



A NEW DIRECTION

Resource Rebuilding:
Habitat Conservation and Stewardship Program

Benchmark Assessment of Public Awareness, Knowledge, Attitudes and Behaviour

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SUMMARY

In this section, we summarize the result obtained from respondents in each of the six regions surveyed:

- Yukon
- Coastal BC South
- Lower Fraser
- BC Interior South
- BC Interior North
- Coastal BC North

AWARENESS AND KNOWLEDGE REGARDING ENVIRONMENTAL ISSUES

Respondents across all regions viewed various forms of pollution as the biggest environmental issue facing their community. Pollution was mentioned most frequently by respondents in the BC Interior South and least frequently by respondents from the Yukon and Coastal BC North.

The next most frequently mentioned environmental issue was habitat destruction, although it was mentioned much less frequently than pollution. Those in Coastal BC North and Coastal BC South tended to express the most concern about the impact of habitat destruction in their community.

In all regions except the Lower Fraser, the majority respondents (between 64 and 73 percent) knew the correct definition of a watershed. In the Lower Fraser region, only half of the respondents knew the correct definition, signaling a need to focus on communicating basic watershed concepts to residents of this region.

KNOWLEDGE OF LOCAL FISH HABITAT AND STREAMS

There was substantial variation across regions in the percent of respondents that were aware that salmon live in their community streams. Awareness was highest in the Yukon and Coastal BC North—where six out of seven respondents were aware. Awareness was lower in Coastal BC South (77%) and BC Interior North (68%), but still substantial. Awareness was lowest in the Lower Fraser and BC Interior South, where only three out of five respondents were aware that salmon live in the streams in their community.

A similar pattern of results was obtained when we assessed the proportion of respondents who could identify the salmon by name. A high proportion of respondents (four out of five) from the Yukon and Coastal BC North could name the salmon in their streams. A somewhat lower percentage of Coastal BC South respondents could name the salmon (69%). Knowledge was lowest in the Lower Fraser and the BC Interior North and South, where it ranged from 57 to 61 percent.

Four of the regions were similar with respect to the ability of respondents to name specific streams in their community. In the Yukon, Coastal BC North and South, and BC Interior, between 78 and 80 percent of the respondents could name streams in their community. Levels of knowledge were lower in BC Interior North (70%) and the Lower Fraser region (54%).

PERCEPTIONS OF THE SALMON POPULATION

The two regions that demonstrated the most knowledge regarding salmon in their communities (Yukon and Coastal BC North) had similar perceptions regarding the number of salmon in community streams—perceptions that tended to be more favourable than perceptions held by respondents in the other regions. Half of the respondents in these two regions indicated that there was a moderate number of salmon in the streams, and one in five indicated that there was a larger number. Only 17 percent of the Coastal BC North and 25 percent of Yukon respondents felt that there were very few salmon in their streams.

Those in the Lower Fraser region and the BC Interior South were most likely to feel that there were very few salmon in the streams in their community (40%). Those in the BC Interior North and Coastal BC South were similar in their perceptions, with 40 percent perceiving a moderate number of salmon and 25 percent perceiving very few salmon in the streams.

In all regions except Coastal BC North, the majority of respondents feel that the salmon population is in decline or in danger of dying out. This perception is strongest in the Interior regions (70 to 71 percent) and the Lower Fraser region (68%). Only half of the respondents in the Coastal BC North region feel that the salmon population is in decline or dying out—a third feel it is stable.

No more than 12 percent of the respondents in any region feel that the salmon population is healthy and growing.

When it comes to evaluating the reasons for the salmon population's decline, those in the Yukon and Coastal BC North and South tend to cite overfishing most frequently. Respondents in the Lower Fraser cite pollution most frequently. Approximately equal proportions of respondents in the Interior regions see the cause of the decline as due to pollution, overfishing and habitat destruction.

The BC Interior North was the only region in which a majority of respondents did not indicate that their community benefits from the salmon population. Those in Coastal BC North were most likely to recognize the benefits of the salmon population (86%), followed by those in the Coastal BC South (79%), Yukon (76%), Lower Fraser (68%) and BC Interior South region (57%).

In four of the six regions—Yukon, Coastal BC South, Lower Fraser and BC Interior North—the commercial benefits of the salmon population (e.g., job creation) were cited most frequently. This was particularly the case in the Coastal BC South region. Those in the BC Interior South region were, by far, the most likely to cite tourism as a benefit of the salmon population.

PERCEPTIONS OF WATER QUALITY

In all regions but the Lower Fraser, the majority of respondents were aware of the state of the water quality in their community streams. Those in the Yukon and BC Interior North had the highest levels of awareness followed by those in the Coastal BC North, BC Interior North and Coastal BC South.

Those in the Yukon and Coastal BC North gave the highest ratings of water quality to the streams in their community. Those in Coastal BC South and in the Interior regions gave moderate ratings, while those in the Lower Fraser gave the lowest rating. In fact, a third of Lower Fraser respondents aware of the state of water quality in their streams gave a rating of “poor”.

PERCEPTIONS OF EFFORTS TO PROTECT FISH HABITAT

Those in the Yukon and Coastal BC North evaluate current efforts in their community to protect fish habitat most favourably. Three-quarters of respondents from the Yukon and two-thirds from Coastal BC North evaluated current efforts as excellent or good. Evaluations are least favourable in the Lower Fraser and BC Interior North, where only two-fifths of the respondents thought efforts were excellent or good. Evaluations are moderate in the Coastal BC South and BC Interior South—half of these respondents say that fish habitat protection efforts in their community are excellent or good.

Awareness of specific programs to protect fish habitat was not high in any region. Those in Coastal BC North and South and the Yukon were most able to give names of specific programs (42 to 48 percent), while those in the Lower Fraser and Interior North and South were least able (26 to 28 percent).

In no region did respondents demonstrate a high level of agreement regarding the sufficiency of the number of protected areas in their community. Half of the respondents in the Coastal BC South, the Lower Fraser and BC Interior South feel that there are too few protected areas in their community while over a third feel that there are a sufficient number. In the Yukon and Coastal BC North the reverse was true. Half of these respondents feel that there are a sufficient number of protected areas and a third feel that there are too few.

Those in Coastal BC North (47%) and the Yukon (45%) were most likely to indicate that they make personal efforts to protect fish habitat. Just over a third of those in the Interior regions and Coastal BC South indicated making such efforts. Those in the Lower Fraser were least likely to indicate that they make personal efforts to protect fish habitat.

RELATIVE IMPORTANCE OF PROTECTING FISH AND WILDLIFE HABITAT

The majority of respondents in all regions indicated that policies to protect fish or wildlife habitat should be implemented even if these policies slow the rate of economic growth. This sentiment was weakest in the Yukon (56%) and Coastal BC North (61%) and strongest in the Lower Fraser (72%).

The majority of respondents in Coastal BC South (69%), the Lower Fraser (63%) and BC Interior South (58%) indicated that they were willing to pay higher taxes to ensure fish and wildlife habitats are protected. Those in the Yukon, BC Interior North and Coastal BC North were more ambivalent—half are willing to pay higher taxes, half are not.

KNOWLEDGE OF LOCAL HABITAT

Six different aspects of local habitat knowledge and awareness were assessed in this survey. Those in the Yukon and Coastal BC North tended to be the most knowledgeable and aware of the local habitat—a third of respondents in these regions possessed the requisite knowledge or awareness for all six aspects. A fifth of respondents in Coastal BC South possessed this degree of knowledge and awareness, followed by those in the BC Interior North (16%), BC Interior South (11%) and the Lower Fraser (6%).

ENVIRONMENTAL ADVOCACY AND PROTECTION

Five different aspects of environmental advocacy and protection were also assessed. Respondents across the regions were similar in their level of activity, with approximately two-thirds of the respondents reporting engaging in at least two of the advocacy or protection activities that were assessed.

There was a relationship between perceptions of the current state of the salmon population and evaluations of current efforts in the community to protect fish habitat. Those who view the health of the salmon population most favourably (Yukon and Coastal BC North) evaluate efforts to protect fish habitat in their community most favourably. They are also the most likely to make personal efforts to protect fish habitat.

These findings underscore the importance of community action in fish habitat protection and can be used to motivate community groups into action.

Those regions that have the worst outlook on the future health of the salmon population are also those regions in which community efforts at protection are evaluated most poorly. We found that a solid majority of respondents from these regions recognize the tangible benefits of the salmon population in their community and they advocate policies that will protect fish habitat, even if such policies may slow the rate of economic growth or increase taxes. These findings suggest that efforts made in these communities to increase knowledge, awareness and stewardship will be well received.

BACKGROUND AND OBJECTIVES

The Habitat Conservation and Stewardship Program (HCSP) is a proactive approach to habitat protection that focuses on developing local capacity in habitat conservation and stewardship. Local capacity reflects the ability of a community to protect fish and fish habitat. Maximizing this capacity maximizes the probability that fish and fish habitat will be protected.

Many things make up a community's capacity to protect fish habitat—e.g., government support, conditions of streams and watersheds. However, the development of capacity depends most critically on the existence of an informed and committed citizenry. Only when a community comprises citizens who are informed and who are committed to protecting fish habitat will that community have the capacity to protect this habitat.

To facilitate knowledge and commitment in the community, the HCSP has established a network of individuals (Stewardship Coordinators, Habitat Auxiliaries and Habitat Stewards) across the Pacific Region who will support, advise and work closely with various community members.

The critical questions to answer at this point in time are: What levels of awareness and knowledge do community members have regarding fish habitat, what are they currently doing to protect fish habitat, and how committed are they to promoting better land and water use practices in order to sustain fish habitat. The present research was devoted to answering these questions by benchmarking levels of awareness, knowledge and commitment among residents of the six regions that comprise the HCSP Pacific Region.

The specific objectives of the research were as follows:

- Assess awareness and knowledge of environmental issues facing the community;
- Assess knowledge of local fish habitat;
- Determine perceptions of the health of the local salmon population as well as perceptions of water quality;
- Assess perceptions of community efforts to protect fish habitat;
- Assess personal efforts to protect the environment and fish habitat;
- Determine perceived relative importance of protecting fish habitat;
- Determine demographic characteristics of residents.

METHODOLOGY

The research was conducted by telephone among residents of the six areas that comprise HCSP's Pacific Region. These regions include, a) Yukon, b) Coastal BC South, c) Lower Fraser, d) BC Interior South, e) BC Interior North, and f) Coastal BC North. The boundaries of these regions were defined by HCSP and are outlined in Appendix A.

Campbell Goodell Traynor (CGT) used a mapping program (MapInfo) to delineate the boundaries of the six regions and the postal codes that comprise each region. Using this postal code data, we drew a random sample of households with listed telephone numbers from each region.

Once a household was contacted, we randomly selected respondents for participation. Specifically, we asked to speak to the person in the household who was 18 years of age or older and who had had the most recent birthday. This selection ensured that particular demographic groups would not be over-represented in the sample. For example, if we attempted to conduct the interview with the first adult who answered the telephone, it would likely result in a disproportionate number of middle-aged females in the sample.

Despite the fact that a random selection of respondents within each household was used, we did obtain a higher proportion of females than males in some regions (a highly common occurrence in survey research). To remedy this slight disproportionality, we weighted the data so that, within each region, males and females were represented equally.

In total, 1500 surveys were conducted. Given that the aim was to collect reliable data for each region, we did not sample regions in accordance with each region's representation in the population. If this was done, over half of the 1500 surveys would have been conducted with residents of the Lower Fraser Valley and only a handful would have been conducted with residents of the Yukon. We collected an equal number of surveys across the six regions (n=250). This made the data for each region statistically accurate to within +/- 6.2 percent--an acceptable criterion. For example, if the survey results indicate that 50 percent of the respondents in a region believe X, then the actual proportion of the residents in that region who believe X falls somewhere between 43.8% and 56.2%.

Given that residents from regions were not sampled in proportion to their representation in the population, we weighted the data so that in the aggregate (i.e., when collapsed across all regions) the data would reflect the correct regional representation. Note that the aggregate data are statistically accurate to within +/- 2.5 percent.

The questionnaire used in the survey was created through joint effort between CGT and representatives of the DFO HCS Program. The survey contained 30 questions and took an average of eight minutes to administer. A copy of the questionnaire is provided in Appendix B. The survey data were collected from April 3 to April 15, 2000.

SURVEY RESULTS

This section presents a detailed discussion of the survey results for each region. Each subsection addresses a different objective of the survey. We begin with the assessment of awareness regarding environmental issues generally, and local fish habitat specifically. We then examine various perceptions—health of the salmon population, water quality, community efforts to protect fish habitat. We then assess personal efforts to protect the environment and fish habitat and determine the perceived importance of fish habitat protection within the community. Finally, we present key demographic characteristics of the residents within each region.

AWARENESS AND KNOWLEDGE REGARDING ENVIRONMENTAL ISSUES

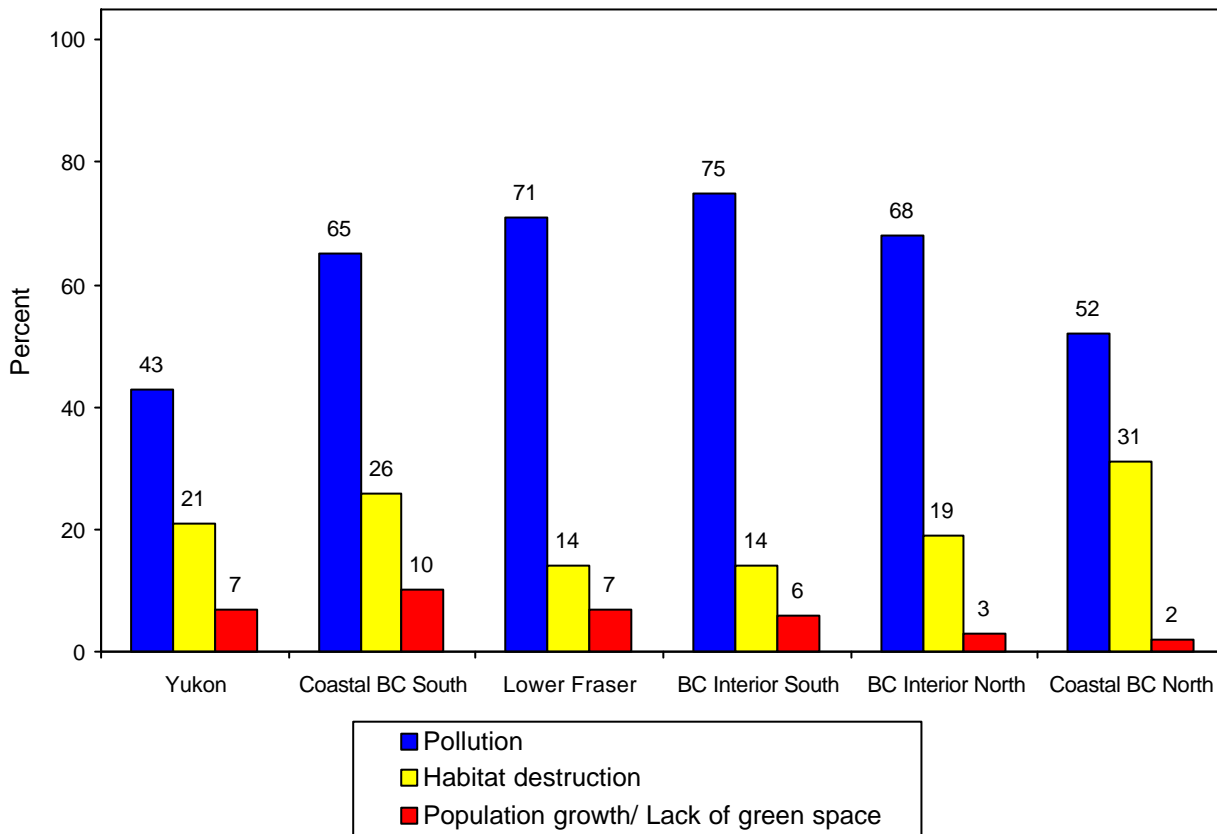
Perceptions of Biggest Environmental Issues Facing Community

To determine the environmental issues that respondents perceived to be the most important in their community, we asked them to tell us what they thought were the biggest environmental issues facing their community. This question not only allows us to take the general pulse of a community regarding key environmental concerns, but also identifies particular areas of concern that may be more likely to motivate increased stewardship and protection efforts.

Over 30 different environmental issues or concerns were mentioned by respondents. Figure 1 displays the types of issues that were mentioned most frequently. The specific issues that comprised each of these types are listed in the Appendix C.

Figure 1. Perceptions of Biggest Environmental Issue Facing Community

Q1: *In your opinion, what is the biggest environmental issue facing your community?*



Across all regions, respondents tend to rank environmental issues similarly. Pollution is viewed as the biggest issue, followed by habitat destruction (e.g., deforestation), and population growth/ lack of green space. Note that those in the BC Interior South were most likely to mention pollution and those in the Yukon and Coastal BC North were least likely to mention it. Those in Coastal BC North were most likely to mention habitat destruction while those in the Lower Fraser and BC Interior South were least likely to mention it.

While not presented in the figure above, respondents in the Southern Interior mentioned the quality of drinking water (19%) more frequently than those in the other regions. Those in the Yukon were least likely to mention quality of the drinking water (3%). Also note that the percent of respondents specifically mentioning the reduction of salmon and fish stocks as a big environmental issue varied by region. Those in Coastal BC North were most likely to mention it (12%), followed by those in Coastal BC South (8%) and those in the other regions (one to two percent).

It is noteworthy that those in Coastal BC North, while most likely to mention reduction of salmon and fish habitat, were least likely to mention water quality as an important environmental issue, suggesting that residents in these areas do not see a strong tie between reductions in the salmon population and water quality.

Demographic Variation in Perception of Biggest Environmental Issue

There was a tendency for those living in rural areas to view habitat destruction as a bigger issue (23%) than those residing in urban areas (16%).

Knowledge of Watershed

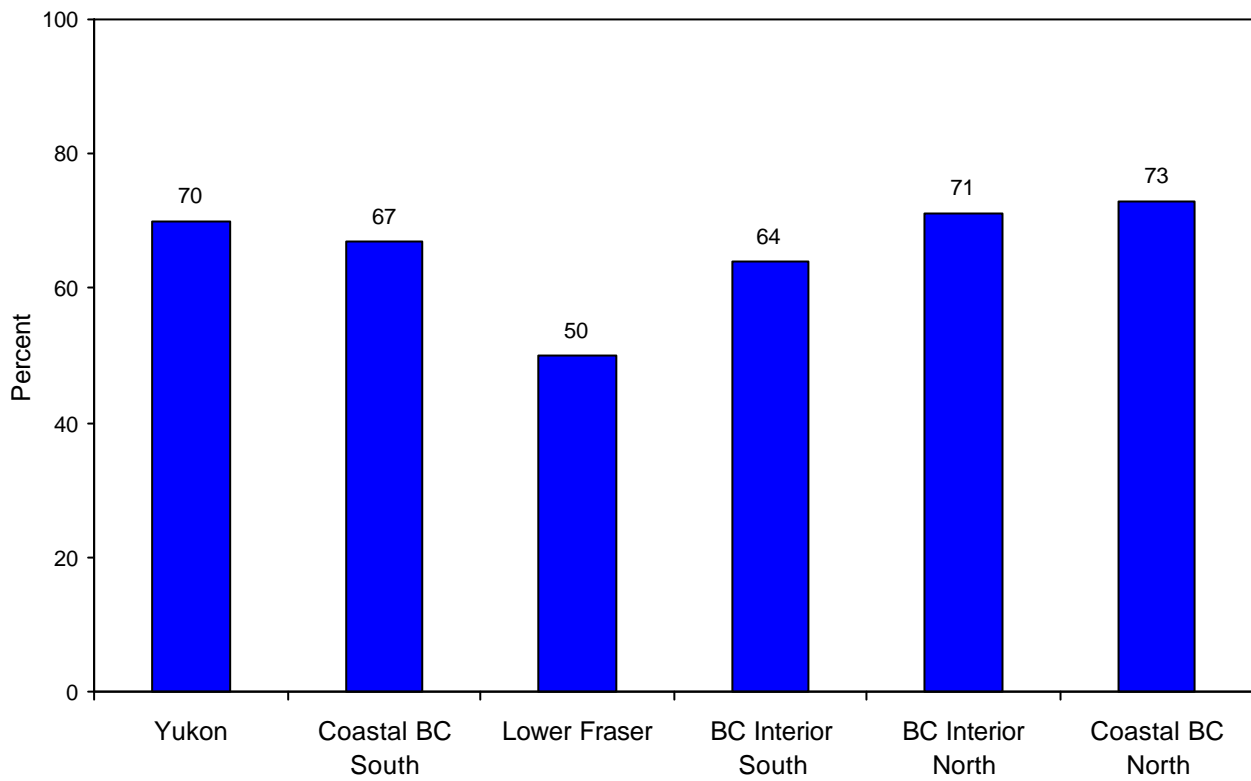
As government agencies and community groups continue to emphasize the critical role of watersheds in maintaining the health of fish habitat, it is vital that residents understand the concept of a watershed. Federal or Provincial documents and pamphlets on fish habitat virtually all rely on the term “watershed” when discussing the health of fish habitats. An understanding of the watershed concept is necessary if issues concerning fish habitat conservation and stewardship are to be communicated effectively. To aid the HCSP in assessing current levels of watershed knowledge in each region, we determined the proportion of respondents in each region who could correctly identify the definition of a watershed.

Respondents were given three definitions and asked to identify which best described a watershed. The three definitions were presented in random order to eliminate any effects of order of presentation. The three definitions are presented below—the correct definition is italicized.

- a) A reservoir that holds water for human consumption.
- b) A manmade facility used to contain water
- c) *Any area of land that drains into a lake river or stream.*

The proportion of respondents in each region who correctly identified the definition of a watershed is presented in Figure 2.

Figure 2. Proportion Who Know Definition of Watershed



In no region did greater than three-quarters of the respondents know the correct definition of a watershed. Levels of knowledge were highest in Coastal BC North, BC Interior North and the Yukon. Knowledge levels were moderate in the Coastal BC South and the Interior South regions, where about two-thirds of the respondents identified the correct meaning of watershed. Respondents from the Lower Fraser possessed the lowest levels of watershed knowledge, with only half being able to identify the correct definition.

Clearly, in the highly populated Lower Fraser region, basic steps must be taken to ensure that terminology is understood before information regarding effective watershed management and stewardship can be communicated.

Demographic Variation in Watershed Knowledge

Watershed knowledge varied depending on the level of education. Only 45 percent of respondents with a high school education or less knew the correct definition of a watershed. Compare this to 57 percent among college or technical school graduates, 63 percent among those who have attended or completed university, and 77 percent among those who have a graduate degree.

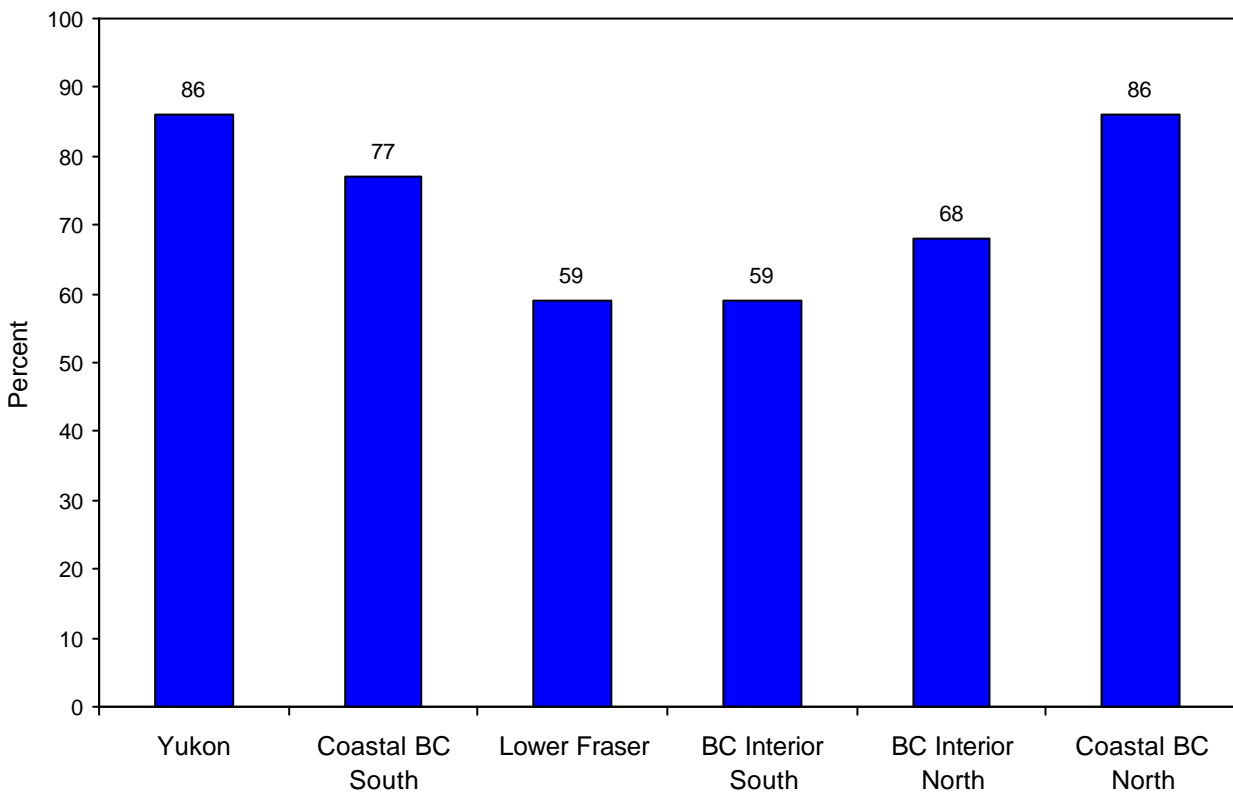
Those who own an acre or more of land were more likely to know the definition of a watershed (68%) than those who do not own land (55%).

KNOWLEDGE OF LOCAL FISH HABITAT AND STREAMS

One of the objectives of this research was to determine the extent to which residents of the different regions possessed basic knowledge regarding fish habitats and streams in their community, as well more detailed knowledge regarding these habitats and streams.

Respondents were first asked if they were aware that salmon live in the streams in their community. The percent of respondents who were aware is presented in Figure 3.

Figure 3. Percent of Respondents Aware that Salmon Live in Community Streams



Awareness was very high among respondents in the Yukon and Coastal BC North. Five out of every six respondents from these regions were aware that salmon live in the streams in their community. Awareness was lower but still substantial in the Coastal BC South region. Those in the Lower Fraser and Interior South regions possessed the lowest levels of awareness. Note that these two regions were also the least likely to know the definition of a watershed.

Demographic Variation in Awareness of Salmon Living in Community Streams

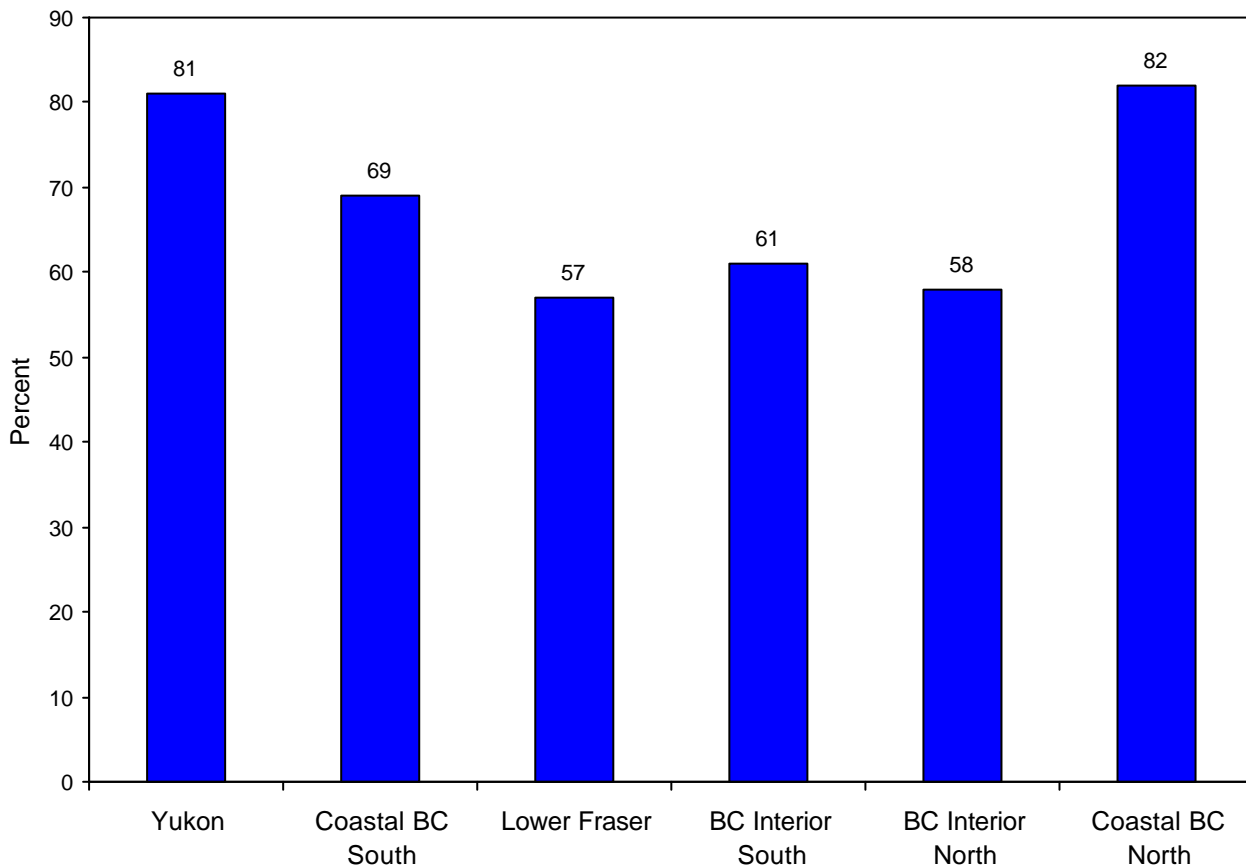
Predictably, awareness that salmon live in community streams increases with length of residence in the community. While only 50 percent of those living in their community for

less than five years are aware, 73 percent of those living in their community for 25 years or more are aware.

Those living in rural areas were more likely to know that salmon live in the streams in their community (73%) than those living in urban areas (62%). Landowners were more likely (74%) to possess this knowledge than those who do not own land (63%).

Those who knew that salmon live in the streams in their community were asked if they could name the types of salmon that live in these streams. Figure 4 displays the percent of respondents who could name at least one type of salmon living in the streams.

Figure 4. Percent who Know Names of Salmon in the Streams.



This figure again points to a higher level of knowledge possessed by those in the Yukon and Coastal BC North. Recall that the data in the above figure are based on those who indicated that they were aware that salmon live in the streams. Thus, we can infer that, even those in the other four regions are aware, their knowledge regarding the types of salmon in the streams is somewhat more superficial than that possessed by those living in the Yukon and Coastal BC North.

Demographic Variation in Naming Types of Salmon

Note that a somewhat higher proportion of landowners could name types of salmon (71%) than non-landowners could (60%).

Of course, the types of salmon that were mentioned varied depending on region. This variation is displayed in the following table.

Percent of Respondents Naming each Type of Salmon

Type of Salmon	Region					
	Yukon	Coastal BC South	Lower Fraser	BC Interior South	BC Interior North	Coastal BC North
Chinook/King	61%	25%	12%	17%	27%	30%
Chum	22%	28%	18%	5%	8%	23%
Coho	28%	54%	41%	29%	26%	63%
Pacific	0%	1%	3%	1%	18%	1%
Pink	14%	21%	14%	8%	18%	37%
Sockeye	19%	23%	27%	39%	30%	51%

*Note that column percentages add to more than 100 because respondents could give more than one name.

As a further way to assess knowledge of local fish habitat, we asked those respondents who were aware that their were streams in their community (98%) if they knew the names of any of the streams in their community and, if they did, how many streams they did know by name.

Similar proportions of respondents in the Yukon (78%), Coastal BC South (78%), BC Interior South (79%) and Coastal BC North (80%) said that they could name specific streams in their community. The proportion was lower for those in BC Interior North (70%) and still lower for those in the Lower Fraser (54%).

Demographic Variation in Stream Knowledge

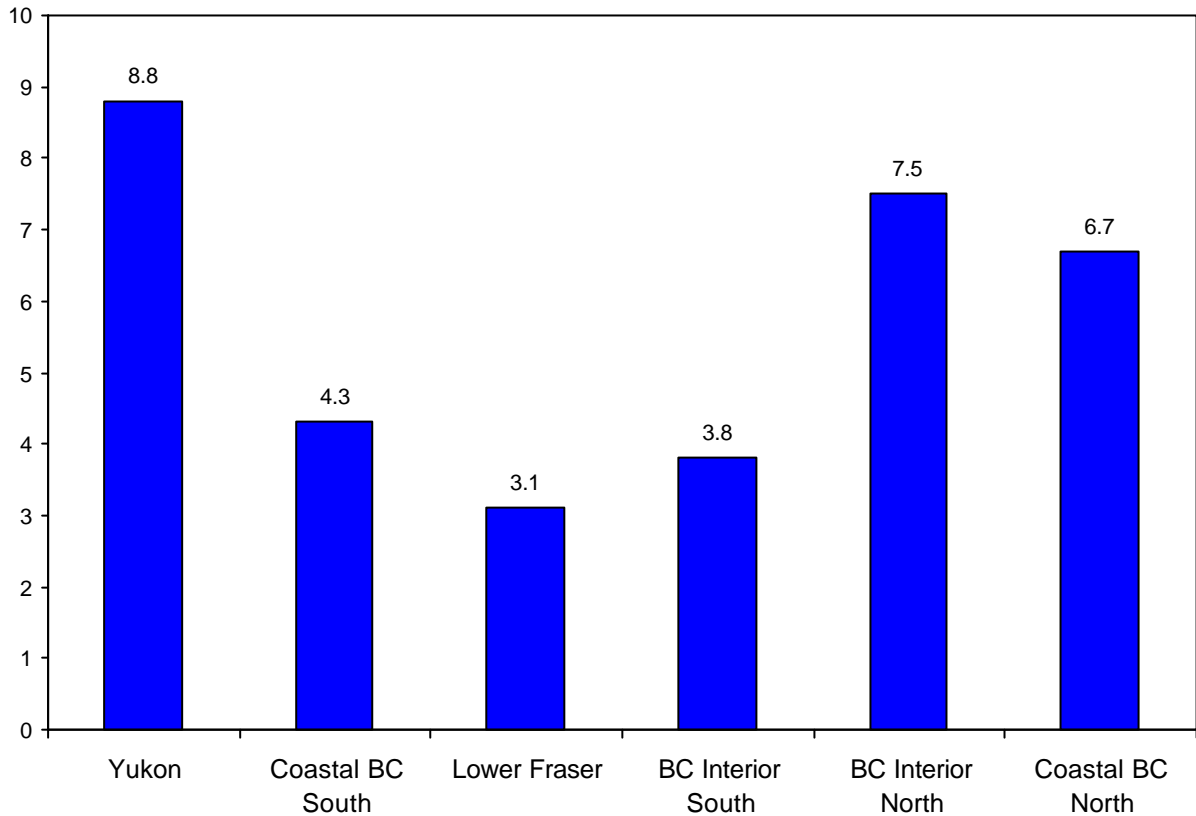
As expected, stream knowledge increased with increasing years of residence in the community. While 38 percent of those living in their community for less than five years could name streams, 77 percent of those living in their community for 25 years or more could do so.

Those living in rural areas are more likely to know the names of streams (71%) than those living in urban areas (57%).

Landowners are more likely to know the names of streams (78%) than non-landowners are (61%).

For those who could name streams, we present the average number of streams named in each region in Figure 5.

Figure 5. Average Number of Streams Respondents Know by Name.



Not surprisingly, local stream knowledge is highest in the Yukon, the region in which respondents possessed a high degree of knowledge regarding the salmon living in their streams. Somewhat surprising are the results for those in the BC Interior North. These respondents display moderate to low levels of awareness regarding salmon in the streams, but show relatively high levels of knowledge when it comes to naming the names of streams.

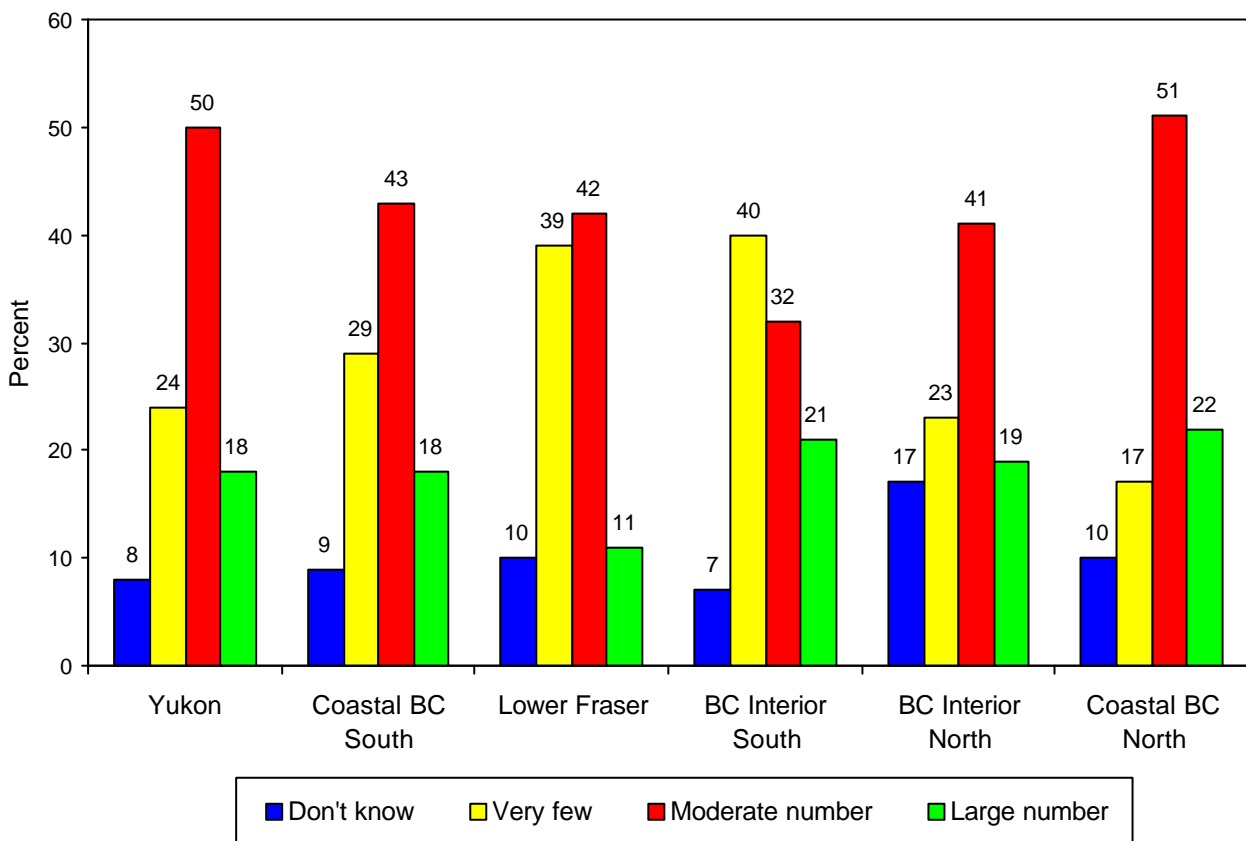
PERCEPTIONS OF SALMON POPULATION

Several questions were asked in order to determine respondents' perceptions regarding the size, health and benefit of the salmon population in their community.

Perceptions Regarding the Number of Salmon in the Streams

We asked respondents who were aware that salmon lived in the streams in their community whether they thought that there were very few, a moderate number, or a large number of salmon living in these streams. The results are presented in Figure 6.

Figure 6. Perceptions Regarding the Number of Salmon in the Streams



With the exception of the BC Interior South region, the modal (i.e., most frequent) response given in each region is that there is a moderate number of salmon in the streams. No more than a fifth of respondents in each of the regions feel that there are large numbers of salmon in the streams.

A few additional aspects of the above figure are worth noting. First, the two regions that demonstrated the most knowledge regarding salmon in their communities (Yukon and Coastal BC North) show highly similar results. Second, two regions--Lower Fraser and BC Interior South--are the most likely to say that there are very few salmon. Note that respondents in these two regions were the least likely to know the definition of a watershed, were least likely (along with the BC Interior North) to know the names of salmon living in community streams, and could not name as many streams in their

community as residents in other regions. Thus, it would appear that perceptions regarding the number of salmon in the streams are not necessarily linked to knowledge of local fish habitat.

Demographic Variation in Perceptions of the Numbers of Salmon

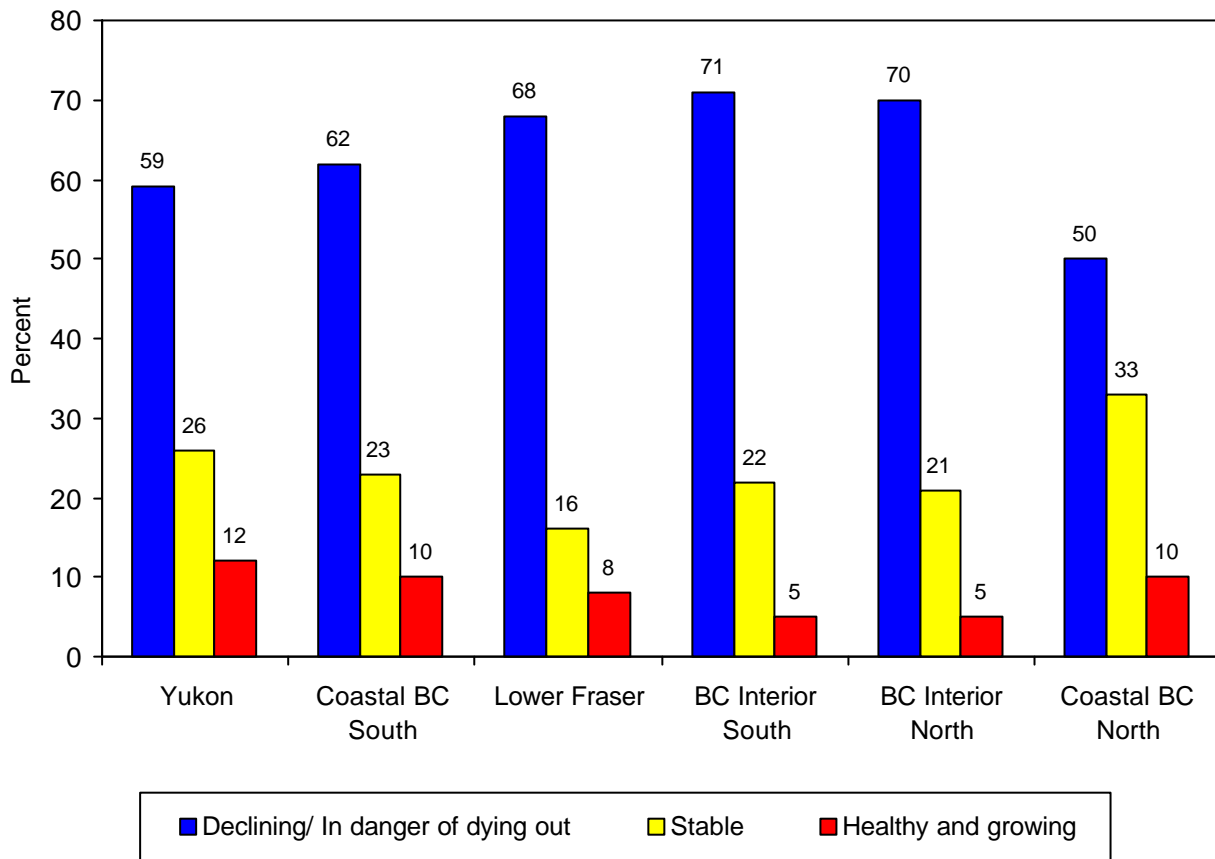
Perceptions regarding the number of salmon vary depending on level of education. Among those with a high school education or less, 30 percent felt that there were “very few” salmon in the streams and 19 percent felt that there were a large number. The comparable figures among those with a graduate degree are 48 percent and nine percent.

Among respondents residing in rural areas, 27 percent felt that there were very few salmon in the streams, 18 percent felt that there were a large number. The comparable figures for those living in urban areas are 41 percent and 13 percent.

Perceptions Regarding Health of Salmon Population

Those who held a perception regarding the number of salmon in the streams, were asked to evaluate the current health of the salmon population in these streams. Specifically, they were asked whether they thought that the salmon population in these streams was healthy and growing, stable, in decline, or in danger of dying out. The results are displayed in Figure 7.

Figure 7. Perceptions Regarding the Health of the Local Salmon Population



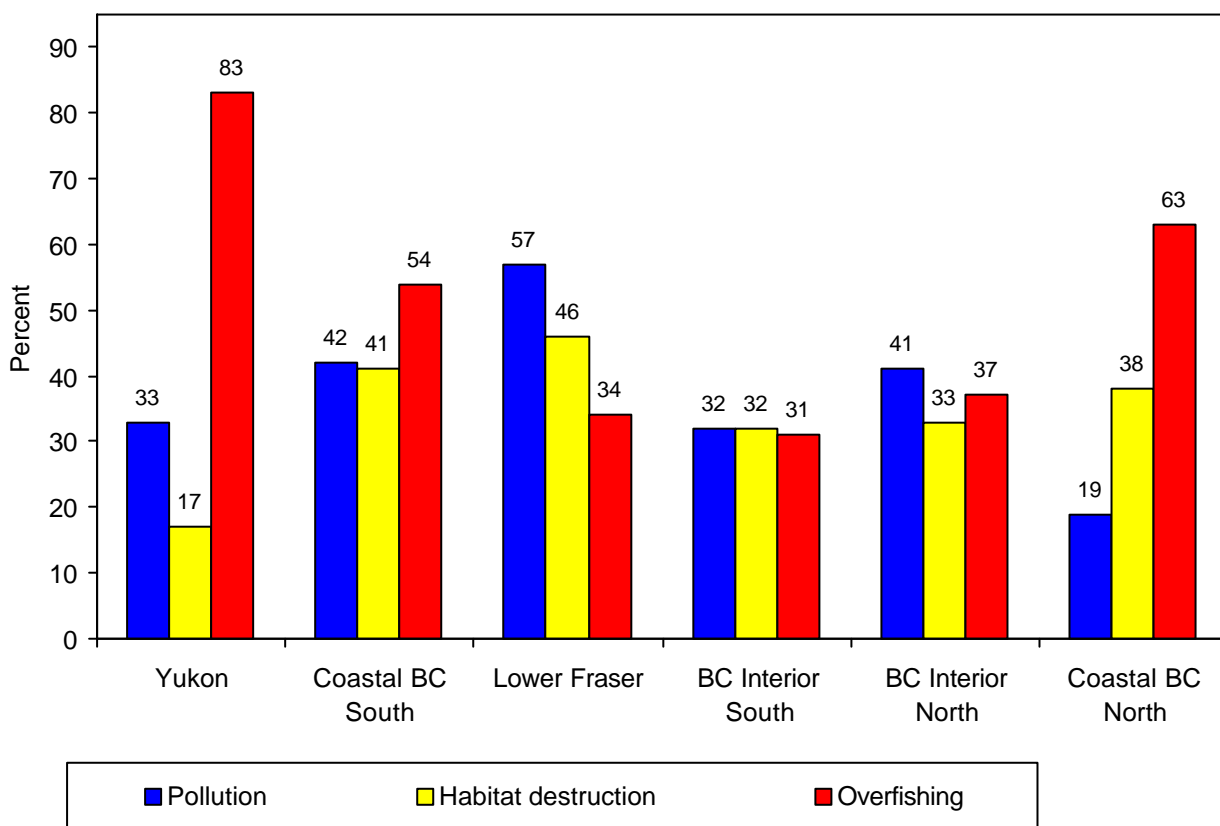
Several comparisons can be made between this figure and the previous figure. First, the regions in which respondents perceive the fewest number of salmon living in the streams (Lower Fraser, BC Interior South and Coastal BC South) are the regions most likely to indicate that the salmon population is declining or in danger of dying out. Second, perceptions of moderate numbers of salmon in the previous figure (Yukon and Coastal BC North) are associated with higher levels of perceived stability in Figure 7.

The most common perception across all regions is that the local salmon population is in decline or in danger of dying out. This perception is weakest, however, in Coastal BC North, where a third of respondents evaluated the salmon population as stable. Also note that, in no region was the salmon population perceived as healthy and growing by more than 12 percent of respondents.

Perceptions Regarding the Cause of the Decline of the Salmon Population

Those respondents who felt that the local salmon population was in decline or in danger of dying out were asked why they thought this. Over 30 different reasons were given for the decline. Figure 8 displays the four types of reasons that were mentioned most frequently. (The reasons that comprised each type are listed in Appendix C). Note that the variation across regions is quite striking.

Figure 8. Reasons for Decline in Salmon Population



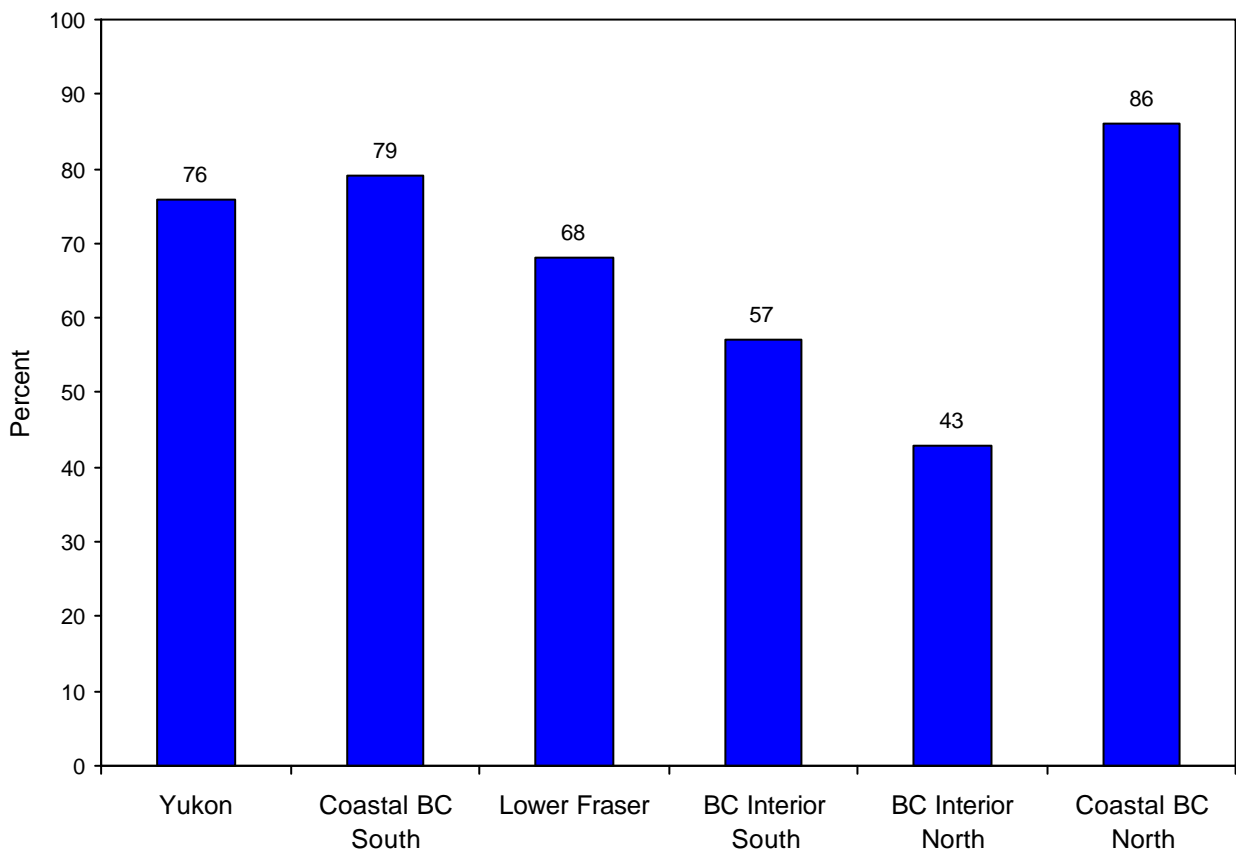
In three regions—Yukon, Coastal BC South, Coastal BC North—overfishing is viewed as the primary reason for the decline of the local salmon population. In BC Interior North and South, pollution and overfishing are given fairly equal weight as perceived causes of the local salmon population’s decline. The Lower Fraser is the only region in which pollution of the streams was perceived as playing a substantially bigger role than overfishing in causing a decline in the salmon population.

Perceived Community Benefits of Salmon Population

One of the ways to increase conservation and stewardship of fish habitats is to make citizens aware of the specific benefits that their community derives from the salmon population. To determine the current levels of awareness and perceptions of benefits, we asked respondents if they felt that their community benefits from the local salmon population and if so, what they thought the primary benefits were.

In Figure 9, we display the percent of respondents who perceive that their community reaps benefits from the salmon population.

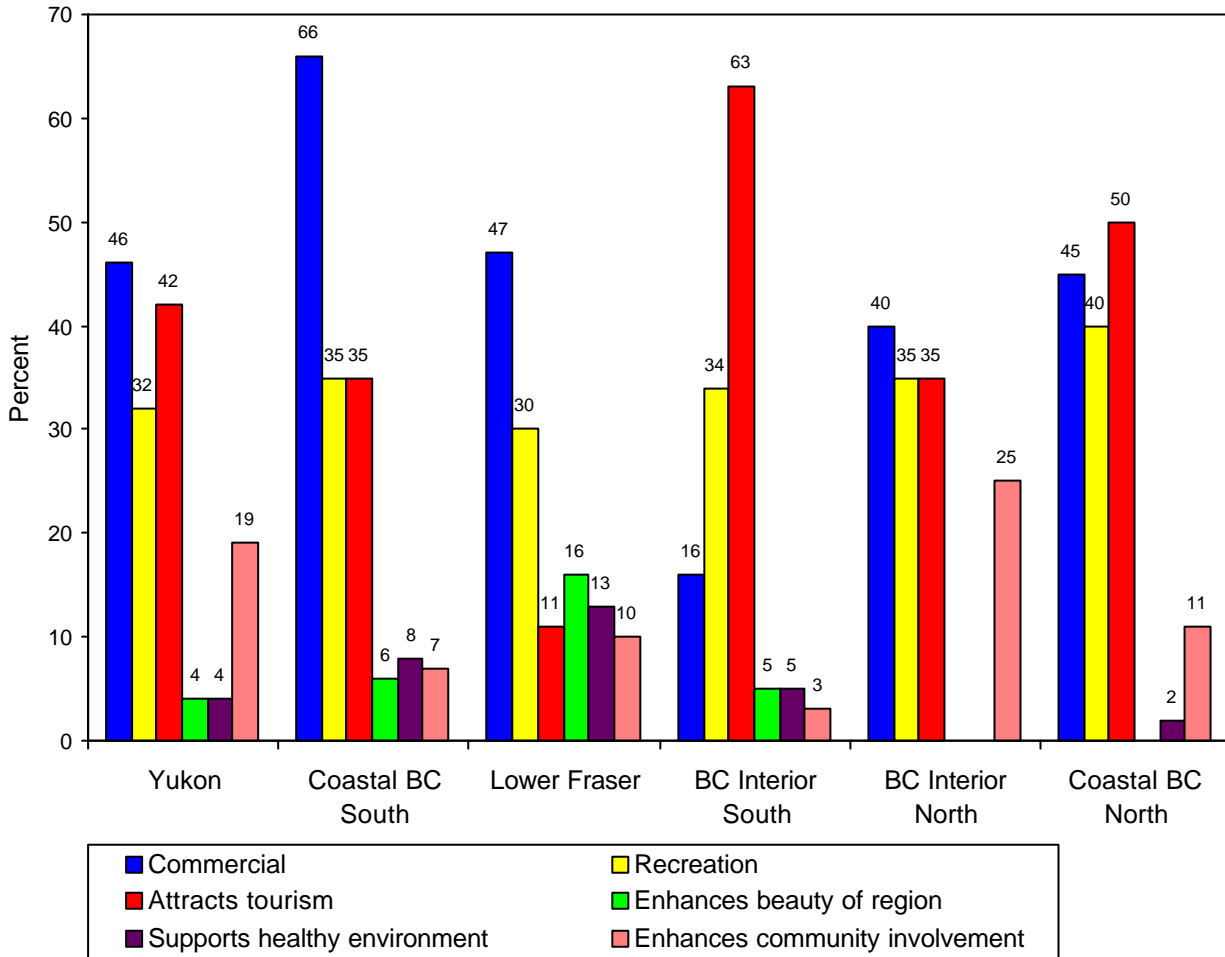
Figure 9. Percent of Respondents Believing that the Community Benefits from the Salmon Population



The Interior regions are notable for the relatively low proportion of respondents who perceive that their community benefits from the local salmon population.

Respondents mentioned over 15 different benefits of the salmon population. The most frequently mentioned types of benefits are displayed in Figure 10. (The specific benefits that comprised each type are listed in Appendix C).

Figure 10. Perceived Benefits of Salmon Population to the Community



In four of the six regions, commercial benefits (e.g., job creation) were cited most frequently—this was particularly true in Coastal BC South. Across all regions, recreational benefits (e.g., sport fishing) were cited with approximately equal frequency.

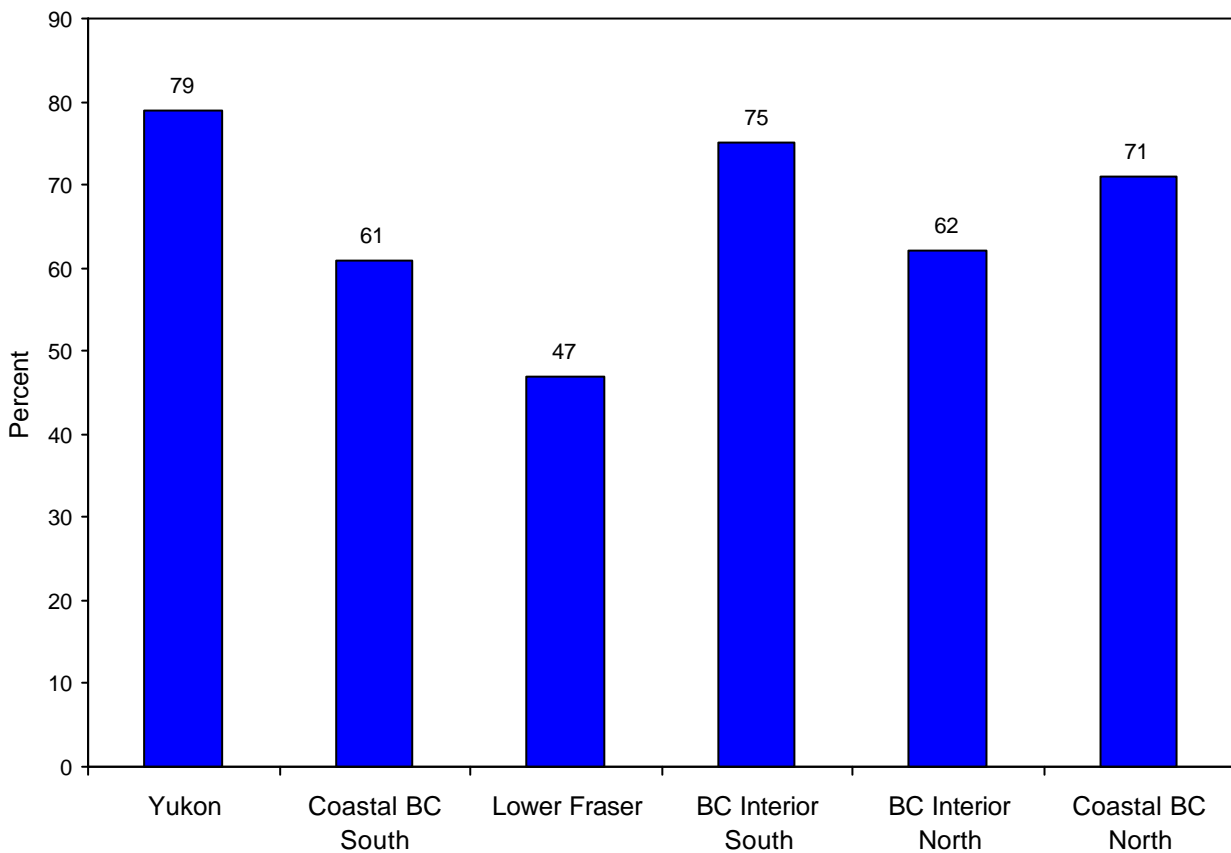
Citing benefits associated with increased tourism varied quite substantially by region. For example, while almost two-thirds of those living in BC Interior South cited tourism as a benefit, only one-tenth of those living in the Lower Fraser did so.

PERCEPTIONS OF WATER QUALITY

Perceptions of water quality play an important role in determining how individuals perceive the health of the local fish habitat as well as local watersheds. To what extent are individuals knowledgeable regarding the water quality in their community?

We first asked respondents if they were aware of the state of water quality in the streams in their community. As show in Figure 11, awareness varied as a function of region.

Figure 11. Aware of State of Water Quality in Streams



Not surprisingly, awareness regarding the state of stream water quality is lowest in the Lower Fraser region—respondents in this region show relatively low levels of awareness in other areas as well—e.g., awareness that salmon live in local streams.

Coastal BC South and BC Interior North respondents show moderate levels of awareness. The finding of moderate levels of awareness among Coastal BC South residents is somewhat surprising given that respondents from this region did not show lower levels of knowledge of the salmon population in their community.

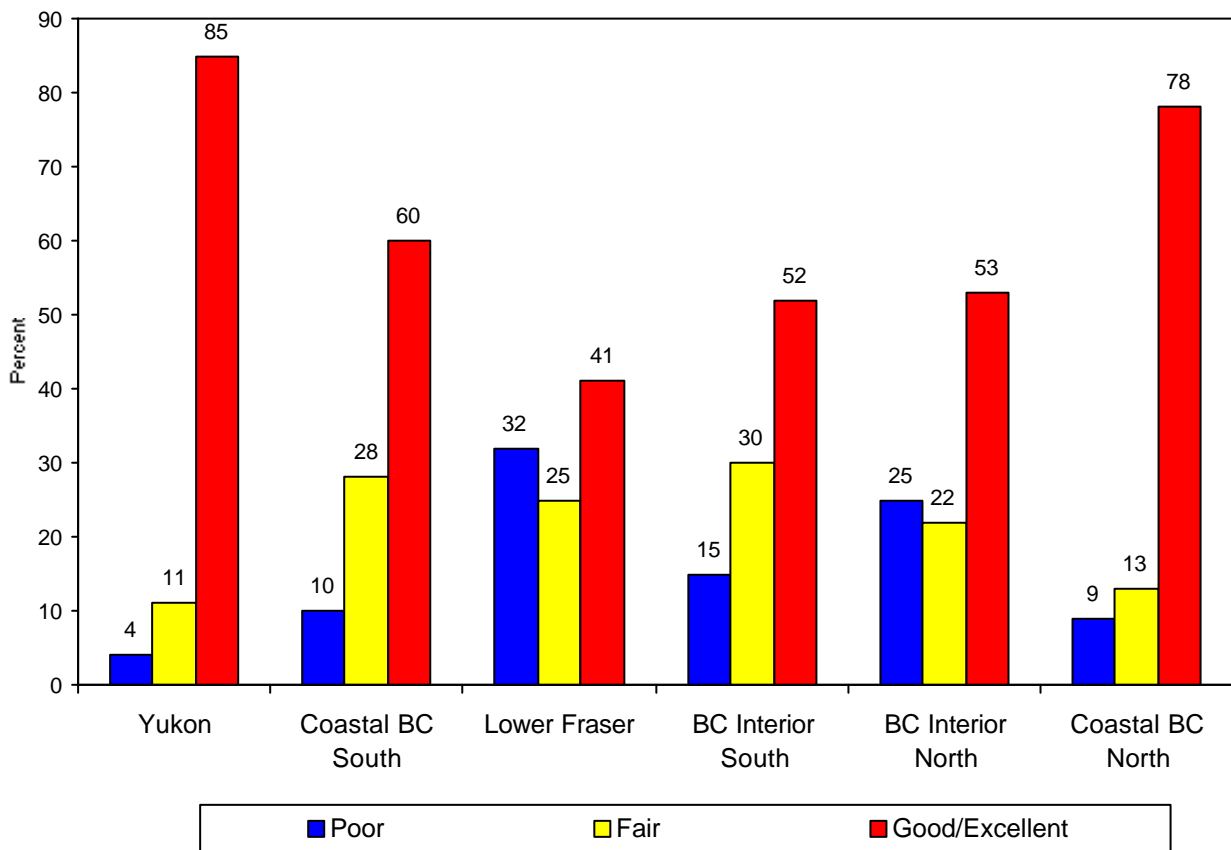
Demographic Variation in Awareness of State of Water Quality

Long-term community residents (15 years or more) had greater levels of awareness regarding the state of water quality (60%) than did residents who been living in their communities for less than five years (43%).

Rural residents were more aware (66%) than urban residents (48%), and landowners were more aware (70%) than those who do not own land (52%).

Those who were aware of the state of the water quality were asked if they thought that the water quality of the streams in their community was very poor, poor, fair, good, or excellent. The following figure displays the proportion of respondents who rated the water quality as poor (including very poor), fair, and good or excellent.

Figure 12. Rating of Stream Water Quality



Ratings of water quality are very high in the Yukon and Coastal BC North—the two regions that contained the highest proportion of respondents who perceive the salmon population as “stable”. Ratings of the water quality are moderate in the Interior and in the Coastal BC South region. Ratings of water quality are lowest in the Lower Fraser

region. While the modal response in this region is still “good” or “excellent” it has the highest proportion of respondents giving a “poor” rating. In fact, a third of respondents view the water quality as poor in this region.

As expected, perceptions of water quality are related to perceptions of the health of the salmon population. Those who perceive water quality as poor are more likely to view the salmon as in decline or in danger of dying out.

Demographic Variation in Ratings of Stream Quality

Those who own land were much more likely to give favourable water quality ratings (69%) than those who do not own land (46%).

Those living in rural communities tended to give relatively high water quality ratings (60%) compared to those living in urban areas (49%).

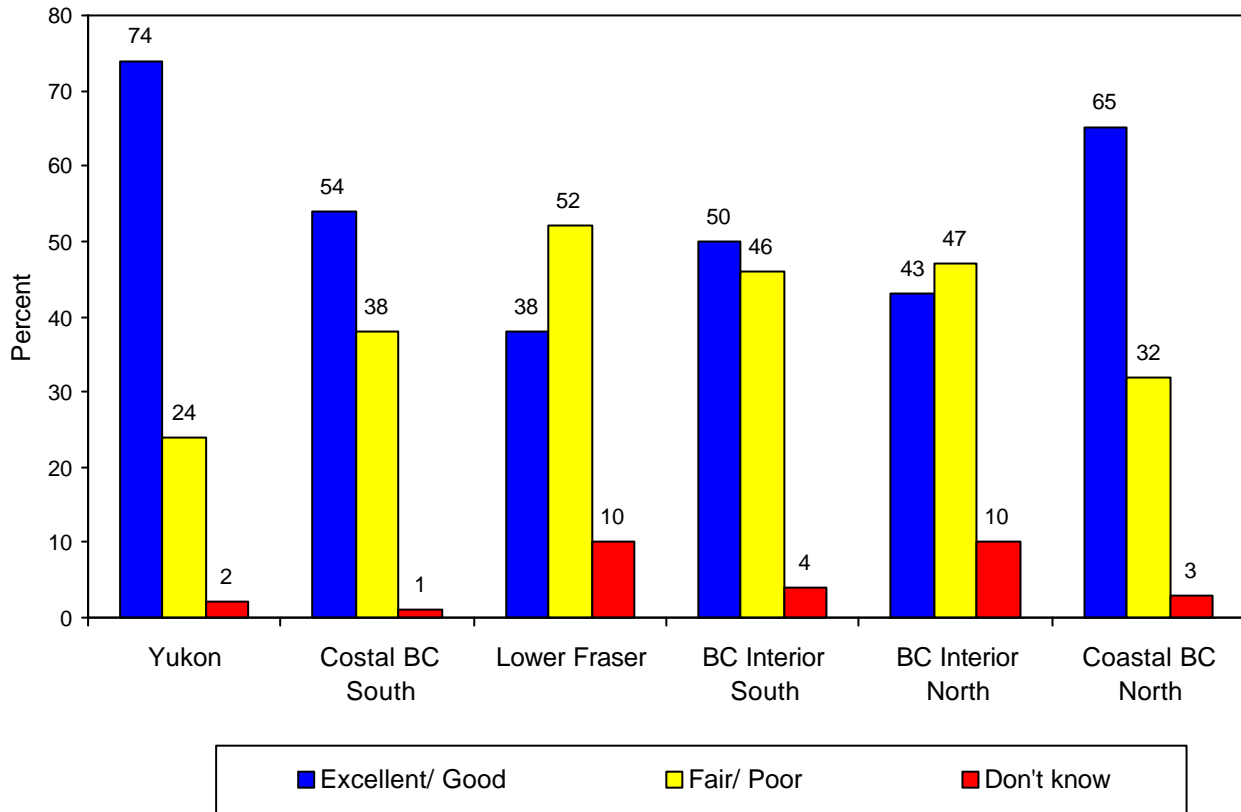
PERCEPTIONS OF EFFORTS TO PROTECT FISH HABITAT

It is important for HCSP to understand how individuals view current efforts to protect fish habitat in their community. Such views will in part determine how the HCSP will be received in the community.

Evaluation of Current Efforts to Care for Fish Habitat

Respondents were asked if they thought current efforts in the community to protect fish habitat were very poor, poor, fair, good or excellent. The proportion of respondents viewing these efforts as poor (including very poor) or fair, and good or excellent is displayed in Figure 13.

Figure 13. Evaluation of Efforts in Community to Care for Fish Habitat



In the Yukon and Coastal BC North, evaluations of efforts in the community to care for fish habitat are very positive. Note that residents in these communities tend to be knowledgeable regarding fish habitat and tend to view the current salmon population as stable.

Respondents in the Coastal BC South and the BC Interior South region give fairly similar ratings, although a slightly higher percentage of those in the BC Interior South give fair/poor ratings.

Ratings are lowest in the Lower Fraser and BC Interior North region. In fact, half of the respondents in each of these regions rated current efforts as fair to poor.

As was the case with evaluations of water quality, we observed an association between perceptions of current efforts to protect fish habitat and perceptions of the current health of the local salmon population. Those who see this population as in decline or in danger of dying out tend to perceive current protection efforts as inadequate.

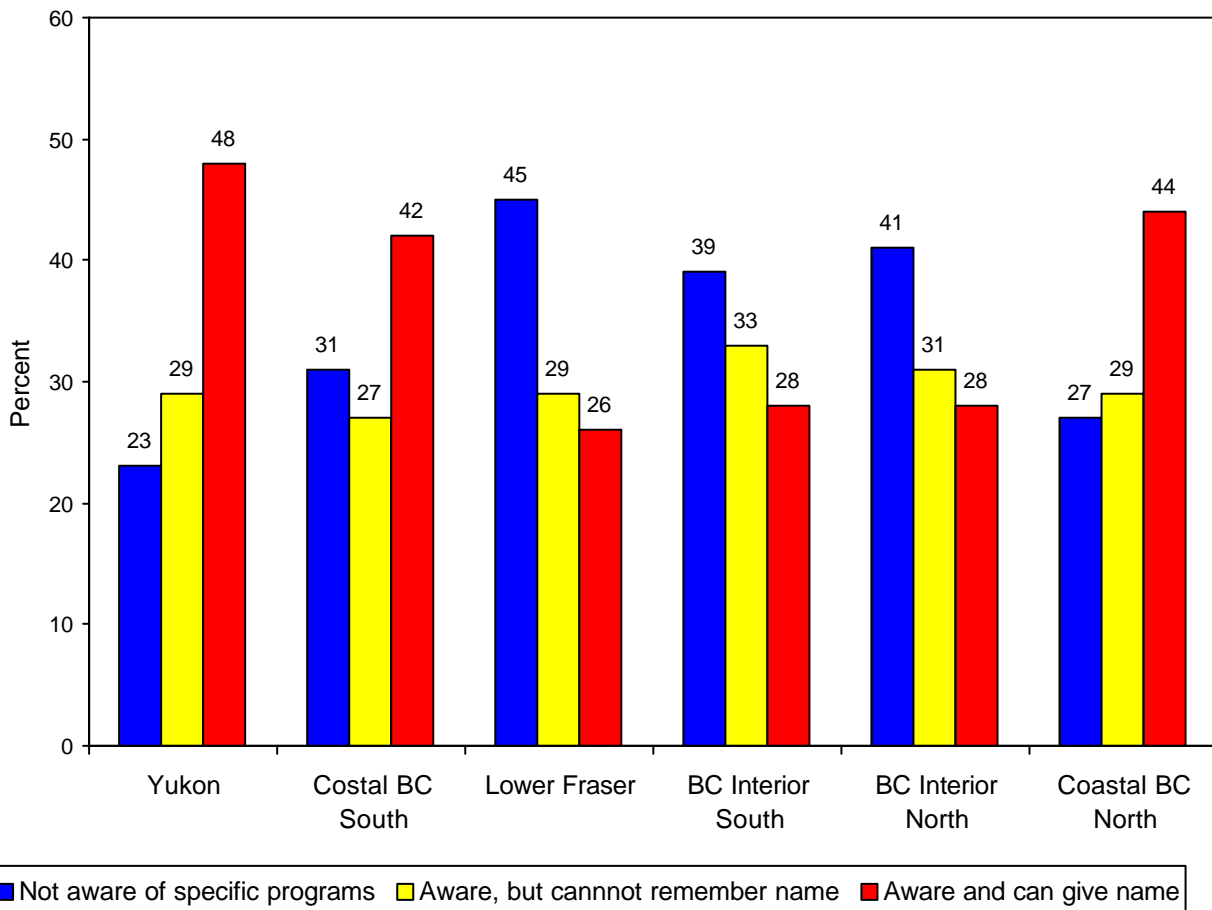
Demographic Variation in Evaluation of Efforts to Care for Fish Habitat

A higher proportion of those residing in rural areas give positive ratings of efforts to care for fish habitat (56%) than those in urban areas (36%). Those who own land given more positive ratings (57%) than those who do not own land (42%).

Awareness of Programs to Protect Fish Habitat

Are respondents aware of specific programs in their community aimed at protecting fish habitat? In all regions, the majority of respondents said that they were aware that programs existed in their community that were aimed at protecting, restoring or enhancing fish habitat. They were not always good at naming specific programs, as displayed in Figure 14.

Figure 14. Awareness of Specific Fish Habitat Protection Programs



Those in the Yukon, Coastal BC North and Coastal BC South were most likely to give specific names of programs that they viewed as devoted to protecting fish habitat. Both Interior regions were highly similar in their awareness of specific programs. Not surprisingly, the relatively less knowledgeable Lower Fraser respondents (who tend to be less knowledgeable than respondents in the other regions concerning fish habitat issues) were the most likely to indicate that they were not aware of any specific programs.

Respondents named over 30 different programs or activities that they perceived as having the aim of protecting fish habitat. Sometimes respondents did not name specific programs but aspects of the community that they perceived as contributing to habitat protection, restoration or enhancement (e.g., “hatcheries”).

The proportion of respondents who mentioned specific programs, is shown in the table below.

Program	Region					
	Yukon	Coastal BC South	Lower Fraser	BC Interior South	BC Interior North	Coastal BC North
Salmon Enhancement (SEP)	13%	17%	6%	8%	11%	10%
Habitat Conservation & Stewardship Program (HCSP)	4%	3%	2%	2%	2%	3%
Fisheries Renewal	6%	4%	0%	3%	3%	9%

As is evident in the table above, relatively few respondents mentioned specific names of programs.

There was a greater tendency for respondents to mention specific aspects of programs (e.g., salmonids in the classroom), or groups (e.g., streamkeepers). Displayed below are the proportion of respondents who mentioned SEP or specific programs comprising the SEP, the proportion of respondents who mentioned Fisheries Renewal or programs related to Fisheries Renewal, and the proportion respondents naming community groups or societies.

Category	Region					
	Yukon	Coastal BC South	Lower Fraser	BC Interior South	BC Interior North	Coastal BC North
Salmon Enhancement (SEP)	36%	23%	16%	13%	18%	26%
Fisheries Renewal	7%	5%	.5%	3%	4%	12%
Community Groups/ Societies	7%	12%	6%	6%	3%	5%

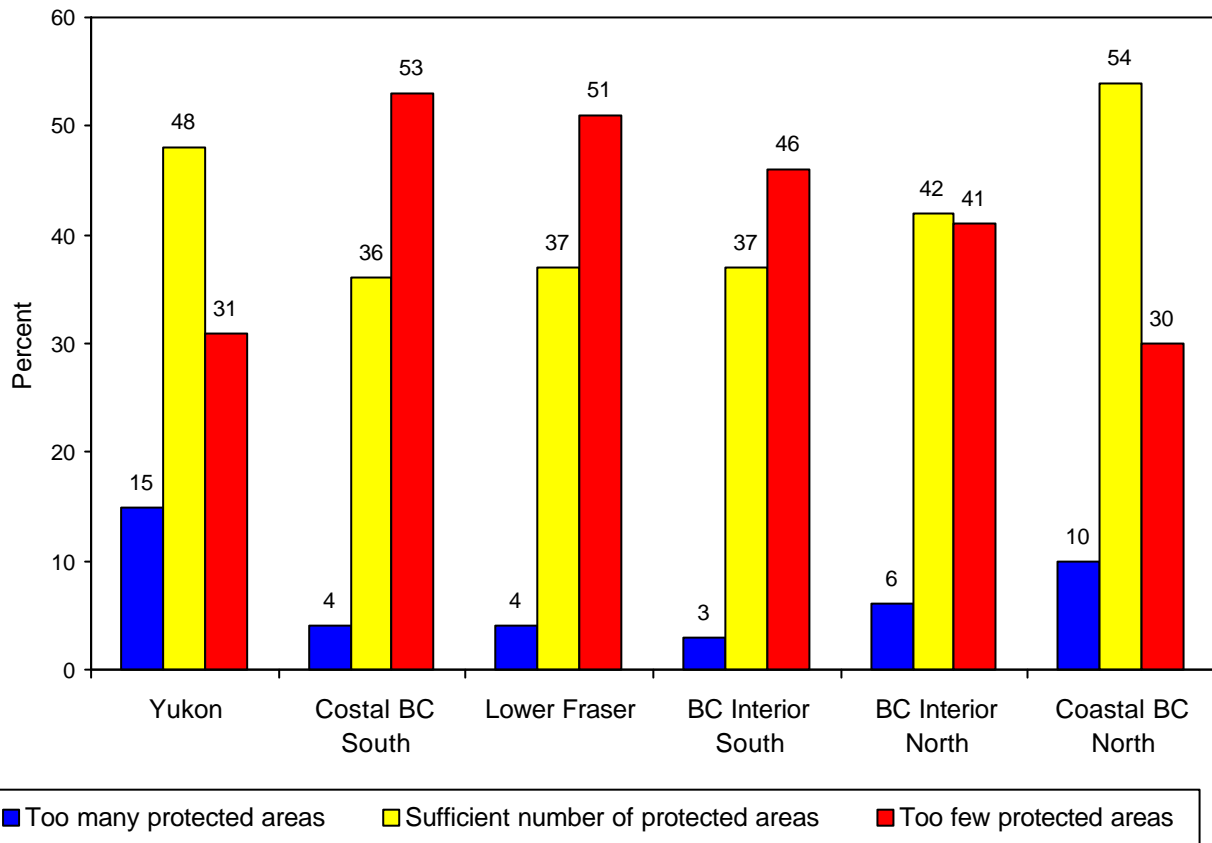
Across all regions, respondents mentioned activities related to the SEP most frequently.

Perceptions Regarding Protected Areas

Another way of evaluating perceived efforts to protect fish habitat is to ask respondents if they feel there are enough protected areas in their community. For purposes of this survey, a protected area was defined as an area that cannot be used for commercial, industrial, or residential development. To the extent that respondents are satisfied with the number of protected areas, they will have more favorable views regarding other aspects of fish habitat. This latter association was confirmed in an analysis in which we found that respondents who perceived there to be too few protected areas in their community, were more likely than those who felt that there were a sufficient number of these areas to a) view the salmon population as in decline, b) give negative water quality ratings, and c) evaluate current fish habitat protection efforts as poor.

Respondents' perceptions regarding the number of protected areas in their community are displayed in Figure 15.

Figure 15. Perceptions Regarding the Number of Protected Areas



Respondents in the Yukon and the North Coast of BC appear to be fairly satisfied with respect to the number of protected areas in their communities—in both regions only 30 percent of respondents perceive there to be too few protected areas.

Respondents in the Coastal BC South, Lower Fraser, and BC Interior North region are all similar in their evaluations of protected areas—the modal response in all regions is that there are too few.

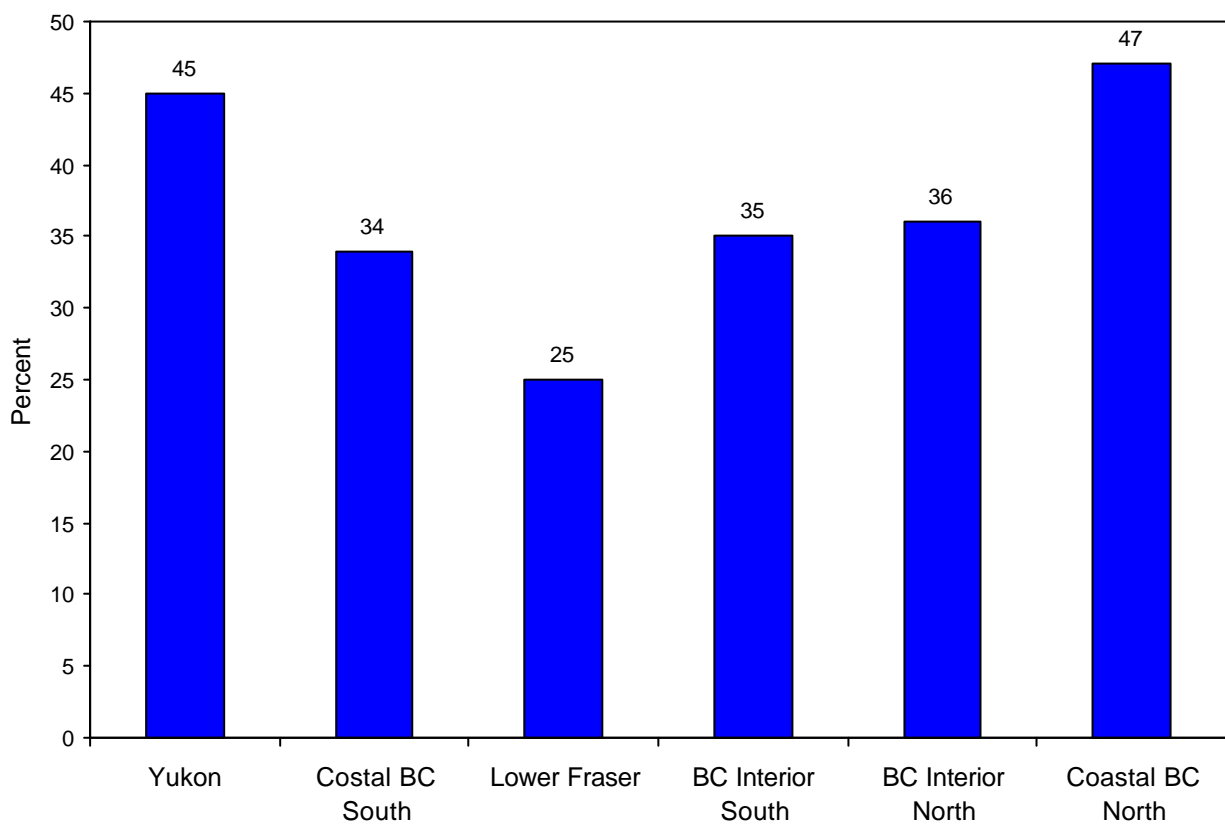
Respondents in the Northern Interior displayed the greatest ambivalence, being equally split between perceiving too few and a sufficient number of protected areas.

Personal Efforts Made to Protect, Restore, or Enhance Fish Habitat

In a series of survey questions, we personalized the issue of fish habitat protection by asking respondents to tell us if they currently do anything to protect, restore, or enhance fish habitat, and, if they do, to identify what they do.

Figure 16 displays the proportion of respondents in each region that indicated that they personally attempt to protect, restore or enhance fish habitat.

Figure 16. Make Personal Effort to Protect, Restore, or Enhance Fish Habitat



The regions can be categorized into three levels of involvement with respect to fish habitat protection. At the top level, we observe that almost half of the respondents in the Yukon and Coastal BC North said that they personally attempt to protect, restore, or enhance fish habitat in their community. At the middle level, we find that about a third of respondents in Coastal BC South and the Interior make such attempts. We find the lowest level of involvement in the Lower Fraser, where a quarter of respondents said that they do things to protect fish habitat.

Examining these levels of involvement as a function of the population in each region yields the following estimates with respect to the number of individuals who personally attempt to protect, restore or enhance fish habitat in their community:

Region	Estimated Number Making Personal Attempts to Protect Fish Habitat
Yukon	14,355
Coastal BC South	231,426
Coastal BC North	44,948
Lower Fraser	516,287
BC Interior South	146,846
BC Interior North	56,215

Respondents mentioned a broad array of things that they do protect, restore, or enhance fish habitat. The most frequently mentioned actions taken in this regard are listed in the following table.

Action Taken to Protect Fish Habitat	Region					
	Yukon	Coastal BC South	Lower Fraser	BC Interior South	BC Interior North	Coastal BC North
Don't litter or pollute streams and rivers	15%	17%	9%	14%	10%	16%
Take care of what you put in drains	3%	7%	17%	6%	2%	1%
Pick up garbage/ Clean beaches	12%	11%	12%	11%	9%	12%
Release fish after catching	18%	8%	9%	11%	18%	8%
Dispose of chemicals or harmful materials carefully	4%	5%	12%	7%	7%	2%
Speak out/ Encourage others to protect habitat	3%	9%	5%	5%	3%	3%
Recycle	5%	1%	8%	5%	3%	1%

Note that personal actions that respondents perceive as protecting, restoring or enhancing fish habitat are not necessarily taken in or by the fish habitat itself. Many respondents see a connection between what they do in and around their homes (e.g., pouring chemicals down the drain) and the health of the local fish habitat. Reinforcing this connection would appear to be key to the success of watershed management efforts in these communities.

Demographic Variation in Efforts Aimed at Protecting Fish Habitat

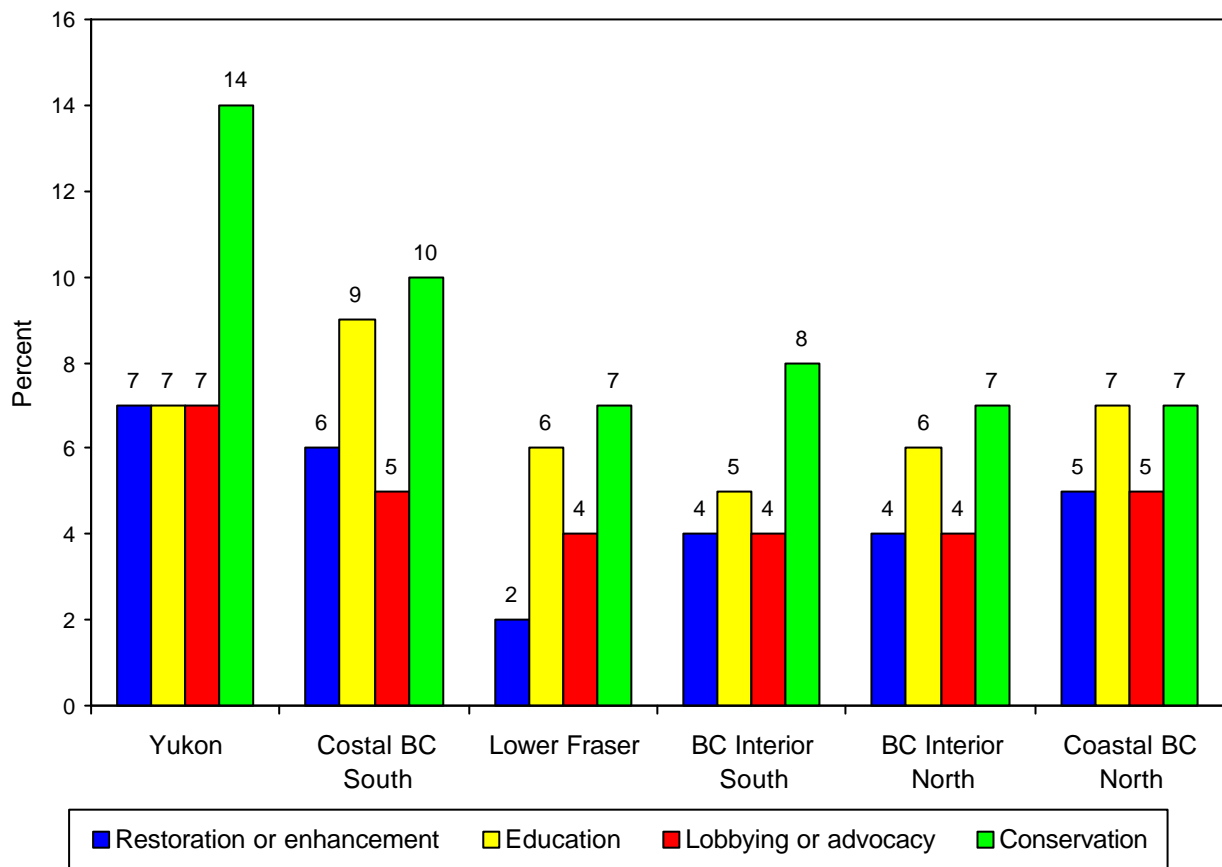
A higher proportion of landowners said that they make efforts to protect fish habitat (42%) than non-landowners (27%).

Personal Involvement in Environmental Advocacy

We also asked respondents about their personal involvement in environmental activities more generally. We asked them whether or not they were personally involved in any environmental advocacy groups or activities. Only about one in ten respondents across all regions said that they were involved in such groups or activities---13 percent in the Yukon, 12 percent in Coastal BC South, 11 percent in Lower Fraser and 10 percent in each of BC Interior South, BC Interior North and Coastal BC North.

These respondents were asked if they were involved in each of the following activities: restoration or enhancement, education, lobbying or advocacy, and conservation. The results are presented in Figure 17. Note that percentages are based on the proportion of *all* respondents in each region.

Figure 17. Type of Environmental Involvement

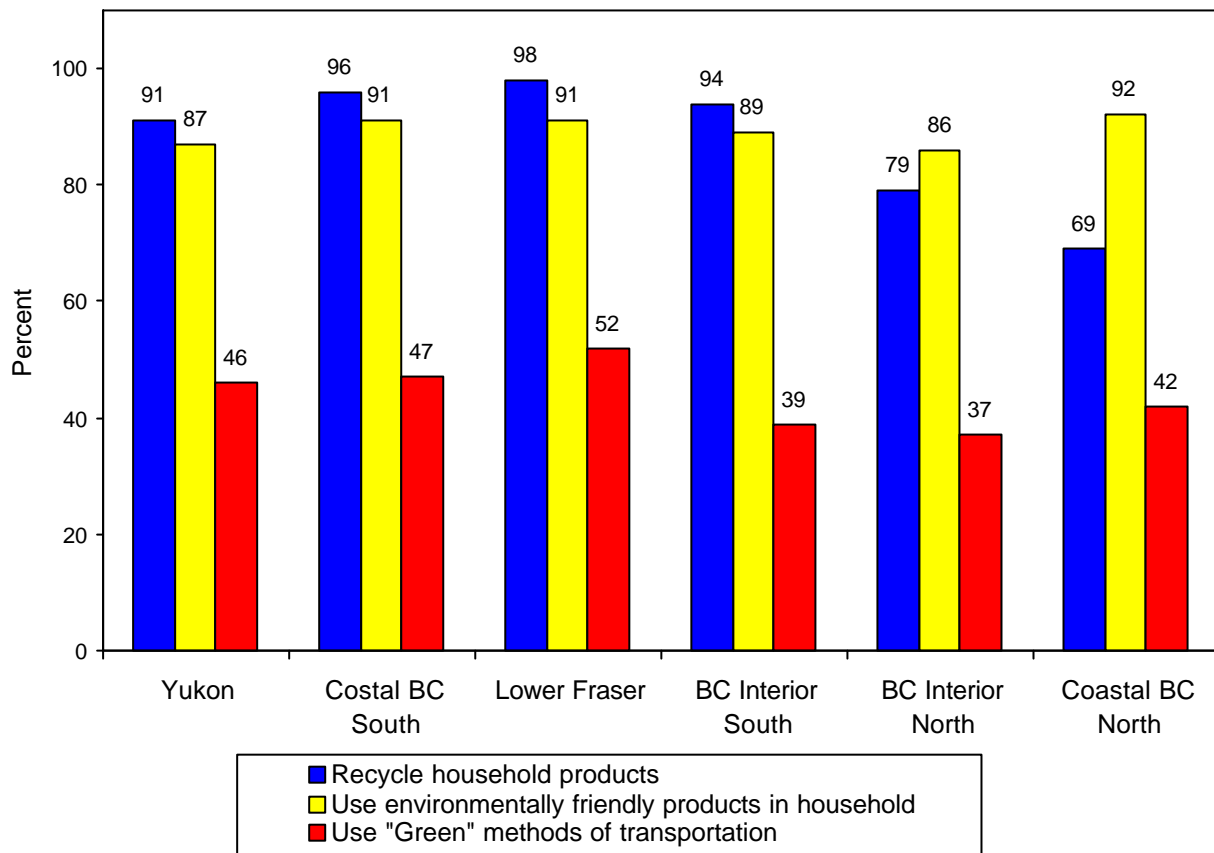


Of the four activities inquired about, conservation is the most common. Education is not far behind however. In fact, in four of the six regions, respondents are fairly evenly split between involvement in education and conservation activities. The Yukon stands out, as this is the only region in which there were twice as many respondents reporting conservation activity than any other activity.

Environmentally Friendly Behaviour

As an additional way of assessing respondents’ current level of care and concern for the environment, we asked them if they engaged in each of the following behaviours on a weekly basis—recycling household products, using environmentally safe products in the home, and using “green” methods of transportation such as public transit. The results are displayed in Figure 18.

Figure 18. Engaging in Environmentally Friendly Behaviours



Recycling is highly common in all regions except the BC Interior North and Coastal BC North. In the latter two regions, the use of environmentally friendly products is actually more common than recycling household products. The use of green methods of transportation is not highly common in any region—it is most common in the Lower Fraser region and least common in the Interior.

Demographic Variation in Environmentally Friendly Behaviours

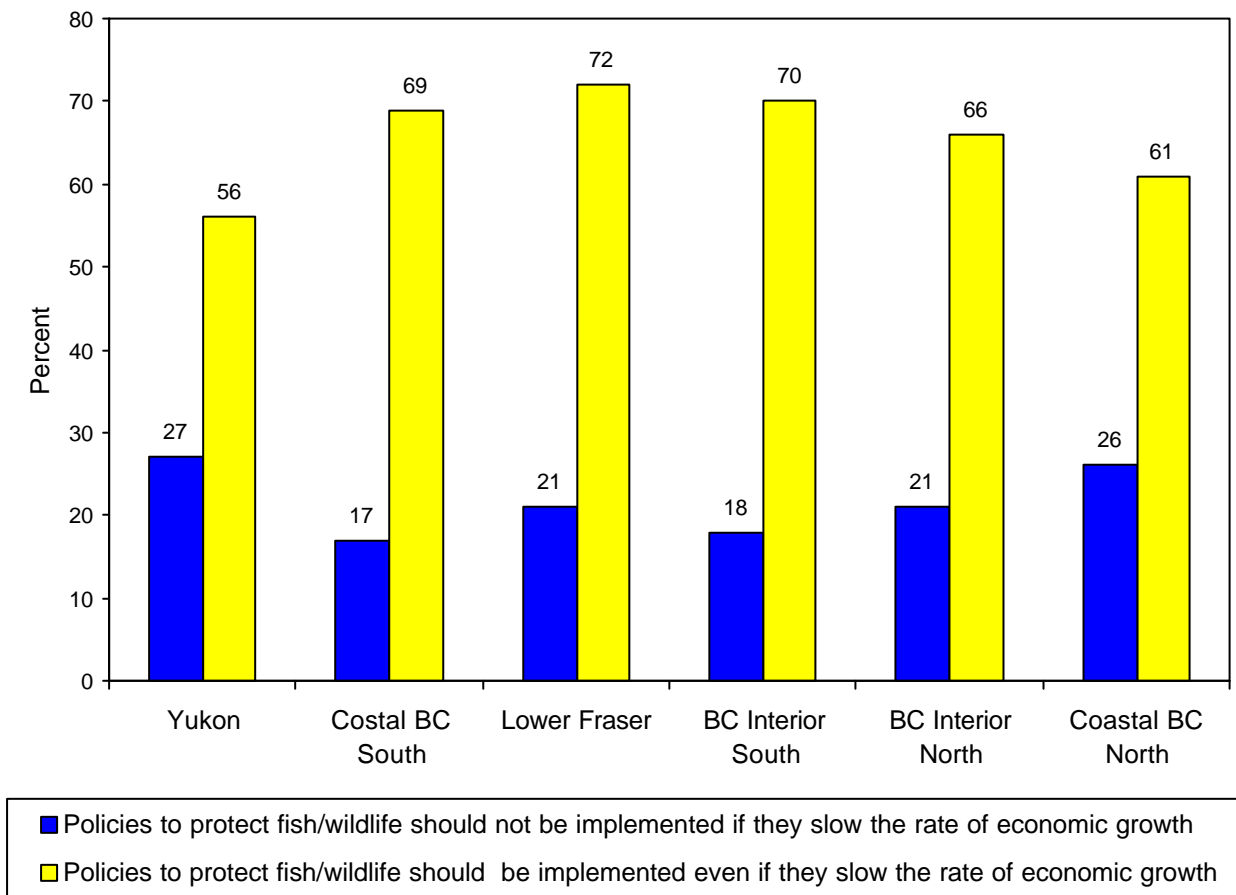
Predictably, a higher proportion of those living in urban areas use Green methods of transportation (54%) than those living in rural areas (34%).

RELATIVE IMPORTANCE OF PROTECTING FISH AND WILDLIFE HABITAT

It is one thing to advocate environmental protection. It is quite another to be willing to make personal sacrifices to ensure this protection. How willing are respondents to advocate policies that will protect fish and wildlife habitat even if these policies may require a certain degree of sacrifice (e.g., a slower rate of economic growth, higher taxes?) We asked several questions to find out.

First, we asked respondents to indicate whether or not they felt that policies aimed at protecting fish and wildlife habitat should be implemented even if such policies will slow the rate of economic growth. The results are displayed in Figure 19.

Figure 19. Habitat Protection and the Rate of Economic Growth

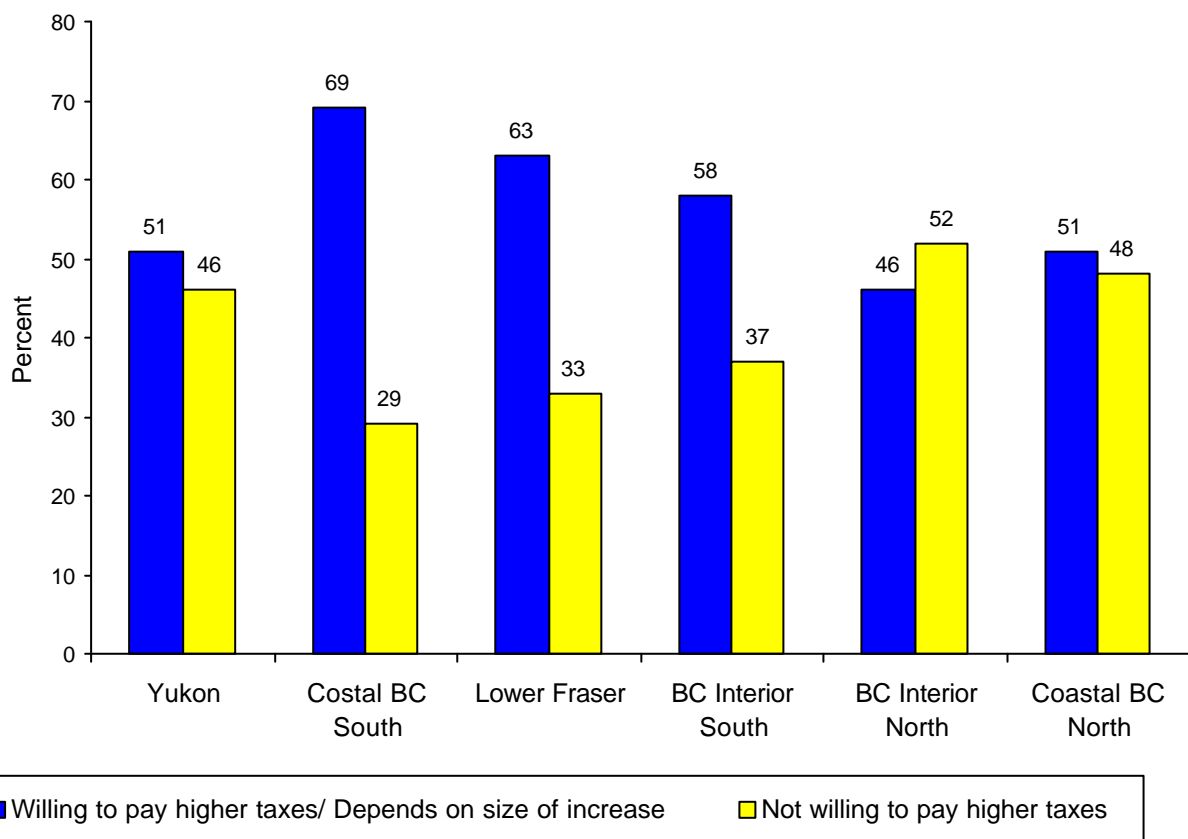


In all regions, the majority of respondents indicated that they believe policies aimed at protecting habitats should be implemented even if they will result in slowing the rate of economic growth. Note that this sentiment is not as strong in the Yukon and Coastal BC North, where a quarter of respondents held the opposing view.

Advocacy of policies despite a decline in the rate of economic growth is related to several of the perceptions that we assessed earlier. The more respondents advocated policies despite slower rates of economic growth, the lower they rated water quality, efforts to protect fish habitat, and the current health of the salmon population. When conditions are perceived as deteriorating, policies aimed at ameliorating become more attractive.

A more direct way of assessing a willingness to make a personal sacrifice to protect local habitats is to ask people if they would be willing to pay taxes to ensure such protection. Respondents' answers to this question are summarized in Figure 20.

Figure 20. Willingness to Pay Higher Taxes to Ensure Habitat Protection



As expected, the more direct question concerning the willingness to pay higher taxes does not yield quite the same degree of support as the question regarding policy advocacy in the face of a reduced economic growth rate. However, levels of support are still fairly substantial. The majority of the respondents in Coastal BC South, the Lower Fraser region and the BC Interior South say that they are willing to pay higher taxes to protect local habitats.

The Yukon, BC Interior North and Coastal BC North communities are notable for their ambivalence regarding a tax increase. About half support it and half oppose it.

We asked respondents who were not willing to pay higher taxes why they were not willing. As is clear in the following table, reasons have more to do with perceptions of the current tax burden and government competence than with the perception that protection of habitats is not needed.

Reasons for Not Wanting to Pay Higher Taxes for the Protection of Habitats

Reason	Region					
	Yukon	Coastal BC South	Lower Fraser	BC Interior South	BC Interior North	Coastal BC North
Pay enough taxes already	56%	72%	60%	57%	59%	67%
Government should allocate funds correctly	24%	32%	34%	21%	27%	14%
Can't afford more tax	11%	13%	9%	13%	14%	10%
More important things to spend tax money on	3%	8%	10%	4%	3%	5%
Have enough habitat protection/ Not a problem	12%	4%	7%	7%	7%	13%

Note that respondents in the Yukon and Coastal BC North are somewhat more likely to perceive that efforts to protect habitats in their communities are currently adequate. This was observed earlier as well.

LINKING KNOWLEDGE, BEHAVIOUR AND ATTITUDES

The survey assesses different aspects of local habitat knowledge, environmental advocacy/protection activities and attitudes regarding the current state of local fish habitats. In this section we combine the different aspects of knowledge and advocacy/protection activities and examine how they relate to attitudes.

Knowledge of Local Habitat

Six items in the survey assessed different aspects of local habitat knowledge. They assessed the following:

- Definition of watershed
- Awareness that salmon live in community streams
- Ability to name salmon in the streams
- Awareness of state of water quality
- Ability to name streams in the community
- Awareness of programs for fish habitat protection and enhancement

We calculated a “Local Knowledge” score for each respondent. The maximum score a respondent could receive was 6 (he or she possessed the requisite knowledge for all items) and the minimum score was 0 (he or she did not possess any of the requisite knowledge for any of the six items). The distribution of scores for each region is shown in the table below, along with the average score obtained among respondents in each region.

Distribution of Local Knowledge Scores

Number correct	Region					
	Yukon	Coastal BC South	Lower Fraser	BC Interior South	BC Interior North	Coastal BC North
0	0%	4%	9%	4%	3%	1%
1 (17%)	2%	6%	14%	8%	10%	3%
2 (33%)	7%	8%	22%	9%	11%	5%
3 (50%)	14%	16%	12%	19%	20%	16%
4 (67%)	19%	21%	20%	28%	20%	16%
5 (83%)	25%	23%	17%	21%	21%	28%
6 (100%)	33%	22%	6%	11%	16%	32%
Average (% Correct)	76%	67%	49%	61%	61%	75%

With respect to the six aspects assessed, respondents in the Yukon and Coastal BC North displayed the most local knowledge, followed by those in Coastal BC South, those in the Interior and, finally, those in the Lower Fraser region.

We also examined the relation between knowledge and the attitudes regarding local fish habitat that we assessed in the survey. We found that higher levels of knowledge were associated with elevated levels of support for fish habitat protection even if rates of economic growth will reduce, higher ratings of current efforts to protect fish habitat, and slightly more positive ratings of the current health of the salmon population.

Environmental Advocacy/ Protection

Five items in the survey assessed different aspects of environmental advocacy or protection activities. They assessed the following:

- Personal attempts made to protect, restore, or enhance fish habitat
- Personal involvement in environmental advocacy groups or activities
- Household recycling
- Household use of environmentally safe products
- Use of Green methods of transportation

We calculated a “Environmental Advocacy” score for each respondent. The maximum score a respondent could receive was 5 (he or she engaged in all of the activities inquired about) and the minimum score was 0 (he or she did not engage in any of the activities inquired about). The distribution of scores for each region is shown in the table below, along with the average score among respondents in each region.

Distribution of Environmental Advocacy Scores

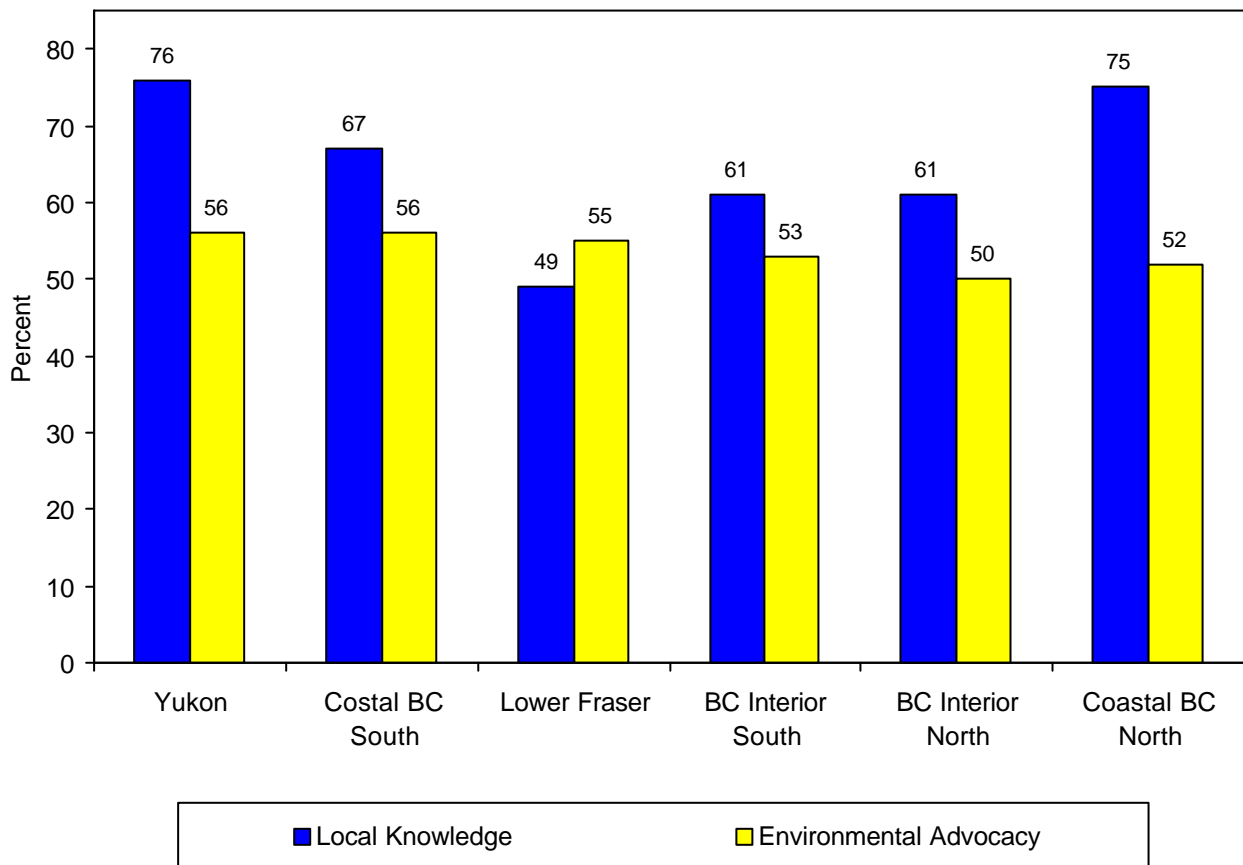
Number of Activities	Region					
	Yukon	Coastal BC South	Lower Fraser	BC Interior South	BC Interior North	Coastal BC North
0	1%	1%	1%	0%	5%	1%
1 (20%)	8%	4%	4%	8%	10%	14%
2 (40%)	29%	33%	33%	34%	37%	33%
3 (40%)	40%	41%	45%	42%	31%	33%
4 (60%)	20%	18%	15%	14%	13%	16%
5 (100%)	4%	3%	2%	2%	3%	3%
Average (% Correct)	56%	56%	55%	53%	50%	52%

Scores for Environmental Advocacy are fairly similar across regions. Scores in the BC Interior North are somewhat lower than scores in the other regions, however.

We also examined the relation between Environmental Advocacy and the attitudes regarding local fish habitat that we assessed in the survey. We found that higher levels of Environmental Advocacy were associated with elevated levels of support for fish habitat protection even if rates of economic growth will reduce, a willingness to pay higher taxes to ensure habitat protection, and lower ratings of water quality. Also note that Environmental Advocacy and Local Knowledge scores were moderately related—higher Environmental Advocacy scores were associated with higher Local Knowledge scores.

The average Local Knowledge and Environmental Advocacy scores for each region are displayed in Figure 21.

Figure 21. Average Local Knowledge and Environmental Advocacy Scores



DEMOGRAPHICS

We asked a number of questions to determine the demographic characteristics of respondents in each of the six regions.

LENGTH OF RESIDENCE

Length of Residence	Region					
	Yukon	Coastal BC South	Lower Fraser	BC Interior South	BC Interior North	Coastal BC North
Less than 5 years	13%	17%	24%	14%	16%	15%
5 to less than 15	29%	35%	36%	30%	28%	27%
15 to less than 25	27%	19%	19%	22%	21%	21%
25 or more	30%	29%	23%	33%	35%	37%
Average (Mean)	19	18	16	20	19	21

Those in Coastal BC North, the Interior, and the Yukon have resided in their communities the longest, followed by those in Coastal BC South and the Lower Fraser.

EMPLOYMENT STATUS

Employment Status	Region					
	Yukon	Coastal BC South	Lower Fraser	BC Interior South	BC Interior North	Coastal BC North
Full-time	62%	47%	56%	41%	56%	54%
Part-time	15%	14%	12%	13%	12%	19%
Student	4%	5%	7%	5%	6%	4%
Retired	7%	26%	16%	31%	14%	10%
Homemaker	4%	5%	6%	5%	7%	7%
Not Employed	8%	3%	3%	3%	4%	4%

Two regions are notable for their disproportionate number of retirees—Coastal BC South and BC Interior South. The other regions are fairly similar to each other with respect to employment status.

Note that those who indicated being employed full or part-time were asked if their employment was related to the fishing industry. Five percent of these respondents (three percent of the entire sample) said that it was. Those in the Lower Fraser and BC Interior South were the least likely to be employed in a fishing-related industry.

LEVEL OF EDUCATION

Level of Education	Region					
	Yukon	Coastal BC South	Lower Fraser	BC Interior South	BC Interior North	Coastal BC North
Less than high school	12%	5%	6%	17%	12%	16%
High school	26%	25%	26%	31%	35%	35%
College or technical	29%	26%	26%	26%	24%	27%
Some university	9%	14%	13%	9%	11%	8%
University degree	17%	18%	16%	9%	13%	8%
Graduate degree	7%	11%	12%	7%	5%	5%

The Lower Fraser and Coastal BC South regions contain residents who have achieved higher levels of education than residents in the other regions.

ETHNICITY

Ethnicity	Region					
	Yukon	Coastal BC South	Lower Fraser	BC Interior South	BC Interior North	Coastal BC North
Caucasian or White	81%	84%	76%	85%	84%	78%
First Nations	10%	3%	3%	2%	5%	12%
Asian	1%	1%	7%	0%	0%	2%
East Indian	1%	0%	4%	0%	1%	1%
Other	4%	10%	7%	9%	8%	5%

AREA OF RESIDENCE

Area of Residence	Region					
	Yukon	Coastal BC South	Lower Fraser	BC Interior South	BC Interior North	Coastal BC North
Urban	43%	36%	50%	35%	38%	30%
Suburban	28%	29%	38%	26%	20%	16%
Rural	27%	34%	9%	34%	41%	49%

Whether respondents identify themselves as living in an urban, suburban, or rural area varies predictably as a function of region of residence.

LAND OWNERSHIP

Respondents were asked if they owned an acre or more of land and, if so, whether or not that land had a waterway beside it. Land ownership obviously varies from region to region, as displayed in the table below.

Land Ownership	Region					
	Yukon	Coastal BC South	Lower Fraser	BC Interior South	BC Interior North	Coastal BC North
Own an acre or more of land with a waterway beside it	14%	10%	6%	10%	22%	21%
Own an acre or more of land (no waterway)	14%	8%	3%	7%	15%	12%
Do not own an acre or more of land	72%	82%	91%	83%	63%	67%

APPENDIX A - COMMUNITY SURVEY BOUNDARIES

APPENDIX B - SURVEY QUESTIONNAIRE

APPENDIX C – CATEGORIZED RESPONSES

Categorized Responses for Question 1

Biggest Environmental Issue Facing Community

- POLLUTION

Air pollution
Water quality in streams/ lakes
Quality of drinking water
Garbage/ Illegal dumping/ litter
Lack of recycling
Pollution of soil
Sewage issues
Noise pollution

Landfill problems
Ozone depletion / Global warming
Water quality in oceans
Sprays / Pesticides
Pulp mills
Skytrain development
Beehive burners
Dust on roads

- HABITAT DESTRUCTION

Deforestation/ Destruction of forest
Killing of wildlife/ Destruction of habitats
Reduction/ Destruction of salmon stocks
Burns bog development

- POPULATION GROWTH/ LACK OF GREENSPACE

Overpopulation/ Overdevelopment/ Urban sprawl
Creating parks/ Having sufficient greenspace

Categorized Responses for Question 7

Perceived Causes of Decrease in Salmon Population

- POLLUTION

Pollution (General)
Industrial/ Chemical pollution
Toxic runoff
Sewage in the ocean/ Ocean pollution
Pulp mill pollution
Pesticides
Oil spills

- OVERFISHING

Overfishing in the streams
Net fishing
Commercial fishing

Aboriginal overfishing
Overabundance of seals
Overfishing of Americans / Alaskans
Sport fishing
Illegal fishing
Overfishing in the ocean

- HABITAT DESTRUCTION

Urban development
Logging
Population growth/ Human encroachment
Destruction of habitat
Man-made dams
Building near rivers and streams
Destruction of spawning grounds
Erosion of stream beds
Road/ Highway construction
Mining

Categorized Responses for Question 9

Perceived Community Benefits from Salmon

- COMMERCIAL

Provides jobs/ Helps our economy	Provides food
Supports commercial fisheries/ canneries	For export trade

- RECREATION

Attracts fishermen to the area/ fishing
Supports fishing as a sport

- ENHANCES COMMUNITY INVOLVEMENT

Supports active community
Brings community together

- ATTRACTS TOURISM

Attracts tourism

- ENHANCES BEAUTY OF REGION

Pleasure knowing fish are there/ Aesthetic

SUPPORTS HEALTHY ENVIRONMENT

Supports natural ecosystem