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# Exploring Yukon's Perspectives on Catch and Release - Moving Beyond Polarization Towards Shared Values

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## Goal and Objectives of the Project

The goal of this project: to explore Yukon's perspectives (especially First Nation and public angling perspectives) on live release, selective harvest, and catch-and-release angling in freshwater fisheries.

Specific objectives of this project include: 1) engaging Governments and stakeholders on their perspectives around live release, selective harvest, and catch-and-release; 2) develop and deliver a live release, selective harvest, and catch and release workshop; 3) develop an understanding of what needs to be addressed in order to change behaviour, and 4) highlight next steps for a Yukon strategy on catch and release (also called live release).

## Background and Context

The term "catch and release" refers to the act of returning fish to the water after an angling experience, and is often used on a voluntary or mandated basis as a management tool for promoting sustainable recreational fisheries (Arlinghaus et al. 2007) (see figure 1). The practice is diverse in execution, ranging from landing a fish after a short angling period and immediately returning it to the water, to that in which a fish experiences exhaustion after a lengthy angling event, is air exposed for several minutes (i.e. for photo opportunities) and subsequently kept in a live well and returned to the water in a different location (Arlinghaus et al. 2007).

The impetus for this project was largely related to: 1) perceptions that some freshwater fish populations were in distress as lakes were being "shut down" or changed to special management and conservation waters (especially lake trout at more accessible Government of Yukon campground lakes), and 2) concerns about excessive catch and release and poor handling practices on the part of public anglers potentially leading to stress and increased mortality of freshwater fish.

Further to this, this project reviewed the live release research conducted by the Yukon Fish and Wildlife Management Board (YFWMB) in the late 1990's and early 2000s:



Figure 1 The practice of catch and release involves landing a fish and returning it to the water. Takhini River Grayling caught using a fly and landed in a rubber net.

- *An Evaluation of Hooking Mortality Resulting from Live-Release Fishing Practices*, prepared by Laberge Environmental Services (1998), presented species specific impacts associated with the impacts of live-release practices on Yukon fish populations. Data was collected from other North American jurisdictions for lake trout, northern pike, arctic grayling, chinook and coho salmon.

- The publication: *Live Release Workshop, Summary and Recommendations*, prepared by the YFWMB, (2001). The workshop represented the final phase of public consultation on the live release issue and the culmination of two years of preparation by the YFWMB.

Discussions at the workshop focused on purpose of live release angling and means of improving the practice in Yukon, as well as recognizing its advantages and limitations as a management tool.

In the 2001 *Live Release Workshop, Summary and Recommendations* report it states:

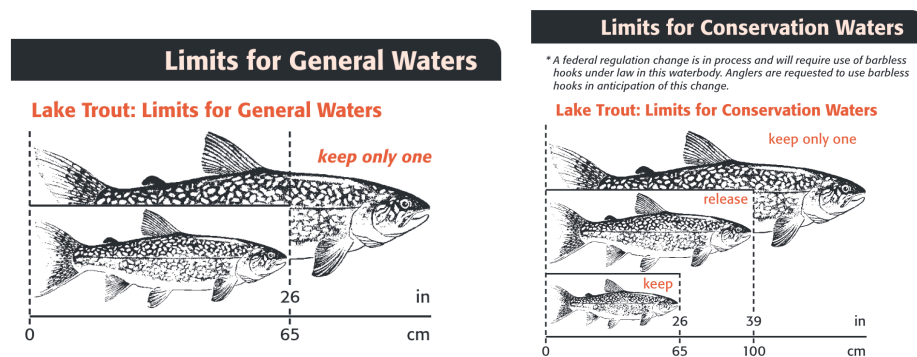
"CATCH AND RELEASE OR LIVE RELEASE ANGLING (LRA) HAS BEEN A LONG-STANDING ISSUE IN THE YUKON, GOING BACK AT LEAST EIGHT YEARS AND BEFORE LAND CLAIMS". LIVE RELEASE ANGLING WAS REFERRED TO AS A MANAGEMENT TOOL ALLOWING FOR SELECTIVE HARVEST AND THAT IT INVOLVES AN ETHICAL DIMENSION RELATED TO CATCHING A FISH FOR "SPORT", BUT IT IS ESSENTIAL TO MANAGING FISH HARVESTS. IT WAS STATED "THAT FIRST AND FOREMOST, WE MUST RESPECT FISH AS A RESOURCE, BUT IT IS ESSENTIAL TO RESPECT ALL PEOPLE OF THE YUKON BY PROVIDING USEFUL INFORMATION SO THAT ANGLERS CAN MANAGE FISH BETTER" (LABERGE ENVIRONMENTAL SERVICES, 2001, P.3).

Through this workshop, the direction for the current management system was supported. "Tools" such as slot sizes, selective harvest, live release, conservation and special management waters are all in the current management "toolbox" and have been in place for close to twenty years (see Figure 2). Discussing with fisheries managers, the two major goals of the current freshwater fishery management strategy includes protecting the large spawners and not limiting the opportunity to participate in the fishery.



Unfortunately, resource scarcity or low populations of specific fish on specific lakes is becoming an issue. When there are fewer fish there are often conflicts between various user groups. One group may feel the other is harvesting too many or impacting fish in a negative way. For example, concerns over lake trout have been brought forward on some of the accessible campground Lakes (i.e. Kusawa Lake, Pine Lake, Snafu Lake, and Tarfu Lake) and more popular larger lakes (i.e. Teslin Lake, Tagish Lake, Bennett Lake, and Lake Lebarge). Recently, some of these concerns have reached a level of public discourse through the media<sup>1</sup> whereby they have reported on regulation changes affecting the ability to retain and harvest specific species on specific lakes.

In the case of freshwater fisheries, there are often multiple stressors (i.e. warm temperatures, predation, disease, habitat loss, harvest, scarcity of food) that can effect a population of freshwater fish at any stage in their life cycle.



**Figure 2: Limits for General Waters and Limits for Conservation Waters from the Yukon Fishing Regulations. Examples of the tools in the fisheries management toolbox.**

To further complicate this, freshwater fisheries fit within a complex, socio-ecological system with multiple facets, and numerous participating user groups (Arlinghaus et al. 2007; Hunt et al. 2013; Arlinghaus et al. 2017). The above-mentioned complexity in freshwater fishery systems makes it difficult to identify the "smoking gun" or the specific cause of the decline. Despite this, there are often perceptions of what might be impacting the resource. Generally, harvest and fishing effort are often cited and become one of the most polarizing issues amongst various user groups and the major source of conflict.

As was stated in the YFWMB publication there is an associated level of mortality by species of caught and released fish (Lebarge Environmental Services, 1998). There are also numerous sub-lethal effects of catch and release such as: alterations to feeding and reproductive behaviours, long-term physiological

<sup>1</sup> <https://www.cbc.ca/news/canada/north/yukon-government-bans-lake-trout-fishing-in-3-lakes-1.3000896> and <https://www.cbc.ca/news/canada/north/yukon-fishing-limits-trout-kusawa-fox-1.4019751>

changes, increased susceptibility to disease and parasite-loading, parental nest abandonment, increased localized travel, lengthened migration period, decreased response to predator stimuli, and post release predation (Cooke et al., 2013; Danylchuk et al., 2007; Thorstad et al., 2003; Thorstad et al. 2007).

One aspect of catch and release fishing that is often overlooked is the fact that most of the research that has taken place, and associated management response "tools" have been driven by biological science and hooking mortality studies after release (Arlinghaus et al. 2007). As Arlinghaus et al. (2007) have stated this has hampered the understanding and disregards the complexity and multi-faceted nature of catch and release. Evaluating perspectives of catch and release requires drawing on historical, philosophical, socio-psychological, biological and managerial insights and perspectives. This perspective is helpful for a variety of reasons such as: 1) improving the science supporting successful fisheries management and conservation, 2) facilitating dialogue between managers, anglers, and other stakeholders, 3) minimizing conflict potentials, and 4) paving the path towards sustainable recreational fisheries management (Arlinghaus et al. 2007 p 75).

In the Yukon context with self-governing First Nations, often conflicts come to light through dynamics between First Nation and the general angling public. For example, Yukon First Nations have special provisions through Chapter 16 of the Umbrella Final Agreement and case law (i.e. 1990 Sparrow decision) providing for the aboriginal right to harvest. The angling public is governed by the *Yukon Territorial Fishing Regulations*, which is a different management structure as those governing First Nations subsistence fishers (see figure 3). It is beyond the scope of this report to explore these differences, however, it provides an important part of the context to fully appreciate the challenges around catch and release fishing.

These sentiments and perceived conflicts are often seen in the traditional media, social media, personal communications, and through dialogue and



**Figure 3 First Nations subsistence salmon fishing with a net on Lake Lebarge.**

discourse at meetings such as Government-to-Government, Renewable Resource Council (RRCs), and YFWMB meetings. Further to this, as self-governance agreements under Chapter 16 evolve, Yukon First Nation Governments will have the ability to set laws around fish and wildlife on their traditional territories. This will require extensive collaboration that will draw on the principles

and best practices through co-management and community based conservation.

General angling is often referred to as "recreational" or "sport fishery" and as previously mentioned, this is different from a First Nation subsistence fishery. The title "recreational" or "sport" for the general public is a term that can immediately provoke a negative reaction. It is for this reason that the term "public fishers" or a "public fishery" will be used within this document to refer to Yukon angling.

Generally speaking, public fishing uses a rod and reel to catch and keep, or catch and release fish. The release of fish is at the heart of this project and also the main point of conflict. The primary argument of the angling public in favour of their use of catch and release fishing is that it provides an opportunity to selectively harvest, participate in the fishery, while minimizing the impact on the resource. Furthermore, public angling advocates would argue, and research supports, that if there were no opportunity to participate in the resource (i.e. fish for a species) there would be no connection to the resource and no incentive to understand it, care about it, and protect it (Schultz P.W. 2011; Young et al. 2016). Many public anglers would consider this connection and associated stewardship essential for the long-term survival of the fish and fisheries. To go fishing means to actively participate in and appreciate nature. Only through participation can human beings see, for example, the beauty and variety of life in nature and thereby learn to respect it (Schwab 2004; Evans 2005).

The irony is that globally, catch and release fishing is seen as the primary conservation tool and ethic, while harvesting fish in many parts of the world is seen as unethical. The opposite is true in northern Canada, where catch and release is perceived as disrespectful and harvesting fish is generally seen as respectful. There are also countries such as Germany that do not voluntarily support catch and release from an animal cruelty perspective and "playing with animals for no good reason" (Aas et al. 2002).

The work completed by the YFWMB in the late 1990's identified this long-standing conflict that pre-dated land claims. Being an issue prior to the 1993 land claims makes this a 25-year debate.

## Project Methodology:

The project methodology was largely based on both formal and informal engagement with Yukon First Nation Governments (YFNs), RRCs, YFWMB, YFGA and anglers. In addition to a number of casual encounters and informal meetings with public anglers, the following is a list of meetings and correspondence received:

- Yukon Fish and Wildlife Management Board through the Angling Working Group – Graham Van Tighem, Frank Thomas, Carl Sidney, John Burdek;
- Yukon Fish and Game Association – Charles Schewen, Gord Zealand;
- Yukon Salmon Sub-Committee – Don Toews, Harvey Jessup;
- Government of Yukon, Environment – Fisheries Dept. – Robert Perry;
- Tr'ondëk Hwëch'in - Natasha Ayoub;
- Carcross Tagish First Nation – Tami Grantham;
- Carcross Tagish Renewable Resources Council;
- Champagne and Aishihik First Nation – Michael Jim, Klukshu Community Meeting (50+);
- Mayo Renewable Resources Council – Barb Shannon;
- Teslin Tlingit Council – James McGrath;
- Teslin Renewable Resources Council;
- Selkirk First Nation - Eugene Alfred;
- Ta'an Kwäch'än Council – Deb Fulmer;
- Wilderness Fishing Yukon – Bernard Stehelin;
- On Top Fly Shop/H2O Troutfitter – Steve Hahn;
- Keepemwet.org - Sascha Danylchuk;
- University of Gotland, Sweden - Dr. Shannon Bower, PhD;
- Fish Ecology and Conservation Physiology Lab, Carleton University - William Twardek; and
- Larry Leigh – Angler.

A meeting about the project and *Keepemwet Fishing* presentation was held on August 15th, 2018 with the YFWMB's *Angling Working Group*.

It should be noted that the term "catch and release", rather than "live release" was used in order to elicit an initial response. Furthermore, in order to maintain neutrality it was specifically stated in advance of any meeting that the project does not advocate for live release, selective harvest and catch and release. It was also essential that this project does not advocate for or against the public



**Figure 4** Keepemwet Fishing is an organization dedicated to sharing principles and techniques for proper handling and release.

or First Nation angling. In other words, the purpose is not to build the case for one approach or another, rather to explore perspectives around the concept.

perspectives for live release, selective harvest, and catch-and-release.

The approach to use *Keepemwet Fishing*<sup>2</sup> (see figure 4) was strategic in that it provided a platform and tangible example to explore

<sup>2</sup> For more information on Keepemwet Fishing visit: <https://www.keepemwet.org/>



Partnering with *Keepemwet Fishing* was not only of benefit for our recreational angling community but demonstrates global best practices around the handling of fish. It was successful in moving discussion from the emotional, "gut feel" response to one of curiosity and discussion. The principles and techniques for proper handling and release were also shared and discussed.

While the focus of the project was largely on freshwater fish (i.e. lake trout, grayling, and northern pike), there are aspects that are relevant for Yukon's salmon fisheries.

Finally, it should be mentioned that initially the proposal looked to develop a short video documenting best practices around handling with *Keepemwet Fishing*. After discussion with the Yukon Fish and Wildlife Enhancement Trust it was decided that a video was premature.

## Project Findings and Discussion

Generally speaking, even after 25 years this is still a complex and polarizing issue. It is also an increasingly important and relevant discussion that speaks to the implementation of land claim agreements, Chapter 16 implementation, community-based conservation, and the co-management of natural resources.

There is not likely to be any movement on catch and release without dedicated effort, cooperation and new ideas. Based on the findings of this project the perspectives around catch and release are still entrenched and polarized "default" positions making it difficult for either party to move forward and have a meaningful discussion. The next few sections will share the pivotal issues, key challenges, and next steps and recommendations.

### Pivotal Issues

There were two pivotal issues from the project seen as perpetuating the challenges around catch and release fishing in Yukon. These are:

#### 1) Clashing World Views Around Catch and Release

As was mentioned catch and release fishing has become the predominant global conservation philosophy and is seen as an ethical practice. Based on the Canadian recreational fisheries data, Cooke and Cowx (2004) suggested that on a global basis, angling catch could be as high as 47.1 billion annually, of which about 17 billion are retained with the remainder caught and released.

In Canada's north, and amongst First Nations catching and keeping fish is seen as ethical and respectful, while the release of caught fish for sport is seen as disrespectful and "playing with food". These are completely opposite perspectives and in large part incompatible and clashing worldviews. It should be mentioned that there are many non-indigenous public anglers that support this perspective as well. There are many public anglers that are purely food fishers and catch and keep fish for food security purposes.

The worldview discussion is cushioned around numerous philosophical traditions around the nature of humans relationship with animals for angling and catch and release. While beyond the scope of this project, briefly the philosophical differences in worldview as stated by Arlinghaus et al. (2007) include: 1) fish have intrinsic value, 2) fish have rights, 3) duties to kill 4) fish, catch, kill and eat, 5) regulatory catch and release, 6) voluntary catch and release, 7) recreational fisheries, 8) fishery management, and 9) use of animals (food, manufacture, pleasure and science). This list, at a very general level speaks to the differences and complexities looking at it from an indigenous and a western, euro-centric world-view.

## **2) A Freshwater Fishery Management System Requiring the Release of Slot-Size or Limits on Fish**

To add more complexity, the *Yukon Fishing Regulations* for public anglers (Government of Yukon, 2018) utilizes size limits (and slot limits) as a management tool which requires the release of fish should they be too large, too small or fit within a slot. In addition, there are limits on many lakes requiring the release of specific species, which may be, incidentally caught while fishing for other species.

The management regime legally requires the release of "out of slot" size fish or public anglers can be charged under the Territorial Wildlife Act. Furthermore, the slot-size tool is often requested by YFNs or RRCs as part of the Chapter 16 Umbrella Final Agreement regulation change process in order to protect specific fish species in specific lakes. This means that those that don't philosophically believe in catch and release are required to utilize this tool in order to protect their fish of interest. This is a difficult position for all and is a part of the conflict and confusion within the Yukon's freshwater fishery.

## **Challenges Identified from the Project**

In addition to the two identified pivotal issues there were a series of specific challenges identified through the project that shed further light on the state of catch and release angling in Yukon.

## Get Beyond "Don't Even Want to Talk About it"

Without exception, those YFNs and RRCs that were approached did not support the general concept of catch and release and were not interested or hesitant to have any dialogue around this topic.

After a few efforts trying to discuss catch and release specifically and not making any progress, the term "live release" was used in order to facilitate discussion. This was immediately recognized as another form of catch and release with little interest in discussion. Not achieving success using the terms "catch and release" and "live release", the focus of the meetings was then changed to initiate discussion around "reducing mortality in released fish". This was also not seen as palatable as it still involved the catching and release of fish.

Finally, after a few false starts, the term "ethical fishing" was used. Ethical fishing and concept of "respect for fish" was a successful driver of discussion. Much of this was due to curiosity towards "ethical fishing" and all could agree that there needed to be respect for fish. Once rapport was established it was possible to discuss perceptions of catch and release.

## Understand Motivations and Getting to Shared Values and Priorities

Based on the *Status of Yukon Fisheries 2010* we know that the primary motivation for anglers is to get outside, relaxation, and spending time with the family fishing. The following quote from the report highlights this perspective:

"FISHING IS A WAY OF LIFE FOR MANY YUKON FAMILIES AND HAS BEEN FOR GENERATIONS. MANY PEOPLE CHOOSE TO LIVE IN YUKON BECAUSE OF THE RELATIVELY PRISTINE ENVIRONMENT AND THE ABILITY TO PARTICIPATE IN OUTDOOR ACTIVITIES. FISH RESOURCES AND FISHING OPPORTUNITIES ARE AN IMPORTANT PART OF THIS ATTRACTION AND ANGLING IS A RESOURCE-HARVESTING ACTIVITY WITH BROAD PUBLIC PARTICIPATION. IMPORTANT LIFE LESSONS ARE LEARNED WHEN A FISH IS CAUGHT, HARVESTED, COOKED, AND EATEN, OR WHEN FISH ARE CAUGHT AND RELEASED FOR CONSERVATION PURPOSES. PUBLIC PARTICIPATION IN ANGLING IS ALSO IMPORTANT FOR CONTINUED AWARENESS AND SUPPORT FOR THE PROTECTION OF FISH HABITAT AND HEALTHY AQUATIC ENVIRONMENTS: PEOPLE WHO FISH ARE ADVOCATES FOR FISH" (ENVIRONMENT YUKON. 2010 P 13).

There are documented cases in literature regarding recreational anglers leading conservation efforts around protecting specific fish species (Granek, E.F. et al. 2008; Barnett, A. et al. 2016; Cooke, S et al. 2016). Other contributions made by recreational anglers include but are not limited to license fees, donations, stewardship activities and commercial guiding economic benefits.

As was mentioned earlier, First Nations have a cultural, spiritual, ceremonial and legal connection to these fish and the respective fisheries (see figure 5). First Nations have always considered themselves stewards of land and part of the landscape with fish and wildlife. The euro-centric approach to fish and wildlife management is much less integrated and holistic. Fisheries management is often directed by western science with less of a focus on the human dimensions or cultural connections to the fishery.



**Figure 5 Ron Chambers, Elder and First Nation Citizen from the Champagne and Aishihik First Nation shares fish stories, songs and ceremony at the 2018 Yukon Salmon Resiliency Conference.**

Getting beyond the polarization, having an honest discussion, understanding each others perspectives, will clearly get all parties closer to shared values. Based on the engagement, FNs and RRCs perspectives and the public anglers appear to be closer than thought. Many Yukon public anglers want to do the right thing as it relates to fish and working with First Nations, however, they have not had the conversation or possess the understanding required to move forward.

At the outset it is clear that all parties can agree there is an interest in maintaining freshwater fish populations for future generations and see the value of participating in the fishery. Other areas of shared values that were highlighted throughout the project included:

- Fish, fisheries and habitat need to be respected;
- An appreciation for nature, being outdoors, and participating in the resource;
- An interest in passing on the knowledge from one generation to the next;
- A responsibility to be stewards of the land and the resources; and
- Fish and fishing are an essential part of the northern lifestyle and essential for a healthy ecosystem.

It is essential that all parties need to move beyond these entrenched polarized positions and focus on common values and priorities. From this place, there is a way to move forward together in order to conserve, protect and share resources. That way should start with a discussion around "respect for fish".

### **General Respect for Fish**

As part of the engagement for this project there were strong feelings from FNs and RRCs about how some anglers were generally treating fish and the fishery. The most prevalent story was related to people catching far too many fish. As



one of the YFWMB Angling Working Group members stated: "being reasonable we can accommodate everyone - except those that want endless resources".

A specific story on Teslin Lake was presented a number of times whereby an angler was boasting about catching and releasing over a hundred lake trout at the mud-line in the spring. There were also references to social media posts on Facebook, Instagram or Twitter whereby Yukon anglers are targeting large, over-slot sized fish and holding them out of water for photographs. This was the initial reason for *Keepemwet Fishing* and their best practices around handling. It was started to combat the proliferation of photography featuring poor handling practices and a lack of respect for fish.

There are numerous concerns about poor handling of fish and the use of certain gear to target many or larger fish. Putting upper limits on how many fish to catch and release through education or regulation were cited as opportunities (i.e. the concept of five and your are done or using double the catch limit as a guideline was suggested).

The example of anglers using downriggers at great depths in the summer heat to target large (or Trophy sized) lake trout was cited as a concern. With the requirement of releasing large slot-size fish in conservation and special management waters, there is a concern of increased mortality given the physiological stress. There are also instances where fish are particularly vulnerable to circumstances around overfishing and predation. Fishing over spawning grounds or at the mouths of cold creeks coming into large warming lake. The use of treble vs. single hooks is often debated and beyond the scope of this project, however the research supports the fact that there is gear and tactics that can result in higher mortality due to deep hooking (i.e. near or on the gills).

"Respect for fish" resonates with all audiences and is likely one of the key values all can agree with. Working together through dialogue and discussion in order to identify what conditions, actions that demonstrate "respect for fish" is something that could move the discussion forward.

### **Common Sense Education**

There was an interest in keeping things simple and not too complicated. The concern was that often the science is too technical for people to understand. There is an endless amount of research and western science around freshwater fish that can take place. Much of it is very specific, technical and only looks at one aspect of the fishery. Keeping things simple focusing on communications and outreach was seen as a positive. It was also pointed out that there is no longer a HEED (Hunter Education Ethics Development) course for fishing.



**Figure 6 Keepemwet Tips on the Takhini River with Grayling - #3 Hold Fish Over Water, #4 Fish Barbless Hooks, #5 Fish with Nets, #6 Fish with Rubber Nets, #8 Photograph Wet Fish, #9 Grip Fish Carefully, and #10 Revive Fish Carefully**

The "let them go and let them grow" catchy slogan was seen as effective for many years. It was suggested that using a campaign and pictures to demonstrate what are good practices would be beneficial. Teaching anglers best practices in fish handling and catch and release, such as the scientifically proven approach taken by *Keepemwet Fishing* is proven and well received. The general principles of their campaign focuses on three principles and a number of techniques (see figure 6):

**Principle 1: Minimize Air Exposure**

**Principle 2: Eliminate Contact with Dry Surfaces**

**Principle 3: Reduce Handling**

**Tip 1: Reduce Angling Duration**

**Tip 2: Follow Local Regulations**

**Tip 3: Hold Fish Over Water**

**Tip 4: Fish Barbless Hooks**

**Tip 5: Fish with Nets**

**Tip 6: Use Only Rubber Nets**

**Tip 7: Carry Hook Removal Devices**

**Tip 8: Photograph Wet Fish**

**Tip 9: Grip Fish Carefully**

**Tip 10: Revive Fish Carefully**

**Perceived or Real Resource Scarcity**

Resource scarcity around the number or condition of freshwater fish can be either real or perceived. For example, with Yukon's lake trout, there may be concerns for specific, accessible, campground lake populations (i.e. Pine Lake, Snafu Lake), however many anglers and the general public may translate this to the species overall. The 2010 Status of Yukon Fisheries states that despite the "healthy populations of lake trout, over half of the angler surveyed felt that the populations were decreasing" (Environment Yukon. 2010, p 49).

The media often does not help with reports of disastrous runs, low productivity, and reporting on the "shutting down of lakes". Anglers may be confused and don't know if fish populations are in trouble or healthy. For example, despite the concerns around Yukon lake trout populations reported in the media, the 2010 Status of Yukon Fisheries states as its main findings "the majority of Yukon fish stocks are healthy and intact. Recreational, First Nations subsistence, commercial, and domestic fisheries are primarily sustainable" (Environment Yukon. 2010, p i).

### Anglers are not all the same

It appears there has been little work done to understand the demographics and respective motivations around recreational fishing in the Yukon. Anglers are largely treated as one homogenous group. The regulations are designed to be simple with a largely "one size fits all approach".

Anglers are not all the same. They fish differently, have different mentalities and motivations, use different tackle, and approach a body of water differently. There are fly anglers, spin anglers, large boat fishers, small canoe fishers, ice fishers, stocked lake fishers, etc.(see figure 7). To highlight these different angling groups one must also consider new communities such as the large Filipino angling population.



**Figure 7 To illustrate how anglers are different, the experience of fishing with kids in a stocked lakes for rainbow trout (Pumphouse Lake) is different than that of kayak fishing with a fly rod for Pike (Snafu Lakes). There are numerous demographic differences within the Yukon's angling community.**

In order to effectively develop suitable management approaches, and target outreach and education approaches one needs to understand these different angler demographics, attitudes and motivations. One notable comment made at an angler meeting was: "all I want to do is be able to go out with my family and catch one dinner size fish to eat with my family". This angler has a specific vision of what the fishery should look like and the management approach that supports their interests. Others may have a different perspective and would like

to catch many fish, until they catch a trophy-sized fish to take a picture with and then release.

### **Aversion to consumptive use**

There has been a general conservation ethic in place for Yukon salmon conservation and to a lesser extent lake trout over the last decade. For example, citizens of the Teslin Tlingit Council have sacrificed and not fished salmon for over fifteen years. This prevailing thinking, also reinforced through the media, has created an aversion to a consumptive use. In the case of salmon, even if stocks rebuild and the public has the opportunity as per Department of Fishery and Ocean's integrated fisheries management plan, education and outreach will be required to rebuild public's interest and participation in the fishery. In addition, advocating for a public fishery in the face of the prolonged conservation efforts may not be acceptable.

With this aversion to consumptive use, many anglers are increasing their efforts at catch and release. The 2010 Status of Yukon Fisheries states that:

*"ANGLER ATTITUDES AND BEHAVIOUR CONTINUE TO SHIFT. NON-RESIDENT ANGLERS HAVE ALWAYS PRACTICED A HIGH LEVEL OF LIVE RELEASE, BUT THE PRACTICE IS BECOMING MORE POPULAR AMONG YUKONERS. ACCORDING TO THE MOST RECENT SURVEYS, APPROXIMATELY THREE-QUARTERS OF ANGLERS ARE NOW IN SUPPORT OF FISHING WITH BARBLESS HOOKS AND HALF ARE IN SUPPORT OF LIVE RELEASE OF FISH (CITED IN YFWMB 1999). THE EDUCATIONAL EMPHASIS IS NOW ON LIVE RELEASE IN MODERATION WHILE PROMOTING A GENERAL ATTITUDE OF RESPECT FOR FISH" (ENVIRONMENT YUKON. 2010, P 21).*

### **Lack of Understanding of Land Claim Agreements and the Aboriginal Right to Harvest**

Yukon's Umbrella Final Agreement (UFA) and First Nation's self-government agreements provide structure around freshwater fisheries and salmon management in Yukon. For example, with Yukon salmon, chapter 16 of the UFA lays out the roles and responsibilities of the YSSC. In addition, the Yukon River Salmon Agreement identifies escapement targets for Yukon River Chinook and Fall Chum on the Yukon River. These treaties and their respective obligations around Yukon salmon provide a legal structure within which salmon management must fit. This is very important for the public and recreational anglers to understand, and is often misunderstood. Recreational fishing in a post land claim context will be considerably different than it was prior to the UFA.

As was mentioned earlier, an understanding of this context is essential as the agreements have implications on access and management to resources in specific areas. Each First Nation with a self-government agreement has a



traditional territory within which they have the responsibility to manage their resources. This can be complex and difficult for the average Yukon angler to understand given the number of self-governing First Nations and respective traditional territories. This understanding, or lack thereof, is often the source of resource conflict between different user groups.

### Few Engagement Opportunities for the Angling Public

Those that work within fish and wildlife know that there are often forums or meetings for specific user groups and Governments (i.e. YFWMB, RRCs, YFNs Lands Managers Meetings) to discuss their localized concerns over specific fish and wildlife species. The angling public does not normally attend these nor is this the most effective way of engaging anglers. Discussions with anglers largely takes place when there is a specific angling regulation change, challenge with a specific resource, or as part of a larger plan (i.e. Special Management Area). Dedicated engagement with public anglers occasionally comes from special interest organizations such as the Yukon Fish and Game Association and the Yukon Salmon Sub-Committee. This is largely dependent on funding, priorities or the general capacity of the organization.



**Figure 8 The Lake Trout and Anglers "Hook Up" event hosted by the Yukon Fish and Game Association in Oct 2017 brought out close to 100 public anglers.**

There are few well-advertised and well-resourced meetings specifically for anglers to discuss their concerns, values or motivations. In 2017, there was a meeting facilitated by Yukon Fish and Game Association and Big Fish Little Fish Consultants to discuss Yukon's lake trout and salmon angling. Approximately 100 anglers gathered for the event spending the evening talking about their perspectives on the

recreational fishery (Zimmermann, D. Big Fish Little Fish Consultants. 2017)(see figure 8). Further to this, there are few options for First Nations and public anglers to discuss and share perspectives with one another.

### The Title "Recreational" or "Sport Fishing"

The names "recreational" or "sport" fishery, that are used in the current domestic management planning process is problematic. The words "recreational" or "sport" suggest that fishing for lake trout or salmon with a rod

and reel is “playful” or merely for fun. This does not accurately reflect many Yukon angler’s values around the fisheries and puts the fishery at odds with First Nations at the outset.

Like First Nation fishers, many public anglers fish for food, ceremony or have a deep respect for fish that is not reflected in this terminology. It is for this reason that recent discussions have preferred to use the word “public fishery”.

### Past Conflicts and Stereotypes



**Figure 9 Past Dalton Post Chinook Salmon Fishery - One of the areas with a previous conflict between First Nations and public anglers.**

Many past fisheries conflicts are deeply engrained in the consciousness of Yukoners. Specifically for salmon, in the 1980’s and 1990’s there was an active recreational fishery, especially at Tatchun River and Dalton Post (see figure 9). Both of these fisheries featured varying degrees of conflict between First Nation users and the public. Reasons for this conflict included: land use conflicts in the area as the result of camping and vehicles use, proximity to subsistence users, poor fishing practices by recreational fishers, lack of education and awareness around First Nations traditional uses and rights, and different philosophies between user groups. While there has not been a recreational fishery for a number of years in these areas, these perceptions and stereotypes still exist. These past conflicts, largely before land claims, are difficult to let go and continue to come up at fishery management meetings.

### Social Media and Photography Influence

The proliferation of social media (i.e. Instagram, Facebook, Twitter) and the speed of communication through the Internet has perpetuated concerns around angling ethics and respect for fish. As was mentioned the impetus for *Keepemwet Fishing* was the concern around poor fish handling being shared within social media and in the mainstream fishing magazines. Pictures of poorly held, dropped, dirty, gill-bleeding, suffering fish for the purpose of a photography increased the potential for fish mortality.

One RRC in particular commented on how disrespectful it was to show pictures of fish in general. One of the predominant concerns lies within First Nations traditional law, whereby fish are not to be talked about, or boasted about or to be played with. Within social media channels, of which there are numerous dedicated to Yukon fishing, many present examples of Yukoners doing exactly

this. Many of these Yukon anglers are well intentioned and specifically want to demonstrate proper handling techniques or to celebrate and respect fish. Unfortunately, this message does not always come through the media and messages and has perpetuated the conflict.

Fishing for ego purposes does not always equate to respect for fish. There are always "bad apples" that can tarnish the reputation of the activity. Sharing a photo of a particularly unique catch with proper handling techniques or capturing the moment of a child's first fish caught is something that many believe should be celebrated. Having a discussion of what is acceptable and what is not, looking at it from different perspectives is part of the solution. Much of this comes down to education and a discussion of what is socially acceptable to share on social media.

### **Requirement to Release Dead or Injured Fish**

Unfortunately, with catch and release there always exists the possibility of mortality with released fish. The YFWMB report *An Evaluation of Hooking Mortality Resulting from Live-Release Fishing Practices* explored this from the perspective of the type of tackle and the impact on specific species. The science of catch and release has grown with a great deal of new findings.

The 2010 Status of Yukon Fisheries states:

"WHEN DONE PROPERLY, THE SURVIVAL RATE FOR LIVE-RELEASED FISH CAN BE AS HIGH AS 94 PER CENT ON AVERAGE TO 76 PER CENT FOR DEEP HOOKED FISH (CITED IN YFWMB 1999). MANY SIGNIFICANT CONTRIBUTORS TO MORTALITY CAN BE CONTROLLED AND REDUCED BY GOOD PRACTICE AND THESE LESSONS ARE SHARED WITH ANGLERS THROUGH THE FISHING SYNOPSIS, OTHER PUBLICATIONS, VIDEOS, AND CONTINUED EDUCATION PROGRAMS. FOR EXAMPLE, THE YFWMB HAS PRODUCED AN EXCELLENT PICTORIAL BROCHURE ON LIVE RELEASE ANGLING. NONETHELESS, THE IMPACT OF EXCESSIVE LIVE RELEASE FISHING CAN BE SIGNIFICANT AND LIVE RELEASE SHOULD ALWAYS BE PRACTICED IN MODERATION"  
(ENVIRONMENT YUKON. 2010. P 22).

Speaking with many anglers, RRCs, YFN, YFGA and the YFWMB, one area of great concern is the requirement to release injured and potentially dead fish. This is a reality and a major factor in this project identifying best practices in the handling and releasing of fish. A number of public anglers have stated that they can't reconcile this, consider it unethical and would keep a dying fish even if it meant going against the regulations.

It should also be noted, how difficult it can be to properly handle and release fish. It takes practice, experience, preparation and there are often circumstances working against it. As stated by Arlinghaus et al. (2007. p 25):

"NUMEROUS SOCIAL AND BIOLOGICAL FACTORS INFLUENCE THE TIME TAKEN FOR AN ANGLED FISH TO RECOVER, OR NOT RECOVER, FROM AN ANGLING EVENT. ANGLER EXPERIENCE, GEAR TYPES, AND ANGLING BEHAVIOURS (I.E., LENGTH OF ANGLING EVENT, PROLONGED AIR EXPOSURE) HAVE BEEN SHOWN TO IMPACT RESPONSE SEVERITY AND RECOVERY TIMES OR MORTALITY, AS HAVE NUMEROUS PHYSICAL AND BIOLOGICAL VARIABLES, INCLUDING WATER VELOCITY, WATER TEMPERATURE AND BODY SIZE OF FISH".

As part of this project, the consultants attempted to fish for grayling and for northern pike with the purpose of holding themselves to a gold standard of handling and release. A number of fish were caught and released during these specific outings, however, it was extremely difficult to confidently state that all fish released did not face an increased potential for mortality.

## Next Steps/Recommendations:

Thus far this report has confirmed that long-standing perceptions of catch and release has not changed in close to 25 years and there is a great deal of polarization on the issue. Further to this, two pivotal issues and a series of challenges were identified that will need to be discussed in order to make progress. The report has also suggested that in order to move beyond polarization there needs to be a discussion, understanding and acknowledgement about shared values and priorities between all user groups. Based on this, the shared values that should be the starting point revolves around "respect for fish".

It is recommended that education, communication and outreach are key to moving forward on the issues and concerns around catch and release. The proposed next steps should be: 1) facilitate dialogue between public anglers and FNs/RRCs and identify shared values and priorities, 2) identify a smaller, strategic working group, and 3) develop a strategic, measurable, education, communication and outreach campaign in partnership with a Yukon First Nation, RRC, YFGA and the public angling community.

The Angling Working Group of the YFWMB should also be met with to discuss the overall methodology, approach and plan. It is suggested that rather than territory wide, the initial campaign should be smaller, manageable, and defined to a particular geographic area or traditional territory in order to be able to demonstrate success.



As was mentioned earlier, normally discussions around catch and release are framed within the western scientific, biological realm, focusing on hooking mortality around released fish. This approach around "respect for fish" should include creating space for indigenous knowledge, traditional law, customary practice and local knowledge. It should also reflect the complexity of this socio-ecological system and draw on historical, philosophical, socio-psychological, biological and managerial insights and perspectives.

The education, communication and outreach campaign should include the following three steps:

### 1) Facilitate Dialogue between Anglers and First Nations/RRC's

The proposed approach is to host a workshop with a small selection of individuals representing various user groups and/or perspectives. The workshop should be facilitated and focus on the information within the research, this report and the personal perspectives of each respective party. It should be an honest discussion, embracing the conflict, differences in worldview and general challenges.

It will be from this, that the different groups will begin to understand each other, identify shared values around the concepts of catch and release and respect for fish. Once these shared values and priorities are identified, the groups can move forward together.

### 2) Identify a Small, Strategic Working Group and Terms of Reference

This diverse working group will be involved in developing a terms of reference and a guiding document for the education, communication and outreach campaign. The group will discuss angler demographics, the agreed upon values and priorities, respect for fish, proper handling techniques and the best ways to communicate with the various angling audiences. The working group will work with a contractor to oversee, develop and deliver the communications campaign.

### 3) Develop a Strategic and Measurable, Education, Communication and Outreach Campaign around "Respect for Fish"

The communications campaign scope will depend upon budget, however, the approach can include: pre and post attitudinal surveys, leaflets/brochures, mail outs, workshops at a community event or a community celebration. What is essential is that the "Respect for Fish Campaign" reflects and respects the differences in worldview and addresses some of the issues and challenges.

It is anticipated that the campaign will develop content based on the workshop and working group findings, however, it is likely to include a number of components:

- A. The First Nations perspective on "respect for fish" and catch and release. This may include aspects of traditional law, language, culture and ceremony.
- B. The public angling perspective on respect for fish and catch and release. This may include the need to stay engaged in a fishery, stewardship and advocacy.
- C. The regulatory and technical aspects including land claim agreements and the Yukon Fishing Regulations (i.e. special management and conservation waters and slot size limits).
- D. Traditional Knowledge and Western Science presented side by side with equal weighting. May feature traditional law aspects, best practices (principles and tips) for live release.
- E. The shared values and specific guidelines for all parties in order to demonstrate respect for fish.

Additional communications materials, such as digital media (websites, social media, videos, TV episodes) may be suggested in order to further leverage the campaign. Additional resources could also be provided for additional pre-and post attitudinal survey design in order to measure changes in behaviour.

Depending on the partnerships and resources leveraged, the campaign can also be scaled up. Partnerships may include: Yukon First Nations, Renewable Resources Councils, Yukon Fish and Wildlife Management Board, Yukon Fisheries-Environment Yukon, Yukon Fish and Wildlife Enhancement Trust, Yukon Fish and Game Association, and the Pacific Salmon Foundation.

As was mentioned, the initial campaign should be smaller, manageable, and defined to a particular geographic area or traditional territory in order to be able to demonstrate success. Should the campaign be successful, it could serve as a pilot project for other fisheries, rivers, and lakes in the Yukon.

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## References

- Aas, O., C. E. Thailing, and R. B. Ditton. (2002). Controversy over Catch-and-Release Recreational Fishing in Europe. *Recreational Fisheries*, Chapter 7:95–105.
- Arlinghaus, R., S. J. Cooke, J. Lyman, D. Policansky, A. Schwab, C. Suski, S. G. Sutton, and E. B. Thorstad. (2007). Understanding the complexity of catch-and-release in recreational fishing: An integrative synthesis of global knowledge from historical, ethical, social, and biological perspectives. *Reviews in Fisheries Science*, 15(1–2): 75–167.
- Arlinghaus, R., J. Alós, B. Beardmore, K. Daedlow, M. Dorow, M. Fujitani, D. Hühn, W. Haider, L. M. Hunt, B. M. Johnson, F. Johnston, T. Klefoth, S. Matsumura, C. Monk, T. Pagel, J. R. Post, T. Rapp, C. Riepe, H. Ward, and C. Wolter. (2017). Understanding and Managing Freshwater Recreational Fisheries as Complex Adaptive Social-Ecological Systems. *Reviews in Fisheries Science and Aquaculture*, 25:1–41.
- Barnett, A., Abrantes, K. G., Baker, R., Diedrich, A. S., Farr, M., Kuilboer, A., ... & Stoeckl, N. (2016). Sportfisheries, conservation and sustainable livelihoods: a multidisciplinary guide to developing best practice. *Fish and fisheries*, 17(3), 696–713.
- Cooke, S.J., Raby, G.D., Donaldson, M.R., Hinch, S.G., O'Connor, C.M., Arlinghaus, R., Danylchuk, A.J., Hanson, K.C., Clark, T.D., and Patterson, D.A. (2013). The physiological consequences of catch-and-release angling: perspectives on experimental design, interpretation, extrapolation and relevance to stakeholders. *Fisheries Management and Ecology*, 20, 268–287.
- Cooke, S. J., Z. S. Hogan, P. A. Butcher, M. J. W. Stokesbury, R. Raghavan, A. J. Gallaghe, N. Hammerschlag, and A. J. Danylchuk. (2016). Angling for endangered fish: Conservation problem or conservation action? *Fish and Fisheries* 17(1):249–265.
- Cooke, S.J. and Cowx, I.G. (2004). The role of recreational fishing in global fish crises. *BioScience*, 54(9), 857–859.
- Danylchuk, S. E., Danylchuk, A. J., Cooke, S. J., Goldberg, T. L., Koppelman, J., and Philipp, D. P. (2007). Effects of recreational angling on the post-release behavior and predation of bonefish (*Albula vulpes*): the role of equilibrium status

at the time of release. *Journal of Experimental Marine Biology and Ecology*, 346(1), 127-133.

Environment Yukon. (2010). Status of Yukon Fisheries 2010: An Overview of the State of Yukon Fisheries and the health of fish stocks with special reference to fisheries management programs. *Yukon Fish and Wildlife Branch Report MR-10-01*. Whitehorse, Yukon.

Evans J.C. (2005) *With Respect for Nature: Living as Part of the Natural World*. Albany: State University of New York Press.

Government of Yukon. (2018), *Yukon Fishing Regulations Summary 2018-19*, Environment Yukon.

Granek, E. F., E. M. P. Madin, M. A. Brown, W. Figueira, D. S. Cameron, Z. Hogan, G. Kristianson, P. De Villiers, J. E. Williams, J. Post, S. Zahn, and R. Arlinghaus. (2008). Engaging recreational fishers in management and conservation: Global case studies.

Hunt, L. M., Sutton, S. G., and Arlinghaus, R. (2013). Illustrating the critical role of human dimensions research for understanding and managing recreational fisheries within a social ecological system framework. *Fisheries Management and Ecology*, 20(2-3), 111-124.

Laberge Environmental Services, (1998), *An Evaluation of Hooking Mortality Resulting from Live-Release Fishing Practices*, Whitehorse, Yukon.

Schwab, A. (2004). *Dear Jim - Reflections on the Beauty of Angling*, Ludlow, UK: Merlin Unwin Books.

Schultz, P. W. (2011). Conservation Means Behavior. *Conservation Biology* 26:6

Thorstad, E.B., Næsje, T.F., Fiske, P. and Finstad, B. (2003). Effects of hook and release on Atlantic salmon in the River Alta, northern Norway. *Fisheries Research*, 60(2), 293-307.

Thorstad, E. B., Næsje, T. F., and Leinan, I. (2007). Long-term effects of catch-and-release angling on ascending Atlantic salmon during different stages of spawning migration. *Fisheries Research*, 85(3), 316-320.



N. Young, S. G. Hinch, and S. J. Cooke. (2016). Getting past the blame game: Convergence and divergence in perceived threats to salmon resources among anglers and indigenous fishers in Canada's lower Fraser River. *Ambio* 45(5):591–601.

Yukon Fish and Wildlife Management Board, (2001), *Live Release Workshop, Summary and Recommendations*, Whitehorse, Yukon.

Zimmermann, D., Big Fish Little Fish Consultants. (2017). *Yukon's Lake Trout and Salmon Anglers Hook-Up Meeting Report*, Whitehorse, Yukon.