

FISH AND FISH HABITAT PROTECTION PROGRAM (FFHPP)

Fish Habitat Restoration Priorities Survey

February 2023

**Native Women's Association of Canada (NWAC) for Fisheries
and Oceans Canada (DFO)**

Report | Confidential | FINAL



Native Women's
Association of Canada

L'Association des
femmes autochtones
du Canada

Canada 



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About the research

Based on its commitment to Indigenous engagement related to the [Fish and Fish Habitat Protection Program](#) (FFHPP), the Native Women's Association of Canada (NWAC) invited Indigenous, women, girls, and gender-diverse people to contribute to the **Fish Habitat Restoration Priorities Survey**.

In the survey, NWAC sought the perspectives of Indigenous women, girls, and gender-diverse people to identify objectives and opportunities related to fish habitat restoration.

The survey relates to the work of Fisheries and Oceans Canada (DFO) in developing a framework to identify Fish Habitat Restoration priorities. Contributions to the survey will be used to propose improvements to the framework.

The survey consisted of four themes:

- A. Preserving the values Indigenous women, girls, and gender-diverse people derive from fish and fish habitats
- B. Identifying climate and non-climate impact on the values Indigenous women, girls, and gender-diverse people derive from fish and fish habitats
- C. Fish habitat restoration priorities and land use change across landscape scales
- D. Fish habitat restoration priorities and Indigenous treaty rights

Methodology

The Fish Habitat Restoration Priorities Survey was conducted online, using the NWAC Simple Survey portal. Participants were recruited using an open online call.

NWAC put out a call to participate using a poster on its Facebook page. The poster included a link that gave prospective participants open access to the survey. As an incentive, NWAC awarded the first 275 respondents with a \$30.00 gift. To facilitate sending the gift, each participant was asked to voluntarily provide their contact information, including their name, home address, email address and phone number.

Participants were limited to Indigenous women, girls, two-spirit and gender-diverse people from across Canada with extensive local and or professional knowledge and or lived experiences in:

- Recreational and/or commercial fishing;
- Fish and fish habitat conservation; and,
- Fish habitat restoration

The survey contained 29 single and multiple-response questions focusing on four thematic areas. The thematic areas and questions were selected based on a list of considerations and conditions for selecting restoration priorities:

Considerations for selecting restoration priorities	List of conditions
Ecological conditions	<ul style="list-style-type: none"> • Improves conditions for aquatic species • Addresses threats related to invasive aquatic species • Mitigates impacts against climate change • Leads to improvement in landscape connectivity • Considers improvement to the size of the area restored • Considers habitat improvement that benefits multiple species • Considers improvement to habitat buffers around unique, sensitive, or protected areas
Socioeconomic consideration	<ul style="list-style-type: none"> • Improves habitat in areas that are economically valuable or recreational fisheries
Cultural considerations	<ul style="list-style-type: none"> • Address restoration priorities that have been identified by Indigenous people

The 29 survey questions were framed using the considerations for selecting restoration priorities in the table above and three broad guiding questions namely:

1. How does the degradation of fish and fish habitats and measures that respond to degradation affect Indigenous values?
2. How can Indigenous knowledge about the preservation of Indigenous values and the protection of Indigenous treaty rights contribute to the identification of **opportunities** and the development of **objectives** related to fish and fish habitat restoration?
3. How could Indigenous knowledge and the preservation of Indigenous values contribute to the **identification of priority** actions for fish habitat restoration?

The survey also utilized a values-driven, gender-based approach that:

1. Gives a gendered voice to Indigenous ideas and ideals, by including and mainstreaming gender and Indigenous values as a central feature in policy-making related to fish and fish habitat protection
2. Frames fish as fish habitats as **social-ecological systems** that are closely connected to life and livelihoods in Indigenous communities
3. Acknowledges that Indigenous life and livelihoods are affected by the **cumulative effects** from both **climate and non-climate impacts** on fish and fish habitats
4. Includes gender identities as important elements of decision-making processes related to the governance of fish and fish habitats
5. Recognizes **fragmentation** (disconnection and conflicts) as natural features of decision-making processes related to fish and fish habitat management
6. Acknowledges the protection of treaty rights as a central feature of fish and fish habitat governance
7. Acknowledges the value of **two-eye seeing in knowledge production and social learning processes** related to fish and fish habitat protection

The survey was launched on Simple Survey at the beginning of September 2022 and closed on September 30, 2022.



Executive summary – key survey results

Theme A: Food support, a prominent benefit of fish & fish habitats for Indigenous women, girls, and gender-diverse people

Survey respondents most often selected food support (89% frequency), as the benefit they think Indigenous women, girls, and gender-diverse people receive from fish and fish habitats. They also selected food support (87% frequency), as the top benefit they think should be preserved. Participants most often selected fish habitat restoration policies that focus on protecting the benefits Indigenous women, girls, and gender-diverse people receive from fish and fish habitats (88% frequency), as the policies that should be given high priority.

Theme B: Many report losses or decline of benefits due to effects of climate change, and projects in or near water on fish habitats

Despite the importance placed on food support as a benefit, about six in ten (58%) of respondents reported a decline and just under one in five (18%) a complete loss of the food support Indigenous women, girls, and gender-diverse people receive from fish habitats due to climate change or seasonal weather changes. Forty-eight per cent (48%) reported a decline and another 15 per cent a complete loss in the benefits received from fish and fish habitats due to projects in or near water, e.g., jetties, wharves, and dams. Other effects reported from climate change or seasonal weather changes included:

- 1) a decline or loss in economic or commercial benefits (50% decline; 15% loss),
- 2) a decline or loss in recreational opportunities (47% decline; 9% loss), and
- 3) a decline or loss in spiritual or cultural fulfillment (42% decline; 20% loss).

Additionally, respondents reported a decline or loss in economic or commercial benefits (39% decline; 18% loss), a decline or loss in recreational opportunities (41% decline; 15% loss), and a decline or loss in spiritual or cultural fulfillment (46% decline; 15% loss) due to projects in or near water. About (68%) of respondents reported a decline in the water quality of fish habitats in their community or other communities due to climate change or seasonal weather changes. Similarly, fifty-eight per cent (58%) of respondents reported both a decline in the



water level and water quality of fish habitats within their community or in other communities due to projects in or near water, e.g., jetties, wharves, and dams.

Eighty-three per cent (83%) of respondents believe that fish habitat restoration policies should prioritize minimizing the impacts of climate change and changes in seasonal weather patterns on fish and fish habitats. Additionally, (78%) believe a high priority should be given to fish habitat restoration policies that focus on minimizing the impacts of projects in or near water on the benefits Indigenous women, girls, and gender-diverse people receive from fish and fish habitats.

Theme C: Impacts of land use changes in urban areas or inland watersheds on fish and fish habitats

Land use changes were also seen as significantly impacting fish and fish habitats. Fifty-nine per cent (59%) of respondents believe that fish and fish habitats have been severely affected by land use changes in urban areas or inland watersheds. Twenty-five per cent (25%) believe that fish and fish habitats have been moderately affected by land use changes in urban areas or inland watersheds. Ten per cent (10%) believe that fish and fish habitats have been somewhat affected, while only four per cent (4%) believe they have not been affected by land use changes in urban areas or inland watersheds.

Theme C: Priority measures for reducing the impacts of land use changes in urban areas or inland watersheds on fish habitats

Eighty-four per cent (84%) of respondents indicated that a high priority should be given to measures that reduce the impacts of land use changes in urban areas or inland watersheds on fish habitats. When asked to select which policy measures are important to control the impacts of land use changes in urban areas or inland watersheds on fish habitats, respondents most often selected measures related to land use change (78% frequency), watershed or forest management (75% frequency), and water quality management (75% frequency).

Theme D: Awareness and importance of policy actions that prevent fish habitat restoration from violating treaty rights

Forty-two per cent (42%) of respondents said they are aware of programs or projects in their community that focus on fish habitat restoration. Fifty-five per cent (55%) of rural respondents were aware of community programs compared to (30%) of respondents from urban areas. Ninety-five per cent (95%) of respondents believe it is important to ensure that projects or programs to restore fish habitats do not violate Indigenous treaty rights, while

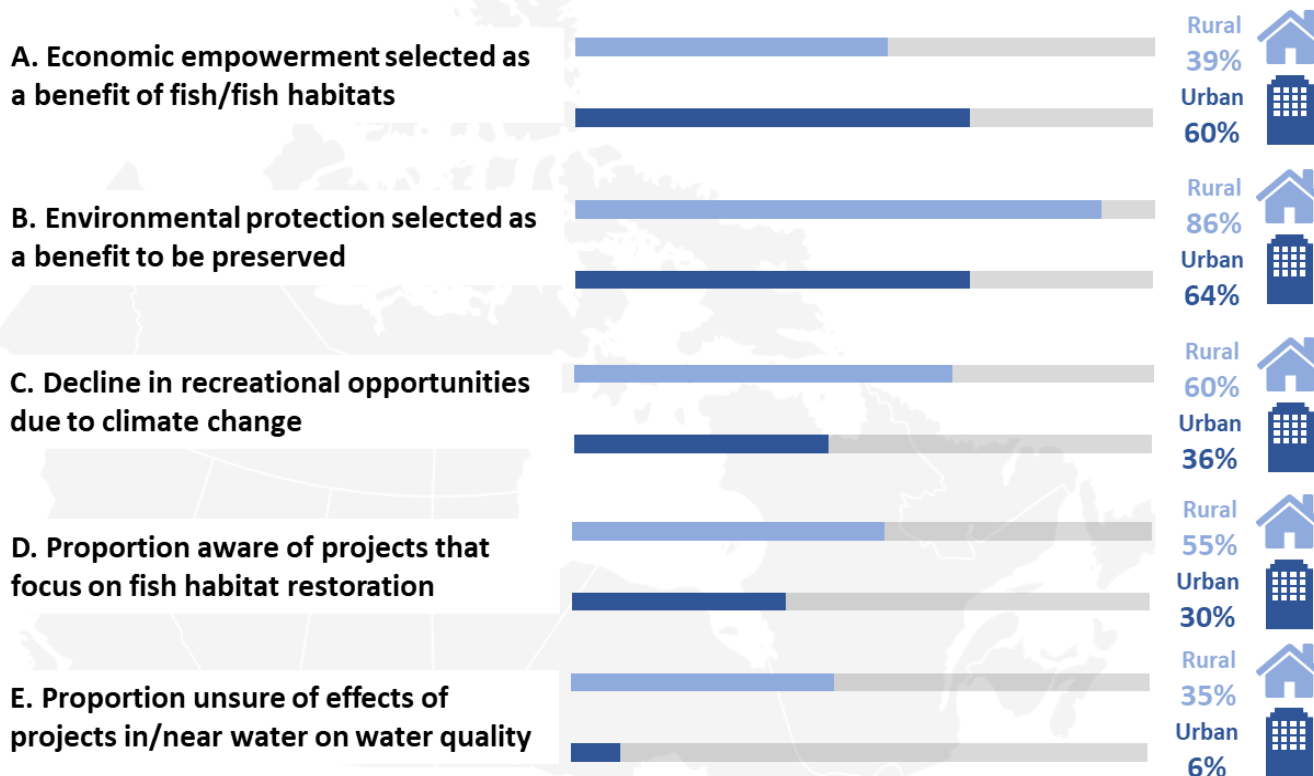


(94%) believe that policy action is important to prevent violations of Indigenous treaty rights while restoring fish habitats. Eighty-nine per cent (89%) think that high priority should be given to actions that prevent fish habitat restoration projects from violating Indigenous treaty rights. Likewise, most respondents (91%) believe it is important that policy measures intended to restore fish habitats do not violate the right to protect traditional and customary governance of traditional lands.

Key perceptions by community size

Urban residents are more likely to select economic empowerment (60%) as a benefit they think Indigenous women, girls and gender-diverse people receive from fish and fish habitats (compared to 39% for rural residents). In contrast, rural residents are more likely to say that environmental protection is a benefit they think should be preserved (86%) compared to urban residents (64%).

Key perceptions





Policies, actions and measures with high priority

Respondents were asked to prioritize a number of policies, actions and measures relating to the protection of benefits received from fish and fish habitats for Indigenous women, girls and gender diverse people, the reduction of impacts from climate change, projects in or near water, and land use changes on fish habitats, as well as fish habitat restoration.

88%
Priority

Fish habitat restoration policies that focus on protecting the benefits, Indigenous women, girls and gender-diverse people receive from fish and fish habitats.

88%
Priority

Actions that prevent fish habitat restoration from violating Indigenous treaty rights.

84%
Priority

Measures that reduce the impacts of land use changes in urban areas or inland watersheds on fish habitats.

83%
Priority

Fish habitat restoration policies that minimize the impacts of climate change and changes in seasonal weather patterns on the benefits Indigenous women, girls, and gender-diverse people receive from fish and fish habitats.

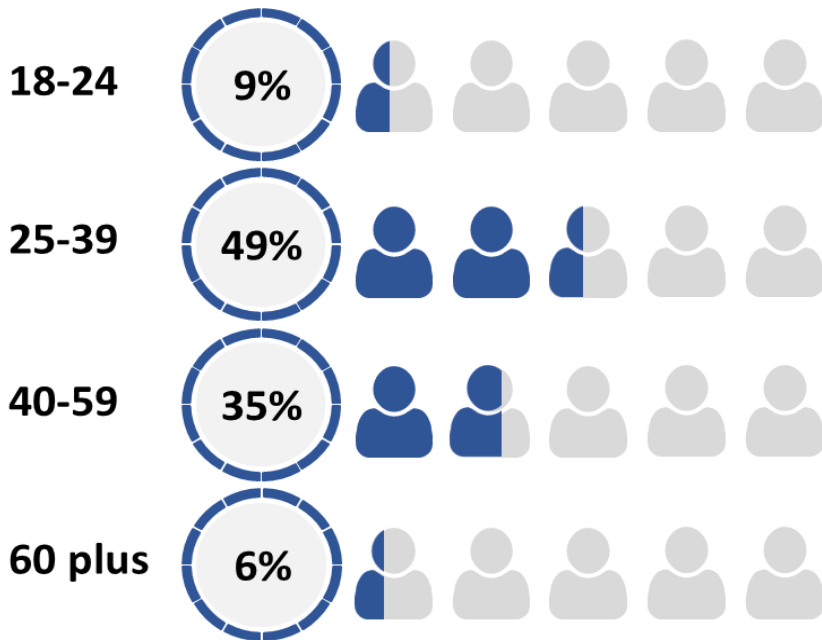
78%
Priority

Fish habitat restoration policies that focus on minimizing the impacts of projects in or near water, e.g., jetties, wharves and dams on the benefits Indigenous women, girls, and gender diverse people receive from fish habitats

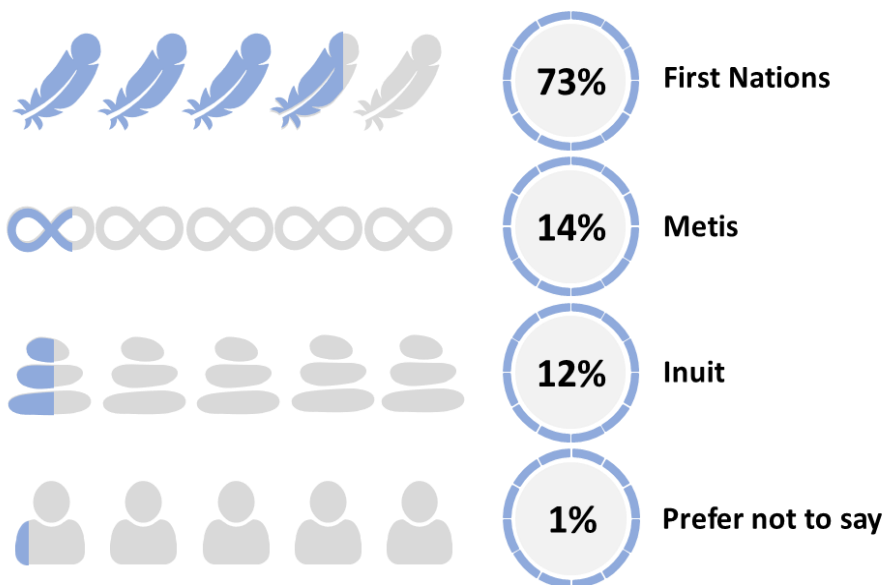


Profile of Participants

Age

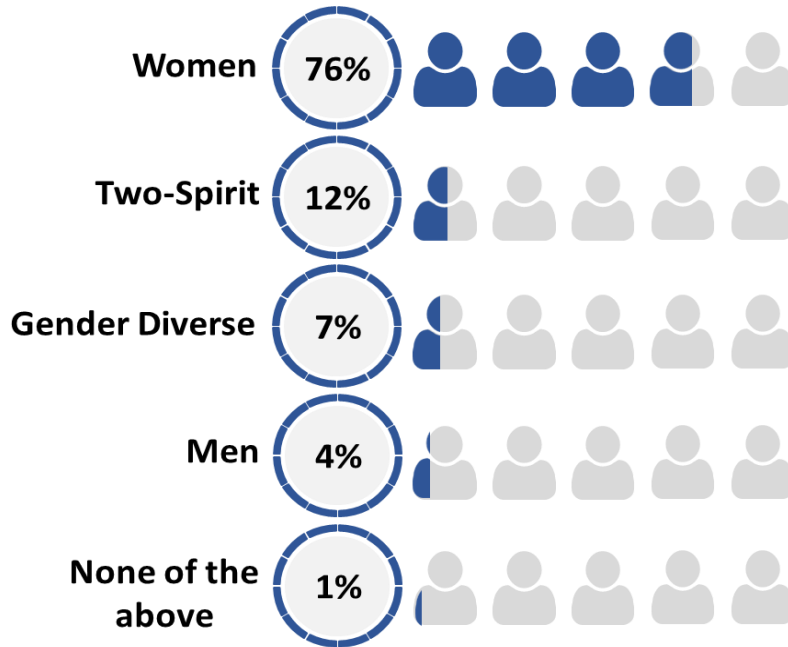


Indigenous Identity

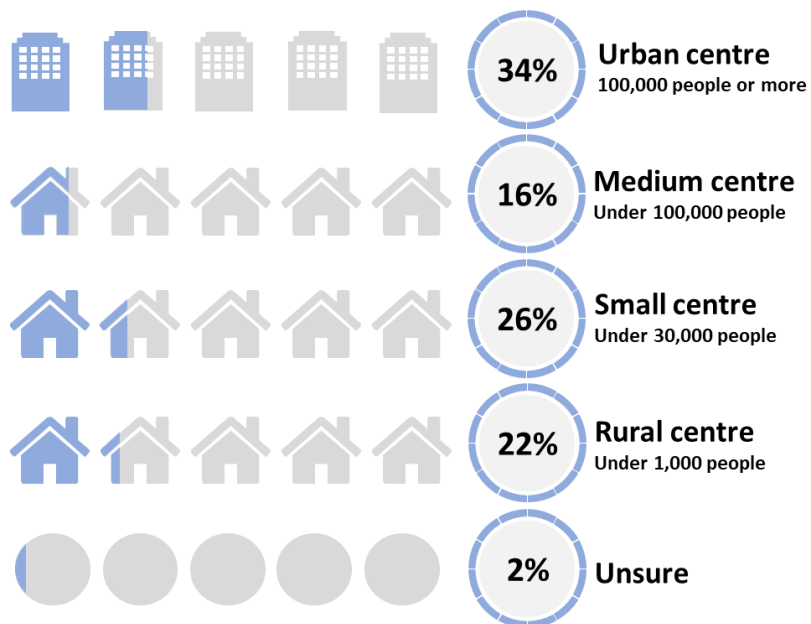




Gender



Size of Community



Findings from the survey

THEME A: Preserving the value Indigenous women, girls, and gender diverse people derive from fish and fish habitats

When asked to select what benefits they think Indigenous women, girls and gender-diverse people receive from fish and fish habitats, respondents most often selected food support (89%), followed by spiritual and cultural fulfillment (75%), recreation opportunities (73%), environmental protection (55%), and economic empowerment (51%). Of the same list of benefits, respondents were also asked to select which benefits they think should be preserved. Food support was selected by 87 per cent of respondents, followed by spiritual and cultural fulfillment (82%), environmental protection (80%), recreational opportunities (62%), and economic empowerment (56%).

Chart 1: Benefits from fish and fish habitats and whether they should be preserved

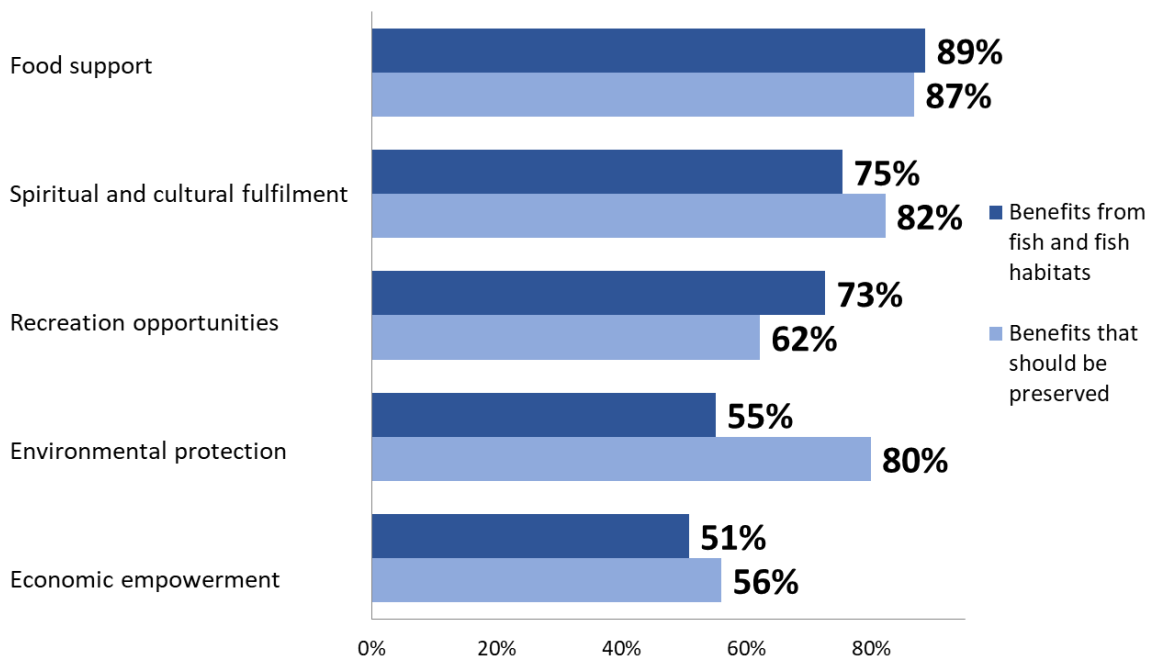


Chart 1: A. Within your community or in other communities, what benefits do you think Indigenous women, girls and gender-diverse people receive from fish and fish habitats? Select all that apply. B. Which benefits do you think should be preserved? Select as many values as you wish.



THEME B: Identifying climate and non-climate impacts on the value Indigenous women, girls, and gender diverse people derive from fish and fish habitats

Effects of climate change and seasonal changes in weather on:

76% report a decline or loss in **food support** from fish habitats

65% report a decline or loss in **economic or commercial benefits** from fish habitats

62% report a decline or loss in **spiritual/cultural fulfillment** from fish habitats

55% report a decline or loss in **recreational opportunities** from fish habitats

Food support

About six in ten (58%) respondents report a decline in food support when asked how climate change or seasonal changes in weather affected the food support Indigenous women, girls and gender-diverse people receive from fish habitats within their community or in other communities. Eighteen per cent reported a loss of food support, followed by another 13 percent who said there was no change. Eleven per cent of respondents were unsure how climate change or seasonal changes in weather affected food support.



Economic and/or commercial benefits

One in two (50%) respondents report a decline in economic or commercial benefits when asked how climate change or seasonal changes in weather affected the economic or commercial benefits Indigenous women, girls and gender-diverse people receive from fish habitats within their community or in other communities, and 15 percent reported a loss in these benefits. One in five (20%) respondents said there was no change in these benefits, while 15 percent of respondents were unsure how climate change or seasonal changes in weather affected them.

Spiritual and/or cultural fulfilment

When asked how climate change or seasonal changes in weather affected the spiritual or cultural fulfilment Indigenous women, girls and gender-diverse people receive from fish habitats within their community or in other communities, just over four in ten (42%) respondents report a decline in these benefits, and one in five (20%) reported a loss. Another one in five (21%) respondents said there was no change in these benefits, while 17 per cent of respondents were unsure how climate change or seasonal changes in weather affected spiritual or cultural fulfilment received from fish habitats.

Recreational opportunities

Almost one in two (47%) respondents report a decline when asked how climate change or seasonal changes in weather affected the recreational opportunities Indigenous women, girls and gender-diverse people receive from fish habitats within their community or in other communities, followed by three in ten (31%) who reported there was no change in these opportunities. Nine per cent of respondents said there was a loss of recreational activities, while 13 per cent of respondents were unsure.

Water quality

About seven in ten (68%) respondents report a decline in water quality of fish habitats in their community or in others due to climate change or seasonal changes. One in five (21%) reported no change in the water quality, while 10 per cent said they did not know.

Level of priority for fish habitat restoration policies that focus on minimizing the impacts of climate change

Over eight in ten (83%) respondents say that fish habitat restoration policies should place a high priority on minimizing the impacts of climate change and changes in seasonal weather patterns on the benefits Indigenous women, girls, and gender-diverse people receive from fish and fish habitats. Fifteen per cent said these policies should place a moderate priority on minimizing the impacts on benefits, and another two per cent said low priority.



Effects of projects in or near water on:

63% report a decline or loss in
food support from fish
habitats

61% report a decline or loss in
spiritual/cultural fulfilment
from fish habitats

57% report a decline or loss in
economic or commercial
benefits from fish habitats

56% report a decline or loss in
recreational opportunities
from fish habitats

Food support

About one in two (48%) respondents report a decline in food support when asked how projects in or near water, e.g., jetties, wharves and dams have affected the food support Indigenous women, girls and gender-diverse people receive from fish habitats within their community or in other communities. Another fifteen per cent reported a complete loss of food support. Just under one in five (18%) respondents said there was no change, with another one in five (19%) who were unsure.

Spiritual and/or cultural fulfilment

When asked how projects in or near water, e.g., jetties, wharves and dams have affected the spiritual or cultural fulfilment Indigenous women, girls and gender-diverse people receive from fish habitats within their community or in other communities, over four in ten (46%) respondents report a decline in these benefits, with another 15 per cent who reported a



complete loss. Just over one in five (22%) respondents said there was no change in these benefits, while 17 per cent of respondents were unsure how projects in or near water have affected spiritual or cultural fulfilment received from fish habitats.

Economic and/or commercial benefits

About two in five (39%) respondents report a decline in economic or commercial benefits when asked how projects in or near water, e.g., jetties, wharves and dams have affected the economic or commercial benefits Indigenous women, girls and gender-diverse people receive from fish habitats within their community or in other communities, with another 18 per cent who reported a complete loss. One in five (21%) respondents said there was no change in these benefits, with a similar proportion (22%) of respondents were unsure how these projects affected economic or commercial benefits.

Recreational opportunities

Although about four in ten (41%) respondents report a decline when asked how projects in or near water, e.g., jetties, wharves and dams have affected the recreational opportunities Indigenous women, girls and gender-diverse people receive from fish habitats within their community or in other communities, almost three in ten (28%) respondents were unsure how these opportunities were affected. Fifteen per cent of respondents said there was a loss of recreational activities, while another 16 per cent of respondents said there was no change in recreational opportunities.

Water quality and water level

Almost six in ten (58% each) respondents report both a decline in water quality and water level of fish habitats within their community or others due to projects in or near water, e.g., jetties, wharves and dams. About one in four (24%) respondents said there was no change in water quality, while 18 per cent were unsure. Similarly, 22 per cent of respondents said there was no change in water levels of fish habitats because of these projects, while 19 per cent were unsure.

Level of priority for fish habitat restoration policies that focus on minimizing the impacts of projects in or near water

Just under eight in ten (78%) respondents say that fish habitat restoration policies should place a high priority on minimizing the impacts of projects in or near water, e.g., jetties, wharves and dams on the benefits Indigenous women, girls, and gender-diverse people receive from fish and fish habitats. Another one in five (21%) said these policies should place a moderate priority on minimizing the impacts on benefits.



THEME C: Fish habitat restoration priorities and land use change across landscape scales

When asked how they think fish and fish habitats are affected by land use changes in urban areas or inland watersheds (e.g., changes from residential and commercial development, logging and mining), six in ten (59%) respondents believe that fish and fish habitats have been severely affected. One in four (25%) believe they have been moderately affected, while one in ten (10%) said somewhat affected. Only four per cent believe they have not been affected.

Respondents most often selected policy measures related to land use change (78%), watershed or forest management (75%), and water quality management (75%) as most important to control the impacts of land use changes in urban areas or inland watersheds on fish habitats. About one in two participants also selected policy measures related to erosion (53%) or policy measures related to stormwater management (51%).

In addition to selecting policy measures they felt were important to controlling the impacts of land use changes in urban areas or inland watersheds on fish habitats, respondents were also asked what priority should be given to measures that reduce the impacts of land use changes. A strong majority (84%) of respondents said that high priority should be given to these measures, while the remaining 16 per cent said moderate priority should be given.

THEME D: Fish habitat restoration priorities and Indigenous treaty rights

About four in ten (42%) respondents report being aware of programs or projects in their community that focus on fish habitat restoration. A greater proportion of rural residents (55%) are aware of projects in their community than those from urban areas (30%).

Chart 2: Awareness of programs of projects that focus on fish habitat restoration



An overwhelming majority (95%) of respondents think it is important to ensure that projects or programs to restore fish habitat do not violate Indigenous treaty rights, which include the right to traditional and customary governance of traditional lands, the right to protect waters and resources including fisheries, and the right to institute laws related to fishing. Similarly, over nine in ten (94%) respondents believe that policy action is important to prevent violations of Indigenous treaty rights while restoring fish habitats.

When asked to select from a list of policy measures which they believed are important to prevent violations of Indigenous treaty rights while restoring fish habitats, respondents most often selected policy measures that do not violate the right to protect traditional and customary governance of traditional lands (91%), followed by policy measures that do not violate the right to protect waters and resources including fisheries (82%). Policy measures that do not violate the right to protect rights to institute laws related to fishing were selected as important by about six in ten (64%) respondents.

Almost nine in ten (89%) respondents said that high priority should be given to actions that prevent fish habitat restoration from violating Indigenous treaty rights, while the remaining 11 per cent said moderate priority should be given.



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Appendix A - Tabulations