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MEMORANDUM FOR THE MINISTER

**STRATEGY TO ADDRESS THE ISSUE OF  
SEA LICE AND SALMON FARMS IN PACIFIC REGION**

(Information Only)

**SUMMARY**

- Ongoing controversy surrounding suggestions that sea lice associated with BC salmon farms are negatively affecting wild salmon populations is undermining public confidence in the BC salmon farming industry and governments' management of it. The controversy is impeding the growth of the industry in BC and is negatively affecting public and policymaker impressions of the aquaculture sector overall regionally and nationally.
- Recently published material has heightened public attention to the issue in BC and it is expected that several soon to be released scientific papers will exacerbate the situation. Effectively addressing these developments will require that the Department adopt a more proactive and assertive posture in managing the sea lice issue.

**Background**

- Salmon farming in British Columbia continues to be controversial as a result of persistent Environmental Non Government Organization (ENGO) of the environmental performance of the sector.
- Since 2001, this criticism has focused on allegations that sea lice from salmon farms in the Broughton Archipelago (see Annex B for map) are causing declines in wild pink salmon populations. A December 2007 report in the journal Science predicts that sea lice emanating from salmon farms in the Broughton Archipelago (BA) will cause the extinction of some pink salmon populations in the area within four generations. (These conclusions are strongly disputed and are the subject of a rebuttal paper to be published in April.)
- Since 2003, the Department and others (e.g. the Pacific Salmon Forum) have conducted extensive field and laboratory research into the potential origins of sea

lice and their relationship to the health of wild salmon populations in the area. This research has informed government and industry management actions regarding on-farm sea lice control, including mandatory sea lice monitoring and treatment and the development of fallow plans for the BA.

- During this period the Department's communications approach has focused on targeted media and stakeholder outreach aimed at responding to emerging issues in a timely manner, correcting inaccuracies and making DFO's sea lice research accessible to Canadians through the department's aquaculture web site.

### **DFO Comment/Analysis**

- Allegations that sea lice from salmon farms are negatively impacting wild salmon populations have eroded public confidence in the BC salmon farming industry and governments' management of the sector, and have seriously impeded the growth of the salmon farming industry in BC. National media attention to the issue has tarnished the image of the aquaculture sector overall and could eventually undermine the market performance of the industry.
- The public controversy and debate around the sea lice issue will likely be heightened by several upcoming developments including:
  - DFO scientist, Dr. Simon Jones will publish research in April 2008 indicating that pink salmon less than a month old and under .5gm in size are vulnerable to mortality when exposed to high levels of sea lice;
  - A major "sea lice and aquaculture" conference is being held in Chile in early April and will draw further scientific and public attention to the issue
  - activist Alexandra Morton is expected to release findings suggesting a link between sea lice from salmon farms and declines in Fraser river sockeye populations in early 2008; and
  - anticipated increases in sea lice abundance in the Broughton Archipelago resulting from an increased number of untreated farms in the area (six versus three in 2007).
- DFO has historically adopted an approach to the sea lice issue that relies heavily on dialogue with the industry and provincial agencies regarding operational management, responding to specific science papers or ENGO press statements and low-key communications efforts. This strategy is not working.
- Effectively addressing the sea lice issue in a manner that improves the environmental performance of the industry, facilitates its sustainable growth in BC and defuses or minimizes public controversy around the issue will require a more proactive and assertive posture and the adoption of a sea lice management strategy featuring a mix of:

- Enhanced management actions to reduce sea lice numbers on salmon farms and reduce exposure of young wild salmon to sea lice associated with salmon farms;
- further scientific research and monitoring to expand our understanding of sea lice and their relationships to salmon farms and wild salmon;
- A rigorous international peer review of the current science with respect to sea lice and salmon farm;
- Stronger collaboration with the Government of BC in addressing the issue and enhancing the sustainability of the industry overall
- Enhanced engagement of industry, ENGOs and First Nations in government research and decision-making regarding aquaculture management;
- proactively communicating DFO's scientific research findings and management actions to Canadians.

Please refer to Annex A for additional detail on the above elements.

#### **Recommendation/Next Steps**

- the Department adopt the proposed Sea Lice Strategy for 2008;
- Identify implementation of the Sea Lice Strategy as a top immediate term funding priority should Budget 2008 funds be secured for Aquaculture 2015
- Engage senior leadership in the Government of BC in the further refinement of the Strategy with a view to establishing a collaborative approach to its implementation
- Efforts begin now to urge salmon farmers to voluntarily treat their farms for sea lice immediately to reduce risk of sea lice exposure for young pink salmon entering the Broughton area this spring.

Attachments:

Annex A – Key Elements of Sea Lice Strategy

Annex B – Map of Broughton Archipelago with Current Stocking Plans by Company

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