

**STATUS OF THE
1997 SALMON AQUACULTURE REVIEW RECOMMENDATIONS
- October 2002 -**

The following is a detailed description of which Salmon Aquaculture Review recommendations have been implemented or partially implemented, and a list of recommendations that have not been acted on in any way that would fulfill the intent of SAR.

Implemented – 6 recommendations

Three recommendations have been implemented generally as set out in SAR and three more have been implemented adequately enough to be classed as implemented. Some of these are fairly irrelevant, such as the industry-constructed Code of Practice.

Partially implemented - 17

Seventeen recommendations have been partially implemented, with significant sub-recommendations ignored.

Not implemented or unknown – 26

Three recommendations regarding fish health are simply unknown. For the remaining 23 recommendations little of substance has been accomplished or nothing at all.

Implemented

Regulation/policy/action	Comments
Escape prevention regulation	Escapes are still happening, net inspections are only every 2 months or after hazardous events
Testing criteria for establishing a waste standard	This was not done by third-party specialists as recommended
Waste regulation	Criticized for allowing significant benthic impact, greatly reduced biodiversity, with no standards for water quality, metals, etc.
Predator prevention plans	Required in management plan, but measures are not stipulated and marine mammal killings continue
Strategic policy objectives for aquaculture	Conflicting objectives that call for environmental protection and industry expansion
Comprehensive Code of Practice	Drafted and finalized by the B.C. Salmon Farmers Association but with no public input as recommended

Partially implemented

Regulation/policy/action	Comments
Pending full integrated coastal zone management planning, regional site planning undertaken	Regional opportunity studies underway but non-tenured interests are being ignored, integrated coastal zone planning in limbo
Farm site applicants must submit an assessment of potential impacts on other resources and user groups	Assessments are being done, but do not cover all marine impacts and minimal assessment of impacts on other users
Improved quality of coastal resource inventory mapping	More mapping has been done, but marine resource information is spotty at best and local knowledge is not incorporated
Pacific and Atlantic salmon culture allowed, but restrict species farmed to account for local site conditions	Farms raising Pacific salmon are not being banned from areas with sensitive wild stocks as recommended
Mandatory standardized inventory information collection and reporting program to track escapes/leakage	Inventory tracking has been put in place, but the information is not being reported to government as recommended
Reduced ecological effects from escapes through escape recovery plans and an expanded Atlantic Watch program	There are no escape recovery plans for farmed Pacific salmon, Atlantic Watch still only covers a small proportion of streams
Fish Health Working Committee established to promote integrated fish health policy development	The committee is established, but it has not solicited advice from First Nations or NGOs as recommended
Strengthen disease surveillance, determine diseases of concern, make them reportable under the Animal Disease Control Act	MAFF staff currently are auditing disease at a sampling of farms, reportable diseases have not been established
Develop standards for managing farmed salmon health enforced as a condition of the aquaculture licence	Disease reporting requirements are weak, diseased fish is allowed to be left in the water with increased risk to wild stocks
All drug use through vet prescriptions, drug use part of fish health database, visible flag indicators when drugs used	Fish health database not yet constructed, visible flag indicators are not required when drugs used
Consistent enforcement and auditing of benthic waste impacts, with fines imposed as ticket offences	Enforcement and auditing threatened by government staff cuts, ticketing program not established
First Nations siting concerns addressed through proper consultation and FN representation on FF Review Committee	First Nations consultation minimal, no FN rep on the Fish Farm Review Committee, the body that finalizes new sites
Better First Nations involvement in policy development, research, monitoring and auditing	Minimal involvement to date, no access to Fish Health database as recommended
Alternative pilot projects launched: three closed contained pilots in operation, one more approved but not operating	The program did not focus solely on closed containment, it allowed twinned net pens as an incentive, program very limited

Better public notice and internal review procedures	Somewhat better public notice, but dispute resolution mechanisms have not been developed as recommended
Broad based advisory group re-established to advise on the implementation of the salmon aquaculture policy - SAIAC	SAIAC established but many policy areas were never put on the agenda, information was restricted, ENGOs have resigned
Some regulatory and policy changes put in place over two years with majority of SAR recommendations still not enacted	

No action or inadequate action

- A Fish Farm Review Committee was set up to coordinate siting and policy implementation, but the committee had no First Nation's or local government representatives, contrary to SAR discussion on conflict resolution and First Nations issues – the committee is no longer operating and siting is now dealt with by an inter-agency site review committee.
- Integrated coastal zone management planning to designate geographic areas of the coast suitable for different activities including aquaculture has not been attempted by either the province or DFO.
- Some SAR siting criteria has been adopted but 5 criteria are missing from the written policy and it is unclear how some criteria are to be interpreted; some fisheries issues are referred to DFO, but the province is not waiting for DFO approvals or environmental assessments due to a fast-tracking policy on siting; there is inadequate marine resource inventory information to fully apply the siting criteria that have been adopted; only a handful of farms have had the new siting criteria applied and more than 25 farms require relocation because of siting concerns.
- Local salmon farm siting advisory committees have not been set up to get input from local stakeholders and local government.
- Existing salmon farms have been assessed for significant negative impacts but remediation plans are not drawn up and more than 25 remain in need of relocation.
- A new set of guidelines for salmon farm siting in freshwater has not been developed – a draft 1992 set of guidelines is being used which does not have consensus support among provincial fisheries biologists.
- No freshwater water quality standards have been established for freshwater aquaculture operations and the new Waste Regulation specifically excludes freshwater aquaculture.
- The accessibility of fish health information has not been improved, no government database has been set up and there has been no published report on the incidence of disease, pathogens and parasites – a fish health database has been set up by the BC Salmon Farmers Association with no access given to government or the public.

- It is unknown if there are any policies to improve the safety of salmon egg importation – the Fish Health Working Committee has not created a list of reportable diseases to improve the health status of fish regarding importation.
- It is unknown if sampling and reporting requirements are improved for diseases in fish being transferred within B.C., nor have foreign diseases been made reportable.
- It is unknown if fish health inspections practices have been improved at fish processing plants.
- MoH and Health Canada have not assessed the risk associated with the potential for an increase in antimicrobial resistance from the use of antibiotics at salmon farms and potential environmental impacts.
- In the five-year period between the SAR review and the establishment of a new Waste Regulation, the existing provincial waste permitting system was not used as an interim measure for farms with over 600 tonnes of feed use annually.
- Schedule C of the Waste Management Permit Fee Regulation was not made applicable to salmon farms with fees recoverable for specific waste discharges, nor are records of feed use subject to government audit.
- Extensive benthic monitoring has taken place, but remediation plans have not been implemented.
- Focused research has not been done on: potential impacts to shellfish regarding antibiotic use on farms and impacts from suspended solids.
- No policy has been developed regarding polyculture.
- More research is still needed to improve predictive capability in site assessment regarding waste impacts.
- The practice of killing predators has not been adequately controlled or monitored.
- Acoustic deterrent devices were not phased out by 1999; there is at least one reportedly still in use in 2002.
- Night lighting has not been restricted, nor have environmental impacts been researched.
- Research has not been done regarding: interactions between escaped farmed fish and wild salmon stocks; the behaviour of escaped farmed salmon; Pacific salmon broodstock development to make interbreeding with wild stocks unsuccessful.
- A policy framework has not been developed for offshore open marine salmon aquaculture.
- A funding commitment has not been established to promote the testing of alternative farming technologies and the provincial pilot program for alternative technologies has no plans for further ocean pilots.

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