

# EXECUTIVE SUMMARY

*Indigenous Stewardship of Salmon Watersheds Webinar 2*  
**Taking care of knowledge, taking care of  
salmon: Indigenous Data Sovereignty**



**Barnes, S., Benson, R., Burrows, D., Chamberlin, B., Charlie, B., Degai, T., Dick, D., Duncan, A., Marsden, T., Paul, M., Prince, N., Reid, A., Scotnicki, C., Speck, K., Van Der Minne, C., Walkus, J., Webb, J., Wilson, B., and 15 anonymous knowledge holders.**

With support from the [Watershed Futures Initiative Coordination Team](#)



## CITATION

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## INTENDED AUDIENCE AND ACKNOWLEDGEMENTS

This report summarizes the outcomes of the June 2, 2022 webinar, *Taking care of knowledge, taking care of salmon: Indigenous data sovereignty*, convened by the Watershed Futures Initiative (WFI). In keeping with the WFI's commitment to support Indigenous ownership, control, access, and possession of Indigenous knowledge (e.g. the principles of OCAP®), all that was shared by webinar participants remains the property of the knowledge holders, including members of the advisory committee and the following:

*Ryan Benson, M.Sc., Okanagan Nation Alliance; Danielle Burrows, Marine Stewardship Coordinator, Nuu-chah-nulth Tribal Council; Byron Charlie; Tatiana Degai (Itelmen people, Kamachatka, Russia; Assistant professor, University of Victoria); David Dick (WSANEC Leadership Council); Alexander Duncan, Chippewas of Nawash Unceded First Nation; Tara Marsden/Naxginkw; Maya Paul (supporting the North Coast Cumulative Effects Program); Nathan Paul Prince (Traditional Land Use Coordinator); Christine Scotnicki; Kelly Speck, 'Namgis First Nation; Colton Van Der Minne, from Tla'o'qui-aht First Nation; Jim Webb, Policy Advisor, West Moberly First Nation-Lands; K\_ii'iljuus (Barbara J. Wilson) MA, St'awaas X\_aaydaG\_a, Haida Gwaii, BC, and 15 additional First Nations knowledge-holders and technical staff who elected to remain anonymous.*

This webinar took place virtually, and all participants were based in British Columbia and included exclusively a Tier-1 audience (First Nations knowledge-holders and technical staff). The viewpoints shared in this report represent diverse perspectives and experience from across British Columbia and beyond. Some of the experiences and lessons shared, however, may also be applicable for First Nations, Métis, and Inuit Peoples across Canada, and Indigenous Peoples beyond.

## EXECUTIVE SUMMARY

Addressing the cumulative effects of land-use activities and climate change that harm salmon is an urgent challenge – a challenge that calls for new approaches to taking care of, and managing, salmon and their watersheds. Indigenous Peoples have stewarded salmon and their habitats for millenia and have the fundamental rights and title to maintain and protect salmon. As stewards, rightsholders, and knowledge holders, Indigenous Peoples must play key roles in the management of cumulative effects.

The webinar, *Taking care of knowledge, taking care of salmon: Indigenous data sovereignty* was held on June 2, 2022 to identify tangible action steps and implementable recommendations for First Nations sovereignty and governance of Indigenous data related to cumulative effects and climate change in salmon-bearing watersheds. There were 43 contributors from across British Columbia and Canada (Figure 2).

This webinar is the second in the *Indigenous Stewardship of Salmon Watersheds* series. In the first webinar in June 2021, more than 50 contributors from Indigenous Nations across Western Canada came together to share their experiences related to cumulative effects in salmon watersheds. Among other key topics, contributors highlighted that Indigenous data sovereignty is a key requirement for First Nations as they work to conserve salmon in their territories.

The online event included five presentations of case studies from: Dr. Andrea Reid, citizen of the Nisga'a Nation and Assistant Professor and PI for the Centre for Indigenous Fisheries at the University of British Columbia; Sean Young, Manager/Curator of Collections and lab of Archaeology–Saahlinda Naay "Saving Things House" (Haida Gwaii Museum); Tara Marsden, Wilp Sustainability Director–Gitanyow Hereditary Chiefs; Jennifer Walkus, Elected Councilor–Wuikinuxv Nation; Dr. Megan Adams, Postdoctoral Fellow, Conservation Decisions Lab at the University of British Columbia; and, Kelly Speck, Elected Councilor–'Namgis Nation.

The presentations were followed by discussions in small groups. Notetakers recorded the conversations, and the notes were analyzed to identify the major themes outlined below. Contributors shared reflections from the presentations and case studies, described the current landscape of data sovereignty in British Columbia, and shared existing strategies and resources. They also discussed recommendations for non-Indigenous researchers who are working on First Nations territories.

The case studies resonated with many contributors. In particular, contributors shared that they appreciated Andrea Reid's call for Indigenous youth to spend time on the land learning how to steward their territories, which will facilitate their ability to become 'data warriors' for their Nations. Several people highlighted Sean Young's comment, "nothing about us without us." Contributors were inspired by Jennifer Walkus and Megan Adam's case study and appreciated learning about the Wilp Wii Litsx Meziadin Indigenous Protected Area from Tara Marsden, and how the Gitanyow have utilized their own knowledge and research to refine their own land use plan and manage pressure from industry on their territories. Finally, many contributors noted that Kelly Speck's discussion of ways that First Nations can build capacity were helpful and inspiring.

The case studies and small group discussions revealed many shared perspectives of the current data sovereignty landscape in British Columbia. While there have been some positive developments in relationships between non-Indigenous researchers and First Nations in British Columbia, there is also much room for improvement. Traditional ecological knowledge is being increasingly recognized and appreciated, but there is still a tendency for policy-makers to dismiss TEK until western scientific methods have "proved" what Indigenous Peoples already know. In addition, discussions highlighted an urgent need to transition away from current policies that require Indigenous Peoples to track and report fish catches and share other environmental data

without having a place in subsequent decision-making. First Nations are also bogged down by reporting requirements for grants and other funding, which undermines Indigenous data sovereignty because the Nations spend time and resources collecting data required for outside agencies that may not necessarily support decision-making by the Nations themselves. Indigenous communities are also often not funded for the work they do to care for and steward ecosystems and fish stocks, but are increasingly being asked to provide these data to government agencies with little or no control over how the data are used.

The contributors also described the challenges they face when asserting sovereignty over Indigenous data. All of the discussion groups described lack of capacity and/or lack of funding as a problem limiting the ability of First Nations to both collect data for themselves, and then to manage and control those data once they are collected. Some groups mentioned that even when funding is available, they have difficulty recruiting Indigenous scientists and have also found it challenging to attract youth to work for the Nation. In addition, there are differences in scale between the United Nations Declaration on the Rights of Indigenous Peoples, OCAP®, and other initiatives supporting Indigenous data sovereignty, and the needs of their communities. In some cases, unresolved issues between First Nations over territorial boundaries or governance structures means there may be questions about who has the authority to grant permission for accessing or collecting data, making it difficult for Nations to create internal laws or regulations to inform data sharing agreements. Finally, discussion groups highlighted the need for Nations to work together and to communicate among themselves, for example to coordinate management strategies and actions such as closures or share data about fish populations.

Many contributors shared the strategies that their Nations already have and are currently using to assert ownership and control over their data. Importantly, however, there was no single approach to Indigenous data sovereignty; instead, contributors highlighted that solutions require flexibility and listening to everyone to create the

best protocols for a given context. Learning about how other Nations approached data sovereignty was helpful for many contributors because different Nations are in different places, and also have different needs and approaches. Some Nations have an open approach to sharing data because they want government and industry to have access and use it, while other Nations have created policies requiring that external researchers sign agreements in advance of coming to their territories, to ensure that the Nations continue holding the rights to those data. Not all Nations have created template data sharing agreements or protocols, but even among those that did, agreements varied by Nation. Several Nations have relied on outside resources to support Indigenous data sovereignty, which is a way to assert control over Indigenous data while working to build capacity within their Nations that would reduce reliance on external services in the future.

Finally, the discussion groups brainstormed steps for First Nations and recommendations for external researchers hoping to work on First Nations territories in British Columbia.

Contributors outlined some potential steps for First Nations to advance their data sovereignty:

1. Determine who is responsible for granting permission for external parties to access data and/or First Nations territories for research;
2. Create steps or policies for external researchers and/or neighbouring Nations for data sharing and/or requesting permission to access data or First Nations territories;
3. Establish a plan for data collection and/or monitoring;
4. Build capacity and secure funding for storing and managing Indigenous data;
5. In the meantime, consider using outside technical tools (such as TrailMark or Community Knowledge Keeper to help manage data);
6. Create tools that would support data collection, management, and dissemination;
7. Consider additional methods that would help to ensure control and maintain ownership over Indigenous data if necessary.

# STEPS FOR FIRST NATIONS

## 1. Determine who is responsible for granting permission to access data and/or First Nations territories for research.

Groups highlighted that this step will require recognizing multiple authorities (e.g. hereditary and elected leaders) and reconciling governance systems—which is sometimes easier said than done. Nations may be able to look to examples of other Nations that have successfully reconciled hereditary and elected governance systems.

## 2. Create steps or policies for external researchers and/or neighbouring Nations, for data sharing and/or requesting permission to access data or First Nations traditional territories.

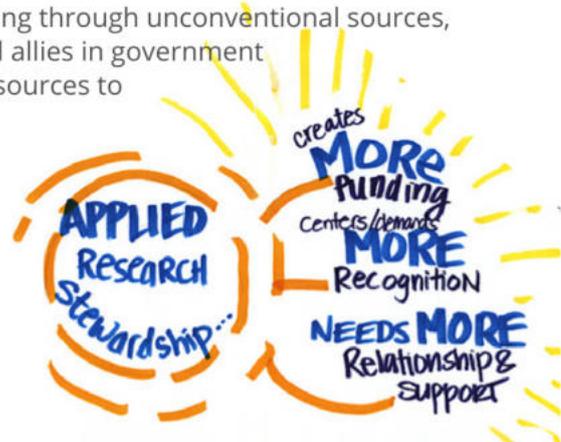
These steps or policies will vary depending on the needs of each Nation, but may include requiring research or data-sharing agreements in advance. Frameworks such as OCAP® and/or the CARE Principles aim to support Nations as they assert data sovereignty and may provide guidance for ensuring that First Nations have control over data collection processes and their communities, and retain ownership and control over how this information can be stored, interpreted, shared, or used. Agreements for external parties can include stipulations to protect Indigenous data sovereignty, for example that the Nation holds legal rights and ownership over the data collected and/or that the Nation requires permission prior to data sharing or publication. Policies or agreements may also stipulate the format via which data are shared; reports that summarize data may be preferable to some Nations than sharing raw data, because they have less control over how raw data are interpreted. Importantly, these tools should ensure that Nations have access to data collected on their territories, as access to data is important to support effective First Nations governance of their resources.

## 3. Establish a plan for data collection and/or monitoring.

Most Nations are already collecting data, but groups shared that these data are not often for their own use and may go to external agencies or funders. What data would be useful to your Nation, if they were not restricted by these external requirements? Creating a plan, even if it is not immediately feasible, may help to establish goals for Nations who seek to use their own data to inform management decisions.

## 4. Build capacity and secure funding for managing Indigenous data.

This is perhaps the biggest and most difficult task facing First Nations who seek to collect and manage their data, and may involve several steps. In some cases, Nations may be able to pool resources to support collective efforts to manage data, for example through a centralized data hub. There may also be external organizations that can support capacity-building. For example, the [Indigenous Research Support Initiative](#) at the University of British Columbia has a mandate to repatriate Indigenous data and also maintains a list of resources for First Nations, including funding sources. Nations can also learn from what other Nations have done and their successes. For example, some Nations have had success securing funding through unconventional sources, such as a local Public Utilities District. Others have found allies in government agencies who are willing to be creative in reallocating resources to First Nations. Extending land-based learning to younger generations will help to build capacity for data collection and the governance of Indigenous data, and may also inspire First Nations youth to become involved in these spaces.



**5. Consider using outside tools to help manage data.**

For Nations that are already collecting data for their own initiatives, using third-party data storage sites or applications such as [TrailMark](#) or [Community Knowledge Keeper](#) to manage data can help to bridge the gap until Nations have the capacity to manage data in-house.

**6. Create tools that would support data collection, management, and dissemination.**

Some Nations have already created these resources within their Nations, for example online data hubs and mobile apps. These Nations may be able to share ideas and experiences that could support other Nations. Alternatively, **First Nations may want to consider pooling resources to create a neutral, centralized data hub** where multiple Nations are able to store their data while retaining access, ownership, and control. For example, the the [Inuit Qaujisarnirmut Pilirijjutit \(IQP\)](#) requires that researchers secure permission and go through ethics approval before accessing recorded interviews with Inuit Peoples. This approach also reduces “research fatigue” among community members by limiting repeated interview requests that may duplicate previous efforts.

**7. Consider methods that could further maintain ownership and control over Indigenous data, if necessary.**

For example, copyrighting data using [Traditional Knowledge labels](#) may provide legal recourse if data are used inappropriately. Alternatively, retaining data in formats that are only accessible to people within the Nation may also prevent its misuse (for example, recording interviews in Indigenous languages).



## RECOMMENDATIONS FOR EXTERNAL RESEARCHERS

Contributors noted that external researchers, policy makers, and agencies can support efforts to assert Indigenous data sovereignty. They made several recommendations for external researchers who work on Indigenous territories in British Columbia.

- **Before doing anything else, educate yourself.**

Learn about the proper and respectful ways to approach and engage First Nations. Read about Indigenous data sovereignty, familiarize yourself with existing tools for supporting Indigenous data sovereignty in Canada and BC (such as [OCAP®](#) or the [CARE Principles](#)), review guidelines and frameworks that support engagement with First Nations communities (such as the [Kitasoo Xai'xais Research Guide](#)), and do some self reflection to ensure that you have good reasons and intentions for seeking to work with First Nations. In particular, non-Indigenous researchers should understand that many Nations have historical and ongoing reasons for being wary of external researchers, and have some preliminary understanding of these reasons so that they can avoid making the same mistakes. The WFI has compiled a list of some potentially helpful resources about Indigenous data sovereignty for anyone hoping to educate themselves ([Appendix 2](#)).

- **Engage with the Nations before planning a research or monitoring project.**

Nations should have an option to collaborate with researchers to ensure that the knowledge produced is useful to them. This may require negotiation and consultation that occurs well in advance of the research project. Different research projects and approaches to collecting data may require different policies to guide how the data are used, shared, and protected. Having early conversations with communities can help them to develop these policies and to build capacity for dealing with questions about managing data in the future. In addition, approaching Nations in a respectful way in advance helps to build trust between researchers and community members, and this remains an important requirement for collaborations as First Nations find that TEK remains undervalued and that external researchers or policy-makers do not always have the best interests of the Nation in mind.

- **Be transparent.**

This is an integral part of building trusting relationships with First Nations. Building trust takes time and in some cases may not be feasible in the short or medium term because of a legacy of past experience. For example, workshop contributors were not convinced that they could build trust with DFO because that agency has continued to withhold data protecting industry at the expense of First Nations. This lack of transparency has only added to the lack of trust between many First Nations and DFO. Therefore, transparency is integral and the First Nations must have access to and control over data, including when and how it is shared publicly.

- **If the Nation chooses to collaborate with a given researcher or project, the researchers should consider ways to co-produce knowledge outputs so that First Nations are involved through all steps of the project, from project design through producing final outputs and products.**

Currently, Nations are collecting data to meet funding requirements and/or provide information to external parties, but without having any power to engage in decision-making or to control how those data are used. Knowledge co-production is one way that workshop contributors thought external researchers could stop perpetuating this pattern. For example, when knowledge is truly co-produced, the research is helpful for Nations and undergoing data collection together also builds capacity for community members who may want to collect and manage data in the future. Another possibility is for collaborators to appoint an advisory committee that includes First Nations community members who are on the research team as well as the external researchers. In this way, community members can help guide discussions for what can be done, what needs to be done, and can guide the research in the proper way so that it meets the needs of the community.

- **Find ways to redirect funding and resources to First Nations.**

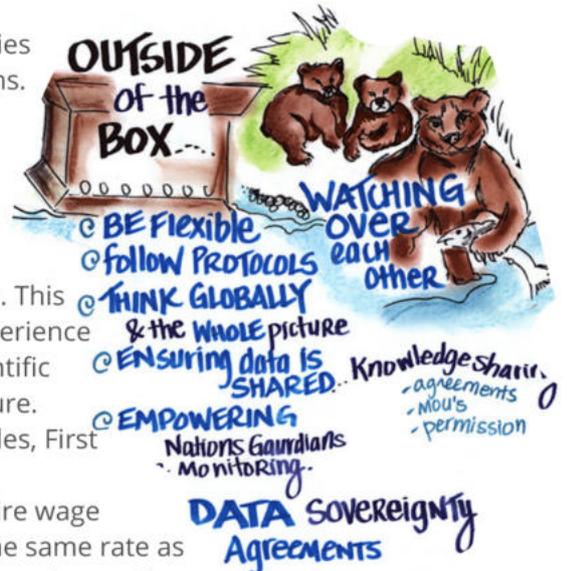
Funding and capacity-building were two of the key challenges facing First Nations as they work towards data sovereignty. In particular, Nations highlight a need for reliable, long-term funding, rather than short-term funding as is typical with academic and/or government support. Securing such long term and stable funding support may be outside the ability of an individual researcher, but is something to be aware of in case there are opportunities for long-term research partnerships that may support a Nation. Groups also shared additional ways that external researchers can support First Nations financially:

- **Be willing to think outside the box.** Contributors shared that they have worked with allies in universities or government agencies who are willing to get creative to redirect resources to the Nations.

- **Pay First Nations community members who support the research or project, and ensure that they are paid at the same rate as external researchers and consultants.**

Researchers commonly hire interns or research assistants to support data collection and other tasks. Rather than hiring from outside of the Nation, work with communities to hire from within. This also supports capacity-building as community members gain experience with fieldwork and may find ways that they can use western scientific methods to support data collection for their own uses in the future. Given the tendency to undervalue TEK in research and policy circles, First Nations community members are often paid at lower rates than external 'experts'. Some Nations are instituting policies that require wage parity; people who are members of the Nation must be paid at the same rate as employees from DFO who do the same or similar work, and Elders, who are the holders of TEK, must be paid at the same rate as external consultants for their time.

- **Importantly, recognize that providing funding does not equal ownership over the data.** Discussion groups highlighted that there is a tendency for granting agencies and/or external researchers to assume that by funding data collection, the data belongs to them. This undermines Indigenous data sovereignty and researchers can take steps, for example through data sharing agreements, to ensure that First Nations retain ownership and control over the data as they see fit. In some cases, researchers may be restricted via internal university or agency policies; in these cases, they should be transparent with First Nations while advocating to change these policies within their organizations.



- **Do the heavy lifting, for example through providing a draft data sharing agreement in advance.**

Many Nations already have data sharing agreements, but others do not. However, external researchers must realize that many Nations are struggling to manage and track an influx of requests on their time, and even if those requests are meant to support First Nations communities, they still require significant effort for Nations to process and respond to them. Doing preliminary research on the Nation's policies and providing a template agreement in advance can reduce burdens on First Nations collaborators. However, external researchers must defer to the Nation for finalizing these agreements and recognize that they may require ongoing negotiation and consultation.

- **Provide and support First Nation's access to technology and/or lab space, along with training for how to use those spaces.**

Some Nations have had to find their own ways to process data or access resources because they did not have access to laboratory space. Researchers who do have access to these resources can help process data and/or find ways to share lab space and equipment with First Nations so that they have the tools necessary to conduct their own research. They can also provide training to help First Nations build capacity for using scientific methodologies, and mentorship opportunities to train youth to become data warriors.

## CONCLUSION

Non-Indigenous scientists are increasingly recognizing the value of Indigenous knowledge. However, the topic of Indigenous data sovereignty has not kept up with the push to combine Indigenous knowledge and western science, and data sovereignty is rarely considered by non-Indigenous environmental researchers in particular. Indigenous knowledge is invaluable and irreplaceable, and knowledge about salmon systems has been held and passed down through generations by First Nations Peoples in BC, who have used this knowledge to sustainably steward salmon systems for millennia. Compiling, managing, and using Indigenous knowledge is therefore a critical ingredient for Indigenous Peoples re-establishing control of salmon watersheds within their territories. However, colonial research approaches continue to limit First Nations' ability to advance Indigenous data sovereignty; non-Indigenous researchers have stolen, ignored, collected without consent, and misinterpreted Indigenous knowledge in many ways that negatively impact Indigenous Peoples. Ownership and control of Indigenous data by Indigenous Peoples is integral for addressing and preventing misuse of Indigenous knowledge, supporting Indigenous sovereignty and stewardship of their resources, and for successfully and equitably managing cumulative effects in salmon-bearing watersheds. The Coordination Team and Advisory Panel hope the knowledge shared by workshop contributors and summarized here will (1) support First Nations as they articulate policies towards Indigenous data, while providing examples of practical tools and processes for governing what, how, and why Indigenous data is collected, stored, controlled, accessed, and used, and (2) provide guidance for external researchers to advance Indigenous data sovereignty in trusting and respectful ways.

