**Key Topics for Applied Scientific Research**

*Please note: Topics are not in order of priority.  Bullets under each of the key topics (Õ) below are suggested examples only.*

* How do freshwater ecosystems (e.g. temperature, hydrology, biological interactions, land-use practices) influence wild Atlantic salmon populations?
* What are freshwater causes of declining smolt size and/or abundance?
* Development of a watershed-based risk assessment of forest harvesting for the protection of Atlantic salmon habitat.
* Identify and map key habitats and risks and propose specific multi-faceted land-use management plans that protect these features.
* Summarize forestry standards in various jurisdictions to protect salmon habitat.

* What are the consequences of salmon aquaculture on wild Atlantic salmon in eastern Canada?
* What is the influence of pathogens and parasites on the marine survival of wild Atlantic salmon?
* What are the consequences of interbreeding between farmed and wild salmon on wild salmon?

* What are the consequences of climate variability and change on wild Atlantic salmon populations?

* How do changes in predator-prey interactions (where salmon can be either predator or prey) affect wild Atlantic salmon survival?

* What are the impacts of interactions between invasive species and wild Atlantic salmon (e.g. smallmouth bass in the Miramichi)?

* What are the contributions of different life-stages (e.g. mature parr, kelt) to overall population viability and what are the primary determinants of their survival?

* What are the effects of the loss of smolt production on wild Atlantic salmon?

* What are the effects of freshwater mitigation measures on wild Atlantic salmon?
* Does stream restoration and/or barrier removal on wild Atlantic salmon populations positively affect wild salmon?
* Do stocking programs improve wild Atlantic salmon populations?

* Modelling wild Atlantic salmon populations.

* Development of a decision-tree to guide stream restoration interventions
* Development of a generalized watershed management plan.

**NOTE**: The following 2 topics were chosen for the RFP issued fall 2021:

* How will climate change directly or indirectly affect the influence of existing stressors on Atlantic salmon population of Eastern Canada?
* Developing time series data on fresh water and marine factors likely to affect salmon productivity (e.g. discharge, temperature, etc.).
* Undertaking climate change vulnerability assessments on wild Atlantic salmon populations.
* How should government and overall management plans respond to climate change and its influence on future Atlantic salmon populations?
* How do freshwater ecosystems (e.g. temperature, hydrology, biological interactions, land-use practices) influence wild Atlantic salmon populations?
* What are freshwater causes of declining smolt size and/or abundance?