



THOMPSON-NICOLA CONSERVATION INITIATIVE

SITUATION ANALYSIS: Collaborative Conservation Opportunities

Eclipse Environmental Consulting | **MARCH 2021**

Situation Analysis: Collaborative Conservation Opportunities, Thompson-Nicola Conservation Initiative

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Front cover photo: Sharp-tailed Grouse, Shutterstock

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ACRONYMS

| | |
|----------------|--|
| ATV | All-terrain Vehicles |
| BEC | Biogeoclimatic Ecosystem Classification |
| BCCA | BC Cattlemen's Association |
| CWS | Canadian Wildlife Service |
| COSEWIC | Committee on the Status of Endangered Wildlife in Canada |
| DFO | Fisheries and Oceans Canada |
| DRIPA | Declaration on Rights of Indigenous People Act (BC Bill – 41) |
| ECCC | Environment and Climate Change Canada |
| ENV | Ministry of Environment and Climate Change Strategy (BC) |
| FLNRORD | Ministry of Forests, Lands, Natural Resource Operations and Rural Development (BC) |
| GCC | Grasslands Conservation Council of BC |
| ICAP | Integrated Conservation Action Plan |
| NCC | Nature Conservancy of Canada |
| NGO(s) | Non-governmental Organisation(s) |
| ORV | Off-Road Vehicles |
| SAR | Species at Risk |
| SARA | Federal Species at Risk Act |
| SRSS | Secwepemcúl'ecw Restoration and Stewardship Society |
| SFC | Secwepemc Fisheries Commission |
| SEAR | Species and Ecosystems at Risk |
| SFU | Simon Fraser University |
| SOSCP | South Okanagan Similkameen Conservation Program |
| TNCI | Thompson-Nicola Conservation Initiative |
| TNRD | Thompson-Nicola Regional District |
| TOTA | Thompson Okanagan Tourism Association |
| TRU | Thompson Rivers University |
| UBC | University of British Columbia |
| TNIPMC | Thompson Nicola Invasive Plant Management Committee |
| UNDRIP | United Nations Declaration on the Rights of Indigenous Peoples |

Executive Summary

Environment and Climate Change Canada (ECCC) has identified 11 **Priority Places** for biodiversity conservation in Canada, including the BC Dry Interior. The Thompson-Nicola (T-N) region of BC comprises 45% of the Dry Interior and contains provincially, nationally and globally significant biodiversity values, including many species and ecosystems at risk (SEAR).

The BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) initiated the **Thompson-Nicola Conservation Initiative** (TNCI) in March 2020 *to explore options for greater support for, and collaboration among, groups doing conservation work in the T-N, including the possibility of a regional conservation partnership (CP) similar to others in BC.*

TNCI Phase 1 research, directed by an ad hoc Working Group, resulted in three reports: *Conservation Status of Species and Ecosystems* (Dyer

2021); *Lessons Learned from Nine Conservation Partnerships* (Abs 2021); and *Situation Analysis: Collaborative Conservation Opportunities* (Abs 2021). Although government is providing start-up funding, the TNCI will be established as an independent, member-driven body. Founding partners can use Phase 1 research results to help design the partnership. The reports may also interest other conservation organisations.

The *Situation Analysis* report is based on 80 interviews with over 60 organisations from Indigenous groups, all levels of government, provincial and local conservation and sectoral groups, and universities. The report summarizes their views, is intended for discussion purposes, and does not necessarily represent the views of the Working Group or consultant.

Conservation Priorities

Priority ecosystems and habitats. Grasslands and wetlands, including riparian areas, are seen as the highest priority ecosystems for collaborative conservation. An ecosystem approach is favoured, with a focus on watershed management, as conserving critical habitat will benefit both species at risk (SAR) and other species. For Indigenous groups, protecting habitat and connectivity for salmon, steelhead and ungulates is key to food security and community well-being.

Biodiversity threats and drivers. A key threat is subdivision of large rural land holdings and urban expansion into rare dryland ecosystems, resulting in grassland conversion and fragmentation. Poorly planned and managed urban, rural and shoreline development has degraded habitat in some areas. Other threats have arisen from increased road-building and greater numbers of recreational users on Crown land,

combined with weak/inconsistent monitoring and enforcement. Terrestrial and aquatic invasive species are an ongoing threat.

Climate change is a cross-cutting driver magnifying threats, e.g., it is a factor in the increasing number of seasonal flooding, drought and wildfire events negatively impacting habitats. Climate-related shifts in species ranges are complicating conservation efforts. Gaps and weaknesses in the provincial institutional framework for conservation and Crown land management are seen as undermining efforts to address biodiversity threats. Collaboration could help if key parties such as provincial land managers, the ranching and agriculture community, and recreationists are involved.

Collaboration Rationale and Opportunities

Benefits of collaboration. There is broad interest and enthusiasm among diverse organisations in creating a partnership to build on and strengthen regional conservation efforts. They hope to tailor the organisation to the regional context, while drawing on the experience of other CPs. The benefits they see echo those identified by other CPs in *Lessons Learned* (Abs 2021), especially increased communication, networking and data-sharing; greater effectiveness and efficiency; pooling resources and expertise; and offering collective influence for changes to policies and practices.

Regional strengths to build on. As of March 2021, the TNCI contact list includes 120 people from over 60 organisations, who will be able to bring a wealth of information, knowledge, expertise and experience to the partnership. The TNCI can also link with other regional conservation initiatives.

Creating a vision. Based on identified priorities, founding partners can develop a vision through discussion of the following themes (and other ideas in the Phase 1 reports). The dialogue can be enriched by exploring the foundational Secwepemc concept of “**Tmicw**”, referring to “Lands and Waters” and “**land, resources, and everything on the earth**”.

Conservation of grassland-wetland ecosystems in the region, including species at risk, is strengthened through collaboration, taking an ecosystem approach.

Watershed management is improved, with a focus on better integration of biodiversity conservation into land, water and natural resource planning and management.

Defining goals and/or objectives – draft themes for discussion.

1. Promote communication and dialogue among organisations with diverse and complementary perspectives on the landscape to identify common goals.
2. Coordinate conservation activities in the region and mobilize complementary roles, expertise and resources, e.g., identify new opportunities, seed innovative, multi-party collaborations.
3. Provide leadership in developing a common direction and strategies for conservation in the region, e.g., harmonize conservation practices across land tenures and management regimes.
4. Increase effectiveness and efficiency of conservation efforts by reducing duplication and combining efforts, e.g., sharing data, knowledge, funding and human resources.
5. Facilitate capacity-building for partners in conservation and organisational skills, e.g., information-sharing, networking, training, training-of-trainers and peer learning.

Possible Structure and Processes

Possible governance models – draft themes for discussion:

- Look at models elsewhere in BC which are organized as “collaboratives”, “programs” or “partnerships”, and choose a structure and name that works for this region.
- Consider a two-tier structure with a steering committee (or similar) and a broader partner level with members who agree to sign on. Look at creating action teams (or similar) focused on specific topics such as stewardship, securement, research, education and land use planning.

- Create a terms of reference, charter, memorandum of understanding (MOU), constitution or similar, drawing on other examples, to define a common vision, mission, values and goals.
- Design a flexible structure that can respond to changing circumstances.

Geographic scope. TNRD boundaries are fine to start with but, given the region's size and diversity of landscapes and issues, the TNCI could start with a focus on priority areas with the greatest threats. There is support for creating sub-regional teams for specific watersheds or valleys, due to the area-specific focus of many groups and the various sovereign territories and priorities of Indigenous groups.

Membership/partners – draft themes for discussion:

- Position the TNCI as an independent, multi-party, member-driven organisation that will collectively design its own governance, goals and programs.
- Involve diverse organisations, including those directly involved in conservation and others whose decisions influence biodiversity, e.g., Crown land, local government and private decision-makers.
- Help groups understand how partnership can help them deliver on their goals and programs.

- Find committed leaders and champions to jump-start and maintain the partnership.
- Build relationships and trust early on through workshops, field trips and collaborative projects.
- Secure support from elected officials and senior managers of key organisations.

Indigenous participation. Early and full involvement by Indigenous groups is seen by all as essential. Many groups are interested, as long as Indigenous Title and Rights and government commitments to [UNDRIP](#), including BC Bill 41 [Declaration on the Rights of Indigenous Peoples Act](#) (DRIPA), are respected. Engagement will be more likely if the TNCI is positioned as a technical collaboration, separate from Government-to-Government discussions; community benefits are highlighted; and support is available.

Administration and funding. A paid, full-time coordinator, effective administrative systems and clear communication are keys to success. Partners need to identify long-term funding options, learning from other CPs. A [Local Conservation Fund](#), based on a regional district or municipal levy, could be explored with interested communities over the long term.

Possible Programs and Projects

There is a common desire that programming be action-based, results-oriented and strategically focused on known biodiversity threats and conservation priorities. Possible program areas include:

- 1. Communication, information-sharing and exchange.** Activities could include formal and informal networking and peer learning.
- 2. Scientific and technical collaboration.** Activities could include research, data-sharing and monitoring, and using Western science, Traditional Ecological Knowledge and local knowledge.
- 3. Regional conservation plan or strategy.** This could include mapping and analysis of biodiversity values and identification of conservation priorities and gaps as the basis for a plan/strategy to guide programming and support funding proposals (Dyer 2021 is a good starting point).
- 4. Securement of conservation lands.** Conservancies are keen to work through the partnership to establish and manage new protected areas, with at-risk grasslands as the priority.

- 5. Stewardship programs for private landowners.** Existing stewardship programs for ranchers and farmers could be expanded in scope (more habitats and species), scale (more staff and volunteers), and target groups (e.g., homeowners). New partners could broaden the focus.
- 6. Working with local government to integrate conservation** into planning and decision-making is a promising role. Partners could provide data, mapping, training and technical support for decision-makers and staff, drawing on BC-based local environmental planning resources, and linking with the provincial [Species and Ecosystems at Risk Local Government Working Group](#).
- 7. Strengthening the provincial regulatory, policy and planning framework for biodiversity conservation, including SEAR, fish, wildlife, watershed and Crown land management.** Increased coordination between government and non-government conservation efforts could boost effectiveness. Partners could address gaps and complement government efforts. There are opportunities through the BC [Together for Wildlife Strategy](#) and [Wildlife Advisory Council](#).
- 8. Connecting with conservation initiatives within and beyond the region.** The TNCI can connect with BC, Canadian and international conservation programs. It could facilitate partner involvement in consultations for the *Integrated Conservation Action Plan* (ICAP) being developed by the Canadian Wildlife Service for the “Dry Interior Priority Place” in 2021-22.
- 9. Invasive species.** Priorities include research, monitoring, enforcement and public outreach.
- 10. Outreach, education, and community engagement on conservation.** The TNCI could harmonize programs, develop targeted outreach to key groups, and expand public and political support for conservation.
- 11. Enhanced Indigenous participation in SEAR, fish, wildlife and habitat conservation.** Many communities are interested in expanding their conservation work through collaboration and capacity-building. First Nations’ lands offer opportunities for increased biodiversity and biological productivity to support food security and economic development. Indigenous groups could train partners on Indigenous legal rights, TEK, culture and conservation practices.

Conclusions and Next Steps

A collaborative conservation partnership for the Thompson-Nicola is an idea whose time has come: there is strong interest across diverse sectors and organisations. There is a good scientific foundation to begin and notable convergence on biodiversity threats and conservation priorities, i.e., species at risk, grasslands-wetlands ecosystems and watershed management. There are numerous regional strengths, assets and current initiatives to build on.

There is general agreement on a possible governance framework, goals, objectives and program areas. Founding partners will be able to draw inspiration and ideas from the 80 participants in the Phase 1 research to launch a partnership focused on advancing conservation in the region.



NICOLA VALLEY

1 Introduction

As part of the [Pan-Canadian approach to transforming Species at Risk conservation in Canada](#), Environment and Climate Change Canada (ECCC) identified 11 [Priority Places](#) for biodiversity conservation in Canada, including the BC Dry Interior (Figure 1.2 and Box 1.1). The Thompson-Nicola (T-N) region makes up 45% of the Dry Interior in Canada and contains high numbers of provincially, nationally and globally significant biodiversity values, including many species and ecosystems at risk (SEAR) (Dyer 2020)(Figures 1.3 and 1.4). The region also has key wildlife and plant corridors along the rivers and valleys connecting the region to the South Coast, Cariboo and Okanagan.

Recognizing the need to strengthen regional conservation efforts, the BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) secured 2019-2020 Priority Places funding

Photo courtesy Richard Doucette

for the “Thompson-Nicola Conservation Initiative” (TNCI). Its aim is to explore options for greater support for, and collaboration among groups doing conservation work in the region, defined for the purposes of this research as the Thompson-Nicola Regional District (Figure 1.1).



Figure 1.1 Study Area: Dyer 2020



Grasslands Conservation Council Director, Dennis Lloyd, installing grassland monitoring plots with the help of a small assistant, Theo Corks.
Photo courtesy Mandy Ross

An ad hoc Working Group was formed in March 2020, with members from government and non-government organisations interested in the idea of a multi-party collaborative conservation program, similar to those in other regions of BC (see Appendix A). This group supervised the TNCI Phase 1 research, conducted by independent consultants and focused on three goals, with a report for each, as follows:

1. Summarize information on ecosystems and species at risk (Dyer, O. 2020. *Conservation Status of Species and Ecosystems in the Thompson-Nicola Region*).
2. Analyze lessons learned and best practices from other conservation partnerships. (Abs, S. 2021. *TNCI: Lessons Learned from Nine Conservation Partnerships* – referred to as *Lessons Learned* in the rest of this report).
3. Assess the conservation situation in the region, including priorities and options for greater collaboration (Abs, S. 2021. *TNCI Current Situation: Collaborative Conservation Opportunities*, i.e., this document).

The Phase 1 work also generated an initial contact list of over 60 organisations and 120 individuals involved in conservation in the region. In Phase 2 these reports will be shared with the contact list and interested groups can use the research as a foundation for creating the new partnership.

Although government is providing start-up funding, the TNCI will be established as an independent, non-governmental body, directed by the organisations who sign on as partners. Founding partners will be able to draw on the experience of other conservation partnerships while creating an organisation tailored to their regional situation, ecosystems and conservation priorities, as summarized in this *Situation Analysis*. Box 1.3 describes the research methods used for this report.

SITUATION ANALYSIS: RESEARCH METHODS

The research for this *Situation Analysis* included 80 interviews of 30-60 minutes with contacts in over 60 organisations, including Indigenous, federal, provincial and local governments; provincial and local conservation and sectoral groups; and universities.

The rest of the report is organized around interviewee responses to questions on the following topics:

- biodiversity values, threats and conservation priorities
- level of interest in collaborative regional conservation
- regional conservation experience: assets and strengths to build on

- possible collaboration benefits and opportunities
- possible partnership governance structure and membership models
- possible goals, objectives and programs

Note: This report is a synthesis of interviewee views and does not necessarily represent the views of the TNCI Working Group or author. Direct quotes from interviewees, used throughout the report, are shown *in italics*.

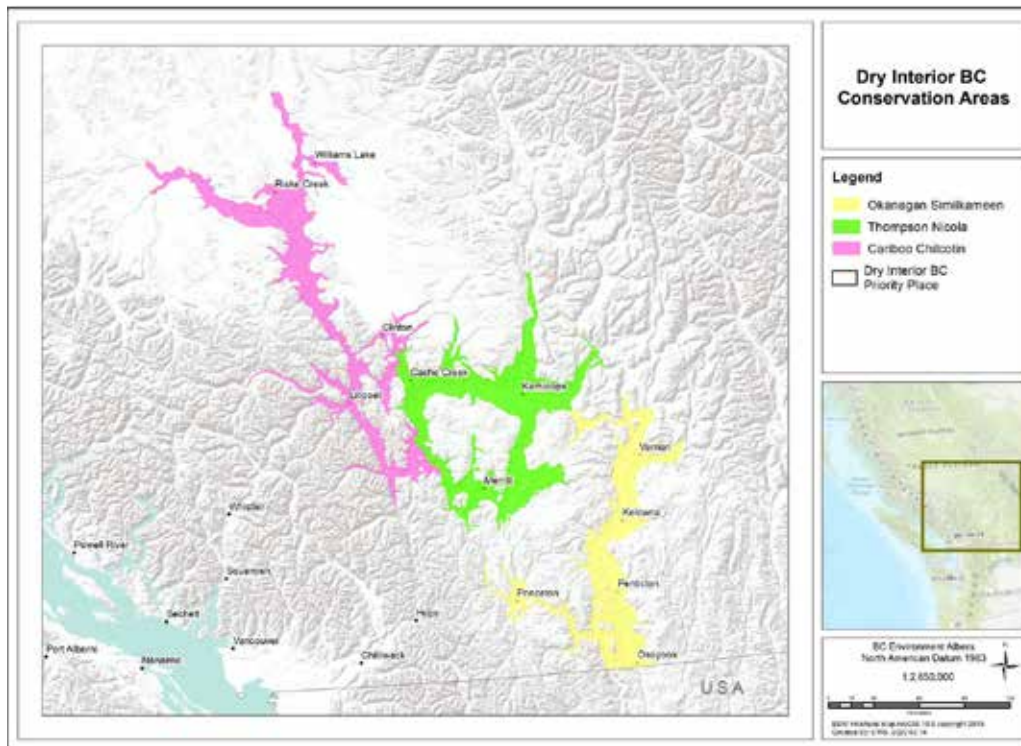


Figure 1.2 Priority Places Program: Dry Interior of BC

* NOTE ON TERMINOLOGY

Conservation partnerships in BC and Alberta are variously called conservation “programs”, “collaboratives”, “partnerships” or “alliances”, and participants are called “partners” or “members”.

This report uses the terms “Thompson-Nicola Conservation *Initiative*” (TNCI) and “partners” for now, but leaves open future decisions on a preferred name, governance structure and terminology.

BOX 1.1 PRIORITY PLACES PROGRAM – DRY INTERIOR, BC

The Priority Places Program is a key element in the [Pan-Canadian Approach to Transforming Species at Risk](#), as endorsed by Environment and Climate Change Canada (ECCC) and Provincial and Territorial Governments and wildlife agencies. This initiative represents a paradigm shift in species at risk (SAR) conservation, away from single species recovery strategies and towards collaborative development of ecosystem-based, multi-species conservation strategies. Priority Places are specific geographic areas where this approach is most likely to be effective in addressing critical conservation issues.

In BC, the Dry Interior (Figure 1.2) and Southwest BC were identified as two of 11 [Priority Places](#) in Canada, based on:

- concentrations of SAR and critical habitat
- significant overlap with other important biodiversity values
- achievability of conservation outcomes
- opportunities for partnership and collaboration among Indigenous peoples, other government and non-government organisations, industry and other resource users

As ECCC funding goals are linked to terrestrial and wetland biodiversity, Priority Places are areas where the following biodiversity values overlap:

- concentrations of multiple SAR and their critical habitats
- important habitats for migratory bird groups in steep decline

- priority wetland habitats within the North American Waterfowl Management Plan “Joint Ventures”¹ in need of protection and restoration

For BC, [Biogeoclimatic Ecosystem Classification](#) (BEC) zones and phases² were used to help define Priority Places boundaries that include those overlapping biodiversity values. The Dry Interior Priority Place extends through the South Okanagan-Similkameen, Thompson-Nicola and Cariboo-Chilcotin regions and encompasses the most at-risk xeric BEC subclasses: the valley bottom BG Bunchgrass Zone (Red-listed: Imperiled, S2); PP Ponderosa Pine Zone (Blue-listed: Imperiled/Vulnerable, S2/S3); and IDF Interior Douglas Fir Zone (Blue-listed: Vulnerable, S3) (Dyer 2020).

The Dry Interior boundaries maximize areas of low-mid elevation grassland, shrub-steppe, wetland and open dry forest ecosystems, which provide habitat for Species at Risk (SAR), migratory birds and other significant biodiversity values. The low-elevation grasslands and dry open forests are key winter range for culturally significant species like Bighorn Sheep, Elk and Mule Deer.

Fisheries and Oceans Canada (DFO) also funds SAR and other conservation programs in the T-N, including the [Priority Watersheds and Salmon Restoration](#) (Appendix B). The ECCC program will align with these and other government programs.

¹ The Joint Ventures are partnerships that focus on areas or species of concern identified in the plan.

² The Biogeoclimatic Ecosystem Classification (BEC) delineates ecological zones (biogeoclimatic units) by vegetation, soils, and climate, and is commonly used in forestry and conservation. It also classifies ecosystems within the ecological zones, based on the potential of the site at climax or mature successional stages.

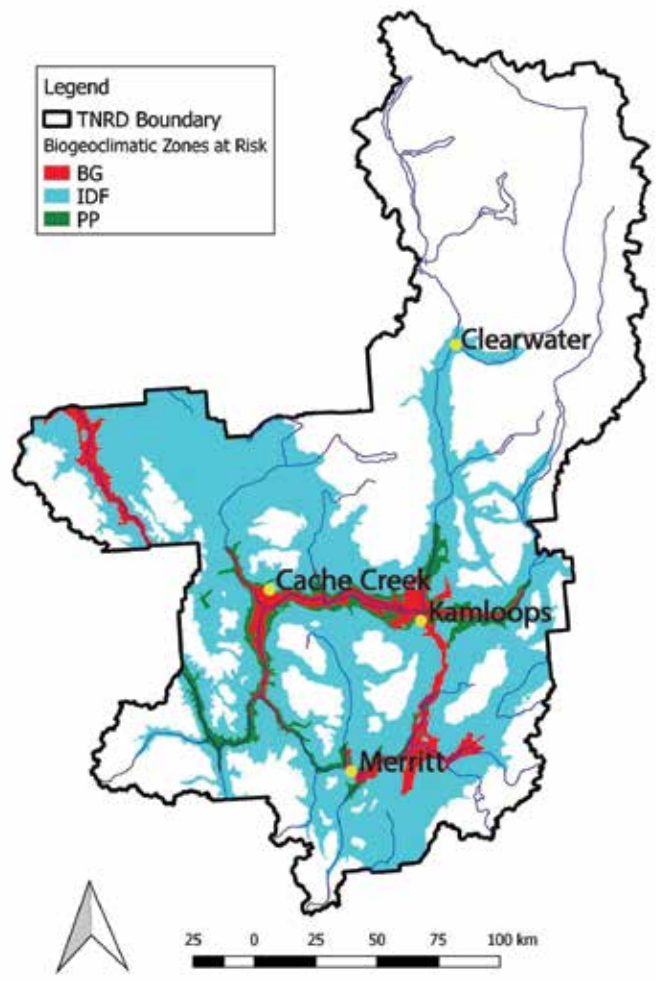


Figure 1.3
 Study area, showing at-risk Biogeoclimatic Ecosystem Classification (BEC) zones:
 BG – Bunchgrass
 IDF – Interior Douglas-fir and Ponderosa Pine
 PP – Ponderosa Pine

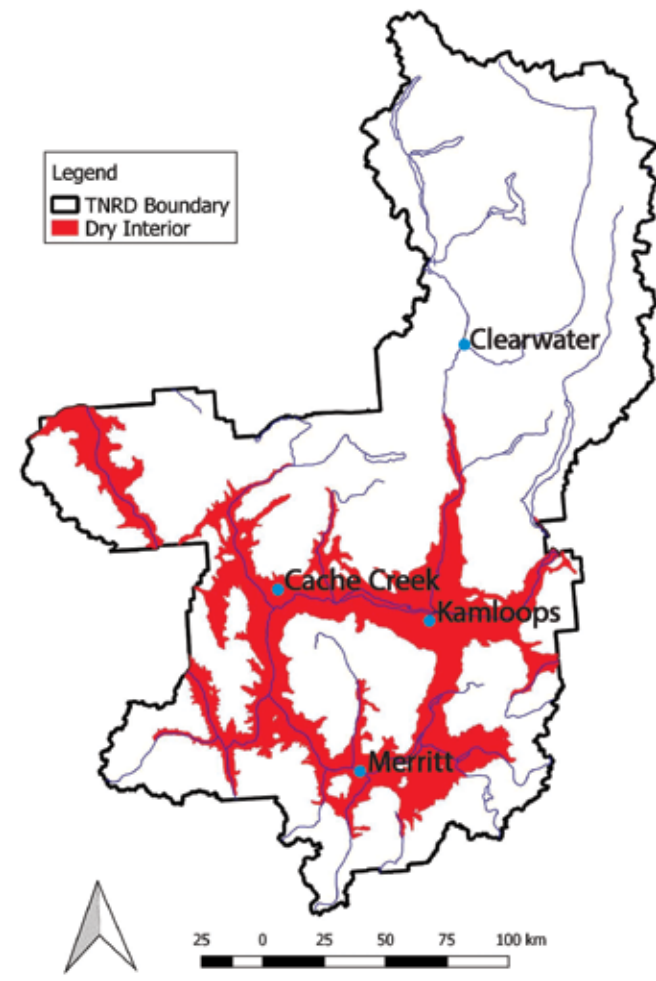


Figure 1.4
 Study Area: Thompson-Nicola Regional District, showing ECCC Dry Interior Priority Places in red, Dyer 2020.



BULL MOOSE

Shutterstock

2 Biodiversity Values, Threats & Drivers

This section summarizes interviewee views on key biodiversity values, threats and drivers in the Thompson-Nicola, including Species and Ecosystems at Risk (SEAR).

2.1 PRIORITY HABITATS AND ECOSYSTEMS

Most interviewees identified grasslands and wetlands, including riparian areas, as the highest priority ecosystems for collaborative conservation. They also suggested these be addressed within the context of watershed management, including forest and rangeland management.

The strong focus of interviewees on grasslands in dry valleys and their associated wetlands, including riparian areas, reflects the findings of

Dyer 2020. The shrub-steppes of the BC Dry Interior (BEC Bunchgrass zone) are an extremely limited habitat in Canada and especially important to birds and other SAR. These at-risk native grasslands support more threatened and endangered species than any other ecosystem in BC: comprising less than 1% of the land base, they are home to more than 30% of provincial SAR. The T-N accounts for 67% of BC's total Bunchgrass zone at about 172,000 hectares (Dyer 2020).

The following specific grasslands, SEAR and habitat concerns were identified:

- grassland conversion, habitat fragmentation and degradation from human activities
- loss of habitat connectivity and wildlife corridors within the T-N and adjacent regions
- population declines in SAR and other plant and animal species, e.g., waterfowl, mammals
- human-wildlife conflicts across various landscapes and tenures

Given the pivotal role of water for Dry Interior biodiversity, watershed management was seen as an overarching conservation priority, with a focus on stream beds and riparian zones as key habitats for terrestrial and aquatic organisms. Concerns focused on the negative impacts of human-caused hydrological changes on terrestrial and aquatic ecosystems and habitats, e.g., water shortages, low flows, contaminated run-off, now exacerbated by climate change.

There's a key connection between grasslands and wetlands. This combination provides the most productive habitats, containing a high abundance of SAR, especially in the aquatic realm.

There is a lot of pressure on grasslands and not many big parcels left since they are mostly on private land or Crown under lease.

We should do what we can to protect riparian areas since they are critical for so many species of insects, birds, reptiles, amphibians, fish and mammals.

There is ongoing concern about the decline in Salmon and Steelhead, especially the significant negative ecological and socio-economic impacts on Indigenous communities.

Many interviewees, especially from Indigenous organisations, see fisheries as a high conservation priority. Most salmon populations in the Southern Interior are struggling due to multiple long-term threats and drivers. Regional factors include the cumulative impact of human activities in T-N watersheds, including low water levels and declines in water quality, magnified by climate change. Chinook are doing relatively well in the South Thompson but other salmon species are not. There have been widespread calls from Indigenous communities and conservation groups to halt the decline of Thompson River Steelhead, which continues even with increasingly restrictive fisheries management. Interior Steelhead is listed as endangered under COSEWIC and many are advocating for a SARA listing. It was suggested that lake stocks are faring better than those in streams since lakes can better buffer extreme changes in water level and temperature.

Steelhead are in a terrible state; many groups want to see Interior Steelhead listed under SARA.

We've worked with Secwepemc Fisheries Commission on SAR on reserve³ and on Interior Fraser Coho.

There is strong interest in taking an ecosystem approach to conservation, stepping up from a single or even multi-species approach to focus on threatened ecosystems and key watersheds. While much conservation work has been driven by the urgency of protecting SAR habitat, most interviewees think that taking a broader ecosystem approach might strengthen regional conservation efforts. The rationale is that threats and drivers impacting SAR also affect other species in those habitats; thus, protecting watersheds and ecosystem functions can benefit biodiversity across terrestrial and aquatic habitats.

³ The term “reserve” is used throughout this report as a one-word reference to “Indian Reserve”, as defined legally on maps and known by Indigenous groups as “Ancestral Territories within the Nation”.

Cumulative negative impacts from poorly managed human activities, exacerbated by climate change, have significantly altered entire fragile dryland ecosystems of the region. For example, pine beetle outbreaks, fires and salvage logging, and the associated increase in the Annual Allowable Cut have changed upland landscapes, forest cover and watershed hydrology. The resulting increase in flooding, landslides and siltation has seriously impacted terrestrial and aquatic habitats.

Some people think that, although an ecosystem approach is desirable, it is also more complex, thus more conservation efforts should still be driven by a focus on priority species and habitats. For example, there is concern about declining populations of waterfowl and water-associated birds, i.e., swans, geese and ducks, due in part to the above-mentioned changes in watershed management at low to montane elevations.

[As researchers], we approach conservation with an understanding that biodiversity has multiple positive effects on ecosystems. By striving to enhance biodiversity, we see a snowball effect across the landscape.

We're working on SAR but there will also be benefits for biodiversity, especially for culturally significant species, e.g., our habitat targets are key winter range for Elk, Mule Deer and others.

Taking a habitat and landscape approach is good way to engage ranchers, agricultural land managers and others at the industry level, as many of them understand the landscape very well.



Coyote ready to pounce.
Shutterstock

As the Thompson-Nicola is a relatively large region with diverse ecosystems, population densities and communities, regional collaborative efforts may want to start by focusing on priority geographical sub-regions within the Dry Interior Priority Place (Sec. 4.1 discusses the use of sub-regional teams).

Box 2.1 identifies geographical areas mentioned as priorities for conservation.

BOX 2.1 POSSIBLE PRIORITY GEOGRAPHICAL AREAS

SOUTH THOMPSON VALLEY

- *Grasslands around Kamloops have been diminished and impacted by subdivision and urbanization.*
- *In the plateau above Kamloops, there may be a lot of SAR that we don't know about.*
- *The main Thompson River Valley from Kamloops to Ashcroft is a priority. There are many big ranches and it's a true desert, e.g., Ashcroft has less than 7 inches [17.8 centimeters] of annual precipitation. The North Thompson is more broken up into farms.*
- *The Upper Hat Creek, west of Cache Creek, has many large, old ranches with grasslands habitat.*

NICOLA VALLEY

- *The Nicola grasslands are a vast area with lots of private land and little housing development.*
- *Much hinges around water; competition for water increases every decade and now every year. We suffer from timing and distribution of water issues, with implications for fish and upland species, especially where there are cattle.*
- *The Nicola has distinct invasives, large operations and multiple First Nations.*

LAKES AND WETLANDS

The Lac du Bois Grasslands Protected Area was mentioned most frequently as a priority:

- *An expansive landscape with fragile ecosystems, the carrying capacity is already reached, especially in the grasslands.*
- *The road is the boundary for off-road vehicles. One side is protected and the other not, but it's all one landscape and recreation isn't well-controlled, resulting in damage from dirt bikes, motorcycles and ATVs.*
- *With its multiple issues, this would make a good case study, field visit and/or project.*
- *There are great opportunities for public awareness and education at McQueen Lake Environmental Education Centre and Isabelle Lake Recreation Site and trails area.*
- *The Bonaparte Plateau has significant wetlands and lakes.*
- *Logan Lake is experiencing impacts on habitat from ORVs around the recreation site.*

2.2 BIODIVERSITY THREATS AND DRIVERS

Interviewees were asked to identify key biodiversity threats and drivers⁴ in the region. They are listed below, roughly in order of frequency of mention.

Urban expansion into rare dryland ecosystems, along with poorly planned and managed land, water and shoreline development, is seen as a key driver of biodiversity decline. Specific issues include grassland fragmentation, conversion and degradation, and subdivision of large ranches into “ranchettes”.

The region is experiencing net population growth, in part from in-migration from Alberta and other parts of BC, which is increasing land values and increasing demand to subdivide large land parcels for housing. With much of the good, easily-developed land gone, there is pressure to subdivide and build on more “marginal” sites, such as grasslands and benchlands with high biodiversity values. Converting large ranches to ranchettes, housing or more intensive crop production can displace grasslands, fragment habitat and degrade biological productivity. Ranchettes are harder to manage for healthy grasslands as there is less room for best practices, such as rotating grazing. New conservation threats are resulting from population *decline* in areas such as the North Thompson, where there is growing demand for lakeshore recreational lots and docks.

Generational landowners are often replaced by developers and new owners who may know little about dryland management. They often erect a large house complex, keep horses that overgraze, and introduce greenery unsuitable to drylands, thus leaving little remaining grassland habitat.

Threats arise on private land, especially along valley bottoms and in key riparian areas, because owners can often do what they want.



Bachelor Heights, Kamloops

⁴ A “driver”, also called a “pressure”, is any natural or human-caused factor that directly or indirectly causes a change in the biodiversity found within an ecosystem. A direct driver influences ecosystem processes while an indirect driver operates diffusely by altering one or more direct drivers. Examples include habitat loss, climate change and invasives. Change is usually driven by multiple interacting drivers.

Interviewees identified various threats associated with increased road-building, expanded public access and more recreational users in the front and backcountry. This is coupled with concerns about weak/inconsistent management of Crown land, including protected areas, tenures and leases.

Increased road construction and road density (roads/km²) on Crown and private land, along with non-compliance with road deactivation conditions attached to Crown land tenures and leases is associated with multiple threats to biodiversity, especially increased public access to the backcountry. These include habitat destruction and damage; soil compaction; interference with wildlife corridors; water pollution; wildlife disturbance, collisions and poaching; and introduction of invasives such as Spotted Knapweed, Zebra Mussels and Eurasian Watermilfoil.

Inadequate control and management of “motorized distributed recreation,” especially near urban areas, is seen as a significant threat to critical terrestrial and aquatic habitats. Irresponsible summer and winter use of off-road recreation vehicles (ORVs), e.g., ATVs, dirt bikes, dune buggies and snowmobiles, has had negative impacts in some areas.

Increased collaboration between Recreation Sites and Trails BC (FLNRORD) and user groups to promote off-road best practices by some ORV clubs has led to some improvements, *but it's harder to reach new riders, small landowners and more resistant riders.* Non-motorized recreational activities, such as mountain biking, hiking and camping can also have negative impacts if poorly monitored and managed. Front and backcountry enforcement has been weakened in recent years by reductions in government field staff. These issues are increasing with population growth in the region and more residents and tourists involved in dispersed recreation in the backcountry.

Urban dwellers who don't live or work outside or in rural areas are often less aware of SAR, biodiversity values and threats, and their role in stewarding fragile ecosystems.

As soon as they designate an ORV site, it brings more people to the area and they spill out from there. Government needs to do more enforcement, management and education, e.g., signage.

The forest industry puts in roads for landings but we have to work hard to prevent subsequent damage to watersheds, including riparian and other habitats.

Off-road vehicle use is not well-managed but not as bad as it was. Conservation Officers used to be effective ears and eyes on the ground, but now we don't have as many Natural Resource Officers on the land.



Peregrine Falcon
Photo courtesy Tim Ennis

Engagement of the ranching community is essential to the success of the TNCI due to the strong interactions between ranching, agriculture and biodiversity. Poor range and dryland agricultural practices have degraded terrestrial and aquatic habitats in some areas. At the same time, many large, multi-generational ranches have significant remaining areas of grasslands and SAR due to their size and/or the use of sound management practices.

Impacts from poor ranch and farm management practices on both Crown grazing tenures and private land include removal of natural grassland cover; soil compaction; livestock disturbance of wetlands, including riparian areas and ponds; and provision of paths and vectors for invasive species. Silt, fertilizer, pesticide and herbicide run-off into watercourses has had negative impacts on fish. At the same time, many ranchers in the area are conservation “champions” and interested in working with their peers and new conservation partners. Several stewardship programs in the area promote best practices, such as livestock and crop rotation and riparian fencing (see Sec. 5.5).

Ranching is the one economic activity that keeps grasslands on the landscape. These lands have to be stewarded carefully, so yes, there will need to be buy-in from the ranching community to make this initiative work on the ground.

Along with protecting multiple SAR, the rancher can benefit from proper management of grasslands and riparian areas, e.g., improved pasture quality and forage. Grazing can play a role in keeping natural grassland, preventing tree growth and avoiding the fire hazard of tall grass.

Bands have seen negative fish and wildlife impacts from private land on reserve lands and Indigenous territories and we have few control options. Some ranchers support conservation and others don't. We worked with local ranchers to keep cattle from creeks with logs and fencing, then put GPS on cows to monitor their movements in three zones to assess results.

In the past, there's been conflict between agriculture and wetlands. Farmers liked to drain and farm them, but many now see that grassland-wetlands are the most productive habitat and need to be managed well.



Sagebrush Mariposa Lily blooms in the grasslands above Peterson Creek Park, Kamloops. Photo courtesy Mandy Ross

Invasive species, both terrestrial and aquatic, are persistent biodiversity threats in the T-N, despite extensive research and control efforts over many years.

The presence of invasives is associated with habitat disturbance, poor land management practices and inadequate control of vectors. When the health and ecological function of a grassland is being scored, it will lose points from having a high density and distribution of invasive species. The topic of invasive plants is being addressed by the Thompson-Nicola Invasive Plant Management Committee (TNIPMC) and Invasive Species Council of BC, both possible partners for the TNCI (see Appendix B). Aquatic invasives are also a biodiversity threat in water bodies and fish streams.

Climate change is seen as a significant cross-cutting driver that interacts with other biodiversity threats. Impacts include increased drought, wildfires and flooding, all of which are impacting grassland, wetland and aquatic habitats and species. Climate change is also shifting ecosystem and species ranges, complicating conservation efforts.

Many interviewees highlighted climate change as a driver and magnifier of threats to biodiversity in the T-N, especially through its role in changing watershed hydrology and seasonal weather patterns. The region is getting drier and hotter on average, with more pronounced seasonal fluctuations between flooding and drought conditions. Specific concerns are identified in the following quotes:

We need to survey the edge of range and expand monitoring for specific SAR, as ranges may be changing with climate change, e.g., Bunchgrass and Ponderosa Pine are moving north.

Regeneration of large Ponderosa Pine and Douglas-fir will become rarer in a new climate regime.

We don't have capacity for long-term ecological monitoring plots to measure climate impacts.

We need more resources for climate-related wildfire management, reforestation strategies and ecosystem restoration.

Fire prevention, suppression and management needs to be re-thought.

The role of climate change in habitat restoration is understudied relative to industrial and recreational impacts.

We are losing topsoil to wind, especially when big fields are turned over, and from more extreme weather events, such as flooding.



Great Basin Spadefoot
Dreamstime

Gaps and weaknesses in the provincial jurisdictional framework for biodiversity conservation and Crown land management, including regulation and enforcement, are seen by many as compounding biodiversity threats and drivers. It was suggested that the TNCI could help to address some of these issues but likely only if key provincial land managers are involved.

Examples of institutional issues mentioned include (see also Sec. 5.8):

- lack of provincial SAR legislation
- insufficient FLNRORD staff and resources and weaknesses in communication and cooperation among branches
- inadequate consideration of biodiversity values in Crown land tenures and licences
- lack of inadequate monitoring and enforcement of forest and grazing tenure conditions
- poorly managed water licensing and monitoring along rivers and streams, combined with climate change is leading to low flows and reduced water quality in some areas, with impacts on fisheries and on water supplies for some Indigenous communities and municipalities
- lack of consistency in land and water management practices across landscapes and tenures, including Crown land (e.g., protected areas and tenured lands), private conservation lands, private land, Indian Reserves and Indigenous Traditional Territories

The interface between Crown and private land is one area where we could do more. Species have no boundaries; we need to manage this better and recognize private landowners for their efforts.

A benefit would be to provide a collective voice for policy changes at the political level.

Indigenous groups identified many of the same biodiversity threats as other interviewees but placed greater emphasis on threats from poorly managed natural resource activities on Crown and private land, such as forestry, grazing and mining, with negative impacts on some band lands and Indigenous Territories.

Many interviewees, especially from Indigenous groups, identified weaknesses in forest management, including poor upland logging and reforestation practices, as a major threat to fish and wildlife habitat. For example, it was noted that pine beetle and wildfire salvage logging, exacerbated by climate change, has changed watersheds and hydrological regimes. The 120% snowpack in 2019 led to two flood events but melted by August, causing water shortages. Other downstream effects have included flooding, wash-outs, debris flows, siltation and sedimentation. Water quality has declined in many watercourses, impacting Salmon and other aquatic species and their habitats, and eroding some band lands and riparian areas.

Gaps in technical knowledge and resources in some Indigenous communities have resulted in poor land and water management practices, e.g., polluted run-off has damaged ponds, streams and riparian areas.



Northern Harrier
Shutterstock



HEREFORD CATTLE ON RANGE

Photo courtesy Keith Weller, USDA ARS

3 Collaboration Rationale and Opportunities

Interviewees were asked about their level of interest in participating in a regional conservation partnership; possible benefits from collaboration; strengths and assets they could contribute; and possible goals and objectives. This section summarizes their responses.

3.1 BENEFITS OF COLLABORATION

There is strong and widespread interest and enthusiasm among diverse organisations in establishing a regional conservation partnership in the Thompson-Nicola.

Interview results indicate that that the “time is ripe” for a regional collaboration that can build on, strengthen and expand past and current conservation efforts to better protect regional biodiversity.

It would be good to have a coordinated effort; we already collaborate with a lot of organisations but it would be useful to put a framework around it.

We won't agree on everything but we'll get to know each other and find our common ground.

We are capable and keen to work in a collaborative environment to improve conservation in the region.

The possible benefits they envision largely echoed the list of proven benefits identified by other conservation partnerships, as summarized in Box 3.1.

Interviewees are keen to design an approach to collaborative conservation that is tailored to the T-N, while drawing on the experience of other regional partnerships, through reviewing the *Lessons Learned* report (Abs 2021) and networking with those groups.

BOX 3.1 BENEFITS OF COLLABORATIVE CONSERVATION

Source: Abs 2021. *Lessons Learned*

Communication and networking: information-sharing, exchange and dialogue among partners: *get to know each other; build trust; bring people working in isolation together.*

Identifying gaps in conservation efforts that could best be served by a partnership.

Greater effectiveness and efficiency: harmonize efforts, avoid duplication and use limited resources efficiently: *we get more done.*

Reduced competition: for profile, influence and/or funding.

More collaboration and partnerships on specific strategies, programs and projects: pool complementary expertise and resources and form innovative partnerships: *we now have more and better projects through identifying similar goals and finding synergies.*

Harmonization of efforts to secure conservation lands.

Increased data and information-sharing: share knowledge among partners, and provide scientific and technical support to external bodies, e.g., government, industry, communities.

Developing a regional perspective on conservation, mid-way between provincial and local: devising regional plans and strategies, and seeing how local projects contribute to broader goals: *raise profile of groups' conservation work.*

Shared administrative resources: share offices, equipment, coordination and financial services.

Collaborative fund-raising strategies and shared funding: *partnerships appeal to funders.*

Shared human resources: engage and mobilize a range of staff, volunteers and outside experts.

Capacity-building for partners: on conservation topics and collaborative skills, through training, peer learning and sharing best practices.

Increased public awareness, education and participation in regional conservation efforts.

Collective influence and a stronger voice for changes to government policies and programs and private sector practices.

3.2 REGIONAL STRENGTHS TO BUILD ON

There are numerous and diverse groups and individuals working on conservation in the region. They can bring a wealth of information, knowledge, expertise and experience to the partnership, including Western science, Traditional Ecological Knowledge (TEK) and local knowledge.

As of March 2021, the TNCI Contact List includes 120 individuals from over 75 organisations, including:

- Indigenous governments and organisations
- federal, provincial and local government agencies
- conservation and environmental NGOs, fish and game associations, and stewardship and outdoors groups e.g., naturalists, hiking/trails groups
- researchers: Thompson Rivers University and private consultancies
- sectoral associations, e.g., BC Cattlemen's Association
- private landowners interested in conservation.

Appendix B is a compendium of these organisations, their conservation activities, and the strengths and assets they could bring to the partnership. There are also ongoing collaborative initiatives and programs, mostly sub-regional, that the TNCI could complement and connect with (as identified throughout the report and in Appendix B).

Kamloops is a key regional centre, home to many organisations involved in conservation. The resulting relationships, networks and partnerships provide a strong foundation for more formal regional collaboration. Nicola Valley groups also have a history of cooperation on watershed issues.

Kamloops is the base for key government agencies with conservation mandates and responsibilities, as well as NGOs and academics working in conservation, including (but not limited to) the following:

- Indigenous tribal councils, bands and natural resources organisations: e.g., Secwepemcúl'ecw Restoration and Stewardship Society (SRSS), Secwepemc Fisheries Commission (SFC)
- Provincial government: FLNRORD Regional and District Offices, ENV Regional Office
- local government: City of Kamloops and Thompson-Nicola Regional District (TNRD)
- academia: Thompson Rivers University
- regional offices for provincial/federal conservation and sectoral organisations: e.g., Grasslands Conservation Council of BC (GCC), Nature Conservancy of Canada (NCC), Ducks Unlimited Canada (DUC), BC Conservation Foundation (BCCF), Forest Enhancement Society of BC, BC Cattlemen's Association and Fraser Basin Council (FBC)
- locally-based conservation NGOs and associations, e.g., Kamloops and District Fish and Game Association, Kamloops Naturalist Club, Kamloops Thompson Trails Alliance.

CASE EXAMPLE: The GCC has supported grasslands conservation for over 20 years, through generating significant grassland geodata and undertaking conservation projects in the Dry Interior. Although GCC's scope is province-wide, the T-N has been a focal area. Many interviewees see strong potential for the GCC to take a leadership role in the TNCI, based on its mandate and record. *We like to think of ourselves as cattlemen, government, scientists and conservationists working together. We can be a broker among groups with various interests but common conservation goals.*

Many Indigenous groups interviewed are active in conservation and interested in exploring options for increased involvement through regional collaboration. They could contribute invaluable conservation knowledge, expertise and leadership, including Western science and local knowledge.

Thirty-eight Indigenous tribal associations, bands, communities and natural resource organisations within the Dry Interior Priority Place were contacted to discuss the regional collaboration. Fourteen agreed to interviews and many others would like to see Phase 1 results and may participate later. Interviewees were from the Secwepemc (Shuswap), Nlaka'pamux (Thompson) and Syilx (Okanagan)

Nations, all belonging to the Interior Salish language group. The term “Indigenous groups” is used in this report when referring to the views of the 14 interviewees, but summary statements should not be seen as representing Indigenous groups who were not interviewed.

One benefit would be healthier habitats and more animals. The land would benefit from us working together. The more partners we work with on projects, the better for the environment.

We are keenly interested.

Partnering leads to many voices speaking to the importance of conservation and biodiversity – it's a stronger message.



Photo courtesy Grasslands Conservation Council of BC

3.3 VISION AND GOALS

Interview results were used to generate some very draft TNCI vision and goal statements for discussion and consideration by Phase 2 participants and founding partners.

POSSIBLE VISION

Given the conservation priorities identified in Sec. 2.1, a vision could be developed based on the following statements/ideas, possibly enriched through discussion of the Secwepemc foundational concept of Tmicw, as described in Box 3.2.

Conservation of grassland-wetland ecosystems in the region, including species at risk, is strengthened through collaboration, using an ecosystem approach.

Watershed management is improved, with a focus on better integrating biodiversity conservation into land, water and natural resource planning and management.

BOX 3.2 SECWPEMC PERSPECTIVES ON ECOSYSTEMS, NATURAL RESOURCES AND CONSERVATION

Indigenous peoples in the region have a deep and ancient knowledge, relationship and history with the land, water and living creatures in their territories. Several interviewees highlighted the fundamental importance to the Secwepemc people of the central practice of “Tmicw”, explained in part as “Lands and Waters” and as “**land, resources, and everything on the earth.**” Tmicw is viewed by all Secwepemc within the Nation as the framework for conservation work on specific issues or species. This holistic approach supports and complements the ecosystem-based approach favoured by most interviewees across groups and sectors.

Tmicw is the lands and waters and everything in them – a form of holistic, collaborative stewardship that has been going on for millennia, both an ancient and existing process.

Tmicw is that which gives us life.

Traditional Knowledges are foundational systems within which most Indigenous peoples operate. Traditional Ecological Knowledge evolves from generations of experience – a base that is incomparable in terms of the depth, breadth, and holistic perspectives it provides for a given ecosystem.

We need to open our eyes and see that everything is related – teach our knowledge to others that are willing to learn.

POSSIBLE GOALS

1. Provide leadership in developing a common direction and strategies for conservation in the region.

The TNCI could help partners develop a high-level picture of the state of regional biodiversity and devise effective collective responses, based on diverse perspectives on the landscape. This work would help to address a leadership gap since no single government body has the mandate and responsibility to ensure healthy ecosystems. *Mandates are often siloed, even within key government agencies,* and a wide range of organisations, mostly non-government, actually deliver most conservation programs on the ground.

Many interviewees think the TNCI could play a key role in harmonizing conservation practices across landscapes and land tenures, including Crown land (e.g., protected areas and lease lands), other conservation lands, private land, Indian Reserve lands and Indigenous Traditional Territories.

In the Dry Interior, 45% of the Bunchgrass Zone is provincially-managed Crown land, 43% is private and 12% is on reserves. Thus, conservation in this area requires partnerships and stewardship, especially in the most at-risk areas (Dyer 2020).

A benefit would be to develop a greater sense of common community purpose and direction.

A partnership develops a shared vision, priorities, stewardship goals and targets, and identifies who's best positioned for specific activities.

SAR and ecosystem recovery work requires collaboration, given the broad geographic range of species. The work is best done cooperatively rather than through isolated efforts – plants and animals don't know boundaries.

We need to re-set and re-launch regional conservation efforts after a series of recent changes. For example, funding shifts and a wave of retirements in government and NGOs has meant a loss of institutional memory. This will help us remake networks and channels and renew collegiality.



Aspen copse
Photo courtesy Richard Doucette

2. Promote dialogue and cooperation among diverse sectors and interests to identify common conservation goals.

Roles under this goal might include:

- Work towards mutual understanding among organisations with various views and interests on the landscape.
- Demonstrate how conservation can be good for the community and economy.
- Provide a vehicle to facilitate government involvement and funder commitments to ensuring Indigenous involvement in programs.
- Extend the reach of conservation groups to include industry and various land, water and resource users.

To be successful, we need to have as big a tent as possible, including groups that may not perceive or recognize each other as allies in conservation.

Break down distrust and biases; listen to people – address fears and concerns about conservation among some landowners.

Bridge the rural-urban divide to understand why you can make a difference on the landscape.

3. Coordinate conservation activities and mobilize complementary roles, mandates, expertise and resources.

Groups working in conservation have various roles, powers, responsibilities, strengths and limitations for conservation work. A partnership would allow them to combine forces and **adopt a multi-faceted, mutually reinforcing approach to conservation which could:**

- Offer an independent collective voice for biodiversity in the region.
- Promote multispecies, landscape and ecosystem approaches that work for multiple SAR and non-SAR.
- Become the known “go-to”, “one-stop shop” to identify organisations and resources to respond to emerging conservation issues.
- Identify new opportunities and seed new collaborations, including project-specific cooperation and innovative, multi-party projects.

Allow groups to do what they do best while creating synergies through cooperation and partnership.

Partners can have complementary roles, e.g., a land trust can secure and hold the land and assume liability, and partner with a local stewardship group who will take responsibility for long-term management, monitoring and education.



Kamloops, Thompson Valley
Photo courtesy Destination BC, Andrew Strain

4. Increase effectiveness and efficiency of conservation efforts.

Many interviewees said a partnership could reduce duplication and overlap of efforts and improve conservation results. Possible roles under this goal might include:

- Share and/or pool human resources: time, staff, volunteers.
- Access and mobilize a larger body of experts, knowledge-holders and volunteers.
- Increase funding, e.g., *Attract more funding. Pool funds. Make more efficient use of available funding. Seek joint funding. Share information on funding opportunities. Reduce competition for funding. Find new funding – we have access to U.S. funders that others may not.*

There is also increasing interest in using results-based frameworks⁵ to assess and improve the effectiveness of conservation programs. This involves setting measurable goals (or “expected outcomes”), choosing success measures and indicators, and then monitoring and reporting on progress towards goals – a process which has proven helpful for both partnerships and funders.

Get on the same page; don't reinvent the wheel.

More people means more bodies for our collective efforts.

Share wins and losses – lessons learned and good practices – to improve program success.

We would like to increase our efficiency and focus by identifying and reaching measurable outcomes. The goal is to ensure that we're investing in the right things to have an impact on the ground.

Results should be meaningful and measurable, enhancing habitats and biological functioning.

⁵ Also called “performance management systems”.

5. Facilitate capacity-building for partners in conservation and organisational skills.

A key goal for the TNCI could be strengthening the capacity of partners – both organisations and individuals – to be more effective in their work. Capacity-building could address conservation-specific topics and organisational skills, such as teamwork and program design, management and reporting. This is likely to occur informally through collaboration on projects but could be formalized through information-sharing, networking, training, training-of-trainers, peer learning and mentoring programs – either stand-alone or attached to projects.

For Indigenous groups interviewed, building organisational capacity to do conservation work; developing transferable, job-related competencies for community members; and expanding related work opportunities were identified as priority goals for collaboration.



Veteran Douglas-fir, Lac du Bois Conservation Area
Photo courtesy Nature Conservancy of Canada



4 Possible Structure and Processes

4.1 POSSIBLE GOVERNANCE MODELS

This section summarizes interviewee views on possible governance structures and processes. The TNCI can draw on diverse governance models used by other BC conservation partnerships, as summarized in *Lessons Learned*, and through further discussion with those groups.

Founding partners can look to models from elsewhere in BC – which are organized as “collaboratives”, “programs” or “partnerships” – and choose a name and organisational structure that works for this region.

Interviewees emphasized the value of being transparent and including all parties and stakeholders in setting up collaborative governance and membership. The process should be *grassroots-driven, self-organizing and let everyone be involved from the start*. They also provided the following suggestions:

- Position the TNCI as an umbrella group to facilitate communication and coordination, in part to counter the perception that it might be a separate and potentially competing organisation.
- Help groups understand how the partnership can help them deliver on their mandates and goals.
- Design a flexible structure that can respond to changing circumstances over time.

A key decision for the TNCI will be whether to focus only (or primarily) on information-sharing and coordination among partners or to also deliver programs and projects. Other BC conservation partnerships have done both, with the relative emphasis different for each, and often changing over time (see *Lessons Learned*). They noted that member groups usually deliver most programs and projects “on the ground” with the partnership helping to facilitate and support their work.

Yet, they suggested, to be a truly regional initiative, the partnership should collectively deliver key pieces of work. These might include regional-level data, mapping and analysis; high-level strategies and plans (e.g., regional conservation strategy, securement strategy); capacity-building for partners; and/or at least some region-wide programs.

Partnerships need stable long-term core funding to support communication and coordination functions, yet most funders support relatively short-term programs and projects and require deliverables such as activities or products. The TNCI will need to strategize how to balance coordination, regional programming and partner support functions at the outset and over time.

Help people get to know each other and develop mutual trust.

It should deliver some regional programming, working back and forth from the site-specific to regional projects to higher-level changes in legislation and policy.

The approach should be a mix of “top-down” and “bottom-up”.

TNCI governance can be set out in a foundational document(s), such as a term of reference, charter, memorandum of understanding (MOU), constitution or similar, drawing on examples from other regions.

Many interviewees emphasized the importance of collectively defining a common vision, mission, values and goals that are *both aspirational and achievable*. These stated commitments help to:

- Define the organisation’s role and niche in regional conservation.
- Provide clarity of purpose and direction.
- Supply a persuasive rationale that outlines potential benefits for partners.
- Clearly communicate the nature of the body to partners, funders and the broader community.

Governance documents could address the following topics:

- organisational structure: e.g., steering committee or round table; and action teams, working groups or sub-committees
- geographical scope, vision, mission, values and goals
- collaboration principles, commitments or guidelines, e.g., *mutual respect, all voices heard*
- membership, e.g., how to join, roles and responsibilities
- accountability, e.g., reporting relationships, financial systems
- decision-making processes and meeting guidelines, e.g., consensus, Robert’s Rules of Order
- coordination and administration, e.g., paid staff, contractors, volunteer management
- funding, budgeting and fundraising strategies.

Foundational documents can be supplemented over time with a strategic plan or list of strategic priorities to guide programs over a specified time period (see Sec. 5.3).

Ensure that all relevant parties are involved in governance decisions from day one.

Create a framework, then build the governance piece by piece, and allow fluidity over time.

Strategic goals help you know where you want to go and where you are; with this creative tension, you'll naturally start moving there as you assess emerging opportunities against your agreed goals.

There is general support among interviewees for a governance structure similar to other BC partnerships, i.e., a high-level steering, executive or coordinating committee, and a broad base of partners or members who agree to sign on.

Interviewees made the following suggestions regarding the steering committee:

- Include leaders, champions and “doers” from diverse sectors and interests.
- Have Indigenous involvement at the leadership level.
- Ensure that members have good regional knowledge and connections.
- Include core funders.
- Choose members that have the time and commitment, i.e., not necessarily senior people, as most managers don't have time for committee work while staff might.
- Pick a strong, active chair that has a good relationship with the program coordinator.
- Once the TNCI is established, rotate the steering committee chair and members to keep more partner organisations engaged.

Separate the operational side from the board/strategic level and ensure that members understand the difference.

Choose steering committee members who will represent, consult with, and engage their respective organisations and sectors.

Partners rise and fall as new reps come in succession. Even good ones face job or personal changes that affect participation over time, so don't put everything on the shoulders of one or a few people.

Include ranching organisations early. Find a really keen person to be on the steering committee. This will be important both to engage the sector and gain political support.

CASE EXAMPLE: The Grasslands Conservation Council (GCC) Board members are well-connected with the ranching community, e.g., BC Cattlemen's Association, Nicola and Kamloops Stock Associations, and TRU. *GCC is on the ground in these areas. We promote communication among the 12-15 GCC Steering Committee members and 30-60 members to find out who's doing what and establish “back channels” if needed, to get things done.*



Elk, Shutterstock

There is widespread support for convening action teams, working groups (or similar), comprised of partners interested in specific conservation topics.

There is general agreement with using TNRD boundaries for the TNCI, but strong interest in eventually forming sub-regional teams for specific watersheds or valleys, given the region's vast size and diversity of ecosystems and communities. Initial efforts could be focused on the most at-risk landscapes and areas currently getting less attention (see Sec. 2.1 and Dyer 2020).

Most interviewees like the model used elsewhere in BC, where regional level work is complemented by teams focused on specific topics such as securement, stewardship and research. The idea of sub-regional teams is appealing because many organisations work primarily in one locality, e.g., North or South Nicola Valley, North Thompson or Kamloops areas. This model was also strongly favoured by Indigenous groups for the following reasons:

- They see the Thompson-Nicola region as too large for practical collaboration.
- TNRD boundaries don't reflect First Nations territories.
- They are most familiar with conservation issues on their own reserves and territories.
- Bands and communities have diverse conservation issues, priorities and capacities.

- Neighbouring bands most often tend to work together.
- They respect each nation's sovereignty, Traditional Territory, and decision-making and co-management of Crown lands within that territory: *We don't want to appear to weigh in on what other groups are going.*
- Sub-regional work could involve all parties working in the area, including Crown land licensees.

The smaller, the better; 50-60 is too big and crazy. If it's too large, your voice gets smaller.

I like the idea of action teams with defined agendas, tasks, deliverables and timelines.

The watershed scale is what's important, for example, with stewardship, it would be the Secwepemcúl'ecw or smaller like Scotch Creek.

It's such a large area, with tonnes of First Nations and differing interests, and then how we can also expect to find commonalities with ranchers and government and move forward as a group?

Most First Nations hate putting lines on a map but we can identify "caretaker areas", so that even if a band is not the primary caretaker, they are informed about what is happening in other areas.



Bald Eagle
Shutterstock

4.2 INDIGENOUS PARTICIPATION

Many Indigenous groups are interested in exploring options for regional collaboration as long as Indigenous Title and Rights and agreements related to [United Nations Declaration on the Rights of Indigenous Peoples \(UNDRIP\)](#) are respected.

Early and full participation by interested Indigenous organisations and communities is seen by all interviewees as fundamental to a successful TNCI. While some Indigenous groups are definitely interested in participating in the TNCI, others would like to learn more about the structure, goals and membership before committing. Some prefer to deal with Crown land issues, such as access management and species conservation, through government to government (G2G⁶) processes and/or co-led “tables” that work to accommodate third party interests, such as the [Nicola Watershed Governance Project](#).

Many interviewees said that TNCI governance should recognize federal and provincial government commitments to implementing UNDRIP, including BC Bill 41 – [Declaration on the Rights of Indigenous Peoples Act \(DRIPA\)](#) and pending federal [UNDRIP legislation](#). This approach includes building renewed G2G relationships based on recognition of Indigenous Rights and Title, respect, co-operation and partnership.

The role of government agencies in the TNCI would need to be carefully defined, given ongoing G2G discussions on DRIPA and decision-making under the *Wildlife Act* and *Forest Act*. Partners might also need to find ways to work together on some programs while continuing to address Indigenous community concerns regarding specific federal (e.g., DFO and fish allocation) and provincial (e.g., FLNRORD referral systems) government policies and programs.

It will be important to indicate how ministry involvement would work at a non-statutory level, especially in light of Bill C-51.

We would need to know the parameters and approach the band after it's fleshed out a bit more to ensure it aligns with our values and goals.

It depends on the structure and how members will interact: government works top-down and this is ground-up.

Respect for title and rights is always the goal when we talk with broader community and technical people. We can work together, but need to stand up for our title and rights – First Nations are not stakeholders.

There is lots room for opportunity, but it needs to be navigated properly.



⁶ G2G-level groups are not title-holders but rather bodies represented in discussions.

It is still the Campfires (Communities) that do the negotiations, but the G2G groups could bring Government to the table.

Allium cernuum, Nodding Onion
Photo courtesy Grasslands Conservation Council of BC

Indigenous participation will be more likely if the TNCI is clearly positioned as a technical collaboration among member groups – separate from G2G discussions being addressed at the leadership level – and if potential community benefits are highlighted.

The TNCI Terms of Reference (or other agreement) could be used to delineate technical vs. statutory topics. Participation by technical staff, rather than leadership staff might be appropriate. While details are to be worked out, it was suggested that TNCI work exclude environmental and natural resource co-governance and statutory issues being addressed through other processes. *G2G can slow things down and doesn't allow for the level of engagement you're looking for.*

The following additional approaches could facilitate Indigenous community involvement:

- Adopt goals that connect conservation and improving the health and well-being of communities.

- Directly approach bands and communities rather than tribal councils since not all bands belong to councils. Membership in councils sometimes changes, and councils usually can't speak for member bands.
- Groups will likely need funding to participate as they are generally over-committed and under-resourced.

Healthier ecosystems lead to healthier communities.

To get First Nations buy-in, we must respect traditional territorial boundaries and overlap. We need to be humble in our approach, defining what will be worked out on a map and by whom, and respecting G2G processes.

We would want to maintain the say over our Traditional Territory and have that respected and recognized by others.

The TNCI will need to do focused outreach to explain the TNCI rationale and involve First Nations who may have had negative experiences with collaboration in the past.



Opuntia fragilis, Prickly Pear Cactus
Shutterstock

4.3 MEMBERSHIP/PARTNERS

Interviewees provided ideas on TNCI membership, with the following key themes emerging.

Include a range of sectors, organisations and individuals from the start, including those directly involved in conservation and those whose decisions affect biodiversity, e.g., resource and land managers, resource user groups, tenure-holders, and private landowners and their associations.

Interviewees suggested the TNCI engage key economic sectors and resource users (e.g., ranching, agriculture, forestry, industry, tourism) and land and water user groups (e.g., recreationists, landowners). While not everyone will choose to participate, they should at least be invited and consulted when relevant to the topic.

There should be a sense that everyone with a stake is involved from the beginning.

Members should have an interest in these landscapes and want to be involved. The voices of people working the land and getting their livelihood from it – including Indigenous communities – should be front and centre. As an academic, I'll sit and listen and see how to plug in to what's needed.

Don't bring your agendas; they'll just drive us apart. We need to focus on what we have in common.

Clearly position the TNCI as an independent, multi-party, member-driven organisation that will collectively design its own governance, agenda and programs, to counter any concern or wariness that it is government-led.

As noted in Sec. 3.2, the TNCI can build on many positive past and current conservation collaborations in the region. However, it will also have to counteract a legacy of negative experiences that, for some, have fed misperceptions, misunderstandings, even mistrust about other sectors and groups in the community. Some parties may be wary, even distrustful of any initiative that appears to be government-led. Possible issues include:

- uncertainty about working with groups they perceive as having divergent interests and goals
- landowner concern, wariness or fear about the possibility of new taxes/levies, restrictions on private land, and/or protected areas proposals
- a perception among NGOs that a new organisation will compete for funding and/or profile
- past misunderstandings between landowners, government agencies and NGOs regarding conservation activities on private land.

These issues can be addressed in part through effective, collaborative design of governance, membership and communication processes, based on suggestions in this report and *Lessons Learned*.

A collaboration will get key parties interested, but you have to win hearts and minds and show how the work will benefit everyone in the community.

Go slowly. Build on successful examples of multi-sectoral regional organisations, like the GCC and Nicola Valley Community Roundtable.

Early collaboration should focus on getting to know each other, building relationships and finding common ground through face-to-face workshops, field trips and field projects.

While many of the key players know each other or about each other, virtually all interviewees are keen to learn more about “who’s doing what”, in part through learning about and visiting successful projects. Field-based projects and field trips early in the partnership could help to build trust and promote exchanges of knowledge and experience.

Engage partners in dialogue and comparing perspectives out on the land.

Spend time on the ground – not an office in downtown Kamloops.

Showcase and expand what is already being done to manage human impacts and protect key landscapes.

Programs should be largely action-based and results-oriented, focused on known biodiversity threats and conservation priorities.

There is strong preference among interviewees for the TNCI to undertake practical conservation initiatives with demonstrable results. This is due to the urgency of SEAR issues in the region and the likelihood that clear successes will attract and retain committed members and funders.

We have lots of plans – we’ve planned nature to death.

More doing, less talking; get things going and get some results. We will be the champions.

Find natural champions and enthusiasts to jump-start the initiative and (hopefully) see it through the years. This is seen as more important than necessarily including senior level representatives of member organisations, who may not actually have the time or commitment.



Burrowing Owl
Shutterstock

4.4 FUNDING AND ADMINISTRATION

Many interviewees emphasized the key roles of sustainable funding, solid management and effective administrative systems in ensuring a successful partnership. This section summarizes their advice.

A paid, full-time coordinator or program manager (could be a contractor) is widely seen as central to maintaining an effective, sustainable partnership.

Suggested possible roles for the coordinator include:

- secretariat to the steering committee
- central contact for internal (members/partners) and external (public) communication
- funder liaison and funding administration
- coordination among members/partners and programs
- program management
- ensuring accountability and follow-up on decisions
- providing continuity over time.

Finding sustained funding, especially for administration and coordination functions, is a perpetual challenge for conservation partnerships. Although the TNCI is benefitting from some government start-up funding, partners could start early to strategize longer-term funding, drawing on other BC examples.

There is a vast array of on-line resources on conservation funding options (see also *Lessons Learned*). Sample models include:

- Establish a Local Conservation Fund (see below).
- Create a dedicated regional conservation foundation, trust or revolving fund to raise and manage business, corporate and private donations, e.g., the [Alberta Biodiversity Monitoring Institute](#) raises money from various industries and sectors.

- Regional conservation authority, e.g., Conservation Authorities in [Ontario](#) are co-funded by multiple levels of government under a Memorandum of Understanding.

Interviewees have mixed views about establishing a Local Conservation Fund, based on a regional district or municipal levy (e.g., a parcel fee), to generate conservation funding. Some see this as a priority action since these funds have generated significant funding in other BC regions, in part through attracting matching funds. Others prefer to first build the partnership through collaborative initiatives and then work closely with local governments to assess the feasibility of such a fund over time.

Elsewhere in BC, these funds are created by a regional district or municipality and administered by the partnership on a fee-for-service basis. An independent technical advisory committee reviews and recommends community proposals in areas such as securement, stewardship and education, but the decision-making authority rests with elected officials. The [BC Conservation Fund Guide](#) webpages provide guidance and case studies. Some funds use an “opt-in” model in which each municipality or electoral area decides whether to participate – a scheme that might suit the T-N, where communities may vary in their level of interest (see more on the BC experience in *Lessons Learned*).

Pursuing a fund would be a good team-building process – creating a long-term vision and something very positive together. Everyone could get behind it.

It's a great idea. I'm surprised it isn't done everywhere and especially here where ecosystems are so fragile and there are so many issues, e.g., flooding, fire management, mudslides. But there may be concerns regarding any new fees; it may be better to wait until trust is built.



MULE DEER PROFILE

5 Possible Programs and Projects

There is a notable convergence of views on the types of programs and activities that might be most fruitful in the early years of the TNCI, as described below (roughly in order of frequency of mention). These program areas generally align with the conservation priorities, threats and drivers outlined in section 2.2 and could provide the basis for thematic action teams.

Photo, top: Shutterstock;
below, *Lewisia rediviva*, Shutterstock



5.1 COMMUNICATION, INFORMATION-SHARING AND EXCHANGE

Activities in this category include:

- Share information about conservation initiatives in the region. Find out what others are doing.
- Strengthen formal and informal networking.
- Disseminate information through organisational networks.
- Learn from each other and from other regions: share approaches, techniques, experiences and resources.
- Promote government transparency and increase communication between government and NGOs/community organisations.

The potential for information-sharing and collaboration is immense. There is some informal cross-pollination, but we need to get into a different setting and look outward more.

We don't know the priorities and strategies of federal and provincial agencies or what they're doing on biodiversity and SEAR. We don't talk with them so we can't make our work consistent with theirs.

Community organisations struggle to know government priorities and where to go for support.

Improve relationships and collaboration between community groups and provincial Crown land managers. We need to admit that things aren't always working well on the landscape.

5.2 SCIENTIFIC AND TECHNICAL COLLABORATION, INCLUDING APPLIED RESEARCH

This is seen as a key area for TNCI collaboration that can build on past and current science and research partnerships among universities, NGOs, conservancies, Indigenous groups and governments in the region. The following possible activities were suggested:

Research and monitoring: data collection and knowledge-sharing, based on data-sharing protocols.

- Inventory and provide access to available biodiversity data, information and mapping, while respecting data protocols, building on Dyer 2020.
- Do a GIS-based conservation mapping exercise, combining published information, grey literature (unpublished), and partner

and community knowledge. Identify sensitive areas, key threats and conservation priorities and opportunities. *Mapping can be an especially powerful tool for multi-party discussions and community engagement.*

- Harmonize data collection, management and reporting standards and protocols to facilitate compilation and comparison.
- Provide training in transferable scientific and technical skills for partners in research and field methods.
- Do a natural values inventory as the basis for a regional conservation plan or strategy (see Sec. 5.3).

Develop a common research and monitoring agenda.

- Identify current and planned regional conservation research, gaps, priorities, and who might best address them. Inventory regional conservation specialist expertise.
- Agree on a research framework, e.g., *conduct network, standardized, coordinated distributed experiments*.
- Provide science inputs to results-based project frameworks, e.g., help define expected outcomes and develop monitoring protocols and indicators to measure progress on conservation. *Species monitoring could include land cover and species changes.*
- Coordinate SEAR stewardship and monitoring on private land, e.g., avoid having researchers from several groups approaching the same landowners, and ensure that results are shared with landowners.

In addition to the above topics, Indigenous groups identified the following specific research and data priorities:

- **Data-sharing, compilation and comparison:** *Find out who else is doing this work; access more data on SAR, other species and habitats on reserves; and compare across other reserve and non-reserve lands. Access to more data never hurts – we're all about knowledge-sharing.*
- **Collaborative research:** *We have limited funding for data collection; we'd like to provide data, do research, participate in studies – it's a win-win. We'd like to add data from our referral responses to our GIS and we're hungry for data on SAR and habitats on reserve to add to the database, e.g., inventory and field work to ground-truth fish and wildlife population models.*
- **Finding new research project partners and funding.** Some bands have used their own funds for research and restoration work that could benefit others in the region.

CASE EXAMPLE: Invasive Yellow Perch in Douglas Lake are impacting food fisheries and are now present in Nicola Lake. The Upper Nicola Band is involved with collaborative research (testing, trapping and tagging) with Okanagan Nation Alliance (ONA), FLNRORD and CWS.

- **Participation in data collection and environmental monitoring in the field:** *We can be the eyes and ears on the ground. We see what's happening on the land.*
- **Combining Western science, Traditional Ecological Knowledge (TEK), and local knowledge and practices,** especially for fisheries, forestry, watershed and SEAR management. *Find ways to access and share Indigenous biodiversity knowledge at the landscape level. This work has been inconsistent and fragmented since funding is limited and project-driven, and we're losing Elders.*
- **Development or adoption of data-sharing protocols for TEK:** Look at developing tools for using TEK, based on those prepared by the [First Nations Major Project Coalition](#) for Indigenous involvement in federal impact assessments.

Sharing knowledge is good, but First Nations are often leery about knowledge mining.

We'd like to share info but are mindful of the risks. We'd like to explore data agreements that could benefit our neighbours. For example, we shared a Traditional Use Study with a proponent and the Province, but we're careful not to publicize things that could be accessed or damaged, e.g., pictographs.

5.3 REGIONAL CONSERVATION PLAN OR STRATEGY

Some (but not all) BC conservation partnerships have developed a regional conservation plan or strategy to define priorities, guide programming and support funding proposals. Plans may include data and mapping on biodiversity values, sensitive habitat analysis, goals, strategies, actions, and an implementation and monitoring plan (see *Lessons Learned*). Some interviewees think such a plan could focus regional conservation efforts and provide a strategic framework for attracting new government and private funding.

For example, the focus of the multi-year CWS Priority Places program is on multi-species recovery strategies and landscape and ecosystem protection. A regional plan or strategy that systematically identifies how conserving key habitats and addressing priority threats will benefit SEAR in the T-N would strengthen the case for CWS project funding.

Some interviewees are cautious about spending any more time and funding on studies and plans, preferring to focus on action-based projects. But others note that there is already a significant store of scientific data, mapping and analysis regarding SEAR and other species, threats, drivers and data gaps in the T-N, and this would enable a relatively “quick start” on a plan. Suggested elements include continuous habitat mapping, broad scale recovery strategies, protection of wildlife corridors, and harmonizing practices (e.g., restoration techniques) and operations (e.g., no-logging buffer zones along park borders)⁷ across landscapes and tenures.

The TNCI Phase 1 research on conservation status in the region (Dyer 2020) provides a strong starting point for a regional plan. The following data sources were also highlighted (see also *Lessons Learned*):

- **Mapping from GCC's Priority Grasslands Initiative** is widely seen as valuable foundational data.
- CWS has undertaken considerable scientific analysis, including mapping of critical habitat for SAR, that has been used to target funding for stewardship groups in the region.
- FLNRORD has used **Terrestrial Ecosystem Mapping (TEM)** to prioritize conservation efforts for parts of the Dry Interior, such as the Okanagan. While this data is unavailable for the T-N, the regional office has identified priority grasslands for selected SAR and is analyzing conservation gaps and next steps.

Look at existing information: a lot is known about values, mapping, threats and drivers. We need action and implementation.

There's so much data in the T-N that you could quickly pull something together – maybe a simple overlay with conservation ranking maps to identify hotspots and then develop quantifiable, spatially-defined goals, targets, strategies and actions.



Western Painted Turtle
Shutterstock

⁷ This has been an issue with logging up to the boundaries of Wells Gray Park.

5.4 SECUREMENT OF CONSERVATION LANDS

Most BC conservation partnerships have securement teams with members from the major BC land conservancies (land trusts and NGOs) involved in acquisition and management of conservation lands. Typically, they meet to discuss emerging opportunities, assess funding options, and consider who might best pursue them. There is nothing similar in the T-N and these organisations are only minimally involved in the region at present. However, those interviewed see great potential for expanding protected areas through the TNCI, with grasslands as the priority ecosystem.

The Province of BC can use several legal tools and agreements to acquire or secure conservation lands “for the benefit of regionally or

internationally significant fish and wildlife species”, as described [here](#). The “Crown Land Securement Partner Program” (CLSPP) focuses on protecting Crown and private land under the *Land Act* (s. 15, 16, 17) or the *Wildlife Act*, which allows for Wildlife Management Areas. The CLSPP is managed by government and non-government partners. Elsewhere in BC, designation of new sites depends on the initiative of FLNRORD regional offices or regional conservation partnerships, which nominate and champion sites and often help manage them. The TNCI could help re-energize this process in the region.

5.5 STEWARDSHIP PROGRAMS FOR PRIVATE LANDOWNERS

Because so much remaining grassland and critical habitat is on private land, stewardship is seen as a key potential program area. A few very large ranches are home to significant biodiversity values, including multiple SAR. Several existing small-scale BC stewardship programs for ranchers and farmers, focused on species and habitat protection, restoration and monitoring could be expanded through the TNCI, with a focus on the most at-risk landscapes. They offer a wealth of resources, strong expertise and a solid track record that could be expanded in scope (more species and habitats), scale (more staff and volunteers), geographic coverage (new areas), and/or new target groups (rural and suburban homeowners). (See Box 5.1 and

Appendix B). This work could also be broadened through collaboration with new and complementary partners, especially Indigenous groups; fish and game, naturalist and ranching groups; and academics and researchers.

It would be useful to coordinate and leverage efforts.

There are a few big landowners with big parcels; thinking about it, given limited resources, 4-5 owners might be 60% of the land base you might target.

Most of these programs promote best management practices for biodiversity that also benefit ranch or farm productivity.

BOX 5.1 EXAMPLES OF LANDOWNER STEWARDSHIP PROGRAMS AND RESOURCES

BC Cattlemen's Association (BCCA): FRISP [Farmland Riparian Interface Stewardship Program](#)

CWS – in partnership with BCCA: SARPAL [Species At Risk Partnerships on Agricultural Land](#)

BC Agriculture Research and Development Corporation ([ARDcorp](#)) programs:

EFPP [Environmental Farm Plan Program](#)

BMPP [Beneficial Management Practices Program](#)

Farmland Advantage: based on the idea of assigning monetary value to habitat conservation and providing compensation/payment to those who protect it (see *Lessons Learned*).

Species and Ecosystems at Risk Local Government Working Group: resources for local government and private landowners

Develop with Care [Environmental Guidelines for Urban and Rural Land Development in BC](#)

BC Stewardship Centre: [Resources on Wildlife and Species at Risk](#)



Western Screech Owl nest box team
Photo courtesy Rick Howie

5.6 WORKING WITH LOCAL GOVERNMENTS ON CONSERVATION

Other BC partnerships have found that working with local governments to better integrate conservation into land use planning and decision-making is a fruitful program area. Their regional perspective often aligns well with regional district boundaries; local government plays a crucial role in land and water use decisions; and many elected officials and staff are interested in environmental topics.

The TNCI could facilitate capacity-building and technical support for decision-makers and staff. This might include providing biodiversity data and mapping, practical tools and examples – coupled with training, technical support and peer exchange. TNCI partners can draw on a wealth of programs, resources and experience in local government stewardship and conservation in BC. In 2011, BC ENV established the [Species and Ecosystems at Risk Local Government Working Group](#). All BC conservation partnerships sit as observers on this group and the TNCI is invited to join once it forms.

The TNCI can also build on regional experience. FLNRORD regularly provides guidance and mapping to City of Kamloops and TNRD planners for proposed subdivisions of large land parcels, such as ranches, housing developments and referrals from the Agricultural Land Commission. Kamloops staff are interested in building on previous SEAR and habitat restoration work. They are seeking updated GCC mapping to guide the 2021 Official Community Plan update, as well as more data and tools to integrate biodiversity into planning, zoning, development approvals and public works. TNRD’s innovative [Cherry Creek – Savona Official Community Plan](#) includes Development Permit Areas to protect “Riparian Areas” and “Environmentally Sensitive Areas and Species at Risk.”

There is also scope for increasing First Nations collaboration with the City of Kamloops and TNRD on topics such as watershed planning and wildfire hazard management. *There’s a disconnect between us and the City and TNRD. We could explore the idea of greenbelts around cities to minimize wildfire impacts.*

Develop the capacity to be a voice in decision-making, e.g., work with elected officials and civil servants.

The City realizes there’s a growing need to address these issues but what needs to be done? If the Province wants to do something, we’d be all for it, but we don’t know what’s primary habitat.



Black Swift chick in hand
Shutterstock

5.7 CAPACITY-BUILDING FOR AND BY INDIGENOUS GROUPS ON CONSERVATION TOPICS

Providing opportunities for individual and organisational capacity-building is a priority for Indigenous groups, with a focus on transferable, job-oriented skills for community members. Lack of internal capacity has sometimes limited Indigenous participation in conservation. Some groups haven't applied for funding, were challenged to deliver on projects, or saw work go to consultants when they lacked the needed expertise. Even when community members have a chance to build technical and field skills through training and working in natural resources sectors (e.g., archeological assessment and environmental monitoring), employment is often temporary or seasonal.

It was suggested that the TNCI consider projects incorporating training for First Nations crews to do year-round conservation work. Possible topics include species and habitat inventory and monitoring, invasive species work, and habitat restoration and enhancement, e.g., creating more habitat for Sage Grouse.

One option is to work through Territorial Stewardship Offices/ Departments to look at expanding existing Indigenous monitoring programs involving Guardians and Rangers. For example, the [Skul'qalt](#) Watchman crew monitors non-forestry activity on the roads and lands of their territory, as well as provincial park and campground activities. Efforts should be made to ensure that opportunities and resources (e.g., funding, training) are available to, and equitably distributed among First Nations communities of various sizes.

Capacity-building should be part of programs and projects to build long-term, sustainable knowledge and skills of partners, including scientific, technical and management skills.

A goal should be to build capacity at a local First Nations level – to include learning and not just deliverables. Every project should leave capacity that can be used again.

Small bands are left out of projects at times due to lack of capacity but projects should help build their skills. It's okay to experiment and even fail as long as capacity is built.

Capacity-building on stewardship for Indigenous communities is another possible activity. First Nations in the region collectively manage extensive land holdings that provide many opportunities to increase biodiversity and biological productivity. Conservation activities could produce benefits for food security (e.g., fishing, hunting, foraging) and economic development (e.g., sustainable forestry, ranching and agriculture). Community stewardship programs could promote sound land and water management practices on reserve lands, including protecting SEAR, other species and sensitive habitats. Current Indigenous youth stewardship programs could be adapted to new areas and new audiences.

Indigenous groups could provide capacity-building for other TNCI partners on Indigenous cultures and conservation practices in the region. This could be done through awareness and education programs focused on regional Indigenous history, legal rights (e.g., Bill 41 – DRIPA) and TEK. These could be based on cross-cultural training already offered to managers and field staff of companies working in Indigenous territories.

5.8 STRENGTHENING THE PROVINCIAL FRAMEWORK FOR BIODIVERSITY CONSERVATION, INCLUDING SEAR, FISH, WILDLIFE, WATERSHED AND CROWN LAND MANAGEMENT

Indigenous, federal, provincial, regional and local government organisations manage the complex jurisdictional framework for biodiversity conservation. This includes Indigenous Title and Rights and an array of federal and provincial legislation, regulations, policies and plans affecting land and water use. Provincial Crown land management plays a strong role in conservation through decisions on Crown land tenures and licensing (e.g., forestry, grazing, recreation, mineral development); ecosystem, fish and wildlife management; and parks and protected areas.

The TCNI could facilitate partner work in support of improvements to the regulatory, policy and planning framework for conservation.

As noted in Sec. 2.2, many interviewees are concerned about gaps and weaknesses in the provincial framework for SEAR and biodiversity. While this is primarily a provincial-level issue, their concerns are widely shared across BC. TCNI activities in this program area might include research, gap analysis and planning to support better integration of biodiversity into Crown land management, along with more resources, i.e., staff, funding for this work.

Partners can connect with other BC conservation policy and planning initiatives underway. For example, the [Fish, Wildlife and Habitat Coalition](#)⁸ is “committed to prioritizing the conservation of fish, wildlife and habitat in BC” through promoting stronger laws, improved practices and new funding mechanisms. They could also participate in the implementation phase for the Province of BC [Together for Wildlife Strategy](#), including the FLNRORD Minister’s [Wildlife Advisory Council](#) and Regional Wildlife Advisory Committees, to be created by 2022.

One of the mistakes is to earnestly pursue a bottom-up stewardship approach without commitment to sound policy and implementation through changes to social and economic values and decisions.

My sense is that, in terms of sustainable management of natural resources, we don’t lack understanding of what we need to do – we lack the public and political will to implement.

We need to build the social capital to affect change and activate the power of the collective to support the political will for change.



Great Basin Spadefoot
Dreamstime

⁸ The coalition, (formed in fall 2020 and led by the BCWF), includes 26 organisations representing over 188,000 members, 54,000 supporters and 750 businesses in BC. Several of these organisations were interviewed for this report.

TNCI partners could bring complementary knowledge, information, funding, expertise and human resources to complement government efforts. As noted in Sec. 2.2, many interviewees said that FLNRORD sections with conservation responsibilities are short-staffed, programs are underfunded, and authorities have often been slow to act on urgent conservation issues, especially over the past decade. TNCI partner work could help strengthen government efforts, but involvement by key provincial managers, e.g., forest, range and water managers, along with biologists and ecologists, is essential for progress in this area (see *Lessons Learned*).

NGOs have come to fulfil many of the functions that should be done by government.

We can often be more responsive, creative and risk-taking than government.

We can get boots on the ground and facilitate ministry projects where they don't have the capacity. Our role or niche [as an NGO] can be to fill gaps where the agency doesn't have capacity.

As academics, we often have more resources, flexibility and nimbleness than government scientists.



Badgers are endangered in BC, with a remaining population of around 300.
Photo courtesy Grasslands Council of BC

Interviewees identified priority conservation management topics that TNCI partners could address. Many of these were suggested by Indigenous groups, who are especially interested in Crown land and water management issues.

1. Watershed and ecosystem-based planning and management

- **Support improved landscape level, ecosystem-based planning and develop Best Management Practices (BMPs)** as tools for biodiversity conservation, for example, sector-specific guidelines for key sectors or activities, such as ranching, agriculture, forestry, recreation, mining and roads.
- **Strengthen monitoring and enforcement of Crown land tenure conditions**, e.g., road deactivation and land rehabilitation. Consider engaging Indigenous, NGO and community groups in monitoring and restoration.
- **Harmonize land, water and conservation practices across land tenures and management regimes**, including Crown land (e.g., protected areas and lease lands), other conservation lands, private land, Indian Reserves and Indigenous Traditional Territories. Examples might include promoting common BMPs, data collection protocols or restoration practices.
- **Expand the scope of watershed restoration work** focused on watercourses and salmon, e.g., the Nicola Basin Collaborative, to include conservation of upland habitat, wildlife and SAR.

A landscape level effort is needed rather than small one-off projects.

Enhance fish and wildlife habitat and connectivity, especially for keystone species. Little has been done since Land and Resource Management Plans 30 years ago.

We need fully functioning ecosystems to re-establish and maintain cultural survival areas, for example, pictographs and spiritual areas used for sweat lodges, training and healing.

CASE EXAMPLE: IMPROVING ROAD AND PUBLIC ACCESS MANAGEMENT ON CROWN LAND

Several Indigenous groups are working with FLNRORD to improve management of forestry, ranching, agriculture and mining resource roads on Crown land in the T-N. This includes reducing road density, enforcing tenure conditions related to road deactivation and rehabilitation, and better managing public access and recreation in the backcountry. One activity involves determining thresholds for the maximum acceptable ratio of roads per square kilometre in relation to habitat pressure, and then devising appropriate standards. There is interest in expanding this work through the TNCI.

2. Forest, rangeland and watershed management

- **Undertake watershed restoration**, including upland and riparian stabilization, in sub-basins where wildfires and pine beetle salvage logging has led to unstable hydrology and negative downstream impacts, such as sedimentation of fish habitat and erosion of reserve lands.
- **Explore forest management and reforestation standards, practices and strategies to better enhance biodiversity values:** *Former spruce, fir and poplar forests have been reforested with pine plantations, creating “pine deserts” in places.* Improvements might include selective logging, mechanical thinning or other practices to better conserve fish and wildlife habitat.

- **Retain mature stands and trees that provide key habitats:** *There are few large trees left, in part due to forestry, land clearing and firewood cutting. We’re losing potentially old trees and snags that provide cavities for multiple species of birds and mammals.*

3. Recreation and tourism management

- **Strengthen recreation and tourism management on Crown land**, including monitoring and enforcement of regulations, public education and collaboration with recreation user groups.
- **Develop and promote sustainable tourism** and “responsible recreation” models and practices for the T-N, in collaboration with TRU and TOTA.

4. Tree encroachment into grasslands and wildfire prevention, control and restoration

- **Consider expanding controlled burn programs** being undertaken by First Nations, FLNRORD and the [Forest Enhancement Society](#). Both planted and natural forest advancement is converting grasslands to forest in many areas. Selective use of prescribed burns, based on Indigenous traditions, protects communities and enhances ecosystems and species, e.g., grasslands, Bighorn Sheep, and Indigenous cultural survival areas. *There has been only minimal use of controlled fires to reinvigorate grasses and other key plant species that provide benefits for wildlife, ground cover and fire control.*
- **Look at habitat enhancement for forested Crown land that was designated as Agricultural Land Reserve** only because it is on a flat bench. For example, it has been suggested that Crown land in the ALR emphasize a grass/forage landscape.

5.9 CONNECTING WITH CONSERVATION INITIATIVES WITHIN AND BEYOND THE REGION

As a multi-party partnership, independent from government, the TNCI is being launched at an ideal time to strategize and facilitate partner input to consultative regional conservation planning being undertaken by CWS over 2021-22 (Box 5.2).

BOX 5.2 TNCI INPUT TO THE CWS INTEGRATED CONSERVATION ACTION PLAN (ICAP) FOR THE DRY INTERIOR PRIORITY PLACE, 2021-22

The ICAP will identify conservation targets and strategies to guide future multi-species, habitat-based conservation investments in the Thompson-Nicola region. It will cover all land tenures, including stewardship on private lands, and will be developed in collaboration with First Nations, all levels of government and community organisations.

The TNCI Phase 1 research has generated a strong technical foundation and helpful contact list that CWS can draw on during the consultative ICAP process.

Many interviewees are also interested in linking TNCI programs with broader scale SAR and ecosystem conservation initiatives. This might include cross-regional, basin-wide, provincial, national and international cooperation in areas such as mapping and databases, joint monitoring programs and exchanges of techniques and lessons learned. Specific topics include migratory bird flyways, habitat connectivity and wildlife corridors. This work might arise from informal networking among TNCI

partners and at annual meetings of the BC conservation partnership coordinators, but could be formalized over time through project linkages.

CASE EXAMPLE: There is interest in cross-regional, life cycle research on specific SAR, especially those using multiple habitats and regions, e.g., Rufous Hummingbird and Black Swift. *We want to know where Black Swifts nest in waterfalls and wet canyons across BC. Williamson's Sapsuckers and Lewis's Woodpeckers are both found across the Southern Interior.*

Many Indigenous groups are involved with area or watershed-based collaborations among First Nations or involving government agencies and NGOs. Sample projects to link to include:

- **Elephant Hill Wildlife Riparian Restoration Project:** research and restoration work
- **Nicola Basin Collaborative:** research focused on hydrology and water-related issues
- **Coast to Cascades Grizzly Bear Initiative** is seen as a good model and approach to consider
- First Nations collaboration with the Wild Sheep Society (HCTF funds) to address Bighorn Sheep disease (Movi), monitor populations, transplant sheep/re-establish populations, and enhance habitat through burning and reopening wildlife corridors.

5.10 OUTREACH, EDUCATION, AND COMMUNITY ENGAGEMENT

There is strong interest in having the TNCI build on current public awareness and education programs, focused on the unique biodiversity values in the T-N, especially grasslands, wetlands and SEAR. These could be made more effective if outreach to the general public is shifted to specific target groups whose actions impact biodiversity, either negatively or positively. Ideally, outreach programs would be components of other TNCI program areas, such as protected areas, stewardship and Crown land management rather than “stand-alone”. At the same time, as noted in Sec. 5.8, raising awareness within the broader public, including community groups, youth and children, can help build support for conservation and influence the political will to act. Specific suggestions include:

- Harmonize and expand existing community awareness, education and engagement efforts.
- Target key groups, such as resource users, Crown land users, ranchers and farmers, homeowners, recreationists and tourists, e.g., ORV users and boaters.

- Extend outreach to new audiences, such as industry, economic sectors and to new community organisations, e.g., service clubs, 4-H clubs, farmers institutes.
- Adopt a results-based approach to identifying and measuring desired actions and behaviour changes and their substantive impacts on biodiversity.

[The TNCI should] have a strong communication component that's clearly linked to its biodiversity priorities and programs rather than a “stand-alone” or “add-on” program.

You need to demonstrate the benefits of education and outreach, given our limited conservation dollars. It has to be well-planned and targeted, and not a blanket awareness campaign [where it's] difficult to measure benefits.



Heffley Lake Stewardship Group: annual waterfowl survey
Photo courtesy Rick Howie

5.11 ENHANCED INDIGENOUS PARTICIPATION IN SEAR, FISH, WILDLIFE AND HABITAT CONSERVATION

Steep declines in salmon populations are the priority conservation issue for Indigenous groups due to the traditional, pivotal role of salmon in providing food and sustenance for their communities. Many bands are involved in various DFO fish and habitat enhancement programs, with a focus on at-risk salmon populations, including Chinook, Coho and Steelhead.

Central to our mission is our commitment to protect existing fisheries resources; to promote integrated, holistic approaches to ecosystem conservation and management; and to provide policy advice on political and technical matters (Shuswap Nation Tribal Council).

Most Indigenous groups have also been involved with wildlife and habitat management, often in collaboration with FLNRORD. Focus species include the endangered mountain Caribou, Bighorn Sheep, and other ungulates important to food security, such as Moose, Mule Deer and Elk. For example, resource road deactivation has increased Moose populations and a hunting moratorium has expanded the Elk population and range. Some also work on Grizzly Bear management.

Several groups have worked on conservation of SEAR, including the significant remaining grasslands on reserves, which represent 12% of the Bunchgrass Zone within Dry Interior region (Dyer 2020, p.21). Projects have involved data collection, species reintroduction and habitat enhancement, such as:

- surveys for Badger and Sharp-tailed Grouse
- introduction of Burrowing Owl into grasslands in the Lundbom Recreation Area
- funding for a First Nations environmental coordinator to address SEAR and invasive species in the early 2000s and devising protocols for using Traditional Ecological Knowledge in SAR work.

CASE EXAMPLE: CWS provided critical habitat funding to the Nicola Tribal Association, Upper Nicola Band and Lower Nicola Indian Band for inventory and monitoring of SAR, including Lewis's Woodpecker, American Spadefoot and Badger, and reintroduction of Burrowing Owls (latter also with the Burrowing Owl Society). *We have a lot of viable habitat so we are putting in protection measures, for example, controlling livestock.*



Salmon drying traditionally on tripod.
Shutterstock

Many Indigenous groups are interested in doing more on grasslands and SAR projects on reserve and in their Traditional Territories, but funding has been a constraint until recently. Most CWS funding to date has gone to bands in the Nicola Valley but there is strong conservation potential and great interest in expanding partnerships through the Nicola, Thompson and Fraser Valleys. The following sample topics were identified:

- regional initiative on the Spadefoot, which is relatively abundant on undisturbed reserve lands but not outside
- regional initiative on Moose (similar to that for Caribou in the North), which is key to food security to feed into a Provincial Moose Strategy, building on the regional Moose [cumulative effects study](#))
- management tables on the keystone ungulates, Grizzly Bear and Badger
- protection for bird habitats, e.g., nesting trees, leks (collective male arenas) and mating grounds
- SAR training, e.g., *for referrals, we get a list of species, not even a map, and we aren't knowledgeable enough to comment on possible impacts.*

We are interested in any project to protect and improve wildlife numbers.

We are keenly interested and have submitted proposals to work on SAR and habitat, including work related to the Trans Mountain Pipeline. We've brought SAR on to the reserve.

We mostly work on fisheries but are looking for funding and collaboration opportunities to broaden our usual focus on forestry and mining and do more on wildlife and grasslands.

The big grants focus mostly on salmon and water, but plants always come into the discussion because they're so important for conservation. We're always gathering data on plants and animals as we work on other topics since it's hard to separate [one species] from everything else.

Indigenous groups also see protection of Indigenous archaeological and cultural resources and sites, and the enhancement of food security as conservation issues. Possible activities to integrate into TNCI work might include:

- Continue to assess and protect archaeological sites under the *Heritage Conservation Act* as part of conservation efforts.
- Assess and protect traditional use and culturally significant areas (“cultural survival areas”), such as those used for camping, hunting, fishing and foraging (e.g., berries and medicinal plants), and culturally modified trees and landscapes. For example, fire was used to enhance forage areas and bird, game and other wildlife habitat.
- Enhance Indigenous food security and [food sovereignty](#), e.g., food, water and medicinal plants, especially culturally important food species, e.g., Salmon, Elk, and other fish and game (see more on [food security](#) issues in Myhal 2018).



Controlled burn, Merritt
Photo courtesy Richard Doucette

5.12 INVASIVE SPECIES – TERRESTRIAL AND AQUATIC

Possible TNCI activities include research on biocontrol of Spotted Knapweed in grasslands, with a focus on invasive pathways (e.g., roads, rail lines and backyards) and vectors (e.g., motorized and non-motorized recreation). Monitoring and enforcement, and education and outreach are seen as the main strategies to reach defined target groups.

The TNRD-hosted Thompson Nicola Invasive Plant Management Committee www.tnrd.ca/services/invasive-plant-management/invasive-plant-management-committee/ and Invasive Species Council of BC (insert hyperlink) <https://bcinvasives.ca/> hope to participate in the TNCI to connect with new organisations and expand their work.



Invasive *Centaurea biebersteinii*, Spotted Knapweed
Dreamstime



SUNSET OVER THE WINTER LANDSCAPE OF THE THOMPSON RIVER VALLEY

6 Conclusions and Next Steps

This *Situation Analysis* and the accompanying TNCI Phase 1 research on ecosystem and species conservation status (Dyer 2020) provides a strong foundation for establishing a regional conservation partnership in the T-N. It shows that there is strong interest in strengthening collaboration across a range of sectors and organisations. There is a good scientific information base and notable convergence on the priorities and key threats to biodiversity, including SEAR.

There are many strengths, assets and existing conservation initiatives to build on. Interviewees largely agree on a basic governance framework and possible benefits, goals and objectives of a regional partnership. A range of possible program areas and activities were suggested for consideration. When launching the new partnership over 2021 and beyond, founding partners can draw on the many ideas and suggestions in the Phase 1 reports, and on experience elsewhere, as described in *Lessons Learned* (Abs 2021).



Photo, top: Shutterstock;
left: Tiger Salamander
Shutterstock

Appendix A

TNCI PHASE 1 WORKING GROUP

Met seven times: March, April, June, August, November 2020 and January and March 2021.

1. Brad Arner, Program Manager, [Grasslands Conservation Council \(GCC\)](#), Kamloops
2. Scott Boswell, Program Coordinator, [Okanagan Collaborative Conservation Program \(OCCP\)](#), Kelowna
3. Danielle Cross, Stewardship Coordinator, Southern Interior, [Nature Conservancy of Canada](#), Kamloops
4. Darcy Henderson, Senior Species at Risk Biologist, Canadian Wildlife Service, Environment and Climate Change Canada (ECCC), Kelowna

5. Brian Holmes, Councillor, [Upper Nicola Band](#)
6. Todd Kemper, Wildlife Biologist, Canadian Wildlife Service, Environment and Climate Change Canada (ECCC), Kelowna
7. Jamie Leathem, Ecosystems Biologist, (FLNRORD), Penticton
8. Glenn Mandziuk, President & CEO, Thompson-Okanagan Tourism Association (TOTA)
9. Alternate: Ellen Walker-Matthews, VP Destination & Industry Development, [Thompson Okanagan Tourism Association](#)
10. Bryn White, past Program Manager, [South Okanagan Similkameen Conservation Program \(SOSCP\)](#), Penticton

REFERENCES

- Abs, Susan. 2021. *Lessons Learned from Nine Conservation Partnerships*. Thompson-Nicola Conservation Initiative
- Dyer, Orville. 2020. *Species and Ecosystems Conservation Status in the Thompson-Nicola Regional District, 2020*. Thompson-Nicola Conservation Initiative
- Myhal, Brittany. 2018. *Master of Land and Water Systems: Final Report*, Vancouver: University of British Columbia

Appendix B

ORGANISATIONS DOING CONSERVATION WORK IN THE THOMPSON-NICOLA

NON-GOVERNMENT ORGANISATIONS (NON-PROFITS, ASSOCIATIONS, CLUBS, CONSERVANCIES)

TNCI research identified over 40 NGOs involved in conservation in the region, including national, provincial, regional and local organisations. They are described below in two categories: (a) local and regionally-based groups, and (b) provincial groups, including some with regional offices in Kamloops.

a. Local and Regionally-based NGOs

Most of the numerous local and regional NGOs focus on specific topics (e.g., grasslands, fish and game, invasive species or tourism); species (e.g., Burrowing Owl, Steelhead, Wild Sheep); target groups (e.g., stewardship for private landowners); and/or locations (e.g., Nicola Valley, Wells Gray Park.)

Compared to other BC regions, local NGOs appear to be relatively small and locally-based, with limited funding. There is no formal T-N umbrella organisation, but many groups know each other, do informal networking, and collaborate on specific projects. The largest and most active are local fish and game groups, naturalist and hiking clubs, trails associations

and stewardship groups, often based in specific towns or areas. There is demonstrated community interest in environmental topics; public events and school programs offered by NGOs are well-received. There appear to be relatively few advocacy or activist-oriented environmental groups, although some groups have been involved in specific land and water use issues and environmental assessments for pipelines and mines.

The BC Cattlemen's Association, and members of Kamloops Stock Breeders Association and Nicola Stock Breeders Association in Merritt support stewardship programs for ranchers on conserving SAR and grassland habitat. Several ranchers are sectoral leaders in grasslands protection, conservation and education.

Regional collaboration can also build on a legacy of citizen and community engagement with natural resource issues. Local knowledge, a common history, past cooperation and established relationships are seen as strong assets. For example, the multi-stakeholder [Nicola Watershed Community Round Table](#) has met for over 20 years; projects include

the community-led “Nicola Water Use Management Plan” and the [Laurie Guichon Memorial Grasslands Interpretive Site](#). Since 2016, the Fraser Basin Council has facilitated the multi-stakeholder [Nicola Basin Collaborative](#) to collectively address water issues.

Local and regional groups can bring the following assets to a regional partnership:

- established identities, profiles and credibility
- local ecological, historical, social and sectoral knowledge
- the expertise of active and retired scientists, resource managers and other experts from NGOs
- in-kind support, including GIS capacity, offices, facilities, equipment and staff time
- contacts and networks for dissemination of information and programs
- experience conducting stewardship programs with ranchers and other private landowners
- multi-generational ranchers and other landowners with deep knowledge of the landscape
- *experienced, interested and willing volunteers*
- *knowledge, expertise, commitment, passion and dedication to achieving results*

b. National and Provincial Conservation Organisations

Many national and provincial conservation trusts, foundations and NGOs are already active and/or interested the region due to the many SEAR and threatened ecosystems in the Dry Interior. They see strong potential for expanding their work in the area through collaboration. Current programs include securing conservation lands; species at risk, and other

species and habitat conservation; research and monitoring; ecosystem stewardship and restoration; policy work; and education and outreach.

Several trusts have already acquired and manage conservation lands in the area and have identified the Dry Interior as a priority for future securement of high value biodiversity areas. All see collaboration as valuable for finding partners to help manage, restore and steward conservation lands, once secured. It was suggested that the T-N region has been “underserved” by these groups in comparison to other regions, in part because there is no regional partnership to work with, nor is there a regional conservation strategy to guide acquisition.

These organisations see themselves, and are viewed by others, as key partners for a regional partnership, as they can bring the following assets:

- funding for acquisition, management and monitoring of conservation lands (either directly or through funds such as the Habitat Conservation Trust Fund)
- scientific information, including extensive GIS databases and mapping
- non-profit status to help partners qualify for grants, contracting (consultants, suppliers), fund-raising and financial management, e.g., *the practical side of getting people on the ground*
- organisational, financial, logistical and administrative expertise
- knowledge and expertise, including local knowledge, for those with offices in the T-N
- relationships and networks, including history and partnerships with Indigenous and other governments, other NGOs and other landowners
- experience with collaboration and partnerships in other BC regions.

INDIGENOUS GOVERNMENTS AND ORGANISATIONS

The collaborative conservation priorities of the Indigenous groups interviewed focus largely on the role of ecosystem and species health in supporting Indigenous food security; restoring watersheds; improving land and water management practices; protecting archeological and cultural resources; and contributing to community safety and economic development.

The most common areas for Indigenous conservation work are fisheries, forestry, water/watershed and wildlife management, including several SEAR projects. Indigenous managers, technical staff, Elders and community members have significant scientific, technical, planning and field expertise in areas such as:

- forestry, including woodlot management, reforestation/ tree planting and rehabilitating roads
- fisheries and fish habitat enhancement
- combining Western science, TEK and local knowledge in conservation
- conservation of SAR and threatened habitats on reserve
- conservation partnerships with federal and provincial government agencies, universities, and other researchers and consultants, including several First Nations-owned consultancies
- ecological restoration and stewardship programs, including with youth

Much Indigenous conservation work is driven by Crown tenure referrals and environmental assessment/monitoring for major developments, both of which are relevant to the work of a conservation partnership. First Nations receive referrals for federal and provincial tenure, licensing and permitting based on the “duty to consult” under Indigenous Title and Rights. They are also involved in environmental assessments and compensation and monitoring programs for major projects, including the Trans Mountain Pipeline (TMX), Highland Copper and New Gold. Sample initiatives that could provide helpful analytical data models for the TNCI include:

- Cumulative Effects Assessment for watersheds in the Secwepemcul’ecw Traditional Territory, a collaboration with [ALCES \(A Landscape Cumulative Effects Simulator\)](#), which highlighted watershed and habitat fragmentation among other impacts
- Land Management Framework for the Adams Lake drainage system, focused on water and forestry development, cumulative effects and management scenarios
- Trans Mountain pipeline-related wildlife protection work, e.g., wildlife sweeps and protecting bear dens and nursing areas for Elk
- Wildlife cumulative effects studies, e.g., for [Moose](#) in the Thompson-Okanagan.

OTHER GOVERNMENT ORGANISATIONS

Government organisations are important partners in other BC partnerships and could bring to the TNCI in-kind staff, scientific and technical support, funding, and data and mapping.

FEDERAL GOVERNMENT:

Environment and Climate Change Canada: The Canadian Wildlife Service (CWS) Pacific Region has worked in the Thompson-Nicola region for decades, and in 2020 expanded to an office in Kelowna with nine staff covering BC Interior issues. CWS provides major funding support to conservation land trusts like Ducks Unlimited Canada, Nature

Conservancy of Canada and Nature Trust of BC. They also fund habitat inventory and restoration work being done by NGOs working on grassland and wetland conservation, such as the Grasslands Conservation Council and BC Cattlemen's Association. CWS staff in Delta and university collaborators (UBC, SFU and TRU – see below) conduct research and monitoring of migratory birds and species at risk in the region. Key CWS programs include [Habitat Stewardship Program](#), [Aboriginal Fund for Species at Risk](#), [Indigenous Guardians Pilot Program](#).

Fisheries and Oceans Canada (DFO): DFO protects and manages fish and fish habitat in the Thompson-Nicola region. It fulfills this mandate through activities such as salmon enumeration, scientific research, fisheries management, regulating development activities under the *Fisheries Act* and *Species at Risk Act*, salmon enhancement, habitat restoration, community engagement, and monitoring and enforcement. It also supports partnerships and stewardship activities for fish and fish habitat, including aquatic species at risk, with local First Nations and stewardship organizations. Funding initiatives include the Aboriginal Fisheries Strategy (AFS), Pacific Salmon Treaty Grants and Contributions, BC Salmon Restoration and Innovation Fund (BCSRIF), Indigenous Habitat Protection Program (IHPP), Coastal Restoration Fund (CRF), [Canada Nature Fund for Aquatic Species at Risk](#), and the [Habitat Stewardship Program for Aquatic Species at Risk](#).

DFO is interested in exploring opportunities for greater regional collaboration to help coordinate, support and prioritize work with partners. Current projects under the [Priority Watersheds and Salmon Restoration](#) program for the Fraser River Priority Watershed include the Thompson River Salmonid Habitat Restoration Project, Secwepemc Leadership For Thompson-Shuswap Salmon Recovery, and Coldwater River Water Storage Enhancement Plan.

PROVINCIAL GOVERNMENT:

Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD): Regional Ecosystems Section staff and local conservation groups proposed the idea exploring a regional partnership, and FLNRORD staff are now the lead provincial partners. The Province

participates in other BC partnerships through in-kind support such as office space and equipment; membership on executive/steering committees; and liaison and support for projects such as shared environmental planning and Regional Conservation Funds (see *Lessons Learned*). The Ecosystems and Fish and Wildlife Sections, based in both Kamloops and Penticton, conduct the day-to-day management of species and ecosystems at risk (SEAR) and regionally important game species. Conservation activities include:

- inventory and monitoring of species and ecosystems at risk
- habitat restoration on Crown land
- establishing and managing conservation lands, such as Wildlife Habitat Areas and Wildlife Management Areas
- developing collaborative land use strategies with Indigenous communities
- developing best management practices and stewardship agreements with local governments and private landowners
- environmental review of proposed development, such as residential, wind farms, mines, and oil and gas infrastructure

Aquatic specialists focus on maintaining water quality and quantity, fisheries specialists engage in stream restoration projects, and wildlife biologists study and manage game species. Increasingly, many of these activities are implemented collaboratively with Indigenous communities. Examples include restorative controlled burns, fencing projects and collective land management strategies.

See additional information on FLNRORD Crown land management responsibilities, including conservation-related functions such as forest, range and agriculture management and recreation sites and trails at [this website](#).

Ministry of Environment and Climate Change Strategy (ENV):

See an overview of ENV responsibilities in relation to conservation at the link in the ministry title and especially at [BC Parks](#) under the tab “About BC Parks” and [Species and Ecosystems at Risk](#).

LOCAL GOVERNMENT:

Staff from the Thompson-Nicola Regional District, City of Kamloops and City of Merritt see potential value in the TNCI and expressed interest (without official commitment) in participating in further discussions. The TNRD Board, consisting of 26 Directors, one each from [10 electoral areas and 11 member municipalities](#), would need to decide on any future board and staff involvement. A possible option is that only interested directors would participate, with the support of relevant staff. The TNRD hosts the collaborative [Thompson-Nicola Invasive Plant Management Committee](#) which is interested in being a TNCI partner.

City of Kamloops planners work closely with government and academia on environmental topics. They are keen on further collaboration, especially as they update their 2021 Official Community Plan. They hope to expand on initiatives such as environmental assessments for public works and private developments; invasive plant management; and ecological aspects of park planning. They might be able to provide in-kind contributions such as meeting spaces and (landscaping) tools, vehicles and equipment for field projects.

UNIVERSITIES & CONSULTANCIES: THOMPSON RIVERS UNIVERSITY, UBCO, UBC, SFU, PRIVATE CONSULTANCIES

BC conservation partnerships often work with universities within or outside their regions. Thompson Rivers University (TRU) faculty and students are widely viewed as key partners for the TNCI, due to their conservation expertise, research and strong record with regional partnerships. There is interest from faculty in Natural Resource Science, Biological Science, Environmental Science and Tourism departments. Other BC universities also work in the region. Universities could bring the following assets to the TNCI:

- a growing body of scientific studies and applied research on regional conservation topics, biodiversity (e.g., grasslands), and sustainable/responsible tourism
- applied research, funded by companies and focused on deliverables and results e.g., sound reclamation and restoration approaches
- the capacity and interest in partnering with other groups to address knowledge gaps

- past and current collaborative projects with Indigenous, government and non-government groups, e.g., Grasslands Council of BC (GCC), CWS, FLNRORD and specific bands
- linkages to the global research community and specialized networks, e.g., TRU is home to the [Herbaceous Diversity Network](#), involving 80 scientists in 20 countries
- access to government and industry research funding, e.g., NRCan, NSERC, Tri-Council agencies, mitigation funds from resource projects
- graduate and undergraduate student research, including field work and surveys:
 - TRU \$5000-\$6000 undergrad scholarships for 4-6 month research projects; results must be disseminated (this has been underutilized)
 - someone from the partnership could sit on a MSc Environmental Science supervision committee.

Academic research can benefit from partnerships through data-sharing, accessing Indigenous and local knowledge, identifying useful research applications, and sharing research results with the community.

Additional research expertise is available through numerous regionally-based consultants, including several Indigenous-owned consultancies focused on natural resources management and conservation in the region. They could offer specialized expertise, local knowledge and experience to support TNCI programs over time.

CASE EXAMPLE: TRU's [Fraser Lab: Centre for Ecosystem Reclamation](#) works closely with the GCC. Some of the Lab's funding and research is designed to support GCC strategic priorities, while the GCC does education and outreach for the Lab's work. Current research includes ecosystem reclamation, climate change, invasive species, mitigation, agroforestry, trophic level dynamics, and drivers of biodiversity within the context of climate change. The Lab also works with industry and landowners on private and leased Crown land, including mining reclamation on private sites and controlling non-native plants, and is open to new topics and partnerships.



Burrowing Owl Conservation Program: release cage
Courtesy Rick Howie