REPORT

A stakeholder's guide - an adaptable framework for evaluating practices and linking potential funding sources to prioritized projects.

The Restoration Playbook v.2.0

JANUARY 12, 2022

Quantified® Ventures

RESOLVE

Dear **RESOLVE,**

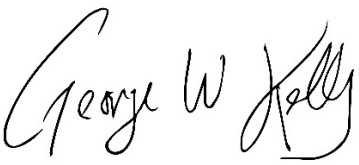
Quantified Ventures is pleased to present a report for the “Restoration Playbook” project. We value the opportunity to work together with you and regional stakeholders to achieve the resource protection and restoration objectives of the Yukon South Beringia Priority Place Initiative.

It is time to break down the siloes and barriers for restoration projects and funding. It also is important to tell the story better about project benefits tied to ecosystem services. The Playbook is a “how-to” resource that supports engagement with key stakeholders and decision-makers to inform and guide effective progress. We believe that this Playbook can help with translating and prioritizing those project benefits into metrics that are understood by both funders and project proponents with the goal of linking funding to on-the-ground benefits.

Enclosed please find Version 2.0 of the project report including recommendations on a path forward. This version is responsive to feedback received to date, recognizing that circulation of the initial draft was limited. We encourage additional feedback and consultations.

If you have any additional questions, please contact me directly at kelly@quantifiedventures.com.

Sincerely,



George W. Kelly,
Managing Director
QUANTIFIED VENTURES

1. Table of Contents

2. Our Team

Quantified Ventures (QV) is an outcomes-based capital firm that drives transformative health, social, and environmental impact. Leveraging deep content expertise and extensive capital relationships, we plan, finance, and develop transformative projects and programs that advance health equity, social impact, community resilience, and environmental justice for a growing array of public and private organizations.

George W. Kelly, Managing Director

Jody L. Bickel, Senior Advisor

Daniel B. Perkins, Ph.D., Team Member

Brad Fairley, Team Member

3. Introduction

Quantified Ventures and its team are pleased to provide the Restoration Playbook (Playbook) that is focused on creating a framework for evaluating and prioritizing restoration practices in the Yukon South Beringia Priority Place Initiative (YSB PBI). While the Playbook lays out a framework, it is anticipated that stakeholder discussions and additional phases of work will be necessary to fulfill the promise of this approach. Additional steps and phases have been recommended in the Conclusion section of this report. QV would like to recognize that this project was undertaken with the financial support of the Government of Canada through the federal Department of Environment and Climate Change (ECCC).

While the Playbook suggests a focus on "restoration," it also includes practices that include preservation and enhancement of high quality natural and historical sites. Ultimately, once fully developed, the Playbook is intended to be an adaptable, web-based framework for evaluating and prioritizing practices, and linking potential funding sources to prioritized projects. As noted, the focus of the Playbook is on the YSB PPI. The funding sources are either direct or indirect beneficiaries tied to regulatory, non-regulatory and/or voluntary sustainability programs. The regulatory programs or laws may serve as a driver for offsets while certain other programs/projects may offer available funding initiatives or commitments of corporations or governments to meet certain environmental goals in certain regions. The Playbook incorporates the prospect of funding into the decision-making framework for prioritizing restoration projects.

As illustrated in Figure 1, by identifying multiple buckets of potential funding, the criteria to achieve such funding, and quantified metrics tied to project benefits, the Playbook facilitates the match between funding and projects. The clear definition of project metrics gets embedded into a multiple-criteria decision analysis (MCDA) that allows the stakeholders to weight their regional preferences in an adaptable prioritization tool. The weighting factors can be adjusted to achieve the specific and targeted goals and objectives of the region and this in turn adjusts the prioritization of projects. The goal is to assist with the prioritization of efforts by the stakeholders in the region and to enable the identification of prospective funding sources.

The Playbook and MCDA do not exist in isolation – they are strategies and tools that go hand-in-hand with development, providing mitigation and offsets as and where appropriate as determined by stakeholders, governments, and markets.

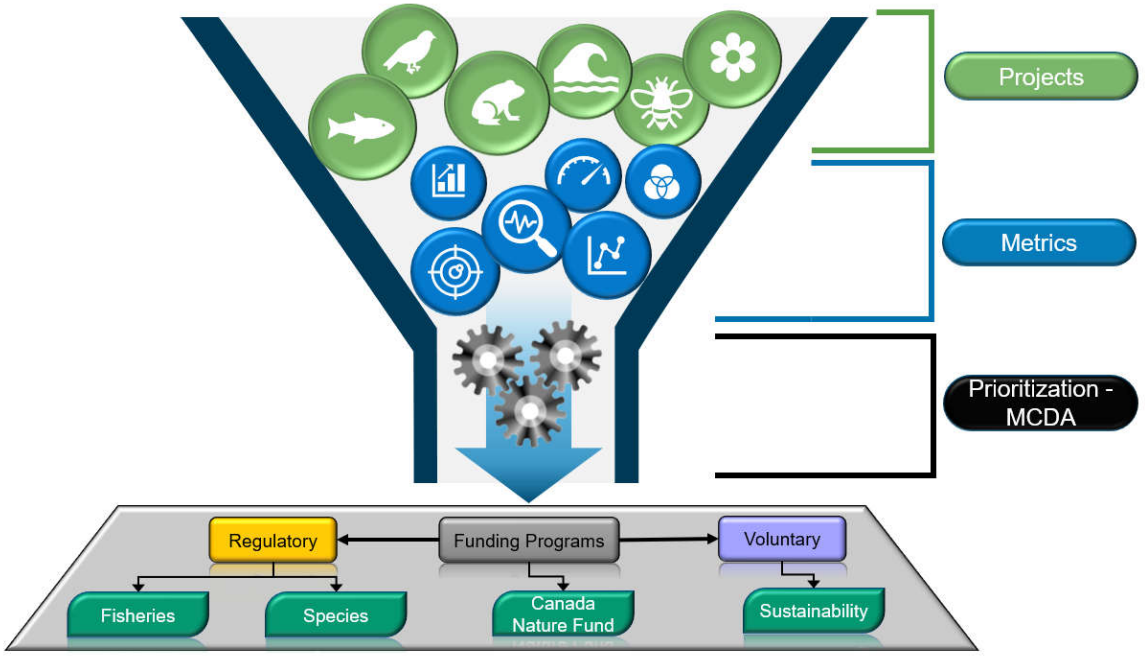


FIGURE 1. CONCEPTUAL DIAGRAM OF THE PLAYBOOK, WHERE RESTORATION PROJECTS ARE FUNNELED THROUGH METRICS AND MCDA PRIORITIZATION TOWARD REGULATORY AND VOLUNTARY FUNDING SOURCES.

The Playbook is not only intended to be implemented by stakeholders in the region but also can be adapted by governments, planning entities, Indigenous communities, and actors outside of the region for their own use. It also can be applied on a scale tied to watersheds, communities, or habitats. For example, a watershed scale approach has numerous benefits for aquatic and terrestrial species, water users, land managers, and environmental diversity. Approaching evaluation on a watershed scale, versus on a project-by-project basis, will result in a more holistic, sustainable, cost-effective program of interrelated projects that can result in continuous corridors of improved ecological functions and values. Too often ecological work begins with a broad ecosystem issue that needs resolution (i.e., poor water quality, diminished water quantity, flooding, etc.), but results in a narrow site-specific project due to jurisdictional politics, land ownership, user interest, and funding. Working at a broader scale, e.g., a watershed approach, allows resource agencies and others to support programmatic, large-scale ecological solutions.

This Playbook outlines a potential framework for regional stakeholders to consider, adapt, and potentially implement. While the QV Team has undertaken research in the development of this Playbook, it is by no means considered exhaustive and it is anticipated that stakeholders will provide additional comments and inputs that will further refine the report. The process is intended to be iterative to include those comments and inputs. This version, 2.0, reflects a first round of input for adaptation to the YSB PPI context.

Ultimately, it is anticipated that this effort will lead to additional refinements and phases that will include the development of:

- a web-based portal
- prioritization tools and metrics
- practice standards and specifications, and
- implementation of one or more pilot projects.

It is time to break down the siloes for projects and funding. From a project perspective, the focus needs to be placed on those with multiple benefits and not on single attributes. As for funding, the barriers and limitations need to be eliminated to create a more fluid and pooled approach to project investment. To secure the funding needed to support restoration and other values, it is important that we tell a better, more complete story about project benefits tied to ecosystem services. We believe that this Playbook can help with translating and prioritizing project benefits into metrics that are understood by purchasers, funders, and project proponents.

3.1. Ecosystem Services Underpin the Playbook

The concept of ecosystem services, as illustrated below (Figure 2), underpins the development of the metrics which in turn are the basis for prioritizing projects under the MCDA. The key is to translate ecosystem services into easily understood metrics make good sense, both quantitatively and qualitatively to funders and project proponents. The services need to be relevant to the region, as the services are dependent upon the eco-region, geology, and climate. The diagram below can be adapted to regional natural resource economies. For example, under cultural, lifestyle values could be included. Under provisioning services, a region like the YSB PPI could add mineral resources, such as those for the energy transition and technology. Ultimately, the goal is to convert these services into a unit of measurement that can be developed and purchased in a fungible manner.

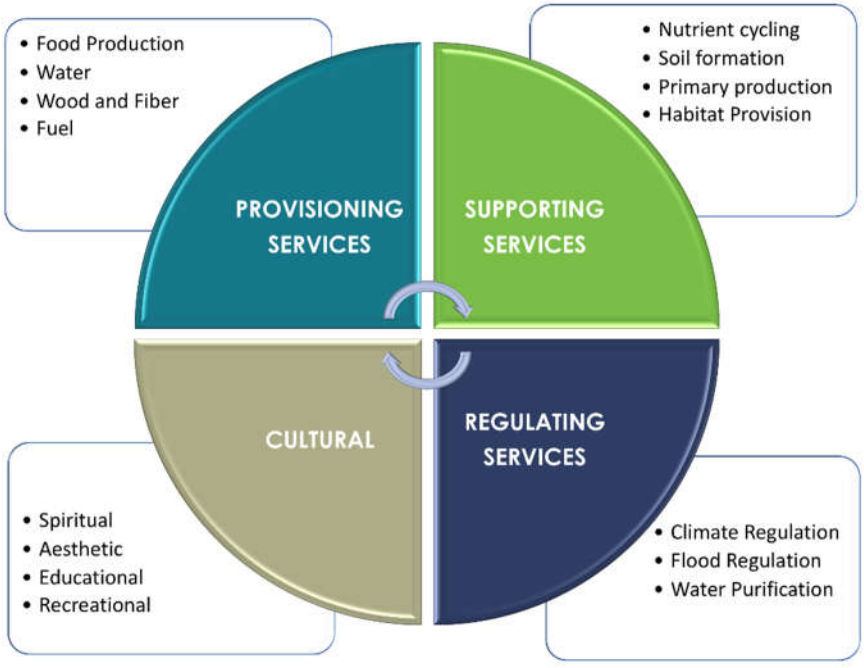


FIGURE 2. CONCEPTUAL DIAGRAM OF ECOSYSTEM SERVICES AS DEFINED BY THE MILLENNIUM ECOSYSTEM ASSESSMENT (HTTPS://WWW.RESEARCHGATE.NET/FIGURE/ECOSYSTEM-SERVICES-MILLENNIUM-ECOSYSTEM-ASSESSMENT_FIG3_278028993)

3.2. Terms & Definitions

Ecosystems are defined as the complex of living organisms, their physical environment, and all their interrelationships in a particular unit of space. Ecosystem services are outputs, conditions, or processes of natural systems that directly or indirectly benefit humans or enhance social welfare.

Ecosystem services can benefit people in many ways, either directly or as inputs into the production of other goods and services. For example, the pollination of crops provided by bees and other organisms contributes to food production and is thus considered an ecosystem service. Another example is the attenuation of flooding in residential areas provided by riparian buffers and wetlands. Ecological assets can be more readily understood, classified, and stewarded within their respective geographically defined spaces.

Watersheds are discrete land areas that channel rainfall and snowmelt to creeks, streams, and rivers, and eventually to outflow points such as reservoirs, bays, and the ocean. For example, the Yukon River is the third longest river and the fourth largest drainage basin in North American, stretching nearly 2,000 miles from the Yukon to Alaska. Although around 126,000 people live within the basin, it is one of the least traveled and populated of all the major rivers in North America. It is the longest free-flowing river in the world while being the world's longest inland Pacific Salmon run.

Environmental credits are an emerging asset class that encourages private sector investment in projects that restore natural resources functions such as wetland, water, and habitat resources, or reduce air pollution. For the environmental credit developer, they provide a means to monetize and sell ecological values created by restoration activities. For the credit buyer, they provide a way to mitigate the environmental impacts of their business operations as required by law or social priorities. In this way, environmental credit markets allow economic development to progress while ensuring the healthy ecological functioning of our natural landscapes and systems.

Ecological assets may be classified and valued based on their status assessment, as in the case of at-risk species, as well as due to their biological performance functions, such as carbon sequestration, water holding and natural treatment, pollination, etc. These assets may also be considered, and even valued, for their socio-cultural significance including traditional communities' usage, recreational benefits, and for the preservation of specialized and unique resources.

3.3. Scale and Scope of the Playbook

As noted above, this version of the Playbook relates to the YSB PPI, however the scope and scale of the Playbook may be adopted to regions and resources determined by stakeholders. As an alternative, the scope could be focused on a watershed, a sub-watershed, a habitat, a set of species or on a community basis. The Playbook can also be used to compliment land use planning, although it serves a different purpose. The focus of the Playbook is targeting restoration, enhancement, or preservation of resources while land use planning sets a course for future development. Nonetheless, the land use plan could serve to identify areas and sites where restoration, enhancement and preservation would be most suitable and could refer to the process and mechanisms by the which the elements of this Playbook could be implemented. In essence, the Playbook frames an adaptable mechanism for supporting restoration implementation which may advance goals established in land use planning.

Relative to restoration projects, as illustrated below (Figure 3), the projects in the landscape can serve many purposes and have many benefits. For example, projects can result in soil erosion control, water purification, habitat corridor improvement, water catchment, and carbon sequestration. The more integrated the projects and process, the better the results in delivering an interlinking natural infrastructure.

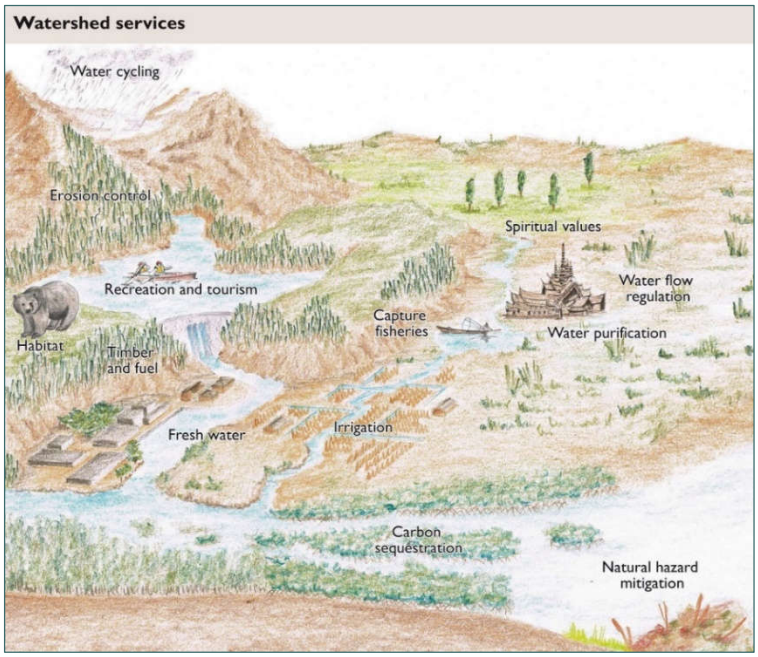


FIGURE 3. ECOSYSTEM SERVICES AT A WATERSHED SCALE.

As noted above, one well established approach is to adopt a watershed approach. A watershed approach does not merely focus exclusively on one strategy but enables stakeholders to consider other contributing strategies or solutions, and to authorize a more cost-effective, multi-benefit distribution of solutions. The watershed boundary can be as small as a sub-watershed or as large as the entire watershed, including tributaries. The watershed could even be drawn to include international regions, as illustrated in Figure 4.

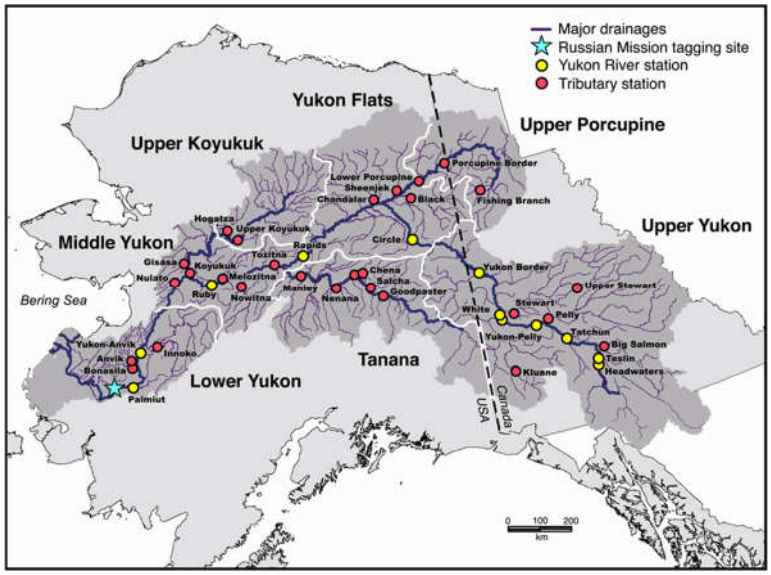


FIGURE 4. EXAMPLE WATERSHED REGION SHOWING THE YUKON RIVER WATERSHED.

The intent of this Playbook is to serve as a strategy resource that can be utilized at any scale, as it is adaptable to the focus areas and concerns of the stakeholders in the region. Accordingly, the scope and scale must be derived from a collaborative and community-oriented process.

4. Description Of Yukon South Beringia Priority Place Initiative & Resources

The Priority Places Initiative is an effort within Environment and Climate Change Canada's (ECCC) Community-Nominated Priority Places (CNPP) for Species at Risk as part of Canada's Nature Fund. CNPP supports multi-partner initiatives in priority places where there are opportunities to protect and recover species at risk and their habitat through multi-species and ecosystem-based conservation action. A priority place may be described as a defined geographic area of high biodiversity value with a recognizable ecological theme and social relevance that may be intuitively identified as a distinct "place" by the people that live there and manage its infrastructure and renewable and non-renewable natural resources.

In 2020, eleven priority places were selected, including the Yukon South Beringia, to focus collaborative conservation action, following the concept outlined in the Pan-Canadian Approach to Transforming Species at Risk Conservation in Canada. The watersheds and fisheries of the Yukon South Beringia Priority Place Initiative (YSB PPI) are important resources in the region and are a significant focus of the Restoration Playbook (Figure 5). The YSB PPI is recognized for its high biodiversity values, with 26 species at risk (8 Beringian), including globally unique species. The area overlaps with Dawson Land Use planning, with active mining and exploration, fishing, hunting and tourism activities, and the opportunity to advance conservation efforts through stakeholder collaboration.

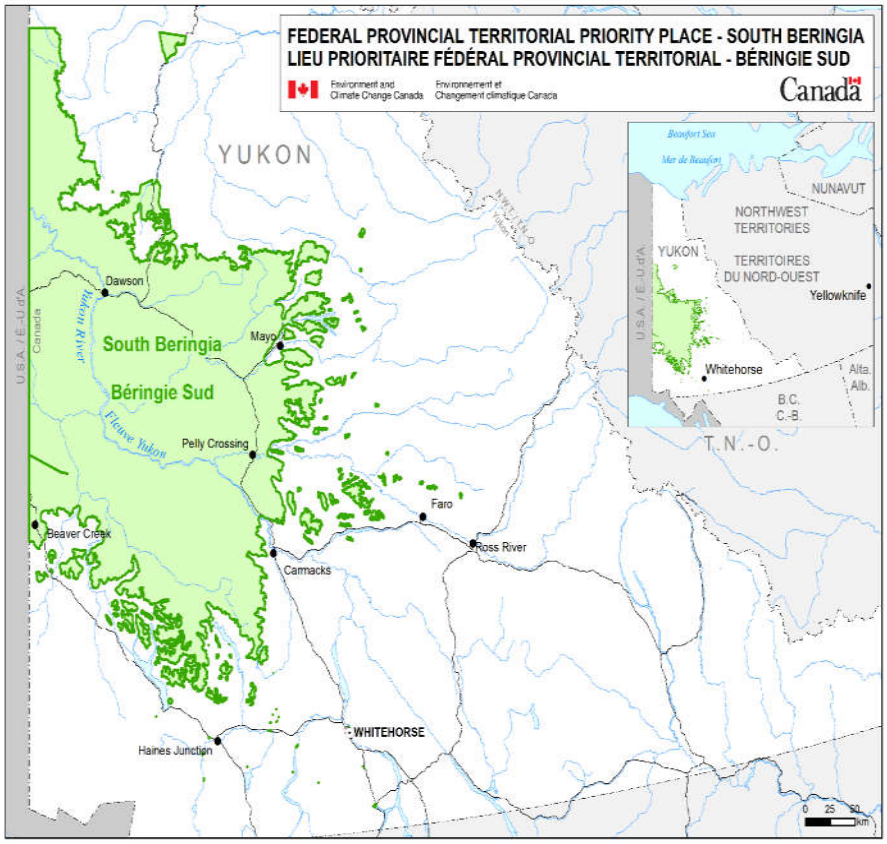


FIGURE 5. FEDERAL-PROVINCIAL-TERRITORIAL PRIORITY PLACES - SOUTH BERINGIA. THIS MAP SHOWS THE LOCATION OF THE SOUTH BERINGIA PRIORITY PLACE IN THE TERRITORIES. SOUTH BERINGIA IS A FEDERAL-PROVINCIAL-TERRITORIAL PRIORITY PLACE.

This is an area that was historically unglaciated in the Yukon and is an ice-free landscape known as the Beringia. It includes the Klondike Plateau and the North Ogilvie Mountains. It is transected by the Tintina Trench and include two eco-zones and six eco-regions. The Yukon River is the largest river and includes associated tributaries such as the White River, the Stewart River, Klondike River, and the Indian River. Wetlands are a significant land use cover and include 10 percent of the land mass in the Dawson sub-region. Many wetlands form above the flat permafrost and create shallow pools and peatlands (including bogs and fens. The area includes extensive permafrost with buried frozen organic sediments. Much of the Klondike Plateau is considered boreal forest.

From a fauna perspective, area resources include a major flyway along the Tintina Trench, mineral salt licks for mammals, intact forest, salmon spawning grounds, and migratory routes for caribou. The YSB PPI includes one Endangered and seven Special Concern species at risk (Species at Risk Act) (Figure 6). Significant pre-human and paleontological and archeological resources also are noted in the region.

The area hosts significant historical mining operations, with placer mines being dominant. Aside from mining, there also were impacts from roads, associated infrastructure, and camps. Within this context the distinction between current and historical mining practices is recognized, with opportunities to link modern practices to desired restoration and conservation outcomes. Dawson is the largest municipal area in YSB PBI. Currently, there are projected placer and hard rock mines, and efforts are being made to undertake regional planning to guide future development through the Dawson Regional Land Use Commission.

FIGURE 6. SELECT YUKON SOUTH BERINGIA SPECIES AT RISK.

5. Indigenous Communities & Other Stakeholder Partners

Engagement, collaboration, and other support from decision-makers and stakeholders in the YSB PPI are critical to develop a project of this type and for long term initiative success in stewarding resources within the region. First Nations government, federal and territorial decision-makers, and agency officials are each essential for certain elements. Stakeholders represent a diversity of valuable perspectives to inform strategies and drive project implementation. They reflect interests including:

- Indigenous Canadians
- Resource and land use planning entities
- Social and environmental focused non-governmental organizations
- Economic and industry focused associations

The Priority Place Initiative includes a focus on improved coordination across levels of government and resource planning to implement a place-based approach to Indigenous Peoples' engagement and well-being. The Canadian government seeks the respectful engagement and consultation of Indigenous People in keeping with the United Nations Declaration of the Rights of Indigenous People (UNDRIP). Indigenous Canadians also known as Aboriginal Canadians or First Peoples are the Indigenous peoples within the boundaries of Canada. They comprise the First Nations, Inuit, and Métis.

The Yukon Territory, the broader geographic home of the Yukon South Beringia Priority Place Initiative, is one of Canada's three northern territories. The Yukon is home to over 37,000 residents and the population is growing. There are 14 First Nations in the Yukon Territory. Approximately 23 percent of the population is Aboriginal, with most belonging to one of the 14 Yukon First Nations. Yukon First Nations are at the forefront of Aboriginal land claims and self-government in Canada. Eleven of 14 First Nations have settled their land claims and are self-governing. This represents approximately half of all such agreements in Canada. These modern treaties are truly comprehensive and designate approximately 9 percent of Yukon's land area as Settlement Land and afford province-like governance powers. The Yukon's modern treaties are comprised of two parts, Self-government Agreements and constitutionally protected Final Agreements. The Yukon treaties establish legislated fiscal arrangements and provide direct taxation powers to Yukon First Nations. Beyond Settlement Land, the modern treaties with Yukon First Nations also establish roles and responsibilities for the joint stewardship of the First Nation traditional territories by Yukon First Nations and the Yukon Government.

The Indian Act continues to apply to three Yukon First Nations. This effort is meant to be inclusive of the three Yukon First Nations who have yet to sign modern treaties and acknowledges the contemporary case law which guides development activities on the Yukon's unceded Traditional Territories and the interests of the Yukon's transboundary First Nations. The Umbrella Final Agreement, the political agreement affirming individual Self Government Agreements of the Yukon First Nations and their traditional territories, is important in the context of the issues addressed in this document. The journey of the Yukon First Nation Self-Government, the regional focal area of the Playbook, is described online at the 'Mapping the Way' website.

Importantly, Article 32 of United Nations Declaration of the Rights of Indigenous People and Call to Action No. 92, issued by the Truth and Reconciliation Commission of Canada states that:

- Indigenous peoples have the right to determine and develop priorities and strategies for the development or use of their lands or territories and other resources.

- States shall consult and cooperate in good faith with the Indigenous peoples concerned through their own representative institutions in order to obtain their free and informed consent prior to the approval of any project affecting their lands or territories and other resources, particularly in connection with the development, utilization or exploitation of mineral, water or other resources.
- States shall provide effective mechanisms for just and fair redress for any such activities, and appropriate measures shall be taken to mitigate adverse environmental, economic, social, cultural, or spiritual impact.

This would include, but not be limited to, the following:

- Commit to meaningful consultation,
- Building respectful relationships, and
- Obtaining the free, prior, and informed consent of Indigenous peoples before proceeding with economic development projects.

The concepts within the Playbook build on the idea of ensuring consultation and consent with Indigenous communities and engaging in consent-based processes with the local stakeholders to address restoration and protection priorities for funding in the region.

6. Legislation

Legislation provides important context for any environmental conservation or restoration project. It provides the regulatory framework within which the work will take place. It specifies the permits required to undertake projects. The following is a list of Federal, Territorial, and Municipal legislation that could affect or support environmental conservation or restoration projects.

Federal

- Fisheries Act (FA) – Fisheries and Oceans Canada (DFO)
- Species at Risk Act (SARA) – Environment and Climate Change Canada (ECCC) and Fisheries and Oceans Canada (DFO)
- Canadian Navigable Waters Act (CNWA) – Transport Canada (TC),
    - (Although this does not yet apply it could be relevant in the future)
- Migratory Birds Convention Act (MBCA) - Environment and Climate Change Canada (ECCC)
- Yukon Environmental and Socio-economic Assessment Act (YESAA)

From an environmental conservation and restoration perspective, the most important pieces of federal legislation are the Fisheries Act and the Species at Risk Act.

Territorial

- Yukon Environmental and Socio-economic Assessment Board (YESAB)
- Yukon Environment Act – Environment, Environmental Programs
- Yukon Waters Act – Executive Council Office, Yukon Water Board and Environment, Water Resources
- Yukon Territorial Lands Act – Energy, Mines, and Resources – Lands Branch
- Yukon Lands Act – Energy, Mines, and Resources – Lands Branch
- Yukon Forest Resources Act - Energy, Mines, and Resources – Forest Management Branch
- Yukon Historic Resources Act - Heritage Resources Board
- Yukon First Nations (Umbrella) Final Agreement – Heritage Resources Board

While there are numerous pieces of territorial legislation and agreements, the most important ones are the YESAA and the Umbrella Final Agreement. The Final Agreement is important because this is the vehicle through the Dawson Regional Planning Commission was created, which provides significant opportunities to protect land from development.

Municipal

Only Whitehorse and Dawson City have heritage bylaws:

- City of Whitehorse Bylaw 2022-10 (Heritage)
- The Town of the City of Dawson Bylaw #09-04 (Heritage)

From an environmental conservation and restoration perspective, the two municipal bylaws are relevant in so much as the can be used to protect significant heritage features.

More details about each of these pieces of legislation and how they can be used to facilitate this project are provided in the Appendix.

6.1. Legislation Driving Offsets

While there is a range of legislation relevant to environmental conservation and restoration projects, there are in fact only a few that require offsets. In all cases, proponents must prove they have followed the standard mitigation hierarchy. That is, they must show that they have avoided impacts to the maximum extent possible. Then, they must show that they have minimized impacts as much as possible. For any residual impacts they are required to provide offsets.

Federal Fisheries Act

The Department of Fisheries and Oceans (DFO) can use the Federal Fisheries Act to require project proponents to obtain an authorization under the Act for projects that harm fish or fish habitat. The authorization may require proponents to provide offsets to compensate for this harm. The offsets usually involve improvements to fish habitat. At present there are no standards for offsetting projects, they are handled on a case-by-case basis. DFO is currently developing standards for monitoring offset projects, and these will indirectly create standards for offsetting projects, but the process could benefit from clearly articulated standards for offsetting.

Federal Species at Risk Act

DFO administers this Act for aquatic species at risk while Environment and Climate Change Canada (ECCC) administers the Act as it relates to terrestrial species at risk. The Act can be used to require proponents of projects that harm endangered species or their habitat to provide habitat offsetting which is generally aimed at improving species productivity. As with the Fisheries Act there are no clear standards for offsetting.

6.2. Regulatory Gaps

The Yukon Territory is sparsely populated with limited environmental regulation in certain areas. As a result, there are some regulatory gaps which may affect environmental conservation and restoration projects. A review of how the legislation is administered reveal additional regulatory gaps.

Fisheries Act/Species at Risk Act

As noted previously, there are no standards for offsetting under either piece of legislation. Also, neither DFO nor ECCC require offsets for all impacts. Proponents of projects with smaller impacts are not always required to provide offsets.

Wetlands

The lack of protection to wetlands is considered by many to be a gap. This is particularly significant given the sensitivity of wetlands located in areas of permafrost, the difficulty in restoring these wetlands and the lack of expertise to do this. The Yukon government is working on strategy to address wetlands policy which may help fill this gap.

Free Entry Staking

With free entry staking, in many cases restored mine sites could be remined, which can put successfully implemented offsetting projects at risk. Restoration funders, whether the funding is mandated or voluntary, are likely to require that projects have permanence so that funds are not spent on short-term projects.

Protection of Crown Land

There exists a lack of mechanisms to protect Crown Land from development when this is set as a priority, although land use planning does provide for a role here. While leases for timber or minerals are relatively easy to obtain, there is debate over whether the opportunity to protect or preserve is sufficient. Some recent planning initiatives (e.g., Dawson Region Planning Commission) may help address this. The Dawson Land Use Plan is addressing a range of issues from development to consideration of areas with high conservation value.

7. Funding Sources

An important consideration in planning environmental conservation and restoration projects is funding (Table 1). Government is the obvious source of funding for these projects. Some of the existing government programs, their focus and the administering agency are outlined below. While government generally takes the lead, the private sector, and non-governmental organizations (NGO's) have shown a willingness to get involved in focused conservation or restoration projects.

TABLE 1. EXAMPLES OF POTENTIAL CONSERVATION PROJECT FUNDING SOURCES.

PROGRAM	FOCUS	MANAGEMENT
Environmental Damages Fund (EDF)	Wide	ECCC
Habitat Stewardship Program (HSP)	Species at Risk	ECCC/DFO
Aboriginal Fund for Species at Risk (AFSAR)	Species at Risk	ECCC/DFO
Canada Nature Fund	Spaces, Species at Risk	ECCC
NGO (e.g., RESOLVE, DU, TU)	NGO Specific	Agency
Private (e.g., Newmont Corp.)	Private Agency Specific	Agency

While there are a number of government programs that are available, they tend to be narrow and have specific criteria which limit the opportunity to develop multi-objective projects envisioned within this Playbook. In addition, their funding tends to be short-term which prevents the development of a sustained performance-based approach to environmental conservation and restoration needed to address future challenges. There are real opportunities to further leverage these programs with offsets, private funding, and voluntary funding sources, but the criteria and standards need to be more consistent.

8. Potential Focus Areas & Initiatives

This section identifies some of the potential focus areas and initiatives related to future environmental conservation and restoration efforts.

Focus Areas

Within South Beringia, an obvious focus for environmental conservation and restoration projects is the legacy placer mine areas. Some of these sites have re-mining and restoration potential. Many of these represent excellent opportunities to restore ecosystem functions including when linked to reclamation and broader land use, conservation, and restoration efforts. Agencies and individuals more familiar with South Beringia can probably identify others.

Initiatives

With many opportunities for environmental conservation and restoration projects, there are also a number of options to increase the number of such projects and opportunities to fill some of the regulatory gaps and/or enhance funding.

Federal Fisheries Act

As noted previously, DFO does not have standards for offsetting. Most projects are handled on a case-by-case basis which tends to result in an uneven approach. DFO is currently developing standards for monitoring of offsetting projects. These monitoring standards could be converted into design standards which would help the industry move forward. While some DFO decisions may result from the quality of fish habitat, more information about offsetting requirements would help stakeholders understand and respond to the offsetting process.

The Fisheries Act does not require all proponents to offset for habitat losses. While our analysis is not based on a comprehensive survey, we have heard from some who believe that this is resulting in the slow but steady loss of habitat. Some believe that an in-lieu fee would provide a vehicle for DFO to collect fees that could be used to offset for small impacts. While habitat banking was added to the Act in 2019, DFO does not yet allow 3rd Party Banking which many believe would improve the quality of offsetting and lower the price. This would allow conservation projects to be completed in advance for the benefit of many prospective permittees that might need offsets in the region. There are efforts underway to encourage DFO to allow both in-lieu fee programs and 3rd Party Banking under the Fisheries Act. Given the emphasis being placed by DFO on reconciliation with Indigenous Peoples, having them involved in pilot projects related to in-lieu fee programs and/or 3rd Party Banking would appear to be a win-win. In some areas, where placer mining is active, projects could build on constructive efforts to include placer miners.

As DFO develops its policies and procedures for habitat banking, it appears that DFO is going to allow fairly large service areas that can span provincial boundaries. Service areas are regions where offset projects can service permitted impacts. It is typically based on watersheds and sub-watersheds. While a broad service area presents challenges, there are legitimate resource reasons for adopting such an approach. It may be possible for DFO to allow service areas to span the international boundary, and allow credits generated in the Yukon Territory to be eligible for use by proponents in Alaska. The recently developed Stream Quantification Tool (SQT) for central Alaska, which considers physical and biological parameters, may provide a way to bridge the gap between restoration projects carried out in the US under the Clean Water Act with a restoration project carried out in Canada under the Fisheries Act which focuses on fish habitat.

Federal Species at Risk Act

As noted previously, ECCC and DFO do not have standards for offsetting. Projects tend to be handled on a case-by-case basis. The administration of this Act would benefit from detailed standards which in turn would help in the development of approaches suggested by this Playbook.

Federal Protection of Lands and Oceans

On October 1, 2020, the Prime Minister made a commitment to protect 25 percent of the Canada's lands and oceans by 2025 and 30 percent by 2030. Building on existing commitments an increase is likely to occur in Northern areas that remain undeveloped. This commitment represents an opportunity to protect or restore significant areas of Yukon South Beringia. This initiative also may bolster efforts to make policy changes, such as opening up more of the Crown Land for conservation projects and emphasizing restoration in some areas while recognizing that the various land uses and economic development are essential in the region.

Dawson Regional Planning Commission

On March 12, 2021, the Government of Yukon announced that certain lands within the Dawson planning region have been temporarily withdrawn from mineral staking. There may be an opportunity to re-balance protection of some areas with development and advancing restoration projects. While we are not able to incorporate implications in this document, we plan to take account of outcomes in our work with leaders in the region.

Carbon Tax

On March 25, 2021, the Supreme Court of Canada ruled that the federal government's carbon tax is legal. With the floor price of Carbon set to rise over the coming years, the tax will create a revenue stream that could be used to fund conservation projects. This could include projects focused on protecting areas with permafrost which represent a vital carbon sink within Canada.

Funding Programs

As noted above, many of the funding programs may be narrow in focus and are not harmonized with other programs, such as offset requirements. If metrics and standards for funding become more compatible with other programs, it could allow for greater leveraging of resource funding.

Planning

The current, ongoing land use planning efforts also could incorporate identified sites, procedures, and mechanisms to further facilitate implementation of approaches outlined in this Playbook. At the same time, the plan and this Playbook could recognize the role of mineral development in the region and address compatibility with mine sites and resource protection and restoration initiatives.

9. Performance Standards & Specifications for Practices

Based on the YSB PPI context, through research the QV Team has identified the following practices as being most applicable. We offer this as a basis for stakeholder consideration:

1. Species habitat preservation, enhancement, and restoration
2. Migratory corridor preservation, enhancement, and restoration
3. Wetland preservation, enhancement, and restoration
4. Stream preservation, enhancement, and restoration
5. Riparian buffer preservation, enhancement, and restoration
6. Cultural preservation and enhancement
7. Archaeological or paleontological preservation
8. Road removal
9. Weir/dam removal

This list is not exhaustive but is representative of the type of practices that could be applicable in the region. It also should be noted that there is a distinction between restoration, enhancement, and preservation. Typically, offsets require some sort of ecological uplift beyond merely preserving a resource, so it is important to understand the project objectives and the criteria of the funding partner.

One the key elements in converting project benefits into units of metrics is to have standardized practices for how to accomplish those benefits. The more consistent and uniform the approach, the stronger the ability to compare projects of the same category. Through standardized practices, decision makers may be able to better compare similar projects based on cost, ecological uplift, and benefits to the community. Without these standards, the program runs the risk of promoting variable approaches and projects within each category of practices.

For a next step in the development of the approaches contained in the Playbook, we recommend that standards and practices be developed for each practice. Moreover, each project should include documentation to support compliance with 12 basic elements listed below. These procedural and substantive elements help maintain consistency and have been adopted in other environmental credit programs around the world.

The standards and practices elements and specific considerations are listed here:

1. **Statement of Project Objectives**

2. **Site Selection Criteria**
   - It is important to ask whether the site meets the requisite objectives. If a site is proposed to be restored, does the site need restoration and can it be restored in light of ecological limitations (such as permafrost wetlands)? It also is important to compare the quality of the site with other sites in the region. If the site is being preserved, is it a high-quality site that provides benefits, that is a resource at risk and that warrants the protection? What is known about the remaining economic resources (for example sites recently mined with more efficient techniques are likely to be good candidates for restoration)?

3. **Site Protection Instrument**
   - It is important to understand the tenure of the proposed practice and whether the practice could be protected against future impacts. If the site can be mined in the near term without protection, then

should the project be pursued? Utilizing information about the mining history and footprint can be advantageous, demonstrating where areas lack economic resources or have been mined-out which may be good targets. Areas prioritized for future mining as part of planning processes may not be good targets for protection instruments where mining is likely to be ongoing.

4. **Project Baseline Information**
   - It is important to document the baseline conditions of the site before the practice is implemented. What is the quality of the site before the practices are adopted? This enables the project proponent to show how the project will improve the performance metrics.

5. **Determination of Benefits/Metrics Post-Project**
   - The determination of the metrics and benefits is important to convey to resource agencies and funders and should be consistent for each category of practice. For example, if restoration of an upland habitat or stream is proposed, will the project receive more benefits than if it were merely being preserved from future development? Tools such as the Alaska Stream Quantification Tool may also help determine the ecological benefits through an effective quantification of the biological, chemical, and physical benefits between pre- and post-restoration.

6. **Work Plan**
   - The work plan is key to determine what practices are being undertaken. This could include actions that improve the biological, chemical, and physical elements of a site or that enhance the vegetative and hydrologic conditions. The calculation of the metrics and benefits will be determined from the proposed practices in the work plan. For example, a project could include restoration of a buffer zone with planting a certain type of forbs at a certain number of stems per hectare. This work plan also would detail any applicable permitting required to accomplish the project.

7. **Maintenance Plan**
   - Once the site work is completed, it is extremely important to set forth a monitoring and maintenance protocol that tracks how the site meets stated performance criteria.

8. **Performance Standards**
   - Performance criteria such as diversity and number of vegetative stems per hectare, diversity and number of species, improved hydrology, integrity of structures, invasive species control and soil integrity are typical factors that are considered for performance. The criteria are monitored for a set period of time to determine if the site is on a trajectory of success to meet the performance criteria.

9. **Monitoring Requirements**
   - It is important to set plans to address monitoring needs, such as invasive control, predation, and general habitat conditions. This is particularly important for sites involving threatened or at-risk species conservation objectives.

10. **Long-Term Management Plan**
    - Proper care must be given to anticipating and funding the long-term site stewardship obligations.

11. **Adaptive Management Plan**
    - An adaptive management plan is becoming increasingly important to address issues such as climate change, including wildfires.

12. **Financial Assurances**
    - Finally, project proponents may be required to post-performance bonds and/or other types of financial assurances to ensure accountability.

All of the above factors are typically combined to create unit pricing of projects that includes all costs. This allows for accurate comparisons of similar types of projects, based on standardized practices and specifications for each practice.

The development of these specification and standards have not been developed in this report but could be part of a future phase of work.

10. Multiple-Criteria Decision Analysis (MCDA)

The heart of the Playbook includes the use of a multiple-criteria decision analysis (MCDA) to assess and determine priorities. The MCDA allows for a comparative evaluation and prioritization of the conceptual restoration projects based on targeted evaluation criteria and weighting factors. It is a tool to evaluate projects with multiple (conflicting) criteria, such as complex environmental components, as it considers all criteria in the evaluation, not just direct and translated costs or revenue that would be evaluated in a traditional cost/benefit analysis. Costs, ability to permit and funding opportunities also are considered in the MCDA, along with non-monetary criteria all of which are assigned a weighting to reflect their relative importance. Included in the criteria will be several metrics to evaluate the potential for the restoration project to generate ecological and cultural benefits to the communities in the region. Weighting of the evaluation criteria will be accomplished using a paired comparison analysis, a tool used for establishing the relative importance of different evaluation criteria when priorities are not necessarily clear, and where objective data are not available for all criteria. The MCDA structure and results will be prepared using a simple matrix visual and accompanying spreadsheet. This tool will allow decision makers to easily adjust the scoring criteria weightings and scores and to identify priority projects, and in future phases of work to identify preferred alternatives for individual projects. The result of the MCDA exercise will be the prioritization of applicable projects.

An MCDA typically requires the following four things:

1. Objectives and metrics/corresponding evaluation criteria
2. Alternative projects or programs aimed at achieving the objectives
3. Weights for each evaluation criteria
4. Scoring for each alternative against each evaluation criteria

There are likely to be opportunities to build on existing restoration efforts, including those supported or initiated by industry. For example, where an existing reclamation effort is underway at a site it may be efficient to add restoration elements at this juncture. Joint efforts like this can bring value, increase restoration value for money, build knowledge, and increase collaboration. YSB stakeholders have raised this point and it could be considered as part of project weighting.

Stakeholders have also emphasized the importance of the evaluation of a site's current status in an effort to identify priorities for significant net gains in creating productive habitat, such as addressing vegetative cover on dredge tailings.

Ultimately, the MCDA and similar tools are a means to allow stakeholders to weigh and assess choices.

10.1. Objectives / Evaluation Criteria

Based on a review of the available literature and consultation throughout the region, there are a number of environmental issues confronting YSB. We recognize that many of these may be accounted for in the Dawson Land Use Plan and other efforts and that this report does not take account of the outcomes of that process. They include the following:

- Loss of Habitat for Species at Risk

- Loss of Wildlife Habitat[1]
- Loss of Fish Habitat
- Degradation of Streams
- Protection of Wetlands
- Loss of Buffers
- Climate Change
- Protection of Indigenous Values

There may be many other environmental issues, but the list above provides a good starting point for the purposes of the mockup. For each one of these assets a metric/evaluation criterion was developed. Based on a review of the YSB area, a series of evaluation criteria and corresponding metrics were developed, shown in Table 2.

TABLE 2. EVALUATION CRITERIA USED TO DEVELOP THE MCDA SCORE FOR ANY GIVEN PROJECT (EXCLUDING PERMANENCE, PERMITABILITY, COST, AND POTENTIAL FOR FUNDING).

Icon	Asset	Metric
	Fish Habitat	Fish productivity
	Streams	Square metres of stream
	Wetlands	Hectares of wetlands
	Buffers	Hectares of buffers
	Species at Risk	Hectares of species at risk habitat
	Wildlife Habitat	Hectares of wildlife habitat preserved
	Climate	Tonnes of avoided CO_2e
	Indigenous Values	Hectares of natural environment

Ultimately, performance metrics represent a unit of environmental benefit, which may be described as credits, and are typically incorporated into contract terms. A consistent performance metric documented in a written protocol uses measurements linked to conservation goals to determine habitat quality. The same performance metric is used to compare multiple projects using different conservation actions.

[1] Whether or not the loss is temporary or long term will need to be addressed as part of the evaluation criteria.

The performance metric is used to determine the conservation value of all projects, integrating landscape and site quality considerations with the quantity of the project. Performance metrics also may be used for administrative reporting purposes.

The metrics must be simple, measurable, useable in the regulatory or non-regulatory context, and accessible. A metric should have clear and straightforward requirements against which progress is measurable. Quantifying units gives the funder a clear understanding of what they are getting for their money. At least some portion of payments may be linked to achieving verified conservation outcomes using the performance metric.

10.2. Other Evaluation Criteria

In addition to the metrics above associated with the conservation/restoration opportunities within YSB, four additional evaluation criteria were added. These evaluation criteria address issues related to the implementation of the projects.

The evaluation criteria and the reason for their inclusion are outlined below:

- Permanence: It is important the conservation/restoration projects are permanent. There is little point in spending millions of dollars on a restoration project that is temporary.
- Permitability: Many restoration projects require some sort of permit to construct them. The time and cost associated with obtaining the necessary permits is an important consideration in selecting among competing projects.
- Cost: Cost is always an important consideration. There is no point in selecting a project that costs $5M to construct when you have $1M available.
- Potential for Funding: Linked to the idea of cost, is the issue of potential for funding. When funding is being sought, the funding agency, whether public or private, it is important that the project meet the criteria of the funding party.

10.3. Weights

The MCDA allows the user to specify a weighting factor for each evaluation criterion. While one can assign a similar weight to all of the evaluation criteria, this is rarely done. It is common to weight some of the evaluation criteria more heavily than others. For example, if all the conservation projects are located on land controlled by Indigenous government, then the acceptability of the projects to the Indigenous community would probably receive a higher weight. In the MCDA mockup provided in this report, the weighting factors applied are 10 and 20, with the evaluation criteria judged to be more important, receiving the higher weight.

10.4. Scores

The next step in the process is to score each potential project against the evaluation criteria. For this particular MCDA example, scores ranging from 0 to 5 were used, with 0 being the lowest score and 5 being the highest score. The MCDA automatically calculates the overall score for each project and then ranks the projects, with the one with the highest score ranking first.

With the MCDA complete, stakeholders can see the results of their decisions. Stakeholders can then discuss and adjust the weights and scores. The process is transparent and helps the group work toward consensus.

10.5. Hypothetical Projects for MCDA

Using the objectives outlined above, six projects were developed that speak to one or more of the YSB PPI objectives. These projects have been used to showcase how the MCDA could work in this region.

1. Restore 1000 m^2 of stream and associated fish habitat damaged by historic placer mining (cost $0.7M).
2. Restore 1000 m^2 of stream and buffer damaged by placer mining which includes a site of significant Indigenous value (Cost $1.0M).
3. Remove a weir in a tributary to naturalize stream slope and improve fish passage to the upper reaches which contains a lot of good fish habitat (Cost $0.5M).
4. Close up to 20 roads reducing access to wildlife habitat (Cost $0.1M).
5. Preserve 100 ha of wetlands from future development (Cost $1.0M) which includes a site of significant Indigenous value.
6. Preserve 1000 ha of wildlife habitat that includes some habitat for Species at Risk (Cost $1.0M).

To help stakeholders understand how an MCDA tool might work for the YSB, an example MCDA calculation for hypothetical projects is shown in Figure 7.

1/12/2022
Restoration Playbook v 2.0

Evaluation Criteria Range	
Lowest	0
Highest	5

			Evaluation Criteria													
			Fish	Streams	Wetalnds	Buffers	Wildlife Habitat	Species at Risk	Indigenous Values	Climate	Permanence	Permitability	Cost	Potential for Funding		
Project Number	Program/Project	Cost ($M)	10	10	10	10	10	10	10	5	5	5	5	10	MCDA Score	MCDA Ranking
1	Restore 1000 m^2 of fish habitat	0.7	3	3	0	0	0	0	0	0	3	5	3	5	165	5
2	Restore 1000 m^2 of fish habitat & buffer	1	3	3	0	3	0	0	0	3	3	5	2	5	205	2
3	Remove a weir to improve fish passage	0.5	5	5	0	0	0	0	0	0	5	4	4	5	215	1
4	Close 20 roads reducing access to wildlife habitat	0.1	0	0	0	0	5	0	0	0	4	5	5	1	130	6
5	Preserve 100 ha of wetland including indigenous cultural site	1	0	0	5	0	0	0	5	4	5	5	2	1	190	3
6	Preserve 100 ha of wildlife habitat including habitat for species at risk	1	0	0	0	0	5	5	0	0	5	5	2	1	170	4

FIGURE 7. EXAMPLE MCDA CALCULATION FOR HYPOTHETICAL PROJECTS. MCDA SCORE AND RANKING ARE PRODUCTS OF WEIGHTED EVALUATION CRITERIA ON A PER-PROJECT BASIS.

As previously explained, the value of the MCDA is that it allows stakeholder to see how different projects, weights, and scores, affects the overall results in real time. To help stakeholders understand how this would work, a copy of the YSB MCDA example calculations is provided as an Excel file (YSB_MCDA_EXAMPLE.xlsx). This version of the YSB MCDA Excel file allows stakeholders to better understand how the MCDA might work.

In order to order demonstrate how the MCDA can be used in different ways, an MCDA has been developed which is based on sub-watersheds. This MCDA uses the same six projects as the first MCDA but allows the user to locate the projects in different watersheds. Each watershed has different weights for the evaluation criteria. For example, it may be better to restore a stream in the migratory headwaters than downstream at the confluence of a river and stream. The scoring would in turn reflect the differences in location and would allow the MCDA to be multi-dimensional. The end result is that the MCDA would produce different scores and priorities for the projects depending on the watershed selected (Figure 8).

Select your watershed:

Forty Mile

Evaluation Criteria Range	
Lowest	0
Highest	5

Project Number	Program/Project	Cost ($M)	Fish	Streams	Wetalnds	Buffers	Wildlife Habitat	Species at Risk	Indigenous Values	Climate	Permanence	Permitability	Cost	Potential for Funding	MCDA Score	MCDA Ranking
			0	0	0	5	30	5	20	0	5	5	10	20		
1	Restore 1000 m^2 of fish habitat	0.2	3	3	0	0	0	0	0	0	3	5	3	5	220	3
2	Restore 1000 m^2 of fish habitat & buffer	1.0	3	3	0	3	0	0	0	3	3	5	2	5	240	2
3	Remove a weir to improve fish passage	1	5	5	0	0	0	0	0	0	5	4	4	5	285	1
4	Close 20 roads reducing access to wildlife habitat	3	0	0	0	0	5	0	0	0	4	5	5	1	155	6
5	Preserve 100 ha of wetland including indigenous cultural site	0.1	0	0	5	0	0	0	5	4	5	5	2	1	180	4
6	Preserve 100 ha of wildlife habitat including habitat for species at risk	0.1	0	0	0	0	5	5	0	0	5	5	2	1	210	5

FIGURE 8. EXAMPLE OF HOW THE MCDA WOULD BE DISPLAYED ON A WATERSHED-SPECIFIC BASIS.

11. Interactive, Web-Based Yukon South Beringia Playbook

For the approaches outlined in the YSB Playbook to reach the ideal audience, we suggest that a web-based, interactive format be developed as part of a pilot phase. The backbone of the YSB Playbook will be in written format; however, funding partners, stakeholders, and prospective project proponents will have equal access to features of the YSB Playbook that will be meant to 1) inventory and describe successes of environmental assets linked to specific, ongoing projects, 2) connect potential funders to prospective projects, and 3) help all parties best use the Playbook in a way that projects can be transparently characterized and prioritized based on the entire suite of metrics described in the MCDA. This web-based application would heavily link to the YSB Playbook report and supporting materials website(s) but would present as a map-based and incorporate important elements of projects, including:

- Interactive map with location
- MCDA score
- MCDA detailed description
- Data room to provide additional project-related data/information
- Funding partners, funding amounts and needs, and a call to action to 'purchase' project assets

Figure 9 and Figure 10 (map driven and list driven, respectively) are an example web-application mock-up (not live) of the direction the web-based application could take, but is not intended to represent a complete reflection of what may ultimately be needed in terms of content, features and style.

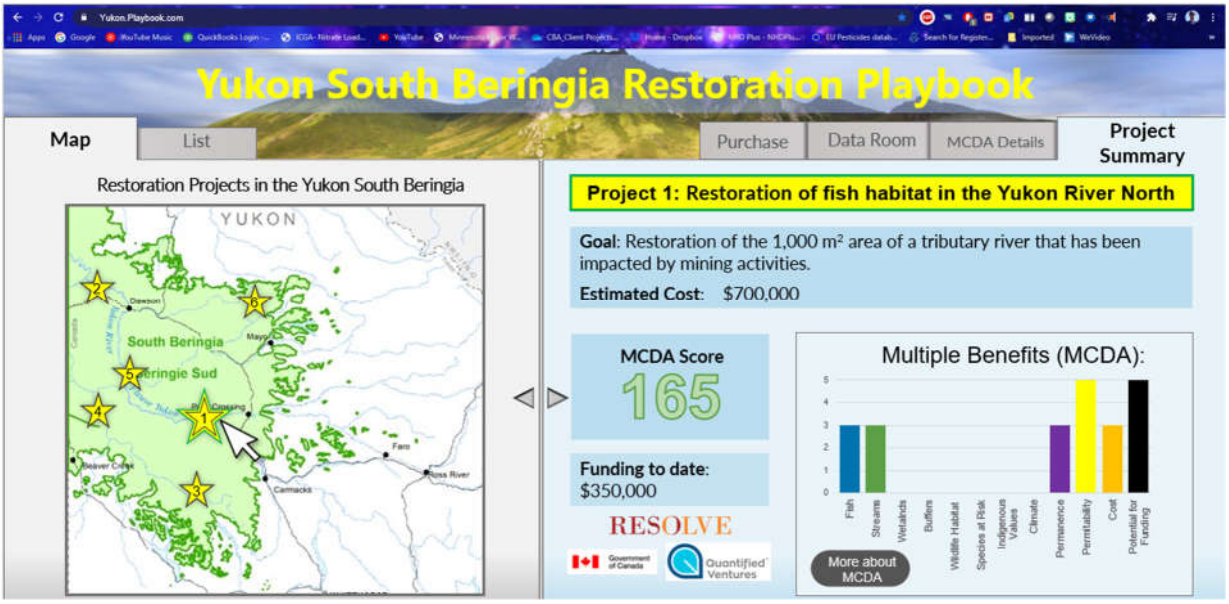


FIGURE 9. MAP-DRIVEN VIEW OF THE YSB PLAYBOOK MOCK-UP WEB APPLICATION.

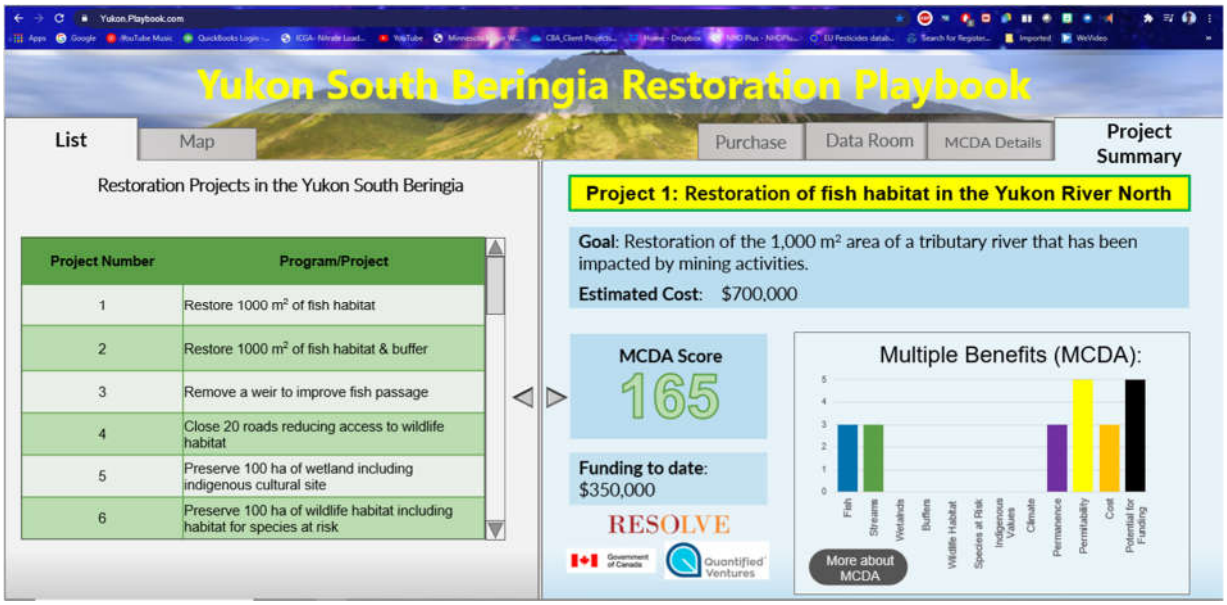


FIGURE 10. LIST-DRIVEN VIEW OF THE YSB PLAYBOOK MOCK-UP WEB APPLICATION.

This web-based application is envisioned as an open-source (not paid to access), stand-alone tool that can be accessed and promoted by 3rd party, stakeholder websites and communication/marketing programs. Programs hosted in the web-application could accommodate additional information such as project reports and information, as needed.

The web-based application would be available to any party seeking to undertake a voluntary or government sanctioned restoration effort. It can be used to develop options where funding and commitments are in place or as a basis to make a case for funding or support.

12. Utilizing a Performance-Based Approach

The concept of the Playbook is to drive solutions that are performance-based. Funders could then fund projects based on these stated units and prices per unit could be developed over time. Conservation projects may be accomplished through multiple forms of delivery mechanisms, outlined in Figure 11.

Pay for performance contract mechanisms align the incentives of funders and project proponents to cost-effectively produce and sustain conservation outcomes that achieve regional goals. Linking payments to conservation outcomes, rather than reimbursing expenses for practices, minimizes the purchaser's risk of funding ineffective projects that do not deliver intended results. Furthermore, pay for performance contract mechanisms share risk with those in the best position to manage it – project proponents – while providing financial incentives that inspire innovation, improve the effectiveness, and reduce the cost of conservation. Long-term pay for performance contracts and project stewardship accounts establishes incentives for project proponents to sustain conservation outcomes over decades.

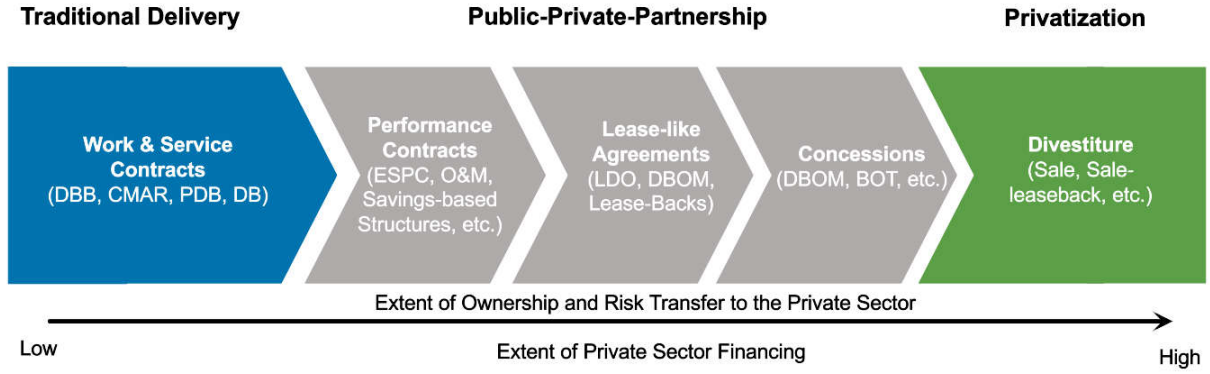


FIGURE 11. SPECTRUM OF CONSERVATION PROJECT DELIVERY MECHANISMS.

The type of mechanisms to deliver projects will determine the ability to leverage private financing and the overall administrative structure of the program.

There are three principal approaches for delivery of environmental projects: 1) traditional design/bid/build procured by entities after funds are collected; 2) performance-based contracting (PBCs) for turnkey and fixed price solutions; and 3) public/private partnership (P3) where a private enterprise engages with the public sector and plays a larger role in administering the program and delivering the solutions.

Traditional public project funding entails a funder that pays a project proponent for actions based on a predefined scope of work. The payment schedule is typically linked to direct cost reimbursement and may include mark ups for overhead costs and an acceptable profit. If profit is allowed, it is linked to the project cost, providing an incentive for the project proponent to increase costs in both the proposal phase and through change orders. Since the project proponent is paid for actions and payments are not linked to outcomes, the funder bears all project risk projects. The funder also may have to issue 3-5 Request for Proposals (RFPs) for each project for site selection, site design and permitting and site construction.

Performance-based contracts (or simply performance contracts) (PBCs) condition payments based on defined performance outcomes tied to metrics that reflect the quality of the project delivered. This strategy typically requires private capital to finance project implementation. Funders pay implementers an agreed-upon price per unit after

pollutant load or volumetric reductions are verified and all requirements are met for certified credits. Typically, this also includes the cost of long-term operation and maintenance, which is included in the overall unit pricing.

Provided below in Table 3 is a highlight of the differences between performance-based contracts and traditional agreements. The Playbook is more oriented to support a performance-based approach.

TABLE 3. DETAILED DIFFERENCES BETWEEN PERFORMANCE-BASED CONTRACTS AND TRADITIONAL AGREEMENTS.

Contract Elements	Performance Contracts	Traditional Agreements
Definition of Performance Outcomes	• Performance metrics • Quantitative results	• Flexible metrics • Narrative results
Payment Terms	• Outcome-based	• Action-based
Monitoring, Reporting, & Verification	• Monitoring & reporting • Ongoing verification	• Monitoring • One-time verification
Management Plan	• Binding • Specific	• Non-binding • Non-specific
Long-Term Stewardship	• Informs payment	• Lacks financial incentive
Adaptive Management	• Basis for action	• Lacks incentive for action

Public-Private Partnerships (P3s)

Public-private partnerships (P3s) come in many shapes and sizes. P3s are a relatively common way for the public and private sector to collaboratively deliver and maintain green infrastructure projects. A community based P3 (CBP3) is a form of alternative delivery in which a government agency and private entity partner seek to improve both water quality and quality of life for a community through the proliferation of green infrastructure projects. A CBP3 is intended to achieve community benefits beyond water quality improvements and permit compliance. Community benefits are achieved through the green infrastructure itself, as well as through the approach such as workforce and equity benefits to the project or program implementation.

As noted, there are less public administrative burdens under the performance based or P3 delivery models. Traditional procurement requires significant management and oversight of every facet of a project while PBCs and P3s require more limited oversight and fewer RFPs.

13. Harmonize & Pool Funding

The Playbook supports the ability to pool funding resources. (i.e., develop The Yukon Restoration Fund). The idea is to pool government funds, offset program payments, voluntary corporate payments, and similar funding from other programs. A designated authority could create a mechanism for pooling and disseminating collected funds. Once pooled, the funds could be used to purchase prioritized projects based on a price per quantified unit of benefit. In addition, a pooled fund could potentially link other funding sources, such as carbon and infrastructure monies, to support large-scale restoration. This also could allow the funds to be leveraged with private capital.

In sum, the pooling of funds could include:

- Designated sources of funding
- A designated authority to collect and disseminate funds
- The ability to leverage multiple funding sources
- The capacity to link species and fishery funding with cultural, historic, and economic development dollars
- The ability to develop and implement project and funding processes province-wide; and
- The ability to work in partnership with private investors in the delivery of cost-effective solutions.

14. Conclusion

This Restoration Playbook presents an approach that can be tested and then further developed in the region. It is the first step to fulfilling a web-based framework for prioritizing and funding projects in the YSB PPI region. As discussed above, the key elements of this Playbook include the development of relevant metrics and creating a MCDA that reflect the collective input of stakeholders in the region. While examples of both the metrics and the MCDA have been included in this version, the intent is to use this as a starting point and then refine these tools to apply the factors, preferences and weights selected by the stakeholders. It also could be determined to apply the framework to a greater or smaller scale, such as a watershed, a sub-watershed, a habitat corridor, or a community-based zone. Ultimately, once the tools are fully developed, they could serve as the basis for a web-based platform that facilitates the interaction between funders and project proponents in the region.

Beyond the development of the framework, it is important to understand the opportunities to shape policy to facilitate even greater incentives for delivering projects on the ground. For example, the development of third-party banking mechanisms under the Fisheries Act and creating new offset policies under the pending Yukon Wetlands Act are opportunities to further enhance restoration incentives in the region. There is also an opportunity to use pilot projects to showcase the benefits and issues of the existing and proposed policies.

Advancing a restoration agenda with support from all stakeholders is complex. It requires effective selection and weighting tools like the MCDA, efforts to identify funders, and on-the-ground application so that stakeholders are building alliances that underpin and support tools like the MCDA.

15. Next Steps

This is version 2.0 of the Playbook and we expect further inputs from the stakeholders as we consider opportunities to implement the elements described in the Playbook, adapted to the region. Additional phases of work would be needed to fulfill the promise of this framework, such as:

- Refining the metric and units of benefits to reflect regional priorities
- Undertaking a collective effort to fully develop a regional MCDA
- Developing specifications and standards for representative practices
- Building an interactive, web-based platform
- Creating an authority to accept pooled funding
- Initiating pilot projects that illustrate either third party banking or wetland offsets under existing or proposed regulatory policies; and
- Rallying funders.

The completion of the additional phases is necessary to fulfill the real potential of delivering a more fluid and robust restoration initiative in the region. We stand ready to further support this initiative and appreciate the opportunity to participate. We look forward to continuing the dialogue and further engaging.

This report as commissioned by RESOLVE Canada.

RESOLVE

16. Appendix

16.1. Yukon Environmental Legislation List

The following is a broad list of environmental legislation that could apply to environmental conservation and restoration projects in the Yukon Territory. It is divided into three categories: federal, territorial, and municipal. For each piece of legislation, a summary of key points is provided.

Federal

- Impact Assessment Act (IAA) – Impact Assessment Agency of Canada (IAAC)
    - The Impact Assessment Act (IAA) replaced the Canadian Environmental Assessment Act (CEAA) in August of 2019
    - The Physical Activities Regulations, known as the "Project List", sets out the projects and activities that are subject to the IAA
    - Schedule 2 of the "Project List" lists the project types and criteria for assessment under the IAA.
    - The IAA sets out legislated timelines for review of projects by the IAAC:
        - Planning Phase: 180 days
        - Impact Statement Phase (time determined by proponent, up to three years unless extension requested)
        - Impact Assessment Phase:
            - Up to 300 days for Agency-led assessments
            - Up to 300 days for integrated review panels with lifecycle regulators (i.e., the Canada Energy Regulator, Offshore Boards, and the Canada Nuclear Safety Commission)
            - Up to 600 days for review panels
        - Decision-making Phase:
            - 30 days for Minister's decision
            - 90 days if decision referred to Governor in Council (i.e., Cabinet)
    - An Indigenous Engagement and Partnership Plan is required to be developed in collaboration with Indigenous groups affected by the project, during the mandatory Planning Phase.

- Fisheries Act (FA) – Fisheries and Oceans Canada (DFO)
    - Amendments to the federal Fisheries Act came into force in August of 2019.
    - The fish and fish habitat protection provisions of the Fisheries Act include:
        - a prohibition against causing the death of fish, by means other than fishing (section 34.4)
        - a prohibition against causing the harmful alteration, disruption, or destruction of fish habitat (section 35)
        - a framework of considerations to guide the Minister's decision-making functions (section 34.1)
        - ministerial powers to ensure the free passage of fish or the protection of fish or fish habitat with respect to existing obstructions (section 34.3)
    - DFO has obligations, among other matters, related to:
        - the fish and fish habitat protection provisions of the Fisheries Act
        - the Species at Risk Act (SARA) with respect to listed aquatic species (except for those located in or on federal lands administered by the Parks Canada Agency)
        - the Aquatic Invasive Species Regulations
        - regulations respecting aquaculture

        - the Oceans Act
        - impact or environmental assessment processes specified under federal impact assessment legislation.
    - DFO's Projects Near Water website provides guidance on determining if a project requires review by DFO.
        - Projects may not require review by DFO and can be completed without a permit or approval
        - Projects may be completed under the Codes of Practice, with the submission of a Notification Form
        - Following DFO's review, projects that do not require authorization may be completed under a Letter of Advice provided by DFO
        - Following DFO's review, projects that contravene the Fisheries Act, or the Species at Risk Act with respect to listed aquatic species, require authorization under Fisheries Act, a permit under the Species at Risk Act, or both.
    - The Authorizations Concerning Fish and Fish Habitat Protection Regulations define the requirements for project authorization, including review timelines for DFO:
        - From the date of receipt of an application, the Minister has 60 calendar days to determine if the application is complete, incomplete, or inadequate, and to notify the applicant of this determination. If the application is not complete or inadequate, the notification will identify the information or documentation that must still be provided by the applicant. [Subsection 4(3)]; and
        - From the date of the notification that the application is complete, the Minister has 90 calendar days to either issue the authorization or notify the applicant in writing that the authorization is refused. [Subsection 4(5)].

- Species at Risk Act (SARA) – Environment and Climate Change Canada (ECCC) and Fisheries and Oceans Canada (DFO)
    - The Species at Risk Act is administered by ECCC, except for aquatic listed species, which is administered by DFO
    - Permits are required for activities that may affect species listed on Schedule 1 of SARA, as extirpated, endangered, or threatened and which contravene the Act's general or critical habitat prohibitions
    - The Minister can authorize, through a SARA permit, an activity that would otherwise violate the SARA prohibitions with the flexibility afforded in Section 73 of SARA. Furthermore, Section 74 states that an authorization issued by the Minister under another Act of Parliament has the same effect as SARA permit which means that a Paragraph 35(2)(b) *Fisheries Act* Authorization can also act as a SARA permit
    - Certain conditions must be met prior to the issuance of a SARA permit or a Fisheries Act authorization acting as a SARA permit. The Minister must be of the opinion that the purpose of the activity (Subsection 73(2)):
        - is scientific research relating to the conservation of the species and conducted by qualified persons;
        - the activity benefits the species or is required to enhance its chance of survival in the wild; or
        - affecting the species is incidental to the carrying out of the activity.
    - As well, the Minister must be of the opinion that (Subsection 73(3)):
        - all reasonable alternatives to the activity that would reduce the impact on the species have been considered and the best solution has been adopted;

        - all feasible measures will be taken to minimize the impact of the activity on the species or its critical habitat or the residences of its individuals; and
        - the activity will not jeopardize the survival or recovery of the species
    - Additionally, Subsections 73(4) and (5) of SARA require that consultation with wildlife management boards or Indigenous groups if the activity affects species found in land claim settlement areas or reserves prior to permit issuance.

- Canadian Navigable Waters Act (CNWA) – Transport Canada (TC)

- Migratory Birds Convention Act (MBCA) - Environment and Climate Change Canada (ECCC)
    - Environment and Climate Change Canada (ECCC) is responsible for implementing the Migratory Birds Convention Act (MBCA), which provides for the protection of migratory birds through the Migratory Birds Regulations and the Migratory Birds Sanctuary Regulations.

Territorial

- Yukon Environmental and Socio-economic Assessment Act (YESAA) – Yukon Environmental and Socio-economic Assessment Board (YESAB)
- Yukon Environment Act – Environment, Environmental Programs
- Yukon Waters Act – Executive Council Office, Yukon Water Board and Environment, Water Resources
- Yukon Territorial Lands Act – Energy, Mines, and Resources – Lands Branch
- Yukon Lands Act – Energy, Mines, and Resources – Lands Branch
- Yukon Forest Resources Act - Energy, Mines, and Resources – Forest Management Branch
- Yukon Historic Resources Act - Heritage Resources Board
- Yukon First Nations (Umbrella) Final Agreement – Heritage Resources Board

Municipal

Only Whitehorse and Dawson City have heritage bylaws:

- City of Whitehorse Bylaw 2022-10 (Heritage)
- The Town of the City of Dawson Bylaw #09-04 (Heritage)

16.2. Attachment

See Microsoft Excel file YSB_MCDA_EXAMPLE.xlsx – dated 01/12/202