Project: Traditional Knowledge and Endangered Species

Introduction / If the Nechako white sturgeon population does not recover soon, it will likely become genetically extinct. The Upper Fraser Fisheries Conservation Alliance (UFFCA), in partnership with Ecotrust Canada and others, are working to prevent just that.

In 1991, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) listed the B.C. white sturgeon (*Acipenser transmontanus*) as a ‘vulnerable’ species. By 1994, all recreational harvest of B.C. sturgeon was suspended. By 1998, they were considered ‘imperiled and in danger of possible extinction’. In 2006, the Nechako and Upper Fraser populations of white sturgeon (Nechako white sturgeon) were Schedule 1 listed as ‘Endangered’ under the Species at Risk Act (SARA). As such, it becomes illegal to kill, harm, harass, capture, take, possess, collect, buy, sell or trade white sturgeon unless a specific SARA permit or agreement is put in place.

Over the last 50 years, since the Kenney Dam was built, the Nechako white sturgeon population has dropped to less than 600 fish, most of which are over 30 years old. Add to this the fact that these sturgeon don’t inter-breed, the fact that they don’t reproduce until males are 15 and females 20, and that, once mature, females only spawn every four to 10 years, and what’s left is an increasing lack of juveniles. With this in mind, UFFCA asked Ecotrust Canada to help facilitate and coordinate the drafting of an Aboriginal Traditional Knowledge (ATK) Protocol, including a community-based research methodology for communities to gather their own traditional knowledge on this species. Led by our Knowledge Systems & Planning team, the project works to increase awareness of, and capacity to protect, ATK, and ensure its proper use in decision-making.
ABOUT THE UFFCA

The Upper Fraser Fisheries Conservation Alliance (UFFCA) was created in 2005 by First Nations in the Upper Fraser watershed to provide advice and support services to its member communities on a range of issues from conservation, to fish harvest planning and management, to environmental assessments, to field data collection science.

The UFFCA primary objectives include working to further the fisheries and aquatic resource related interests of the Upper Fraser First Nations. They promote and encourage:

- Inclusive and transparent decision-making regarding fisheries issues in the UFFCA area;
- Stewardship of fisheries resources and sustainable harvesting practices;
- Sustainability in fisheries management, decision-making and practices; and
- Cultural values associated with historical practices.

ATK IN FISHERIES

In certain federal statutes there is a requirement to consider Aboriginal peoples’ knowledge when making management decisions, particularly related to natural and cultural resources. SARA requires that COSEWIC carries out its functions using the best available information, which includes ATK. SARA also requires that government departments consider ATK when developing and implementing recovery measures to protect species at risk. However, while the federal government establishes its policies for working with ATK in respectful and meaningful ways, First Nation communities often lack the capacity and resources to ensure their ATK is protected and used properly.

Understanding what ATK is from a First Nations’ perspective is important for ensuring terminology is well interpreted and consistently used. Often, processes used for planning and decision-making break down as a result of misunderstandings and misrepresentations in this regard. In the case of fisheries management within SARA, there are a series of challenges that arise due to the existing Aboriginal Rights to fish for Food, Social and Ceremonial purposes. In the case of the First Nation members of the UFFCA, Nechako white sturgeon, listed as endangered under SARA, are periodically by-catch of gillnet fishing for salmon.

For thousands of years First Nations in the Nechako and Upper Fraser Watersheds used a selective harvesting method of fish weirs (or fences), which sustained their fishery (see middle photo above). However, because of an historical agreement—the Barricade Treaty signed in 1906—these First Nations agreed to stop using their selective fish weir methods. In exchange, they would use nets for fishing, as well as take up farming, using equipment allocated through the Barricade Treaty. This occurred during a time of active colonial policies to alter First Nations livelihoods and improve commercial fisheries for canneries.

The challenge facing fisheries managers and policy makers now, is to revisit and redevelop the capacity of First Nations to collect and protect their ATK, and then incorporate it in management decisions in ways that give First Nations control of their data and how their knowledge is used. While legal mechanisms exist to limit Aboriginal use of fisheries resources for conservation efforts, it creates an environment of hostility and resentment since, in nearly all cases, First Nations use of such resources were not the source of declined fish populations. In the case of Nechako white sturgeon, for example, the decline in population over the last 50 years was mostly due to the combined factors of the Kenney Dam being built, and industrial forestry and agriculture, all of which have impacted water flows and temperatures. Habitat disturbances and loss are also contributing factors to the decline of this ancient creature.

Further, protecting ATK from misuse and misrepresentation is a critical concern for First Nations, particularly in relation to conservation efforts.

Nechako white sturgeon

- First Nations consider this a sacred fish, naming it Lhecho (‘Big Fish’) in Dakelh.
- If caught it was eaten quickly, being unsuitable for preserving through drying/smoking.
- These fish can grow up to 3 metres and have no scales, showing instead bony plates called scutes.
- They rely on touch and taste to feed.
ECOTRUST CANADA’S ROLE

Our project began with a series of community meetings in Prince George and Fort St. James, and several workshops with First Nations fisheries representatives, during which the purpose of the project was discussed, and important work was done in developing an Aboriginal Traditional Knowledge Protocol and designing a community-based research methodology for the collection of their ATK.

Ecotrust Canada sees the partnership with UFFCA as a means to find important solutions with communities for improved fisheries management and community planning. The Nechako and Upper Fraser watersheds are important regions that form part of the headwaters for Fraser Basin, one of the world’s largest undammed salmon rivers. This project fits into Ecotrust Canada’s key 2011-12 initiatives:

- Ecosystem-based Forestry
- Traceability
- Qwiqwiq-sap Initiative
- Fisheries for Communities
- Innovative Land Use Planning Tools
- Community Mapping & Planning

Ecotrust Canada’s team, consisting of Jaime Sanchez, MCIP, Manager for Knowledge Systems & Planning, and Pamela Perreault, PhD Cand., Researcher and Facilitator, played the role of facilitating meetings with UFFCA staff and guiding the creation of the ATK Protocol and community-based research methodology. An iterative process with the participating First Nations was used to ensure that project goals were clear, particularly the understanding of the importance of ATK in conservation-related legislation and policies.

The work we are doing with UFFCA further signifies a growing effort to ensure that ATK is properly protected and used in community planning and decision-making. As part of the recovery planning for Nechako white sturgeon, ATK can provide valuable insight into several areas:

- Identifying critical habitat;
- Linking cultural and spiritual teachings to management requirements and planning;
- Developing partnerships for building capacity and support for community-based conservation;
- Improving scientific knowledge for fisheries management and incorporation of ATK into conservation policies and laws.

To this end, the community-based research methodology being developed by Ecotrust Canada, in close partnership with communities and UFFCA, incorporates methodologies developed by Terry N. Tobias and outlined in his book *Living Proof: The Essential Data-Collection Guide for Indigenous Use-and-Occupancy Map Surveys*, an award winning book co-published by Ecotrust Canada and the Union of BC Indian Chiefs. If the project receives further funding, we anticipate coordinating further workshops on these methodologies.

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**Upper Fraser Fisheries Conservation Alliance**

**Major Watersheds in the Upper Fraser**

Stuart, Nechako, West Road (Blackwater), Chilcotin, Upper Fraser, Williams Lake, Quesnel, Quesnel, Mcgregor, Prince George, Revelstoke.
CONCLUSION

In an era when reconciliation with indigenous communities around the world is slowly, but surely, improving, Ecotrust Canada believes that First Nations’ traditional knowledge must be protected and used according to their protocols. This project has resulted in an Aboriginal Traditional Knowledge Protocol that will be shared with other First Nations, organizations and government agencies that can be used as a template for other initiatives of a similar nature. Ecotrust Canada has also recently supported the implementation of United Nations Declaration on the Rights of Indigenous Peoples (UN Declaration), which outlines a global minimum standard for the respect, dignity and survival of indigenous peoples. Historically, indigenous peoples around the world have been subjected to abuses and human rights violations and this UN Declaration is a vital instrument for advancing the economic, social and cultural development of indigenous peoples, a cornerstone of building resilient communities. Implementing the UN Declaration in all our initiatives with First Nations communities will ensure that Ecotrust Canada supports harmonious and cooperative relationships between States and indigenous peoples.

The resulting Aboriginal Traditional Knowledge Protocol is an extremely important document for First Nations, organizations and government agencies that work with or encounter Aboriginal Traditional Knowledge. First Nations want their knowledge protected from abuse and misuse. Most also want their knowledge used on equal footing with western science, particularly in fisheries management. Two First Nations have already agreed to sign the ATK Protocol, which is an agreement between the First Nation Band Council and UFFCA; the future objectives of the project will be to have other First Nations voluntarily sign the ATK Protocol and continue the collection of Aboriginal Traditional Knowledge. In addition, capacity building through training workshops in research methodologies will be included so that First Nations communities collect, store and protect their own community’s ATK.

If the Nechako white sturgeon population does not recover soon, it will likely become genetically extinct. Which is why this work is being done, and why many other efforts are being made by organizations like the Nechako White Sturgeon Recovery Initiative, UFFCA, Carrier Sekani Tribal Council, and local and First Nations communities in the Nechako and Upper Fraser Watersheds to save the sturgeon. The incorporation of Aboriginal Traditional Knowledge represents thousands of years of collective, local knowledge and experiences that will complement and improve planning and recovery initiatives of this important species.

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For further information please contact:

Jaime Sanchez, MCIP
Manager, Ecotrust Canada
Knowledge Systems & Planning
T: 250.713.1129
Email: jaime@ecotrust.ca

Brian Toth, MBA, RP.Bio
Executive Director, Upper Fraser Fisheries Conservation Alliance
Email: briantoth@shaw.ca

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www.recovery.gc.ca

Additional Resources & Further Reading:
www.uffca.ca
www.nechakowhitesturgeon.org
www.biocultural.iied.org/tools/community-biocultural-protocols
www.fnfisheriescouncil.ca

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