

Data Collection Partnerships for a More Sustainable Angling Industry

A Case Study at Salmon Rivers

Industry Sector

Outfitting Tourism

Location

Salmon Rivers throughout Newfoundland

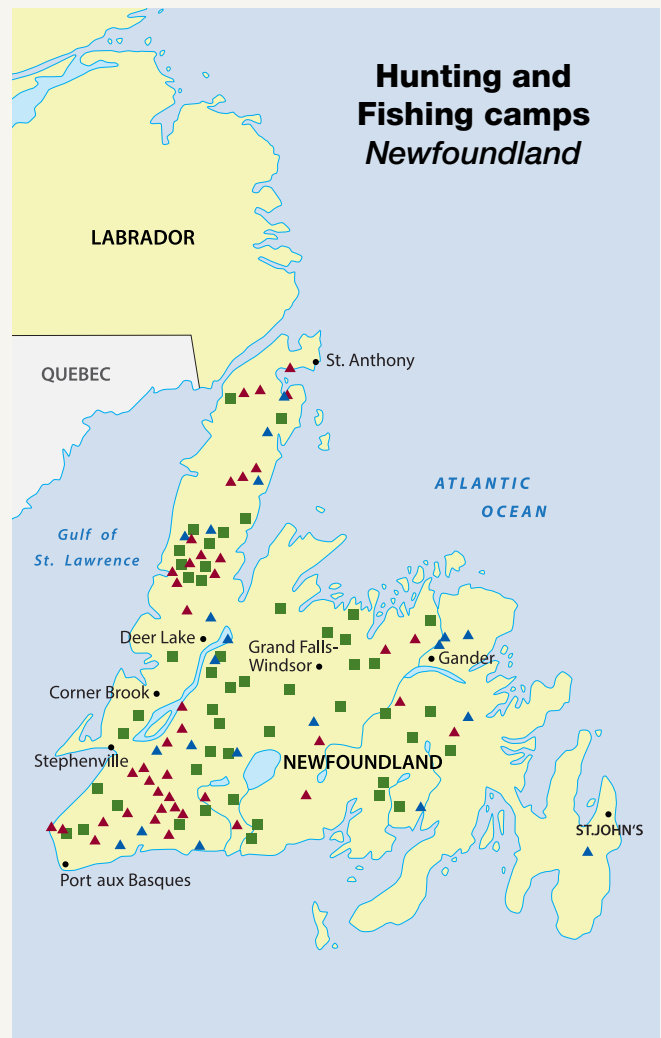
Climate Change Risks

River closures, species vulnerability

Background

There are over 50 outfitting lodges on the island of Newfoundland that offer salmon fishing experiences to visitors between June and September each year. In recent years, the impacts of climate change have become increasingly prevalent during the fishing season, with low water levels, warmer water temperatures, and fewer fish returning to spawn in salmon rivers each year.

The provincial outfitting industry is one of the largest sources of tourism revenue for the province, welcoming thousands of visitors each year from all over the world. Salmon is one of the most popular species that attracts visitors to the province, making the industry highly vulnerable to shifts in the health of Atlantic Salmon stocks.



In recent years, the industry has had to adapt to changing salmon stocks by working with DFO to find a solution that allows visitors to experience salmon angling in the province.

Climate Change Impacts

Water temperature has been cited as the most important factor affecting survival of salmon during catch and release season. Studies by DFO have indicated that when temperatures reach above 20°C, adult salmon become lethargic as their energy is re-directed to meet basic metabolic demands such as respirating and blood circulation. External sources of stress, such as the exhaustive physical demand experienced during angling, can be detrimental to the species if already vulnerable from thermal stress.

Adaptation Measures

Recent studies by DFO have sought to identify the optimal window when catch and release salmon angling can reasonably take place without placing the species in duress. Conversely, these studies have identified critical temperature thresholds that can be used to trigger in-season closures of the recreational fisheries.

In-season closure of rivers can be detrimental for nearby outfitting lodges whose services center around salmon angling. For this reason, when water temperatures are high, DFO has elected to close rivers to salmon angling for periods of time throughout the day when temperature parameters are near the critical level, rather than closing rivers altogether. The timespan between one hour before sunrise and 10 a.m., when temperatures remain low relative to daytime highs, remains open for salmon angling. While the hours from 10 a.m. to one hour before sunrise the next morning are closed to angling to protect the species during the warmest hours of the day. This approach to river closures has allowed angling to continue



Photo Credit: Haitham

without causing significant harm to the species, ensuring that outfitting lodges can continue to offer their normal services and remain profitable.

Most outfitting lodges have further adapted to offer additional excursions to guests throughout the remainder of the day including ATV tours, hiking, and culinary experiences.

This form of adaptation heavily relies on the relationship between outfitters and DFO. Outfitters maintain a working relationship with DFO where communication remains open, concerns are communicated, and both parties work towards mutually agreeable solutions. This working relationship between the two groups is further promoted through data collection (e.g., water level, temperature) by outfitters, which is passed on to DFO. Because DFO would not necessarily have the resources to collect such a wide range of onsite data, this arrangement allows DFO to use measured data to determine if rivers are safe for operations, as opposed to relying on models and assumptions.

Conclusion

Through strong partnerships, members of the angling industry are working with DFO to collecting data on rivers that may ultimately avoid unnecessary closures. The industry has further adapted by offering alternative experiences during daytime high temperatures which coincide with river closures for angling, when salmon are most vulnerable.

Photo Credit: Newfoundland and Labrador Tourism



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