulation?

Policy development is generally intended to provide the most efficient methods for implementing regulatory control. The partial list of issues will need expanding to determine best management practices associated with license conditions. Best management practices should be adaptive to regional variation and ecosystem processes, and informed by defensible research that can be empirically validated in the case of each operation. The most efficient approach will be precautionary that takes into consideration the identification of *risk* and the level of tolerance that can reduce or eliminate it.

Some of the issues listed in the DFO discussion document relate to the high level architecture (policies and plans) for aquaculture, while others relate to operational aspects of aquaculture management. It would be positive to have a more complete discussion about DFO’s vision for the management of aquaculture before trying to dissect the various ‘policies’ for aquaculture into the proposed ‘list of issues.’

Recommendation: *DFO and First Nations should engage in discussions related to the higher level vision for ‘architecture’ and ‘operational management’ of aquaculture, looking at how the proposed issues related to policy fit into the approach.*

The list of policies in the discussion document does not directly address the question of the roles of spatial scales in management, and the engagement of First Nations and other stakeholders in decision-making. First Nations have been clear that in order to develop an effective management regime DFO needs to incorporate an Area-Based Management

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approach for the aquaculture industry in B.C. which directly relates to First Nations engagement and offers bi-lateral as well as multi-lateral engagement processes, and incorporates an area-based approach to siting, management, science, and monitoring and compliance.

***Recommendation:** The Regulatory Framework and/or the policies need to more clearly address the adoption of an Area-Based Management framework for aquaculture in B.C. which includes an outline for bi-lateral co-management at a variety of spatial scales (local, area/ regional, B.C.-wide, and possibly national) in both architecture and operational management decision-making.*

As outlined the policies do not focus on science, improvements in knowledge related to the science of aquaculture, or provide a focus on risk-mitigation strategies.

***Recommendation:** Amend the policies and guidelines to include a focused area for science capacity and policies which specifically relate to risk mitigation.*

Strategic Question 13: Aquaculture Regulation for B.C.

Is there anything that you would add to the regulation beyond the regulatory provisions outlined above?

The current timeframe adopted by Canada have created an urgency to shift aquaculture regulatory jurisdiction and have forced a truncated approach to development of the regulatory regime. In the discussion document DFO states that “in the short term, policies will focus on existing provincial or federal requirements.” Given the controversy associated with aquaculture in B.C. Canada should give serious consideration to the possible issues associated with moving a fundamentally flawed system for aquaculture management from the provincial to the federal government. In order to exercise due diligence DFO needs to assess the shortcomings of the current management regime and should be working in earnest as quickly as possible to make required improvements.

Judge Hinkson’s decision regards aquaculture as a form of “fishing” and this is likely the reason DFO intends to use the *Fisheries Act* for aquaculture regulation. Previous suggestions by others have included development of an ‘Aquaculture Act’ dedicated to management of the aquaculture sector. It will take an act of legislation to change the regulatory regime now being contemplated. It might make sense to consider developing a time expiry for the newly proposed regulation to provide review of its efficacy, responsiveness to industry, and providing the mechanisms to conserve and protect aquatic resources. The regulatory regime will also need to include new structural mechanisms that should be evaluated.

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***Recommendation:** The federal Aquaculture regulation for B.C. should have a built in 5 year review which would allow for an audit and evaluation, including proposed amendments or clarifications.*

This regulatory shift provides an opportunity for Canada to add substance to its prior commitments to First Nations people. The new regulatory framework also creates an opportunity to increase engagement of First Nations in a regulatory context. The development of meaningful engagement of First Nations on this issue will include an ongoing relationship between Canada and First Nations both with respect to the architecture for managing aquaculture and the operational management functions. This relationship needs to be built into a co-management framework that operates at various spatial scales (local, area/ regional, and B.C.-wide). The development of this new relationship can also support Canada in its objectives of developing economic self-sufficiency for First Nations coastal communities, if it is done on terms that respect the values and legitimate authority of First Nations in their territories.

***Recommendation:** The aquaculture regulatory framework needs to directly address the issues of co-management and moving towards area-based Management with First Nations, both with respect to program architecture and operational management.*

What is not presented in the context of aquaculture regulation and industry development is the role of the Canadian Council of Fisheries and Aquaculture Ministers (CCFAM) and Canadian Council of Ministers of the Environment (CCME) and how First Nations fit into these structures. These councils are an integral component to developing priorities for governance in fisheries and aquaculture, and environment, respectively. Occasional invitation for Leadership to participate in First Ministers meetings although welcome does not provide for effective and continual engagement to realize priorities' implementation.

***Recommendation:** Reference to the role of CCFAM and CCME, including mention of how First Nations fit into these structures.*

Conclusion

The development of a B.C. regulatory framework for aquaculture is clearly a complicated undertaking. The discussion paper provided by DFO in November 2009 outlines a number of general questions related to the development of the new framework, but it only allows for broad and general responses to many detailed questions. The method DFO has used to separate discussions related to the regulatory framework as opposed to policy development also creates confusion and uncertainty as to where First Nations should be providing various types of input.

Appendix 1 provides a summary of the recommendations provided from this report. It is hoped that this information will help B.C. First Nations to enter into discussions with DFO

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about the development of a new regulatory framework from a more prepared position with the capacity to continue to move these discussions forward in the future.

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Appendix 1: Summary of Recommendations and Discussion Points

DFO Question 1: Does the proposed Vision appropriately address the principal challenges within the industry? (p.6)

Recommendation: A recommended alternative vision would be: As a world leader, Canada is committed to protecting aquatic environments, upholding obligations to First Nation people, increasing public confidence, and facilitating aquaculture sector prosperity by continuing to advance innovative and sustainable technologies and promoting regulatory compliance for environmentally sound, socially responsible, and economically competitive industry performance.

Suggested Revisions:

Priorities re-ordered to reflect the mandate of DFO (protection/conservation of aquatic environment first, followed by Crown's legal obligations)

Direct mention to the Crown's obligation to First Nations

Discussion point: Is the time frame provided reasonable to effectively engage First Nations in consultation on the aquaculture regulatory shift? (p.8)

Recommendation: The regulation should stipulate a time frame to facilitate regulatory transition and evaluate its efficacy.

DFO Question 2: Principles of a Federal Aquaculture Regulation for B.C. - Is there anything that you would add to or delete from these principles?

Discussion point: Since all federal agencies have the same high degree of legal obligation to First Nations, will there be separate consultation processes specific to their agency mandate regarding aquaculture regulation and addressing Aboriginal title and rights?

Discussion point: How will the federal government coordinate multi-department and agency requirements within the stated objective of developing a "designed regime with more consistent regulation & policies while still managing significant risks?"

Recommended addition: The Government of Canada recognizes the existence of Aboriginal rights and title to the marine environment, waterways, and natural resources within B.C.

Recommendation: The Government of Canada recognizes the need to facilitate development of collaborative institutional capacity for First Nations to effectively participate in the management of aquaculture in B.C.

Recommendation: Canada will only sanction the operation of the aquaculture industry if it is committed to providing adequate funding to Department of Fisheries and Oceans and other federal or provincial departments or ministries tasked with associated responsibilities.

Recommendation: Canada's aquaculture regulatory regime will incorporate a precautionary approach to identifying, assessing and managing risk and regularly evaluate risk management metrics and their results for minimizing or eliminating risk.

Strategic Question 3: Application -Is there anything that you would add to or delete from the scope of the activities that would be managed under the proposed regulation?

Recommendation: The regulations need to include a scoping statement which recognizes a governmental role for First Nations in the management of aquaculture which is different in nature than those of industry, non-governmental organizations, etc., which is related to their proven and asserted rights which are Constitutionally protected.

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Strategic Questions 4 and 5: Conditions of Licence:

Are there items that should be added or deleted from this proposed list of licence conditions?

What type of activities should be ticketable offences instead of, or in addition to being subject to prosecution?

Recommendation: Aquaculture licenses should only be issued where an aboriginal tenure permit has been issued or where there is proof of engagement and approval of all First Nations in whose territory the application lies.

Recommendation: Work should be completed to look at the most effective mechanisms for engaging First Nations in discussions with aquaculture companies about how they would like to structure agreements and working relationships. These agreements may well benefit from some level of standardization across the industry on the Pacific Coast. These agreements should be explicit as helping to structure accommodation/compensation which relates to First Nations rights which will be infringed by aquaculture-related activities.

Recommendation: Should be amended to include more direct reference to the process for license renewal, roll over and/or license time duration.

Recommendation: The license conditions need to be designed to maximize transparency and the flexibility to make amendments in accordance with the development of an adaptive management approach.

Recommendation: DFO needs to clarify the enforcement element of the licence conditions. A \$1000 fine is not adequate for a breach of licence conditions. Contravention of most of the licence conditions should be subject to prosecution.

Strategic Question 6: Deleterious Substances

Are there other categories of substances that should be managed under section 36 of the *Fisheries Act*?

Discussion note: Can DFO release additional information related to the CSAS Pathways of Effects and how they might relate to aquaculture, so that this information can be available to First Nations to consider as a part of their review?

Recommendation: DFO, with its First Nations partners, industry, and other stakeholders, should review the current state of science with respect to pollution associated with aquaculture, in order to develop regulations that reflect the most complete science information available today.

Recommendation: Canada should recommend that for the purposes of aquaculture management, DFO and its partner First Nations have the jurisdiction to monitor, enforce, and charge under Sections 35 – 43 of the Fisheries Act relating to pollution

Recommendation: A full investigative program is needed to conduct research on items such as those summarized above, and develop thresholds for monitoring the environment as well as reporting on environmental indicator performance.

Discussion point: Clarity is needed to determine whether aquaculture feeds and feed waste products contain toxic elements that pose pollution risk, and if so, to assess in a complete way what constitutes acceptable levels of risk.

Strategic Questions 7 and 8: Notification & Reporting

What information/documentation should be kept by companies and to what level of detail?

What information should the Department make reportable to the public, recognizing that such

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requirements must be in accordance with the *Privacy Act*?

Discussion Point: The data that are often difficult to obtain are those data sets that provide information on impacts to the environment. Developing the appropriate level of monitoring tools to facilitate effective environmental monitoring requires adequate data sets for researchers.

Recommendation: Notification requirements should also extend to instances of non-target and unauthorized by-catch.

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Recommendation: Considerations for a new fee schedule should relate to elements of risk and risk mitigation, with higher risk aquaculture paying proportionally higher fees.

Recommendations: Spatial fees for aquaculture should include a component which relates to the infringement of First Nations' rights and title and which incorporates a tenure payment directly to local First Nations.

Discussion Point: First Nations should consider their input relating to fee schedules for aquaculture including considerations relating to the restrictions to holding capital assets through the Indian Act, and the need to develop capacity and capability at various scales (local, area/region, and B.C. wide).

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issues related to policy fit into the approach.

Recommendation: The Regulatory Framework and/or the policies need to more clearly address the adoption of an Area-Based Management framework for aquaculture in B.C. which includes an outline for bi-lateral co-management at a variety of spatial scales (local, area/ regional, B.C.-wide, and possibly national) in both architecture and operational management decision-making.

Recommendation: Amend the policies and guidelines to include a focused area for science capacity and policies which specifically relate to risk mitigation.

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Recommendation: The aquaculture regulatory framework needs to directly address the issues of co-management and moving towards Area-Based Management with First Nations, both with respect to program architecture and operational management.

Recommendation: Reference to the role of CCFAM and CCME, including mention of how First Nations fit into these structures.