

## Summary List of Recommendations

The following list of recommendations is taken from the final report from the Minister's Advisory Committee on Atlantic Salmon. These recommendations cover areas related to conservation, enforcement, predation, science and international issues, in keeping with the mandate of the Minister's committee. New investment is recommended to deliver on many of these recommendations. Others can be accomplished by changes in practices or management approaches. There is a large network of partners ready and able to work on all fronts to address salmon-related initiatives. The committee believes that local Aboriginal and stakeholder groups, NGOs and existing science partners will play a major role in accomplishing the objectives of the recommendations.

**1.1 - The federal government should make additional investments in habitat improvement that will increase salmon production in freshwater ecosystems. The new investment may be administered through existing administrative structures. The priority habitat initiatives would be determined at the regional level where government representatives and partners can identify priorities.**

**1.2 - In addition to the new investment, DFO must work with partners to explore ways to strategically utilize available funds (RFCPP, ASCF, FQSA/Hydro Quebec, Environmental damages Fund (formally HADD fund), Adopt-a-stream, provincial programs, etc.) to carry out collaborative habitat restoration work.**

**1.3 - DFO should support water conditioning projects (such as the West River initiative) where NGO groups are mitigating acid effects, and review options for treating other acid-impacted river systems. Funding arrangements should be explored with other agencies and international partners who are involved in major international ecosystem initiatives.**

**1.4 - Partner with relevant provincial resource departments, industrial resource users and developers to ensure that appropriate legislation and best land use practices are in place to protect fish habitat. Ensure the legislation is enforced.**

**1.5 - DFO to work with hydro operators, Aboriginal groups and concerned NGOs to identify the water needs and water risks for salmon (flow rates, timing, temperatures, etc) so that whenever possible, hydro operators can factor these concepts into their water management plans.**

**2.1 - Harvest levels for salmon in Atlantic Canada should be set using the precautionary approach framework that is presently being developed for Atlantic salmon. The limit reference point (LRP) should be the benchmark to determine if there will be any directed retention in FSC and recreational fisheries. When the abundance of salmon is above the LRP, DFO should consult with First Nations and Aboriginal partners as well as with recreational fishery interests to define the appropriate levels and sharing of directed retention salmon fisheries. DFO should network with First Nations and Aboriginal groups as well as recreational angling interests to set appropriate daily and seasonal bag limits including consideration of grilse and large salmon retention limits in accordance with the principles of the precautionary approach and status of the stocks.**

**2.2 - In Quebec, support the proposed conservation management approach which will revise upward the conservation limits and modify the protocol for setting recreational season and harvest levels on a river by river basis. Under the new system, the retention of large salmon in the sport fisheries will be authorized in rivers that reach their conservation limit or management target, under certain conditions and within limits, and as agreed to by the Minister and the river managers. In rivers that do not meet their conservation limits or management target, the retention of large salmon will be forbidden. However those rivers may be opened to the retention of grilse only, or be imposed total catch and release of all salmon irrespective of size, or in the worst situation be closed totally to salmon fishing.**

**2.3 - There should be information, education materials and training provided on the benefits and proper techniques for hook and release angling. Anglers and river groups should take the lead on this with the support of DFO and provincial agencies.**

**2.4 - Eliminate the three fish salmon bycatch in the Labrador resident trout net fishery. Modify the opening and closing dates and other conditions on these licences to minimize the impacts on the salmon runs. If salmon mortalities in this fishery continue to be a problem, a total ban of this trout net fishery should be imposed.**

**2.5 - Review bait fisheries in all regions to determine if they are still required by local commercial fisheries. Similarly, the Quebec commercial trout net fishery should be reviewed to see why it exists and eliminate it if there is no clear socio-economic objective to continue it. If these net fisheries are to continue, include licence conditions related to location, timing, orientation, depth, mesh size and other factors that will minimize impacts on salmon runs.**

**2.6 - When gillnets are used for FSC fisheries, they should be tended regularly and not left out for long periods of time. Explore the possibility of establishing take-out periods in the management plan – examples would be a 24 hour period every week and extended periods during times of high large fish migration, as is practiced in some Aboriginal fisheries in Labrador. Longer weekly takeout periods (72hrs) should be considered.**

**2.7 - In an effort to reduce coastal fishing in FSC fisheries, explore options to set gill nets near the entrance of salmon rivers or in bays and estuaries of salmon rivers to avoid catching migrating mixed stocks.**

**2.8 - Where possible, explore the use of fish traps to replace gillnets for harvesting FSC fish allocations. Work should be done by DFO, Aboriginal and other partners to find a way to make trap nets work in areas where they have been ineffective to date.**

**2.9 - Explore option to take small fish only in the FSC fisheries, particularly in areas where such action is needed. Potential ways to do this may include the use of fish traps, mesh sizes in gill nets and season adjustments.**

**2.10 - Explore options to replace salmon with other FSC species (eg striped bass in Miramichi).**

**3.1 - Stock enhancement should be considered as an option to maintain genetic stocks or improve collapsed stocks. DFO should provide advice to protect against genetic risks, but also provide advice and support (such as monitoring impacts) when programs may have a beneficial impact.**

**4.1- DFO should work with provincial regulators and industry to address risks that open pen salmon culture pose to wild Atlantic salmon, particularly salmon escapement and disease/parasite transfer. Proper regulatory checks and balances should be put in place in all Atlantic jurisdictions, as noted in the Doelle-Lahey report that was recently released in Nova Scotia.**

**5.1 - Increase funding levels and capacity for wild Atlantic salmon enforcement.**

**5.2 - DFO should explore how to get efficiencies from enforcement dollars through collaboration with provincial agencies, enhancement of Aboriginal/Native Guardian programs or other partnerships.**

**5.3 - DFO should continue to explore the use of technology (cameras, heat sensors, etc) and risk assessment tools to improve enforcement techniques. They should also use internal knowledge and that of local partners to select the timing when enforcement activities are most needed.**

**5.4 - DFO should recognise that the presence of partners such as Aboriginal/First Nations, anglers and river groups can be a deterrent to poachers on rivers and in estuaries. Develop networks with these groups, and establish collaborative means to detect and report poachers so that enforcement action can take place in a timely manner.**

**5.5 - Carry out education programs, in cooperation with partners, to inform the public and user groups about the state of wild salmon stocks, how poachers pose additional risks to the resource, and the options that are available to help prevent poaching. There should be educational messages aimed at persons purchasing poached salmon.**

**6.1 - Develop a grey seal harvest in the Gulf of Saint Lawrence. Partner with First Nations groups to conduct a grey seal fishery. If possible, focus on targeting grey seal populations that are congregating in estuaries or river mouths when smolts are leaving the rivers or adults are returning.**

**6.2 - Conduct stomach content analysis on seals that are present in estuaries during salmon migration times.**

**6.3 - Allow seal harvests/culls in other areas where they are clearly targeting wild Atlantic salmon.**

**7.1 - Support expanded research programs on striped bass to get a better understanding of the impacts this species is having on wild Atlantic salmon (surveys in Miramichi Bay and Bay of Chaleur, Bay of Fundy smolt tagging work).**

**7.2 - Consult with local First Nations bands in the Miramichi area to explore the establishment of striped bass food fisheries that may replace some of the FSC salmon catch.**

**7.3 - Since striped bass population levels in the Northumberland Strait are well above conservation targets, DFO should allow an increased harvest through angling or other methods (from the Cheticamp area in Western Cape Breton through to the Gaspé Peninsula). Required spawning levels must be respected to ensure the striped bass population does not approach threatened levels, as occurred in the past.**

**8.1 - Support and expand the research on the impacts of seabird populations on salmon.**

**9.1 - For 2015, continue with the small mouth bass eradication program in Miramichi Lake. For 2016, explore other options such as chemical eradication under the authority of the new Aquatic Invasive Species Regulations.**

**10.1 - Secure long-term funding for existing locations and increase the number of locations where counting takes place. Target/priority areas include the South Coast of Newfoundland; additional rivers in Northern Labrador, far north and Kenamu River in Lake Melville; an additional river in Southern Labrador, the Eagle River is suggested; an additional river on Anticosti; and an additional river on the Saint Lawrence North Shore, east of Moisie River.**

**10.2 - Do a review of the options that are available for doing counts and stock assessment to evaluate which are most cost effective, which are appropriate for science needs, and which may work best in given climates and circumstances (counting fences, swim through, smolt wheels, new technologies to do electronic counting, etc.).**

**10.3 - Do a review of the approaches used to determine egg requirements for river systems so that consistent principles, most appropriate methodologies, and realistic numbers can be used for minimum spawning requirements. (Note: this work may be underway with the PA approach for Atlantic Canada and the developing 2016 management plan for Quebec).**

**10.4 - As DFO implements the precautionary approach, science and management should develop the tradeoffs and implications associated with different harvest levels when the stock is in the cautious and healthy zones.**

**11.1 - Work with provincial partners in NS, NB and NL to improve the licence return rates from the recreational fisheries. Collaborate on the development of a user-friendly electronic on-line reporting system that would be available for reporting on a daily basis. Establish a deterrent or incentive process/program to encourage reporting – there must be some consequences for not reporting.**

**11.2 - Work with Aboriginal groups to obtain good data and to better use the information that they are collecting or can collect from their subsistence fisheries.**

**11.3 - Work with anglers, professional guides, fishing camps, river groups, or others who are regularly on the rivers and in the estuaries, to collect any data that may help in pursuing science needs.**

**11.4 - Foster data sharing among DFO, the scientific community and other partners/user groups.**

**12.1 - DFO should support and encourage their scientists to work collaboratively with university researchers, NGOs, private researchers or local interest groups in an effort to collect information and pursue scientific knowledge on Atlantic salmon. DFO/the federal government should establish a Wild Atlantic Salmon Research and Innovation Fund to support this initiative.**

**12.2 - DFO should work with The Atlantic Salmon Federation and international scientists to address low marine survival and salmon migration patterns. There should be support for and collaboration with Greenland to do genetics and tagging work to gain a better understanding of the populations, migration, mortality estimates and relationships between the west Greenland fishery and river spawning populations.**

**12.3 - DFO should provide training to local aboriginal, river groups or school groups (or arrange for training programs) so these groups can assist in doing science work such as stock assessments, data collection, water quality sampling, etc.**

**13.1 - Work with national and international partners to research the larger ecosystem changes that are occurring in the Northwest Atlantic, including the Gulf of Saint Lawrence. Identify salmon as a keystone species to study as part of this research.**

**13.2 - Support and expand ocean tracking programs to help understand the marine components of Atlantic salmon – either through direct DFO involvement or partnerships. Programs could include smolt tagging, adult tagging in remote areas (Greenland) or increased monitoring sites/activities. Results of this important work should be peer reviewed and published.**

**13.3 - Support genetics work that would supplement the tagging and migration studies.**

**14.1 - Support existing water monitoring programs and expand on them to establish time series data on water throughout salmon river systems.**

**14.2 - Use partnerships with river groups, universities, local schools or local community groups to collect fresh water samples and data. DFO should provide training and necessary support.**

**14.3 - Use technology such as remote sensing to map rivers and identify temperature patterns in rivers.**

**14.4 - DFO should work with research partners to study the impacts that changes in water quality, such as increased aluminum levels in acid rivers, are having on different life stages of Atlantic salmon. Likewise, partnership research programs are needed to better understand hydrology, particularly related to climate change and impacts on freshwater habitat.**

**15.1 - Work with provincial partners and the aquaculture industry to do genetics work in river systems adjacent to aquaculture farms to determine the presence and impacts of escaped fish on local wild stocks.**

**15.2 - Aquaculture fish should be marked so that escapees may be identifiable, genetically traceable and removed from river systems. There should be consequences to the aquaculture industry for not accurately reporting escapees in a timely manner.**

**16.1- Continue to work with NASCO, Greenland, Denmark and other partners to reduce the harvest and effectively manage the salmon fishery located off western Greenland.**

**16.2 - Work with NASCO, France and other partners to reduce and eventually eliminate the salmon net fishery conducted off Saint Pierre and Miquelon. The first target should be the elimination of the commercial fishery.**

**17.1 - Change to a two year management cycle in NL. Maintain the option to implement immediate changes for major management or conservation issues. In other regions in Atlantic Canada, once an appropriate management regime is in place for a foreseeable period, the consultations can change to a two year cycle.**

**17.2 - DFO should work with the provinces and NGOs to streamline the permitting and approval process for volunteers who are doing constructive work on salmon stocks or salmon habitat.**

**17.3 - DFO should work with representative interest groups to identify contact people (and coordinates) who can be accessed to get the various federal and provincial approvals or funding to do salmon-related work.**

**17.4 - Give a one year advance notice about management changes that will be introduced so that businesses can adjust and plan as necessary.**

**17.5 - The federal government/DFO and Quebec should address the governance process so that the province will have the authority to quickly make management changes needed for conservation.**

**17.6 - Governments must promptly address the harmonization of management approaches in the river systems on the border of NB and Quebec. Establish a process to immediately deal with this situation when future management changes are made.**

**17.7 - A review of the Wild Atlantic Salmon Policy is overdue. It should be reviewed considering recommendations in this report and the new policy should be implemented. The federal government and the province of Quebec should collaborate and attempt to implement their respective salmon policies within the same time frame.**

**17.8 - Review the unscheduled salmon rivers in NL to determine whether some should be listed as scheduled waters.**

**17.9 - Review the status of closed rivers in the Maritimes, in consultation with First Nations partners and interest groups, and assess the possibility of reopening. Similar reviews may be considered for NL and Quebec.**