



NARRATIVE
RESEARCH

2020 Public Perception Study Summary Report

May 2020

Prepared for:





Background and Introduction

Recently, there has been much public discussion concerning the fate of the Miramichi River, and special interest groups, such as the Atlantic Salmon Federation (which oppose fish hatcheries and aquaculture in general), has controlled the dialogue in the media. This has been detrimental to the Miramichi Salmon Associations' desire to restock the river.

To direct development of the Association's communication strategy, Narrative Research was commissioned by the Miramichi Salmon Association to undertake a quantitative research study to assist with the development of its communications strategy related to the health of the recreational salmon fishery in New Brunswick. Survey objectives included assessing public opinion related to rivers in New Brunswick. More specific research objectives of this study included:

- Measure overall opinion of the health of rivers and recreational salmon fishery in NB;
- Assess importance of actions to ensure the long-term sustainability of rivers, most notably the Miramichi River;
- Identify unaided and aided awareness of the Miramichi Salmon Association;
- Evaluate support / opposition for various actions towards the recreational salmon fishery;
- Identify the main concerns surrounding rivers in NB, particularly the salmon fishery; and
- Understand how opinions vary across NB, as well as in the Miramichi area specifically.

The following summary report provides results for the **2020 Public Perception Study** and includes a description of the research methodology employed for this study, an executive summary of results, key considerations and a detailed analysis of results. Throughout the report, table numbers are referenced for the detailed data tables, which provide a breakdown of each question by key demographics and regions. Appended to the report is a copy of the data tables.

To meet project objectives, a random telephone survey was undertaken with 401 New Brunswick residents. Of those, 200 were conducted across Northern NB (including an oversample of 109 residents in the Miramichi area), 127 across Southern NB, and 74 were conducted in the Moncton area. The following provides further details on the research methodology employed for the study.



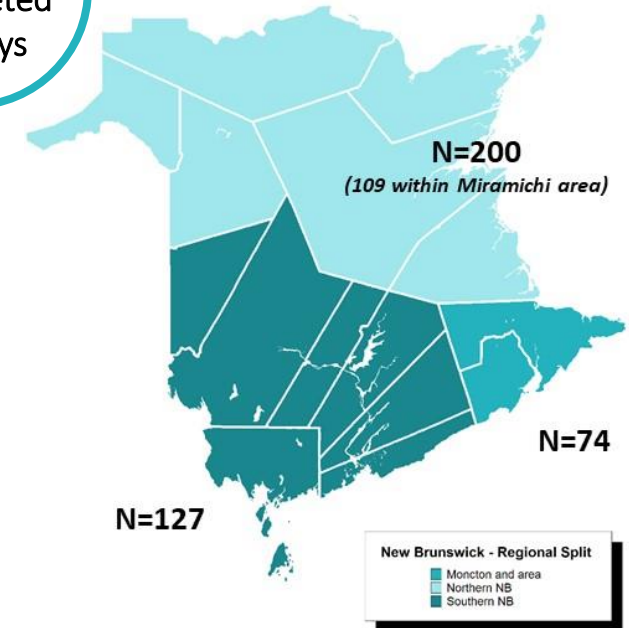
Telephone Survey

- A random telephone survey was conducted with 401 NB residents aged 18yrs+.
- The questionnaire was designed by Narrative Research in consultation with Miramichi Salmon Association.
- Data collection was conducted April 20 – April 29, 2020
- The average survey length was 13 minutes.



401
Completed
Surveys

Completes by Region



Target Audience

- The primary target audience included residents living in New Brunswick. Specifically, 401 surveys were completed across the province, with a margin of error for overall results of +/-4.9%.
- To ensure opinions of those living near the Miramichi could be explored, the survey included an oversample of 109 residents living within the Miramichi area.
- Overall provincial results were weighted by age, region and gender to ensure accurate representation of the province's population.



Results of the **2020 Public Perception Study** indicate that New Brunswick residents are conscious of a variety of environmental issues in the province, and consider pollution and the protection of waterways to be the main environmental issues facing New Brunswick.

Only two-thirds of New Brunswickers are aware of the decline of wild Atlantic salmon in the Miramichi River in recent years, although residents in the Miramichi area show slightly higher levels of awareness. Overall, water pollution and overfishing are primarily attributed to decline, although the presence of invasive species is the top mention by residents in the Miramichi area.

Despite the fact that not all residents are aware of the decline of wild Atlantic salmon, there is **widespread agreement of the importance of efforts to recover New Brunswick's wild Atlantic salmon stock**. Unfortunately, there is only moderate confidence among residents that the stock can be brought back, and residents in the Miramichi area are least confident.

Controlling regulations related to wild Atlantic salmon stock is **clearly considered to be a government responsibility**, although opinions are mixed as to whether such control is a provincial or federal government responsibility.

There is **very limited awareness of which groups or organizations are involved in the conservation and restoration of wild Atlantic salmon stock** in New Brunswick. In fact, less than half of New Brunswickers are aware of the Miramichi Salmon Association, and knowledge of its mandate is limited. Findings underscore the importance of increasing awareness of the Association and its role, particularly given the importance placed on a wild Atlantic salmon stock recovery.

There is **widespread support among residents for collecting smolts, raising them, and stocking the Miramichi with adult wild Atlantic salmon**. Indeed, there is limited opposition to this concept. Residents primarily attribute their support for such an action to the desire to bring the salmon stock back, while reasons for opposition stem from a concern that it is unnatural.

Residents deem a variety of actions important to help revitalize New Brunswick's wild Atlantic salmon stock. Indeed, nearly all of residents believe it is important to **protect the waterways with responsible land use**, to **develop a recovery plan to get fish stock back**, and to **manage individual species to keep the ecosystem in balance**. Similarly, roughly eight in ten residents believe it is important to **report declining fish stock numbers to the public**, and **stock the Miramichi with wild Atlantic salmon**, while three-quarters believe it's important to **address invasive species**.

Residents largely endorse several specific actions to impact the salmon fishery, with **reducing the impact on waterways**, and **reducing harm to salmon while fishing**, being top of mind. Residents most strongly agree that the government should **examine forestry, mining and farming practices on crown land** with a goal to reduce the impact on waterways. There is a similar level of agreement that proper **protocols should be put in place to ensure anglers reduce harm to salmon** while fishing.

Finally, residents believe it is important that conservation groups lobby government to ensure best practices are created and enforced for species management in the Gulf Region.

Findings suggest the following considerations warrant attention by Miramichi Salmon Association.

1. Efforts are needed to heighten public awareness and understanding of Miramichi Salmon Association and its role in New Brunswick.

Awareness of the Miramichi Salmon Association is limited (although higher in the Miramichi area), and there is limited familiarity of the Association's mandate and functions. Given the strong public support for actions to revitalize wild Atlantic salmon stock, the Association would clearly benefit from being more closely aligned with directing and promoting revitalization of the declining wild Atlantic salmon population.

2. Results should be used to lobby government to move forward with various actions to address the declining wild Atlantic salmon population.

Findings show there is widespread agreement among residents that it is important to focus efforts on revitalizing the wild Atlantic salmon population. Further, residents largely endorse a range of actions to revitalize wild Atlantic salmon stock. More so, despite negative dialogue in the media, over eight in ten residents support the concept of collecting and raising smolts to be released into the Miramichi. Given some pre-existing negative beliefs surrounding fish hatcheries and aquaculture, when communicating such an initiative, it will be important to underscore that the proposed approach includes smolts that are wild salmon (versus farmed salmon).

Results suggest that information from this study should be used to clearly communicate to governments the public's perceptions of the gravity of the problem, the perceived importance of addressing the problem, as well as high levels of public support for the various actions to address the situation.

3. Public education is warranted to increase awareness of the declining wild Atlantic salmon population in New Brunswick.

Given that only two-thirds of residents understand that the wild Atlantic salmon stock is declining, public education of the challenge at hand should be considered. Clearly communicating the extent of the problem, together with a presentation of factual evidence of what is causing the problem, will be paramount for further enhancing public support.



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Detailed Analysis



Main Environmental Issues

Pollution is most often identified as the main environmental issue in New Brunswick, followed by the protection of water / waterways.

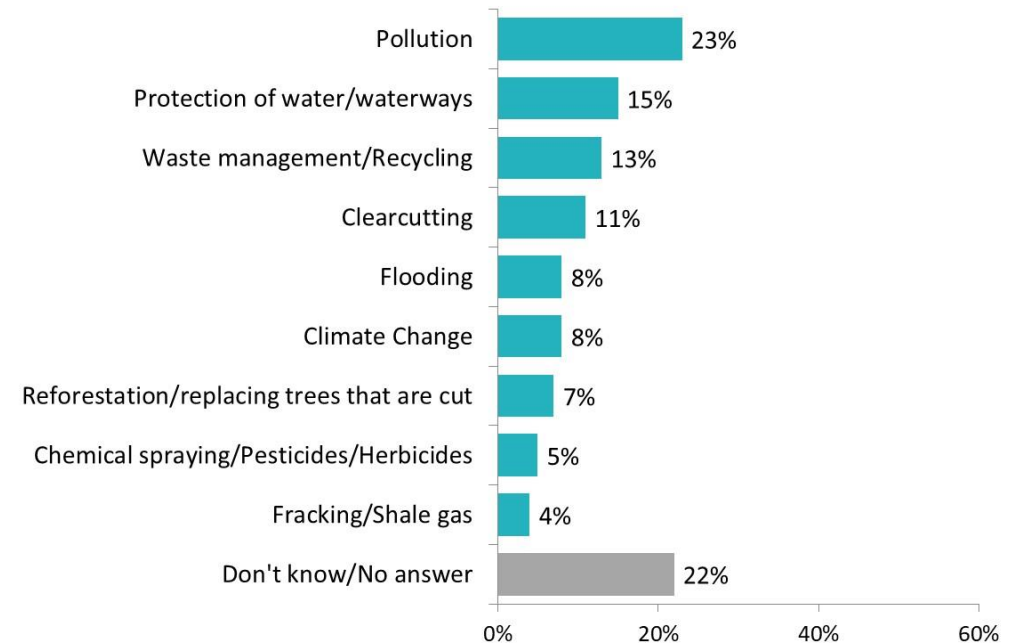
When asked, unaided, what residents consider to be the main environmental issues in the province, one-quarter of residents mentioned *pollution*, while a similar portion was *unsure*. Fifteen percent mentioned *protection of water/waterways*, followed by *waste management/recycling* (13%) and *clearcutting* (11%). Other concerns were mentioned by less than ten percent.

Some differences of opinion are evident across specific communities. For residents in the Miramichi area, *protection of water/waterways* (24%) is as much of a concern as *pollution* (24%). Additionally, *protection of water/waterways* is considered a main environmental issue among nearly three in ten (28%) Indigenous residents, considerably more important than *pollution* (8%).

Regions outside of the Miramichi area are less likely to consider the *protection of water/waterways* as a main environmental issue. (Table 6)

Main Environmental Issues in New Brunswick

Key Mentions From Total Unaided Mentions



Q.6: What do you consider to be the main environmental issues in the province? Any others? (n=401)





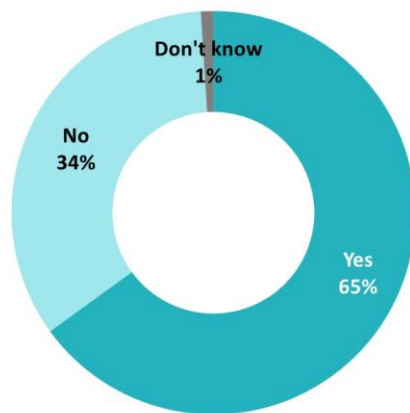
The majority of residents are aware of the decline of wild Atlantic salmon stocks in the Miramichi River, with water pollution and overfishing most commonly linked to the decline.

Overall, two thirds (65%) of New Brunswick residents are **aware** that wild Atlantic salmon stocks in the Miramichi River has declined significantly in recent years. In contrast, one-third (34%) of residents indicate they are **not aware**.

Perhaps not surprisingly, the vast majority (81%) of residents in the Miramichi area are aware of this decline, with a more moderate level of awareness in other regions. Additionally, males (70%), residents over 55+ years (76%), and higher income earners (78%) are more likely to be aware of the wild salmon stock decline compared to their counterparts. In contrast, residents between 18-34 years (46%) and Indigenous residents (47%) are less likely to be aware of the declining trend. (Table 7)

When asked, unaided, what has caused the decline in salmon stock, over three in ten (34%) residents mentioned **water pollution**, while a similar portion (30%) stated **overfishing**. Two in ten (19%) residents were **unable** to provide an answer, and all other reasons were mentioned by ten percent or less of residents. Across the regions, **water pollution** and **overfishing** are the two most commonly mentioned reasons for the decline of the salmon stock. However, in the Miramichi area, **Smallmouth bass/invasive species** (32%) was commonly mentioned as a key reason for the decline in the stock. (Table 8)

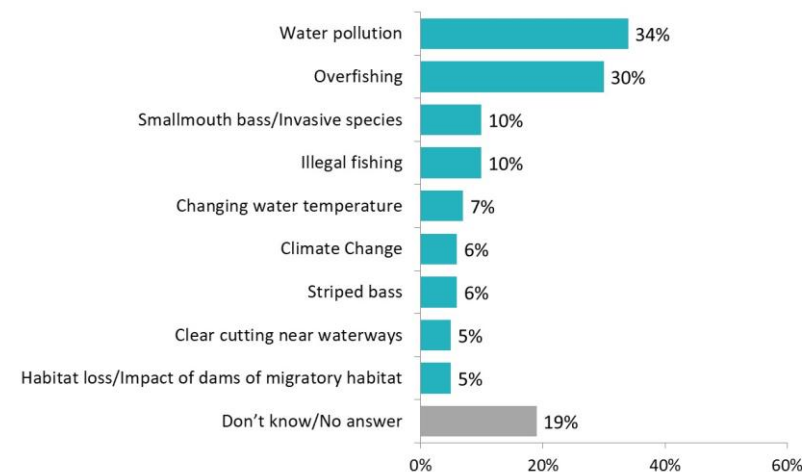
Aware Wild Atlantic Salmon Stocks in the Miramichi River Have Declined Significantly in Recent Years



Q.7: Prior to this call, were you aware that wild Atlantic salmon stocks in the Miramichi River have declined significantly in recent years? (n=401)

Reasons for Decline in Wild Salmon Stock

Key Mentions from Total Unaided Mentions



Q.8: In fact, the wild salmon stock in the Miramichi has declined to below sustainable levels in recent years. What do you think has caused the decline in salmon stock? Anything else? (n=401)



Importance of Recovery of Wild Salmon Stock

The vast majority of residents believe it is important to focus efforts on the recovery of New Brunswick's wild Atlantic salmon stock.

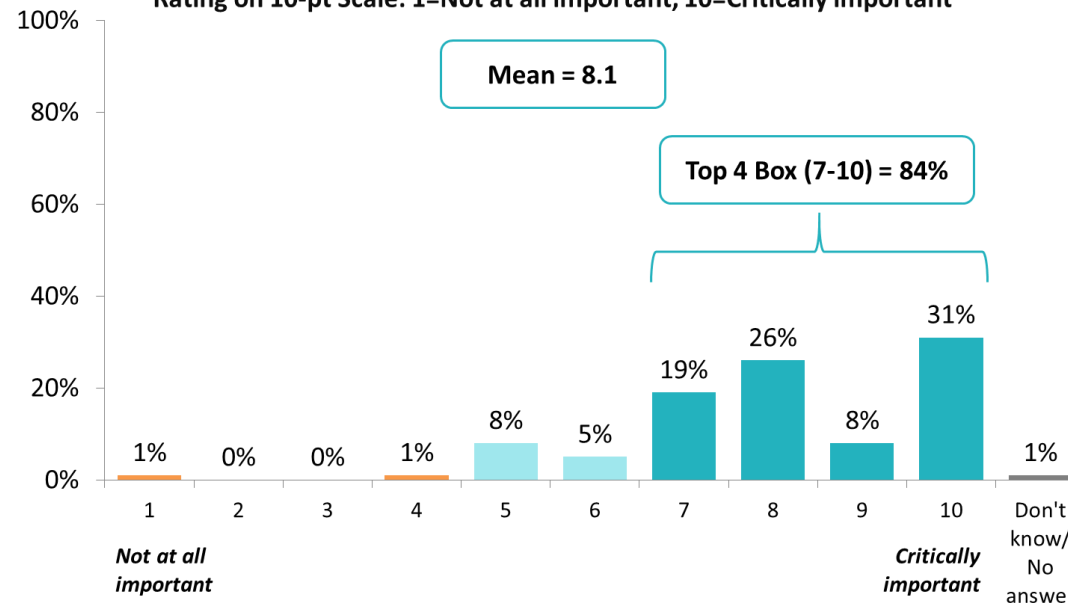
Overall, more than eight in ten (84%) of residents believe it is **important** to focus efforts on the recovery of New Brunswick's wild Atlantic salmon stock. In contrast, few disagree with the need for such actions.

While the majority of residents across the province place importance on recovery efforts, those living in Northern NB, and specifically those in the Miramichi surrounding area, place a higher level of importance on the recovery of wild salmon stock than those living in other regions.

In addition, a few differences warrant mention. Females (91%) are more likely than males (77%) to consider it critically important, and the perceived importance increases notably with age. (Table 9)

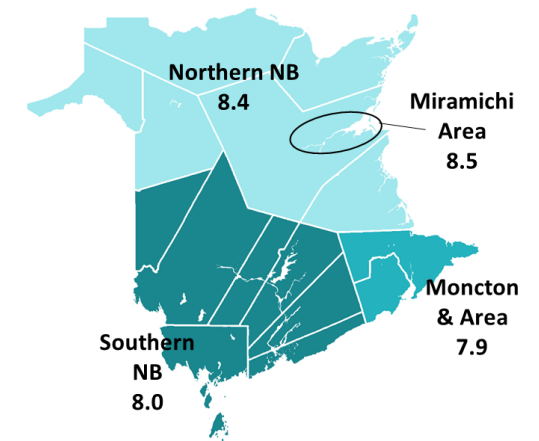
Importance of Focusing Efforts on Recovery of New Brunswick's Wild Atlantic Salmon Stock

Rating on 10-pt Scale: 1=Not at all important, 10=Critically important



Mean Score by Region

New Brunswick Overall = 8.1



Q.9: Using a scale of 1-10, where '1' is not at all important and '10' is critically important, how important do you think it is to focus efforts on the recovery of New Brunswick's wild Atlantic salmon stock? (n=401) Responses of 'Don't know/No answer' are excluded from the calculation of the mean score.





Confidence in Revitalization of Wild Salmon Stock

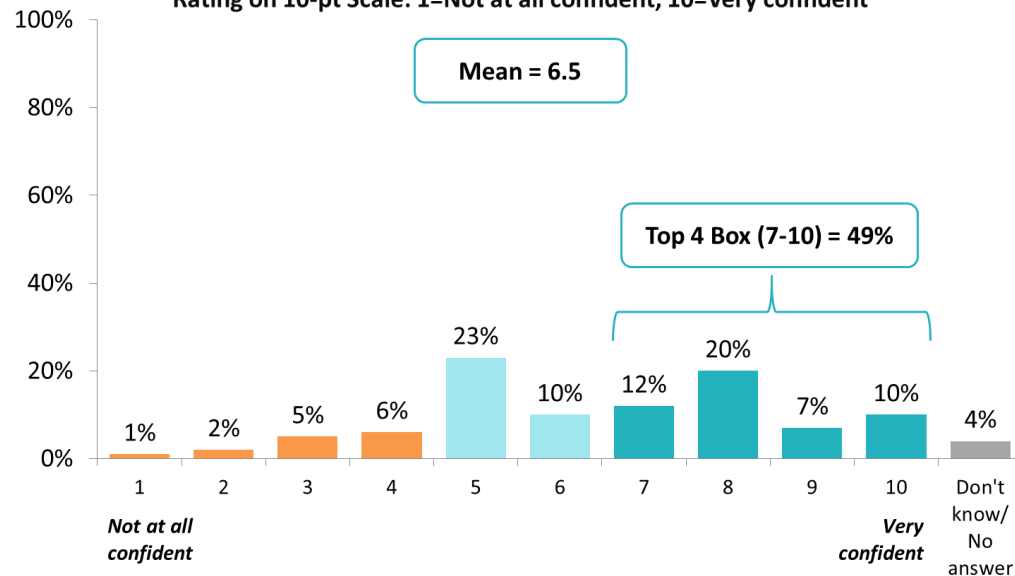
There is only moderate confidence that the wild Atlantic salmon stock in New Brunswick can be brought back.

Overall, one-half (49%) of residents are **express some level of confidence** that the wild Atlantic salmon stock in New Brunswick can be revived, while one-third (33%) offer mid box scores. Positively, only a small minority (14%) has little confidence in the stock's revitalization.

Across the region, residents in the Miramichi area are least confident in the revival of the salmon stock, with only three in ten (32%) indicating confidence. Additionally, residents aged 55+ years, those in households with higher household incomes, and Indigenous residents are less confident. (Table 10)

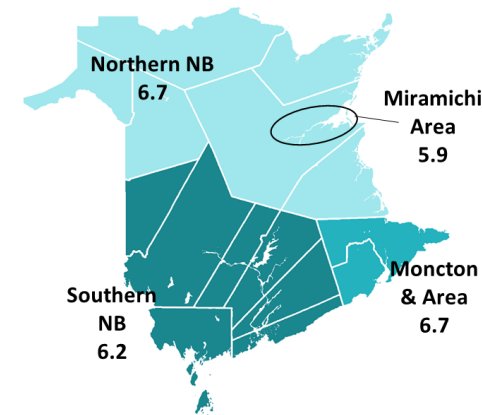
Confidence That Wild Atlantic Salmon Stock in New Brunswick Can Be Brought Back

Rating on 10-pt Scale: 1=Not at all confident, 10=Very confident



Mean Score by Region

New Brunswick Overall = 6.5



Q.10: And using a 1-10 scale where '1' is not at all confident and '10' is very confident, how confident are you that the wild Atlantic salmon stock in New Brunswick can be brought back? (n=401) Responses of 'Don't know/No answer' are excluded from the calculation of the mean score.



Responsible for Controlling Regulations

Government (either provincial or federal) is considered to be responsible for controlling regulations relating to New Brunswick's wild Atlantic salmon stock.

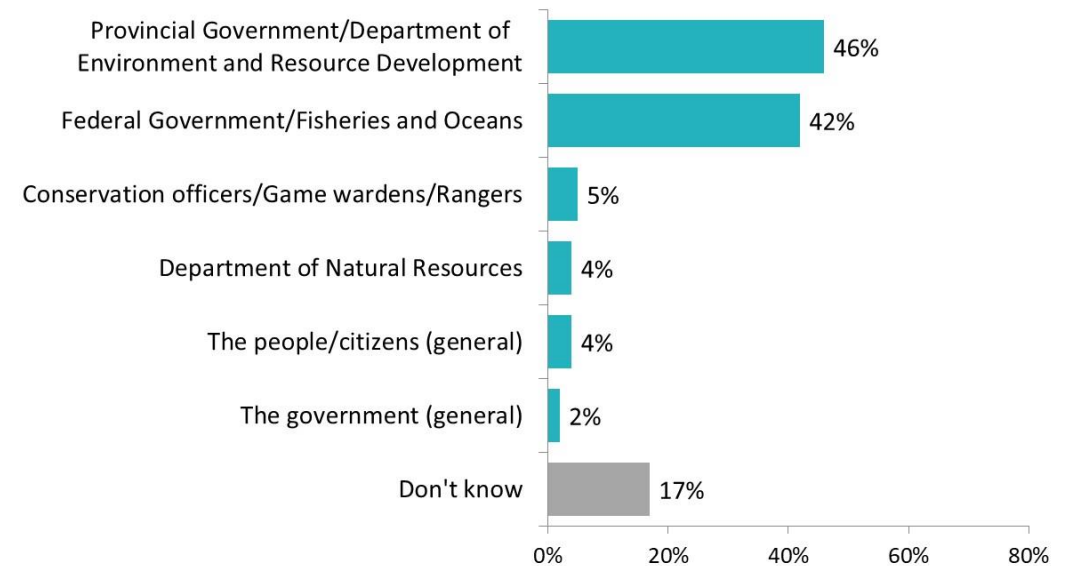
Controlling regulations related to wild Atlantic salmon stock is clearly considered to be a government responsibility, although opinions are mixed as to whether such control is a provincial or federal government responsibility.

To the best of residents' knowledge, the **provincial government/Department of Environment and Resource Development** (46%) or the **Federal Government/Fisheries and Oceans** (42%) are most commonly believed to be responsible for controlling regulations relating to New Brunswick's wild Atlantic Salmon stock.

Across regions, results are fairly consistent, with the exception that those in the Miramichi area are more likely to mention the federal government (57%). Across demographics results are consistent, although residents between 18-34 years of age and Indigenous residents are more likely to mention they **don't know**. (Table 11)

Responsible for Controlling Regulations Relating to New Brunswick's Wild Atlantic Salmon Stock

Key Mentions From Total Unaided Mentions



Q.11: To the best of your knowledge, who is responsible for controlling regulations relating to New Brunswick's wild Atlantic salmon stock? Any others? (n=401)



Awareness of Groups/Organizations

New Brunswickers struggle to identify other groups and organizations that are involved in the conversation and restoration of wild Atlantic salmon in New Brunswick.

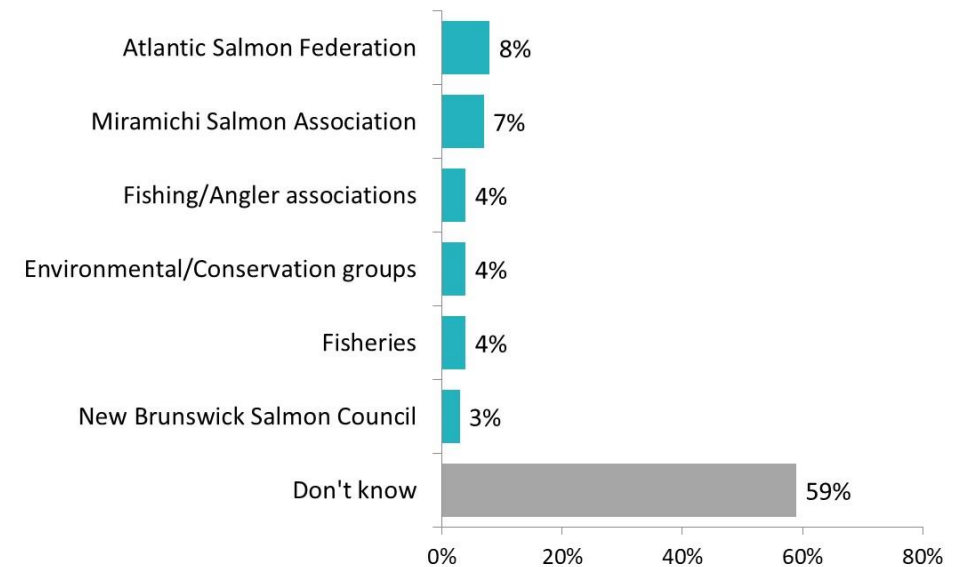
Overall there is low unaided awareness of any groups and organizations that are involved in the conversation and restoration of wild Atlantic salmon in New Brunswick. Indeed, six in ten (59%) residents are unable to recall any group or organization involved in the conservation and restoration of wild Atlantic salmon in New Brunswick.

Those who were able to name a group or organization most often mentioned the **Atlantic Salmon Federation** and **Miramichi Salmon Association**, although all mentions were under ten percent. That said, mention of the Atlantic Salmon Federation was more prevalent in southern NB (13%).

Unaided mention of the Miramichi Salmon Association is notably higher within the Miramichi area, where one-quarter (24%) of residents recalled the Miramichi Salmon Association. (Table 12)

Groups or Organizations Involved in Conservation and Restoration of Wild Atlantic Salmon Stock in NB

Key Mentions From Total Unaided Mentions



Q.12: What other groups or organizations, if any, are involved in the conservation and restoration of wild Atlantic salmon in New Brunswick? Any others? (n=401)

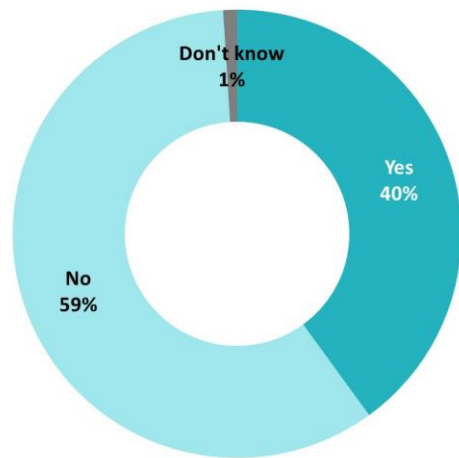
Less than half of New Brunswickers are aware of the Association, and knowledge of its mandate is limited.

Those who did not identify the Miramichi Salmon Association, were asked if they had heard of the organization. Aided, four in ten (40%) residents indicated they had heard of the Miramichi Salmon Industry before the interview, while over one-half of residents (59%) had not. Across the regions, aided awareness of the Miramichi Salmon Association is highest in the Miramichi area, with the majority (78%) indicating awareness. In contrast, awareness is lowest in the Moncton area (30%), among residents 18-34 years (14%), and French-speaking residents (25%). (Table 13)

When combining both aided and unaided mentions of Miramichi Salmon Association, findings show that less than half of New Brunswickers (44%) are aware of the Association.

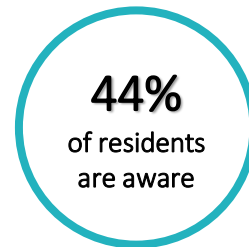
When asked what Miramichi Salmon Association does, residents cite a wide range of answers, while one-third (32%) is unsure. Three in ten (29%) residents believe the Association is responsible for the **conservation/preservation of salmon**, while a much smaller group of residents mention **stocking/restocking the salmon population** (16%) or **monitoring/tracking salmon** (13%). All other answers were mentioned by ten percent or less of residents. (Table 14)

Aided Awareness of Miramichi Salmon Association

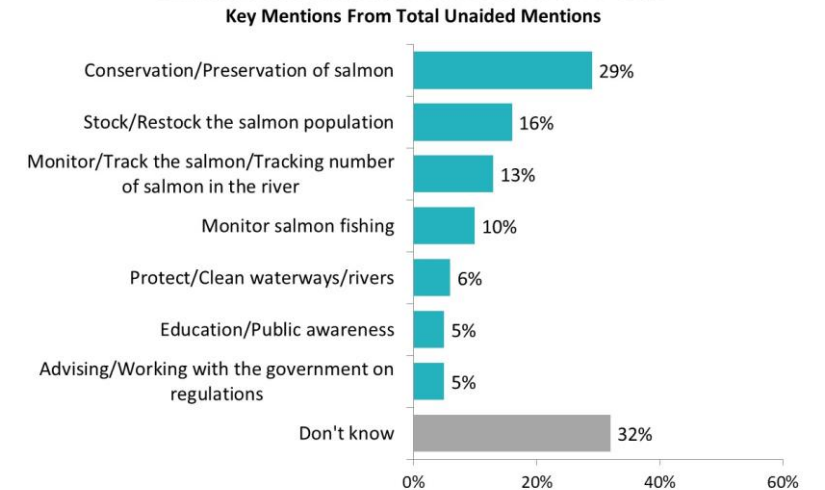


Q.13: [DO NOT ASK IF 'MIRAMICHI SALMON ASSOCIATION' IS MENTIONED IN Q.12] Prior to this call, had you heard of the Miramichi Salmon Association? (n=350)

(Unaided & Aided Awareness)



Top of Mind Awareness of What the Miramichi Salmon Association Does



Q.14: To the best of your knowledge, what does the Miramichi Salmon Association do? (n=401)

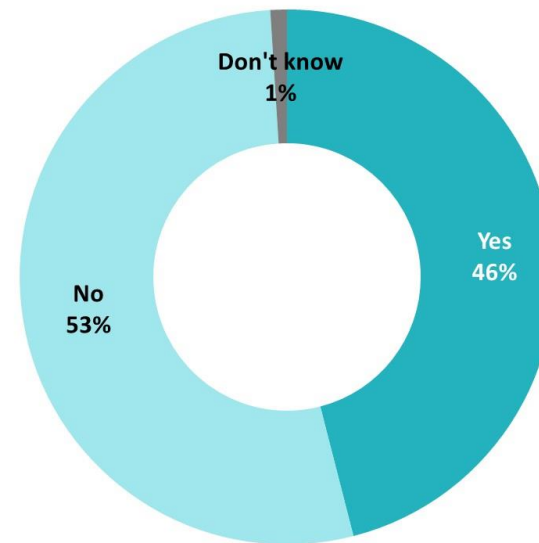
Roughly one-half of residents are aware of the best practices suggested for anglers when angling for salmon.

Overall, less than one-half (46%) of residents are aware that it is suggested that anglers use best practices (*i.e. catch and release, using barbless hooks, and not having a salmon on line for more than 10 minutes in warmer weather*) when angling for salmon. Just over half (53%) is aware of the recommendation to use such best practices.

Across the province, awareness of best angling practices is highest in the Miramichi area (60%) and lower in other regions (Northern NB: 45%, Southern NB: 46%, Moncton area: 47%). Additionally, females are less aware than males (41% vs. 51%), and awareness decreases with age and income.

Of note, seven in ten (69%) Indigenous residents are aware of the best practices. (Table 15)

Aware of Best Practices When Angling for Salmon



Q.15: As a result of declining salmon stock, it is suggested that anglers use best practices when angling for salmon. This means they should catch and release salmon, use barbless hooks and should not have a salmon on a line for more than 10 minutes during warmer weather. Were you aware of these best practices? (n=401)



Residents deem a variety of actions important to help revitalize New Brunswick's wild Atlantic salmon stock.

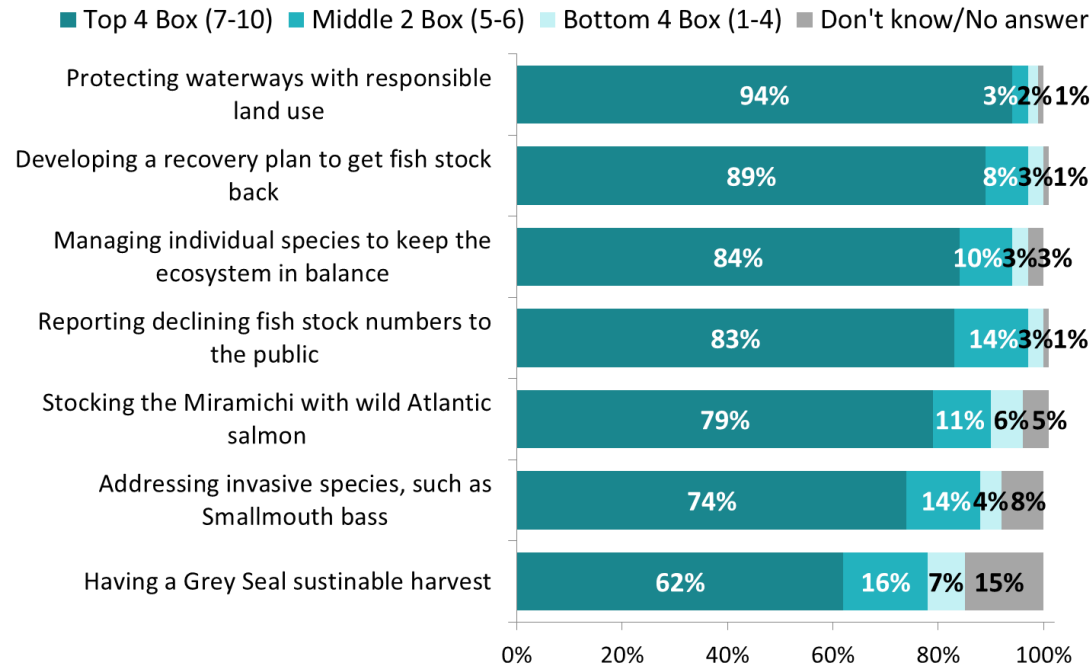
Residents were asked how important specific actions are to help revitalize New Brunswick's wild Atlantic salmon stock.

Results indicate that essentially all actions are deemed important, to some degree. Nearly all of residents feel it is important to *protect the waterways with responsible land use*, while nine in ten indicate it's important to *develop a recovery plan to get fish stock back*. Roughly eight in ten residents believe it is important to *manage individual species to keep the ecosystem in balance*, *report declining fish stock numbers to the public*, and *stock the Miramichi with wild Atlantic salmon*. Three-quarters believe it's important to *address invasive species* and slightly less residents indicated it is important to *have a Grey Seal sustainable harvest*.

Across regions and demographics, scores are fairly consistent, showing high levels of importance for all actions. That said, as shown in the table to the right, those in the Miramichi region place slightly greater importance on most initiatives. (Table 16a-g)

Importance of Actions to Help Revitalize New Brunswick's Wild Atlantic Salmon Stock

Rating on 10-pt Scale: 1=Not at all important, 10=Critically important



	Mean Scores				
	NB Overall	Northern NB	Southern NB	Moncton and Area	Miramichi Area
Protecting waterways with responsible land use	9.0	9.2	9.0	8.9	9.0
Developing a recovery plan to get fish stock back	8.7	8.8	8.7	8.6	9.2
Managing individual species to keep the ecosystem in balance	8.4	8.8	8.2	8.1	8.8
Reporting declining fish stock numbers to the public	8.4	8.6	8.3	8.3	8.8
Stocking the Miramichi with wild Atlantic salmon	8.1	8.2	8.0	8.1	8.6
Addressing invasive species, such as Smallmouth bass	8.0	8.4	7.8	7.8	8.8
Having a Grey Seal sustainable harvest	7.5	7.5	7.6	7.2	7.5

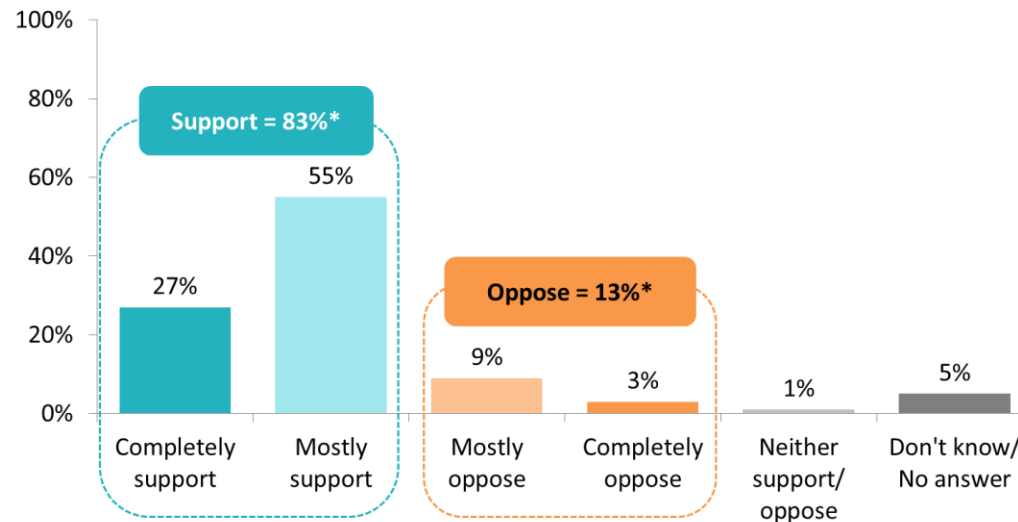
Q.16a-g: Using a 1-10 scale, where '1' is not at all important, and '10' is critically important, how important are each of the following actions to help revitalize New Brunswick's wild Atlantic salmon stock? (n=401) Responses of 'Don't know/No answer' are excluded from the calculation of the mean score.

There is widespread support among residents on the topic of collecting smolts, raising them, and stocking the Miramichi with adult wild Atlantic salmon.

Despite negative dialogue in the media, over eight in ten residents support collecting and raising smolts to be released into the Miramichi. Indeed, more than one-quarter of residents **completely support** the idea, while over one-half **mostly support** it. In contrast, only thirteen percent express any level of opposition to the concept, while five percent are unsure.

Across all regions there is widespread support, with Miramichi showing slightly higher levels of **complete** support (32%). Across demographics results are highly consistent, although males express a higher level of support than females. (Table 17)

Opinion of Collecting Smolts, Raising to Adults, Then Stocking the Miramichi with Adult Wild Atlantic Salmon

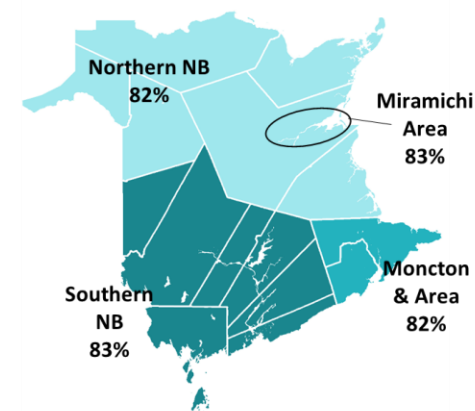


Q.17: After wild Atlantic salmon spawn, the smolt or young salmon, swim to the ocean. Unfortunately only about 2% of smolt return to the Miramichi as adults. One consideration is to collect the smolts before they reach the ocean, raise them to adults, and release them in the river. All things considered, do you completely support, mostly support, mostly oppose, or completely oppose collecting smolts, raising them and stocking the Miramichi with adult wild Atlantic salmon? (n=401)

**Due to rounding.*

Mean Score by Region

New Brunswick Overall Support = 83%



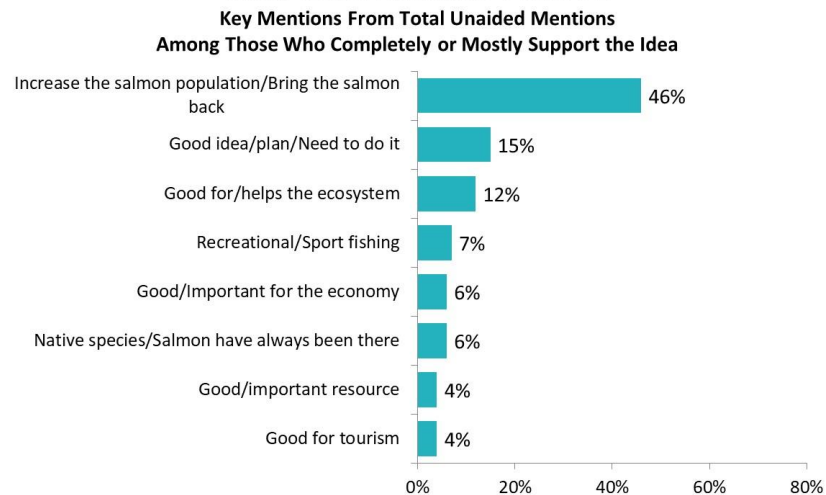


Increasing the salmon population is the key driver of support for stocking the Miramichi with wild Atlantic salmon, while opposition is primarily driven by the perception that it is an unnatural approach.

Residents who indicated support for stocking the Miramichi (n=322) were asked why they supported the concept. Nearly one-half of those mentioned it will increase the salmon population/bring the salmon back. Other less common reasons mentioned were it's a good idea, good for the ecosystem, and recreational/sports fishing. In the Miramichi area, there are slightly more residents mentioning recreational/sports fishing than any other region.

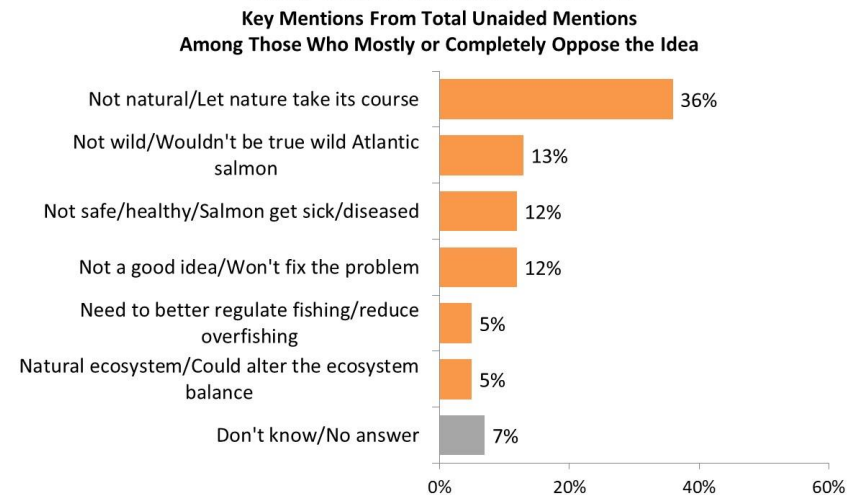
Residents who did not indicate support for stocking the Miramichi (n=49) were asked why they oppose the concept. Over one-third of residents mention it's not natural/nature should run its course. Less commonly mentioned reasons were the salmon would not be true wild Atlantic salmon, it's not safe/healthy, and it won't fix the problem. Additionally, less than ten percent mentioned there is a need to better regulate fishing and stocking could alter the ecosystem balance. (Tables 18a-b)

Reasons for Supporting Stocking the Miramichi with Wild Atlantic Salmon



Q.18A: [IF 'COMPLETELY SUPPORT' OR 'MOSTLY SUPPORT' IN Q.17] Why do you support stocking the Miramichi with wild Atlantic salmon? (n=322)

Reasons for Opposing Stocking the Miramichi with Wild Atlantic Salmon



Q.18B: [IF 'MOSTLY OPPOSE' OR 'COMPLETELY OPPOSE' IN Q.17] Why do you oppose stocking the Miramichi with wild Atlantic salmon? (n=49*) *Caution: Small sample size.



Residents largely endorse several specific actions to impact the salmon fishery, with reducing the impact on waterways, and reducing harm to salmon while fishing, being top of mind.

Residents are most in agreement that the government should *examine forestry, mining and farming practices on crown land to reduce the impact on waterways*. There is a similar level of agreement that proper protocols should be put in place to ensure *anglers reduce harm to salmon while fishing*.

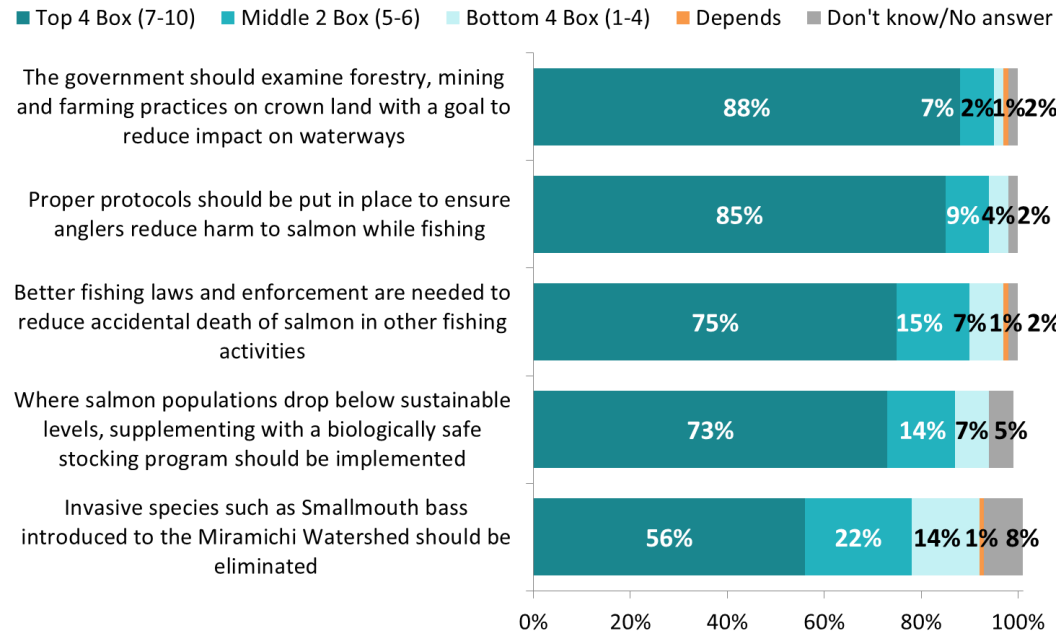
Additionally, three-quarters of residents agree that *better fishing laws and enforcement are needed* and where salmon populations drop below sustainable levels, *supplementing with a biologically safe stocking program should be implemented*.

Residents are less likely to endorse the *eradication of invasive species such as smallmouth bass*, although more than half agree with such actions.

Perhaps not surprisingly, those in the Miramichi area are much more likely to agree with the potential actions. Women are more likely than men to agree that proper protocols should be put in place and better fishing laws and enforcements are needed. (Tables 19a-e)

Opinion of Possible Actions On Fishing and Salmon

Rating on 10-pt Scale: 1=Completely disagree, 10=Completely agree



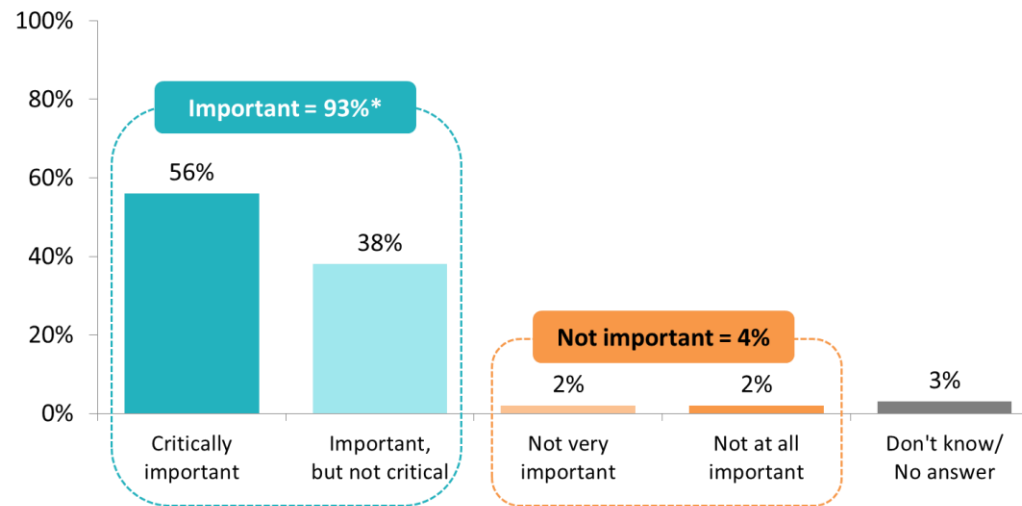
NB Overall	Mean Scores			
	Northern NB	Southern NB	Moncton and Area	Miramichi Area
8.7	8.8	8.8	8.6	8.9
8.5	8.8	8.4	8.5	9.1
7.9	8.2	7.4	8.3	7.9
7.8	8.2	7.5	7.9	8.2
7.3	7.8	6.9	7.0	7.4

Q.19a-e: Using a scale from 1 to 10, where '1' is completely disagree and '10' is completely agree, please indicate to what extent do you agree or disagree with each of the following actions? (n=401) Responses of 'Don't know/No answer' and 'Depends' are excluded from the calculation of the mean score.

Nearly all residents believe it is important that conservation groups lobby government to ensure best practices are created and enforced for species management in the Gulf Region.

Regardless of location, almost all New Brunswickers consider it important that conservation groups lobby the government to ensure best practices are created and enforced for species management. In fact, over one-half of residents believe it is *critically* important, while four in ten believe it is important, but not critical. Few believe it is not important. (Table 20)

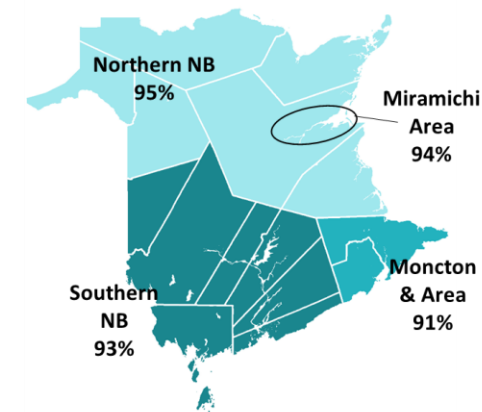
Level of Importance That Conservation Groups Lobby Government to Ensure Best Practices are Created and Enforced for Species Management in the Gulf Region



Q.20: Thinking of the role of conservation groups, do you think it is critically important, important, but not critical, not very important, or not at all important that conservation groups lobby the government to ensure best practices are created and enforced for species management in the Gulf Region? (n=401) **Due to rounding.*

Mean Score by Region

New Brunswick Overall Important = 93%





Profile of Survey Respondents

The survey included a mix of female and male respondents. The sample was composed one-quarter of residents aged 18-34 years, one-third of residents age 35-54, and slightly more residents over 55+ years. The bulk of residents are employed full-time, while two in ten are retired. One-half of residents has graduated from a post secondary educational institution, while one-third reported that their highest level of education is high school or less. Residents household income varies.

Profile of Respondents (n=401)

