INVEST IN NATURE

SCALING CONSERVATION FINANCE IN CANADA FOR A NATURE-SMART ECONOMY

MAY 2021

Smart Prosperity Institute

About Smart Prosperity Institute

Smart Prosperity Institute is a national research network and policy think tank based at the University of Ottawa. We deliver world-class research and work with public and private partners – all to advance practical policies and market solutions for a stronger, cleaner economy.

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LIST OF ABBREVIATIONS

AAFC	Agriculture and Agri-Food Canada
ABMI	Alberta Biodiversity Monitoring Institute
ABWRET	Alberta Wetland Rapid Evaluation Tool
ARPA	Amazon Region Protected Areas
AUM	Assets Under Management
BMP	Best Management Practices
CAP	Common Agricultural Policy
CCF	Cheakamus Community Forest
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
CPIC	Coalition on Private Investors for Conservation
CSR	Corporate Social Responsibility
DFO	Fisheries and Oceans Canada
ECCC	Environment and Climate Change Canada
ENGO	Environmental Non-governmental Organization
ESG	Environment, Social, and Governance
EST	Ecosystem Services Toolkit
FAO	Food and Agriculture Organization of the United Nations
FSC	Forest Stewardship Council
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Greenhouse Gas
GIIN	Global Impact Investing Network
HABISask	Hunting, Angling and Biodiversity Information of Saskatchewan
HNWI	High Net Worth Individual
IBC	Insurance Bureau of Canada
ICE	Indigenous Circle of Experts
IDB	Inter-American Development Bank
IISD	International Institute for Sustainable Development
IPCA	Indigenous Protected and Conserved Area
IUCN	International Union for the Conservation of Nature
LLC	Limited Liability Company
LULUC	Land Use, Land-Use Change and Forestry
MNAI	Municipal Natural Assets Initiative
NAPTEP	Natural Area Protection Tax Exemption Program
NBS	Nature-Based Solutions
NCC	Nature Conservancy Canada
NGO	Non-Governmental Organization
NRCAN	Natural Resources Canada
NSTIR	Nova Scotia Department of Transportation and Infrastructure Renewal
OPERANDUM	Open-air Laboratories for Nature Based Solutions to Manage Hydro-Meteo Risks
PA-BAT	Protected Areas Benefits Assessment Tool
PES	Payment for Ecosystem Services
PFP	Project Financing for Permanence
REIT	Real Estate Investment Trust
RIBITS	Regulatory In-Lieu Fee Bank Information Tracking System
SAVi	Sustainable Asset Valuation
SMC	Stormwater Management Credit
SRC	Stormwater Retention Credit
TFRR	Task Force for a Resilient Recovery
TNC	The Nature Conservancy
UBC	University of British Columbia
UN	United Nations
UNEP	United Nations Environment Programme
WEF	World Economic Forum
WWF	World Wildlife Fund

KEY MESSAGES

1 **Scaling investment in nature is critical for the Canadian economy, to address climate change, and support the well-being of all Canadians.** Natural systems contribute directly to 12% of the GDP via forestry, oceans, and agriculture. Conserving and restoring nature supports health and biodiversity, and can save billions by reducing the impact of, and adaptation to, climate change.

2 **There is a global biodiversity finance gap, and it cannot be overcome by public finance alone.** The global shortfall is estimated at US$700 billion annually between now and 2030. While core public funding is essential and can leverage both private and philanthropic dollars, scaling private investment will be needed to meet biodiversity and climate targets.

3 Attracting private finance to nature is challenging, given that **ecosystems do not lend themselves to traditional investment vehicles**. Nature often requires sizable upfront investments for benefits that accrue over time, diffusely or indirectly, and often in the form of avoided future costs that are not accounted for on balance sheets.

4 **Conservation finance mechanisms help capture nature's many value streams and bring new funders to the table.** These financial instruments seek to generate financial, environmental and/or social returns. Scaling them requires overcoming complexity and risk.

5 The **business case for investment is most easily made where revenue streams already exist**, or cost savings are clear and easily quantified. More complex arrangements that capture environmental externalities and ecosystem benefits that are harder to measure involve multiple partners and increase transaction costs.

6 **High transaction costs are a major impediment to developing a project pipeline** in Canada. Overcoming this challenge requires :

- **Establishing credible metrics and impact assessment methods.** Improving the ability to estimate and track financial risk and ecosystem value streams is critical for conservation finance to connect with mainstream finance.
- **Normalizing natural asset management and ecosystem service data collection**. Governments can support and accelerate private-sector standards while promoting open access to ecosystem data.
- **Creating an enabling policy environment.** Programs to provide seed funding and matching funds, a clear regulatory environment, and favorable tax policies can all de-risk entry to investors.

7 **Intermediaries are essential.** Since there are often multiple partners involved, organizations are needed to design financial instruments, bring stakeholders together, and assess impact metrics that provide confidence to investors and accelerate implementation.

8 **The landscape is diverse and collaboration is key**. Stakeholders include Indigenous governments, agricultural communities, forestry, and heavy industry such as the oil and gas sectors, as well as banks, philanthropic organizations, and municipalities. The range of beneficiaries and investors may not be the same for a given project and development of collaborations, partnerships, internal, and external learning opportunities and professional development are needed.

9 **Conservation finance solutions do not apply everywhere**. Specific needs must be examined to evaluate the applicability of various financial instruments on a case-by-case basis. Efficiently allocating capital from new sources can free up donor funding for ecologically significant areas where revenue-generating and no-cost models do not apply.

10 **Existing tools are not exhaustive**. There is a need and opportunity to investigate new financing models that address Canadian challenges. Many carbon-rich and biodiverse landscapes are not currently at risk of conversion. This lack of "additionality" means they are not eligible for offsets - we need other financial incentives to reward protection and stewardship in these settings.

KEY RECOMMENDATIONS TO SCALE CONSERVATION FINANCE

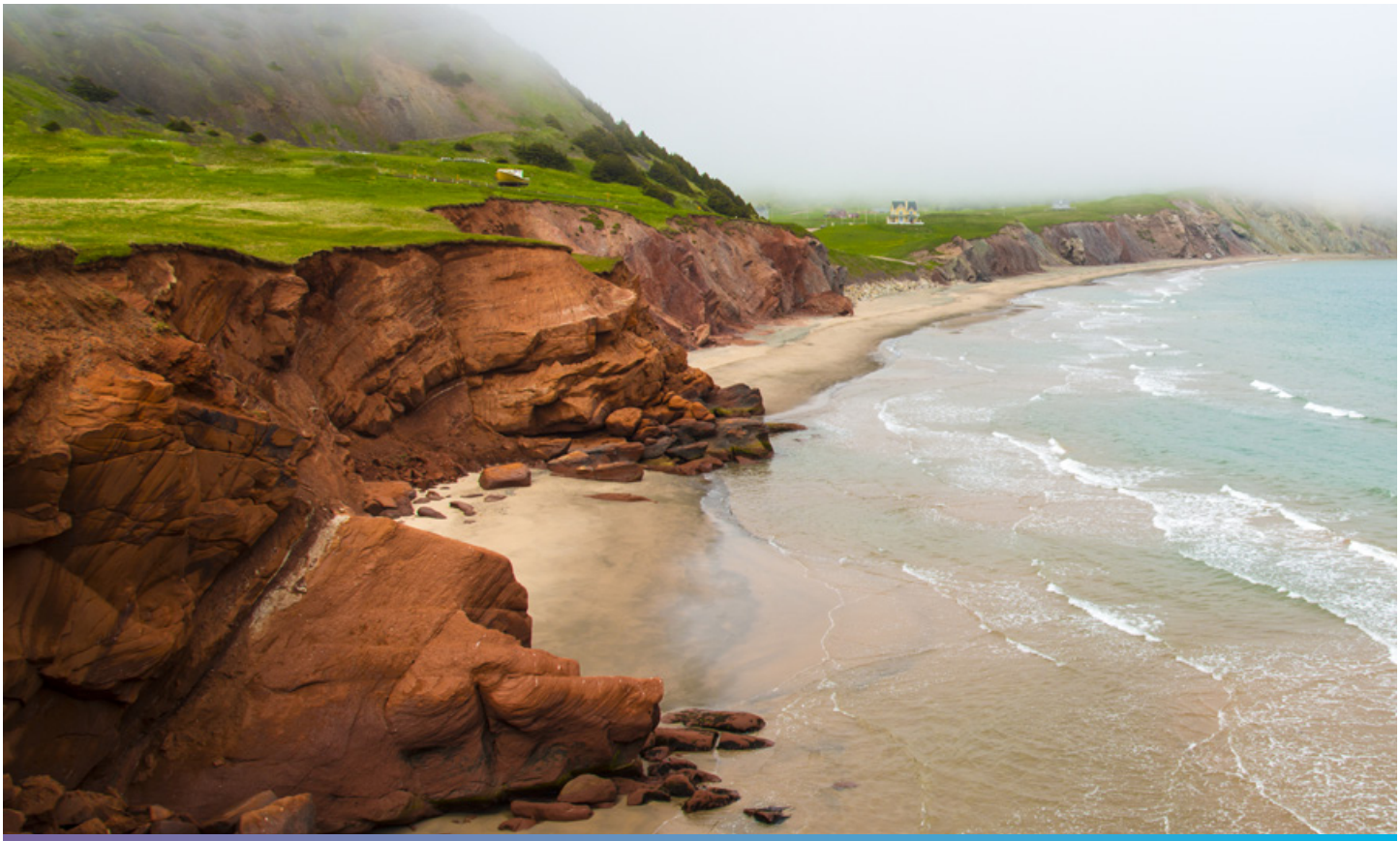
There are several immediate actions that can be taken by key stakeholders to develop more investable projects and create a more attractive environment for investing in nature in Canada.

Building the Project Pipeline	Who
Direct investment in large public-private funds and trusts for conservation, blended finance instruments	Government, Philanthropy
Early-stage funding for pilots to overcome high transaction costs, create proof of concept	Government, Philanthropy
Create a **nature finance fund** for revenue generating projects and/or businesses	Government, Philanthropy, Financial Sector
Develop **new nature+ financial instruments**, such as pooled funds, labelled funds, and green investment products	Financial Sector

Attracting the Private Sector	
De-risk private sector participation by providing anchor funding, differential rates of return, acting as a guarantor, buyer of last resort	Government, Philanthropy
Boost price signals for ecosystem service markets via policy design e.g., carbon and biodiversity markets, payment for ecosystem services	Government
Risk pricing by developing financial metrics and measures that account for unique properties of natural assets	NGOs, Financial Sector, Insurance
Develop **business cases and "blueprints"** for nature-based investments in Canada	Philanthropy, Insurance, NGOs

Fostering an Enabling Environment	
Support research and convening on key issues related to environmental and financial metrics, funding models for carbon-rich landscapes where offsets do not currently apply	Government, Philanthropy, NGOs
Mandate ecosystem data collection and reporting for government-funded initiatives to feed into an open access database	Government
Encourage financial sector to **adopt standards for nature-related financial disclosures**	Government, Financial Sector
Institutionalize natural capital accounting in asset management protocols	Government

Institution Building	
National Coalition for Conservation Finance - set national agenda, coordinate efforts, align resources and guidance	Government, Philanthropy, NGOs, Financial Sector



1. INTRODUCTION

Conservation Finance is Investing in Nature

The term conservation can conjure images of wild landscapes and untouched wilderness. Indeed, many conservation efforts focus on the most biologically diverse, largest, and most pristine spaces. In Canada, which houses 20% of the world's freshwater, the world's longest coastline, and second largest tract of intact forest, conserving expansive landscapes has global implications for both climate and biodiversity.[1]

However, nature and the ecosystem services it provides (e.g., carbon sequestration, improved air and water quality) are essential in all landscapes, from those connected to dense populations to more remote settings. Recent initiatives, such as the creation of Rouge National Urban Park, have helped demonstrate how natural areas near large urban centers bring important benefits for ecosystems and communities.

People are an integral part of nature. Indigenous Protected and Conserved Areas (IPCAs) are central to successful conservation and land management strategies at a national scale. This report considers how we can scale investments in nature, whether these investments support Indigenous stewardship, sustainable agricultural and forestry practices, or restoration in urban and peri-urban areas.

Investing in Nature makes Economic Sense

Investments in nature also deliver economic benefits. Nature and natural resources are the foundation of the Canadian economy, whether directly – oceans, agriculture and forestry represent 12% Canada's GDP[2] – or indirectly through recreation, tourism, flood management and carbon sequestration. Canadians were estimated to spend $40 billion* annually on nature-based activities in the 2012 Nature Values survey[3]. Beyond what we harvest from and experience in nature, healthy ecosystems underpin the global economy. The top five global economic risks identified by the World Economic Forum were all environmental in 2020: extreme weather, climate action failure, natural disasters, biodiversity loss, and human-made environmental disasters[4]. Failing to protect nature and account for the benefits generated by healthy ecosystems puts economic prosperity at risk.

A growing body of global evidence reinforces how investing in nature supports economic and development objectives together:

- **Growing the economy requires healthy ecosystems**. The UK government's *The Economics of Biodiversity: The Dasgupta Review* highlighted that long-term value creation is constrained by natural capital depletion, while pointing to the global underinvestment in protecting the natural world. Between 1992 and 2014, the stock of natural capital per person fell by 40% while the stock of produced capital per person doubled[5].

- **Protecting ecosystems can dramatically reduce the impact of climate change and its associated costs**. Doubling nature conservation could reduce atmospheric CO_2 by 0.9 gigatons to 2.6 gigatons and secure 27-33 million jobs in ecotourism and sustainable fishing alone[6].

- **Investing in nature positively influences job creation**. *The Task Force for a Resilient Recovery's* recommendations for Canada highlighted economic recovery opportunities in ecological restoration, Indigenous-led conservation, stewardship on working lands, and natural infrastructure[7].

- **Conserved nature provides more economic value than working landscapes**, though capturing that value is a challenge. A recent Global Assessment of 62 sites found that most of them were more valuable when conserved than when converted to intensive human use (e.g., agriculture, forestry)[8].

"Failing to protect nature and account for the benefits generated by healthy ecosystems puts economic prosperity at risk."

These reports show evidence of economic benefits from investing in nature, but this benefit does not necessarily accrue to the communities living in or near natural areas. For example, while one study[7] found that 70% of natural landscapes examined were more valuable when conserved, this value was measured globally. Many of the economic benefits from nature investments accrue diffusely at a regional or global level, potentially over long periods of time. Financial instruments and policies that can shift the economic incentive structure for nature are needed to address this imbalance and motivate action.

* $ refers to Canadian dollar, unless mentioned.

A note on terminology: Nature-Based Solutions and Natural Climate Solutions have emerged as terms to communicate the importance of nature, including as a risk reduction strategy for climate adaptation and mitigation. In the context of this report, we follow the IUCN definition and consider Nature-Based Solutions (NBS) as the entire suite of tools and activities that conserve, restore, or lead to improved management practices in any landscape. Some practices may be implemented to optimize for biodiversity conservation (e.g., strategic habitat conservation), others optimize for carbon sequestration (e.g., extending harvest cycles) or climate resilience (e.g., wetland mitigation), while still delivering others – a wetland can also provide habitat for key biodiversity. To avoid confusion or interpretation that NBS are primarily climate focused, we refer to investing in nature to capture the full suite of benefits.

Current investments in nature fall far short of what is required to sustain biodiversity, healthy natural environments, and achieve global targets[9]. Scaling global numbers to the Canadian context, one estimate put the national funding gap at US$15-20 billion a year[10]. While impact investment has grown in other sectors nationally, investment in nature has not been as large as it could be, particularly given attractive attributes in Canada relative to other countries (Box 1).

Globally, the biodiversity finance gap is estimated to be in the range of US$700 billion annually (Figure 1). There is important work to be done in communicating the important benefits of nature, so that knowledge can be translated into financing for investments in nature, from the livelihoods of local communities to sustainable global supply chains.

Box 1: Canada is attractive to investors

- Stable government and regulatory context – appealing for risk reduction
- Wealth of natural resources – investing in sustaining natural capital can benefit existing natural resources industries, especially forestry and agriculture
- Capacity to cope with shocks – reduced risk from fires, floods, diseases

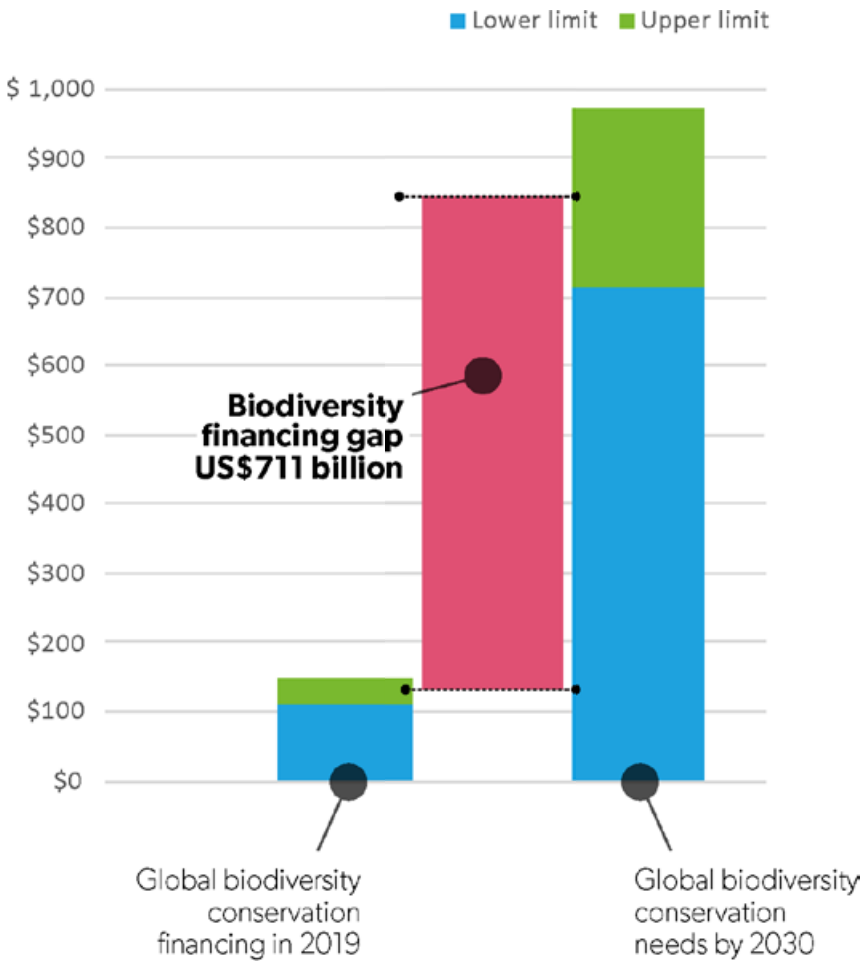


Figure 1: Global Biodiversity Financing Gap (in billion USD). Adapted from Deutz et al. (2020).

Closing the Finance Gap

Since 2015, public investment in nature has increased dramatically in Canada. As part of the *Convention on Biological Diversity* commitment to protect 10% of marine and freshwater and 17% land, the $500 million* Canada Nature Fund is expected to be equally matched by project recipients and from philanthropic and private contributors. Collectively, they will contribute $1 billion to the establishment of protected and conserved areas and recovery of species at risk by 2023. The federal government, in its September 2020 Speech from the Throne, committed to protect 25% of its lands and oceans by 2025 and working towards 30% by 2030[11]. More recently, the 2021 Federal Budget committed a further $2.3 billion to expand protected areas, including Indigenous Protected and Conserved Areas, by one million square kilometers in the next 5 years[12]. Along with the *Nature-Smart Climate Solutions Fund*, and Canada's leadership role in the *Global Commission on Adaptation* co-leading the Nature-Based Solutions subgroup, there is currently significant political will at the national level for scaling conservation, restoration, and action to sustain and enhance ecosystem services.

Investing in nature has long been the domain of public actors. Much of the public focus is on specific protected areas and rare and endangered species and ecosystems. Conservation campaigns tend to rely on public funding or donor contributions – either by individuals or organizations. Environmental NGOs (ENGOs) work in a range of landscapes, and increasingly with a wide range of partners, recognizing that the impacts on nature go far beyond protected areas. There is a growing understanding that key ecosystem services are delivered in cities, agricultural regions, and can include both pristine and marginal landscapes. Public investment remains essential for sustained financial support for conservation, restoration, and stewardship within and beyond working landscapes. However, there is increasing interest in encouraging private investment in nature for two key reasons:

- The scale of investment required is not likely to be fulfilled by public investment alone
- Excluding the private sector ignores the potential to reduce *drivers* of loss (habitat loss, land use change, agricultural expansion, unsustainable land use practices) while simultaneously reducing the financing gap

In theory, the most efficient way to incentivize private investment in nature is to use public policy to ensure prices reflect the social value of natural assets. In practice, until these changes are made, we need more creative ways to align the incentives of investors and the public and ecological good. Creating instruments and markets that make it possible for investors to generate ecosystem benefits while meeting financial objectives is one strategy to do so.

Jurisdictions outside of Canada are demonstrating how institutional structures and a favorable policy environment can directly support the expansion of nature-based investments and on-the-ground impact. Significant attention is being paid to natural capital investment opportunities in the EU, with large funding pools by the European Investment Bank providing seed funding for eligible projects. The US has an established track record of ecosystem credit markets for carbon (mostly tied to forestry, with some tied to agriculture) and water (mostly wetlands, also stormwater), among other global examples.

The Government of Canada has indicated a strategic interest in leveraging private investment in nature and has already taken some steps in this direction. Examples include Environment and Climate Change Canada's *Nature Fund*, which will raise $500 million in matching funds and gifts in-kind to increase Canadian protected and conserved areas as well as protect and recover species at risk. The 10-year $4 billion *Natural Climate Solutions Fund* includes $3.16 billion for the *Growing Canada's Forests* program, part which is the headline initiative to plant two billion trees. The *Agricultural Climate Solutions fund* includes $631 million for nature-smart climate solutions. Budget 2021 earmarked $2.3 billion over the next five years for land and inland waters, Indigenous Guardians programs, and to generate employment opportunities in nature conservation. These commitments have the potential to deliver significant impact, and when applied with conservation finance instruments can leverage private and philanthropic capital to achieve even more impact on the ground.

Conservation finance actions in the context of this report are those that generate **net financial returns or no net loss** to investors alongside environmental returns. By growing the number of investment opportunities, conservation finance seeks to help close the investment gap, achieve conservation and climate goals, and improve environmental outcomes for communities.

In this report, we explore:

- What constitutes conservation finance and what types of investments are appropriate for consideration
- The current conservation finance landscape in Canada across four land use types: conservation, ecological restoration, forestry, and agriculture
- Innovations in conservation finance, including opportunities to attract more investment in nature by:
    - Incentivizing broader participation
    - Rewarding diffuse beneficiaries
    - Responding to demand among investors and would-be investors
- Barriers to the growth of investment in nature in Canada
- Opportunities to develop a market for conservation finance in Canada, with a specific emphasis on policy options for government and the private and philanthropic sectors that:
    - Grow the number of investable projects
    - Support an enabling environment to scale Canada's market for these projects

This report aims to promote broader understanding of the conservation finance landscape, showcase promising examples as well as key learnings from existing projects, highlight hurdles in the Canadian context, and identify opportunities to overcome challenges and expand the Canadian market. Despite the range of potential benefits to a broad set of stakeholders, conservation finance has been slow to emerge. In understanding why, we seek to provide pathways to overcome barriers and catalyze growth.

2. CONSERVING AND RESTORING NATURE WITH FINANCE

Generating Returns by Investing in Nature

Conservation finance broadly refers to all the means through which financing and revenues can be generated for investments in nature. The Conservation Finance Network uses the following definition: "mechanisms and strategies that generate, manage, and deploy financial resources and align incentives to achieve nature conservation outcomes"[13]. The concept of conservation investment was further elaborated by environmental NGO Forest Trends, where they emphasize that ecological outcomes must be central to the project:

> *Investments intended to return principal or generate profit while also resulting in a positive impact on natural resources and ecosystems. In addition, conservation impacts must be the intended motivation for making the investment; they cannot be simply a by-product of an investment made solely for financial return*[14].

This report is specifically focused on broadening interest in investing in nature through financial mechanisms where revenue generation or cost avoidance leads to a net financial gain for at least one investor or participant. Existing nature donors and funders recognize the need to not only increase the scale of funding for nature but also broaden the spectrum of participants. The focus is on returns, as well as participation that attracts other participants to generate returns – for example, a philanthropic organization can provide funding to leverage private capital, thus increasing the total pool of funds though not all parties receive a financial return on investment.

Financial returns on investments in nature can come from:

- Direct revenue generation from a commodity produced (e.g., forestry, agricultural product), where the investor has equity stake in, or loan to, a business that produces the commodity
- Revenue generated from an investment in a thematic fund
- Direct revenue generation from offsets or credits
- Avoided capital or maintenance costs, such as the avoided water treatment costs associated with watershed restoration or the reduced costs to cities or landowners associated with reducing the impact of extreme weather events
- Reduced insurance premium payments due to investments in natural infrastructure that reduce the risk or impact from a weather-related event or natural disaster
- Direct payments to landholders for improved management practices, as in payment for ecosystem services programs (PES)
- Interest from loans and revolving funds where an individual project, suite of projects, or organizations engage in an activity to produce ecological outcomes, and through the cost savings or revenue generated are able to pay back the loan.

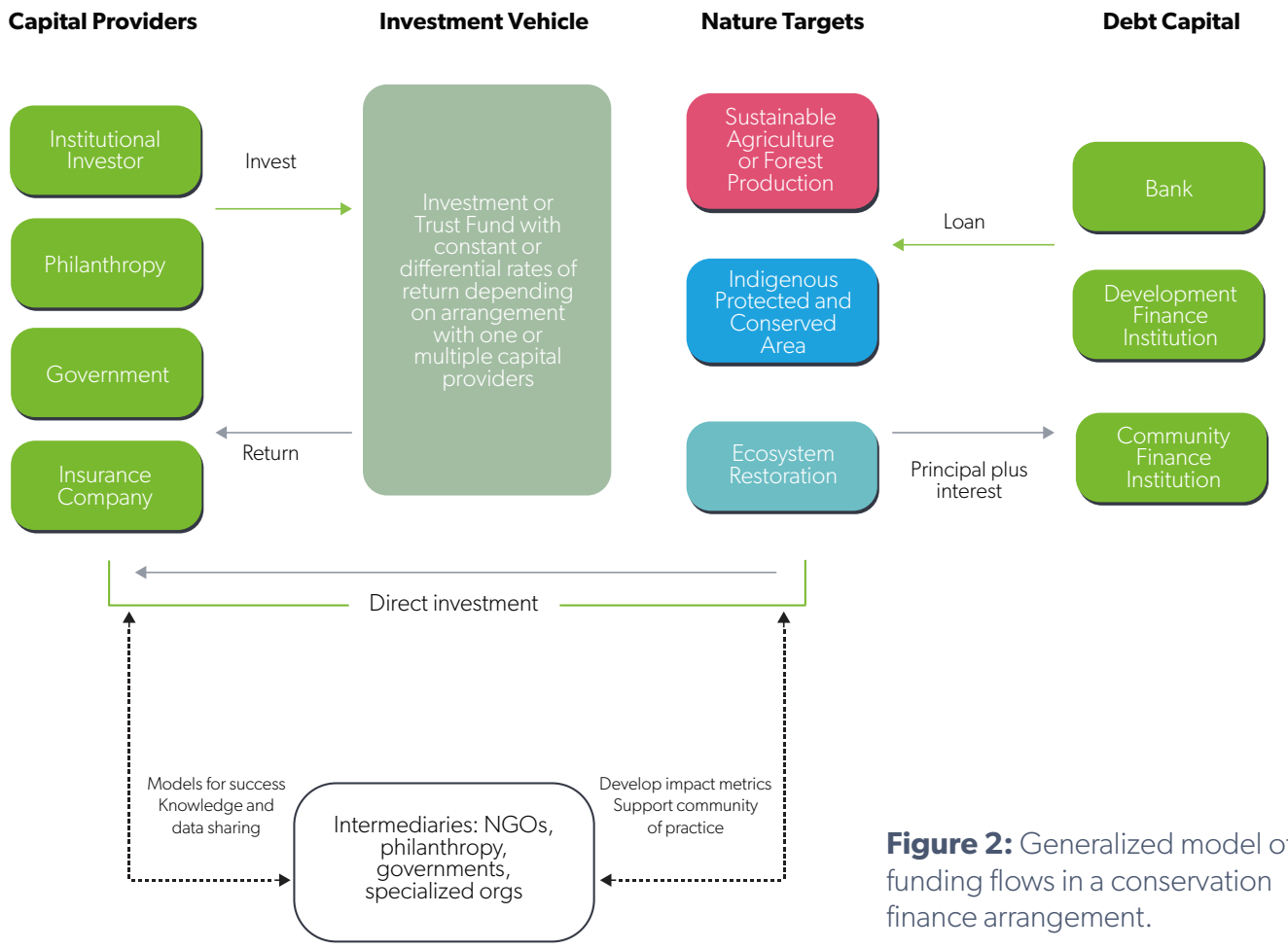


Figure 2: Generalized model of funding flows in a conservation finance arrangement.

The generalized model (Figure 2) illustrates how either capital or debt capital providers invest directly, through an investment vehicle, or through an intermediary that holds the investment vehicle or manages the financial mechanism.

In addition to a financial incentive for potential investors, investments in nature that generate ongoing returns provide a sustained source of funding. This can be important to maintain permanent ecological benefits, since grant-funded programs can struggle to maintain conservation outcomes beyond the funding period.

Engaging private actors in investing in nature can be particularly beneficial when those actors' regular practices have a direct impact on the environment. Arrangements in which private actors assume financial responsibility for their impact on nature are necessary if investment in nature is to keep pace with industrial and economic activity. These arrangements can provide for investments in nature beyond protected areas, such as in working landscapes on private land, where ecosystem service delivery is no less important. While conservation finance can be helpful for a variety of projects involving investments in nature, it is important to note that it **does not work for all projects** (See Box 2).

"Arrangements in which private actors assume financial responsibility for their impact on nature are necessary if investment in nature is to keep pace with industrial and economic activity."

Box 2: Conservation finance: applicable to subset of activities to support nature

This report focuses on investments in nature that can **generate economic returns** or lead to **no-net financial loss**. It is important to note that many worthwhile conservation projects will not generate economic returns. We focus on this subset of investments in nature because they offer an opportunity to obtain private financing and attract new actors to the sector. Other types of funding (grants, levies, fees etc.) remain important means of support, especially where the financial mechanisms discussed in this report do not apply. For example, species at risk occur in particular places and certain conservation measures are appropriate to implement regardless of whether a business case is present.

Some conservation funders have expressed the concern that projects that generate returns will draw funding away from those that do not, such as protections for species at risk, or cause ENGOs to cater projects to potential investors that meet financial requirements but have fewer benefits for nature. It is important for project developers to be mindful of such concerns and seek investors and participants who understand the importance of ecological returns as much as financial ones. Conservation finance is not intended to redirect existing donor streams. Indeed, attracting new investors for revenue-generating projects can free up traditional donor funds for non-revenue generating projects.

Investing in Nature Delivers Returns for the Economy, Health, and Climate

Investing in nature – from natural infrastructure that protects cities from flood damage to climate smart agriculture that uses less resources and improves downstream water quality – generates a wide range of returns, some of which are more easily quantified than others:

- Urban trees improve air quality, reducing incidences and severity of pulmonary diseases. A study examining environmental data from 86 Canadian cities found that urban trees remove up to 16,500 tonnes of air pollution annually, translating to more than $227 million in health cost savings[15].

- Coastal restoration activities can reduce the impact of sea level rise and flooding and improve yields for fisheries.

- Proximity to natural spaces directly impacts property values and tax revenues, while regular access provides benefits for mental health and well-being. One study suggests that park proximity and use for physical activity can decrease the number of poor mental health days experienced by individuals by up to three days a month.[16]

- Intact forests like the boreal forest in Canada house vast carbon stores, which are critical for mitigating and adapting to climate change, while also providing habitat for species at risk.

- Maintaining quality agricultural land supports increased food security and provides positive effects to their surrounding regions. A 2016 study found that the protected status of Ontario's Greenbelt region resulted in $9.6 billion in economic activity in farming, recreation, and tourism sectors[17].

A variety of investor surveys have documented the growth and potential of conservation finance markets:

- Annual investment in conservation sector doubled from an average of US$0.8 billion between 2009 and 2013 to US$1.6 billion in 2014-2015[9].

- A 2014 report found that US$1.9 billion in conservation impact investments were made by private investors between 2009 and 2013, and projected the investment to grow to US$5.6 billion during 2014-2018[18].

- A 2015 study estimated that the American restoration economy generates roughly US$9.5 billion in sales each year[19].

"Despite the pandemic, the demand for carbon credits exceeded expectations in 2020."

- Voluntary markets for carbon credits generated from forestry and land use are growing, valued at US$171.9 million in 2018 compared to US$63.4 million in 2017[20]. Despite the pandemic, the demand for carbon credits exceeded expectations in 2020 as new corporate pledges overcame losses from aviation and tourism sectors. While average offset prices remained flat overall, there was a 30% increase for nature and forestry offsets while renewable energy offsets dropped 16%[21].

- In 2018, $5.5 billion in green bonds were issued in Canada[22].

- In the first nine months of 2020, green bonds worth US$200 million were issued globally, adding to the more than US$1 trillion green bonds issued so far[23].

- Yearly average property and casualty insurance losses are rising in Canada, from an average of $405 million between 1983 and 2008 to $1.8 billion between 2009 and 2017, according to a 2018 report by the Insurance Bureau of Canada[24]. The report highlighted several cases where natural infrastructure reduced flood damages and stormwater costs.

Addressing Emerging Climate Risk

Investing in nature can reduce both immediate and long-term risks associated with climate change. For example, the presence of intact coastal wetlands reduces both the immediate impact of flooding and the costs associated with storm surges and extreme weather events. At the same time, carbon sequestration by healthy natural landscapes reduces the overall concentration of CO_2 in the atmosphere and thus the long-term impact and severity of climate change.

Where projects have the potential to generate revenue as well as reducing climate change risks, private actors may be engaged in financing climate change mitigation and adaptation. Ecosystem service markets for stormwater, wetlands, carbon, and biodiversity have been set up to take advantage of this complementarity in the US, Australia, and Europe. In Canada, there is a groundswell of interest in these types of ecosystem service markets. However, the relative dearth of conservation finance projects in Canada suggests a lack of alignment between investors, project developers, and critical intermediary organizations who could facilitate growth and support capacity development. Canada is falling behind despite a natural resource base that should position the country as a global leader.

Who is Investing?

A variety of actors have shown interest in investing in nature:

- Corporate investors seeking to demonstrate that they are mitigating or offsetting the impact of their operations, and increasingly from their supply chain. Growing public pressure suggests this trend will continue.

- Institutional investors looking to divest from risky industries and seeking out greener alternatives as improved metrics for environment, social, and governance (ESG) and disclosure initiatives increase visibility. Climate-related disclosures are becoming mainstreamed in the financial sector with the influential *Task Force on Climate Related Financial Disclosure* (TCFD). An analogous *Task Force for Nature-Related Disclosure* will provide further guidance to financial institutions, specifically focused on biodiversity.

- Specific sectors acknowledging the rising costs of climate change. The insurance and re-insurance industry have been particularly active, recognizing the benefits of investments in nature that reduce the damage and resulting costs associated with natural disasters and extreme weather events.

- High-net-worth individuals and young investors with different value profiles are asking investment managers to provide more data on sustainability and investment alternatives that are aligned with responsible investment principles. The role of this group is expected to increase as the largest wealth transfer ever, between Baby Boomers and millennials, transpires in the coming decade(s).

"While the sale of offsets entails a long, complex process from acquisition of land to accreditation and selling of credits, the business case is increasingly clear."

- With increasing costs of natural disasters like floods, fires, risks to food security and producer income from droughts and invasive species, federal, provincial, territorial, and municipal governments are recognizing the benefits of landscape and ecosystem-scale investments in nature. With constrained public budgets, the potential to partner with private investors is of interest to optimize impact.

Accessing investments in nature

Regulatory offset markets, particularly for carbon, provide a relatively predictable investment environment due to regulations driving demand and providing market transparency. While the sale of offsets entails a long, complex process from acquisition of land to accreditation and selling of credits, the business case is increasingly clear.

Box 3: Blended finance

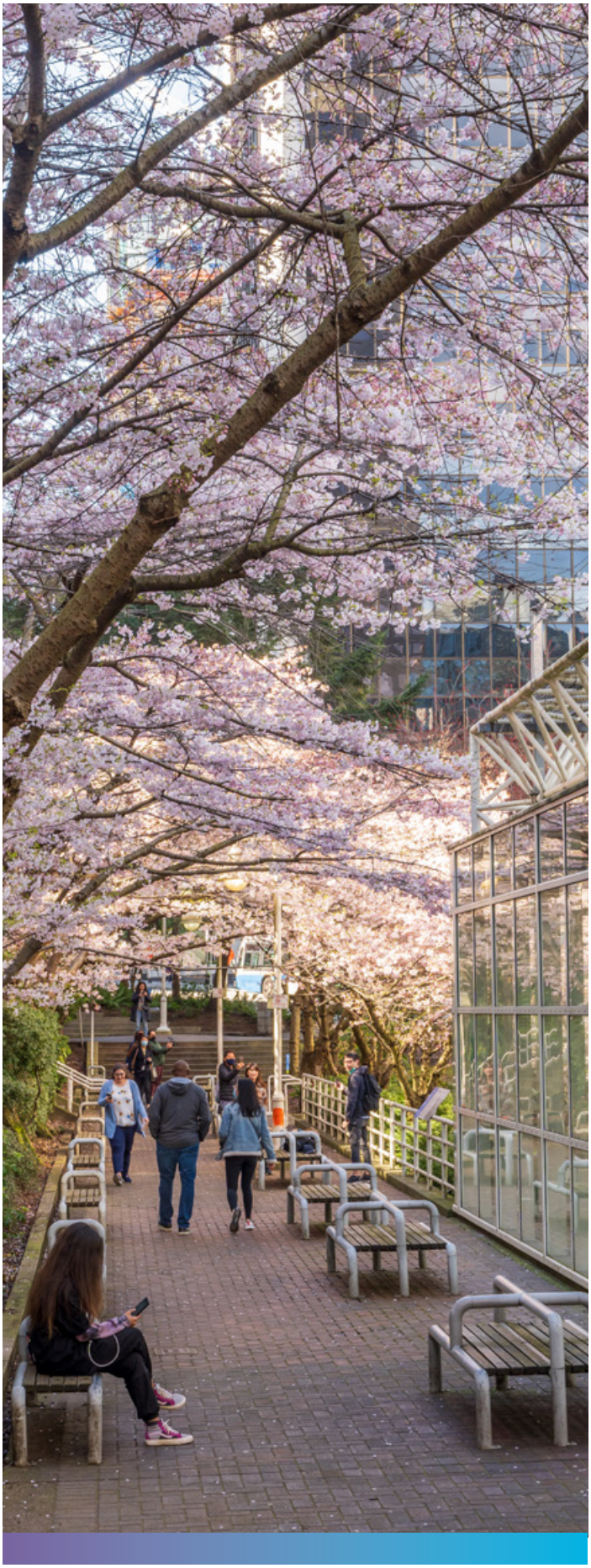
Many of the financial mechanisms presented in section 3 have multiple sources of funding. Blended models often rely on layering financial arrangements to engage partners with different requirements and objectives. Often, blended financing is used when public or philanthropic donors seek to leverage further private capital, and structures can be arranged so that different rates of return or time frames apply to different partners. Terms associated with blended finance include:

Mezzanine Funding: A mix of debt and equity financing that offers an investor the right to convert debt portion to equity, if the company defaults.

Concessionary Capital: A de-risking mechanism under which a part of capital is allocated in a relatively less risky diversified investment.

Catalytic First Loss: An investment technique where an investor agrees to bear initial losses, thereby encouraging enhanced level of participation from prospective investors.

Differential Rates of Return: The rate of return varies for different participants, e.g., a philanthropic organization may agree to a 0% rate of return to enable more competitive rates for traditional investors that would not otherwise engage.



The structure of bonds, such as impact bonds or resilience bonds, can become more complicated as more partners, often with differentiated rates of return, become involved. Several financial mechanisms include incentives to motivate conservation action, such as tax incentives and payment for ecosystem services.

Most reported conservation investments in ecosystem service market surveys, such as those for water and biodiversity, have measured direct investments into companies or projects that generate revenue or offset projects. Equity investments or loans to companies engaged in revenue-generating projects are straightforward and easier for investors to evaluate than more complex projects.

The next section examines the conservation finance options available for four types of natural landscapes highly relevant to the Canadian context: Protected and Conserved Areas, Ecological Restoration, Forestry, and Agriculture. Many of the more straightforward opportunities to leverage private capital for nature lie outside of strictly protected areas, and involve sustainable management practices on working landscapes where forest and agricultural production or offset generation is taking place. Conservation and restoration finance models are more likely to be blended to capture a suite of ecosystem service value streams.

There is potential for overlapping usage of different financing strategies across landscape types, and there are also occasions and settings where the lines between these types blur. However, we have divided in this way to highlight themes particular to each landscape type and illustrate how conservation finance can be incorporated into existing conservation and land use strategies and approaches in Canada.

3. FINANCIAL MECHANISMS FOR INVESTING IN NATURE

In this section, we outline conservation finance instruments for each of the four priority landscape types: **Protected and Conserved Areas, Ecological restoration, Forestry, and Agriculture**. For each instrument we describe examples, and success factors. A series of icons are included with each example, to facilitate comparison of different attributes of each instrument. The icons indicate whether it exists in Canada, its scalability, likelihood to deliver financial returns, environmental returns, and how challenging it is to implement.

"Public money can serve as important anchor funding to deliver important ecological benefits and while attracting philanthropic and private investment."

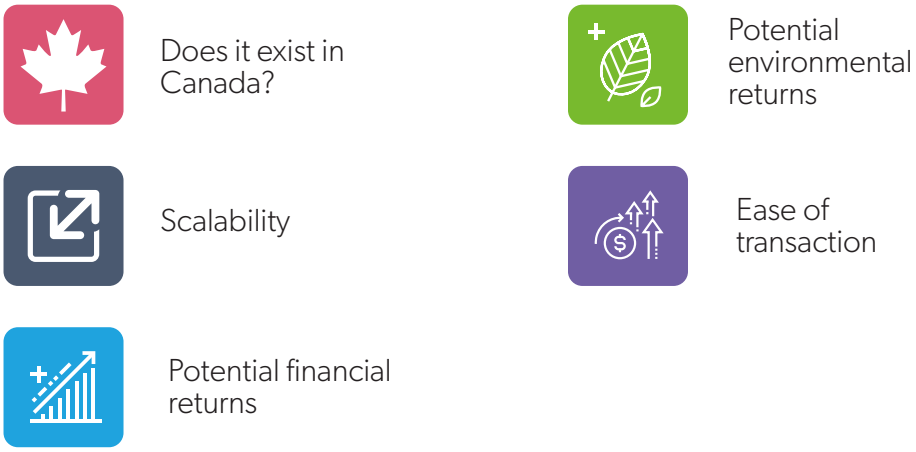


Figure 3: Icon legend. The maple leaf icon can be present, half (to reflect initial steps), or absent for each instrument. The others are evaluated on a scale of 1-3 for low, medium, and high.

PROTECTED AND CONSERVED AREAS

A nation known for its natural resources, Canada has committed to protect 25 percent of its lands and oceans by 2025 and 30 per cent by 2030[1]. Investments in nature are part of the strategy to meet net-zero carbon emissions from anthropogenic activities by 2050 (Canadian Net-Zero Emissions Accountability Act)[25], and the government has recognized the potential for nature-based solutions as a tool to address both climate change and biodiversity loss[26].

Unlike the flood- or fire-related cost savings associated with restoration, and clear revenue streams from production and credit markets in agriculture and forestry, generating revenue streams to produce returns for external investors can be more challenging in protected and conserved areas. Debt or equity investments in adjacent tourism enterprises or natural resource management activities (including those that produce offsets) are one clear path, but investing in conservation action itself tends to require partnerships and financial arrangements to ensure public benefits derived from ecosystem services (e.g. water quality improvements), and downstream economic benefits are captured (e.g. job creation and regional GDP impacts). While not directly revenue generating, the *Canada Nature Fund* demonstrated how significant government funding commitments can leverage non-public funding for conservation and protected areas. The $2.3 billion commitment in Budget 2021 will advance conservation and protected areas, including Indigenous Protected and Conserved Areas, and nature-related jobs, and can serve as important anchor funding to deliver important ecological benefits and while attracting philanthropic and private investment.

What is Driving Interest in Novel Financing in Protected and Conserved Areas?

- **Government commitments** – 25% by 2025 and 30% by 2030 in particular. The scale of the commitment invites government to seek partners, while attracting legacy-seeking investors who want to be associated with large-scale conservation. Net-zero climate commitments generally include nature considerations as part of the strategy. In the context of protected and conserved areas, carbon and biodiversity offset can be generated when new protected areas are created, if additionality can be proven. This can be a challenge, as elaborated upon below.

- **IPCAs and Guardians programs** – the *Canada Nature Fund* provided a significant boost to IPCA creation and Indigenous Guardians funding. New federal funding support to Indigenous Governments and communities seeking to both protect and sustainably manage lands has the potential to engage external investors seeking landscape-scale biodiversity and climate benefits while also supporting communities.

- **Corporate sustainability commitments** – increased pressure on companies to reduce their ecological footprint beyond carbon is creating demand for green investment strategies and funds, interest in biodiversity credits, and less harmful business practices.

What is Slowing Implementation?

- **Additionality challenges** – Carbon credits are one of the most straightforward revenue sources for landholders where new conserved areas could be created, though they cannot be generated without proving additionality (i.e., that the land is at risk of conversion). In landscapes where avoided deforestation does not apply, and where carbon credits cannot be generated by avoided fire or afforestation, conservation would not be considered "additional" despite other ecosystem service benefits. In these cases, there is a need for incentives beyond traditional carbon credits.

Box 4: Indigenous Protected and Conserved Areas

Indigenous Protected and Conserved Areas (IPCAs) are a type of protected area that recognize and emphasize the primary role of Indigenous leadership and management. The classification emerged from Indigenous Circle of Experts (ICE) recommendation, to formally recognize the significant leadership role Indigenous communities play in managing and expanding protected areas[27]. IPCAs offer twin benefits: securing Indigenous communities' rights over natural resources and conserving biodiversity. Several IPCAs have been created and supported through the *Canada Nature Fund*. The *Indigenous Guardians Pilot Program* was launched in 2017 with a financial allocation of $25 million over four years. The program supports Indigenous stewardship initiatives, providing culturally meaningful work in remote communities and leadership roles for land management. The 2021 federal budget also emphasized support to both IPCAs and Guardians programs as part of new funding commitments to conserved and protected areas.

Whether classified as an IPCA or not, Indigenous-managed lands are central to successful conservation and land management strategies in Canada. While Indigenous communities manage 20% of the global land area, these lands contain 80% of the biodiversity[28]. A UBC study found that Indigenous-managed lands have increased biodiversity and climate benefits compared to non-Indigenous managed counterparts[29]. Examples of large-scale Indigenous led conservation like the Great Bear Rainforest and the Thaidene Nëné National Park highlight that if landscape-scale conservation efforts are to succeed, they require sustained financing.

- **Limited financial incentive for improved maintenance of existing protected areas** – Degraded ecosystems can become net carbon sources rather than sinks. Significant biodiversity and climate gains can come from improved management of existing protected and conserved areas (pressures on municipal and provincial parks became particularly evident during COVID), but there are few financial incentives to boost funding for maintenance when enthusiasm and focus are on creating new protected areas.

- **Limited business case for revenue generation** – as highlighted in the introduction, there is strong evidence that protected areas produce strong regional economic benefits, but these benefits are difficult to capture as financial returns to an external investor.

- **Mineral rights** – natural resource right holders, especially in the north, prevent significant tracts of land from being set aside for conservation, even if unlikely to ever be mined.

Conservation Trust Funds and Project Financing for Permanence

A consistent challenge for the creation of protected areas is securing long-term funding to maintain and support the management of a park[30]. Conservation trust funds are large scale funding vehicles to provide sustained funding and support for conservation goals in a specific landscape. Project financing for permanence (PFP) is a specific type of public-private partnership focused on long-term financial support for conservation initiatives where government or other financial inputs are mobilized as the initial funding is consumed. Landscape scale conservation supported by Trust Funds and PFPs can allow for multiple uses (i.e. protection alongside resource management), which is an attractive and more realistic model than strict protection for local communities that rely on natural resources.

Example: To provide sustained funding for the 14,305 sq km Thaidene Nëné National Park Reserve, a $30 million trust fund was created with matching funds from the federal government and philanthropic support raised by the community in partnership with Nature United. The trust fund generates about one million dollars annually for operational costs including Guardians, training, and management[31]. An additional 12,200 sq km of territorially protected area and wildlife conservation area are adjacent to the national park. The park and surrounding area have led to new economic activities, jobs for local community members, and tourism opportunities[32] while protecting the rights of the Łutsël K'é Dene.

Canadian context: Achieving national conservation targets requires substantial increases in protected areas, many of which are likely to be led by Indigenous communities. Due to the scale and complexity of landscape level protection and management, PFPs have significant potential for application in this context.

Coast Funds was created in 2007 to support conservation and economic development activity within the Great Bear Rainforest, which contains 64,000 km^2 of coastal temperate rainforest in British Columbia. Across the landscape there are protected area "conservancies" and ecosystem-based management plans to guide resource management outside of protected areas. Conservation activities are funded via interest from an endowment fund, while an economic development fund invests in revenue generating projects such as tourism and commercial enterprises. To date, over $102 million for 409 conservation and sustainable development projects have been approved[33], and a further $220 million in direct investment for First Nations communities were leveraged[34].

Likely participants: Large donors including philanthropic organizations, corporate philanthropy, high net worth individuals, and government actors. Endowment funds operating in isolation have fallen slightly out of favor since while they provide sustained funding, they tie up significant capital for relatively small annual spending opportunities.

Success factors:

- **Large donors**. Major donors including governments, philanthropy, and development banks are often necessary to launch funds of this scale
- **Landscape Scale Conservation**. Attracting funding of this scale usually means a significant region is being protected (as in the Great Bear or Thaidene Nëné)
- Addressing **funding permanence**, which is one of the prime areas of concern while creating new protected areas (seed capital and enthusiasm initially, but long-term funding can be elusive)
- **Revenue generating activities –** pairing conservation funding with support for local economic development can render financial arrangements more attractive to rural and Indigenous communities concerned about land use restrictions related to protection

Tax Incentives: Conservation Easements and Exemptions

In the conservation context, tax incentives often apply to property tax rebates offered by government for putting in place conservation practices on private lands. A conservation easement is a formal commitment by a landowner to conserve and protect the land in its natural form, incentivized by a tax exemption. Conservation easements are lands permanently devoted to conservation, irrespective of the title holder of land.

Canadian context: The Ecological Gifts Program administered by ECCC offers tax incentives to landowners who donate their ecologically sensitive land to eligible organizations, who in turn work to maintain or enhance the environmental value of the land. Under the program, gifts worth $900 million were donated between 1995 and 2019 to protect 1,950 sq km of wildlife habitat[35].

Example: British Columbia's conservation tax incentive program *Natural Area Protection Tax Exemption Program* (NAPTEP) allows 65% exemption on property tax to landowners for lands protected permanently by conservation easements[36]. As the Program is focused on lands critical for wildlife and sensitive ecosystems, it contributes to regional conservation efforts at low costs (i.e., tax foregone). A 2008 study calculated that the tax shift due to implementation of NAPTEP in one local region would cost less than two cents per year per $100,000 of property's assessed value – effectively a 'no-cost' conservation model[37].

Likely participants: Landowners, provincial governments, trust holding NGOs, ENGOs. Nature Conservancy Canada is one of the largest ENGOs in Canada whose model relies upon buying private land and setting it aside for conservation, using easements are a key strategy to incentivize participation.

Success factors:

- A **regulatory environment** that allows tax exemptions for conservation is a prerequisite for such programs.

Biodiversity Credits and Offsets

Similar in concept to carbon credits, biodiversity credits are generated through conservation and restoration activities that result in enhanced biodiversity outcomes. Activities that produce credits can be purchased as an offset, as offsets are tied to specific regulated activities as part of mitigation efforts when ecological damage has taken place elsewhere (see habitat and species banking on page 22). While an offset project *can* produce credits, biodiversity credits do not necessarily need to be tied to a regulatory arrangement, and thus can be bought by anyone interested in supporting conservation and help support net positive goals.

Canadian context: Biodiversity offsets are regulated in several Canadian jurisdictions as part of mitigation regulations under environmental impact assessments. This type of offset is discussed in the restoration section. In the context of conserved and protected areas, biodiversity credits are more likely to fall outside regulated mitigation and be part of voluntary credit schemes. In the voluntary context, biodiversity benefits can be attached to carbon credits and certification, such as Verra's climate, community and biodiversity (CCB) standard. Demand is currently limited, but designing a framework for voluntary market for biodiversity credits could drive funding to key ecological regions in Canada.

Example: The Biodiversity Offsets Scheme in New South Wales, Australia approved 406 accredited assessors[38] to evaluate proposed 'biodiversity stewardship sites' – which are evaluated across nine dimensions using an online Biodiversity Assessment Calculator[39]. The scheme is a result of Biodiversity Conservation Act 2016 No 63 that regulates creation and transfer of biodiversity credits[40].

South Pole's *EcoAustralia credits* produce biodiversity credits for the voluntary market. The credits are generated through investments in Australian biodiversity and habitat protection, and are bundled with Gold Standard certified carbon projects such that each EcoAustralia credit delivers a ton of carbon and an Australian Biodiversity Unit that are sold together.

Likely participants: Governments for framing rules, assessing and auditing bodies, project developers, landowners, NGOs, consulting organizations as intermediaries.

Success factors:

- Design of a biodiversity offset or biodiversity credit system is critical to ensure quality assurance for what a credit delivers. Key considerations include:
    - Credibility and relative costs and benefits of **impact measures**, i.e. accounting for ecosystem actions (e.g., habitat conservation) vs. ecosystem outcomes (e.g., more bears)
    - Permanence
    - Accounting for variation in **habitat quality** – physical location, importance for specific species at risk, connectivity. For mitigation, this is often done through ratios (two or three times the area protected compared to what was degraded).
- Enabling **regulation** that provides rules for the creation and transfer of credits
- To scale conservation outcomes, voluntary markets need to be attractive to **non-traditional conservation donors** – otherwise achieving meaningful conservation gains is challenging

Green Bonds

Green bonds function like other government issued bonds, with the exception that investments are constrained to specified project types. Typical green bonds invest in large scale infrastructure investments including transport and electric vehicles, renewable energy, and water-related infrastructure. The partial leaf is intended to indicate that while green bonds have an established track record in Canada, their implementation for nature conservation and restoration projects is limited.

Canadian context: Ontario is currently the largest issuer of Canadian dollar Green Bonds, with seven issues totaling $5.25 billion. "Ontario's Green Bonds capitalize on the Province's ability to raise funds at low interest rates and serve as an important tool to help finance public transit initiatives, extreme-weather resistant infrastructure, and energy efficiency and conservation"[41]. Demand consistently outstrips supply, pointing to a need for more projects that are eligible for this type of funding. The 2021 Federal Budget announced a new federal green bond framework will be forthcoming, with an issuance target of $5 billion. Nature conservation projects are indicated among eligible project types, though uptake will be limited so long as the nature project availability is low, as is discussed in section 4.

Example: Québec's provincial green bond issue in early 2020 was oversubscribed the day it was launched, with 85% of investors being signatories to the UN Principles for Responsible Investing. The $500 million, 7-year bond has a 1.85% coupon rate. In Québec, green bonds can fund projects including forest, agriculture and land management, renewable energy (excluding nuclear), and energy efficiency[42].

In Québec, as in Ontario, there has been limited application for nature conservation explicitly thus far. The new Federal Green bond announcement indicates nature conservation as a possible project type, potentially providing a mechanism for members of the public to contribute to large scale conservation. The associated cost savings in the form of public goods – reduced cost of climate change, local resilience, physical and mental health, are economic savings captured by government

that enable repayment. Reliable ecosystem service data and financial impact metrics are needed to create investment cases and set appropriate coupon rates.

Likely participants: Financial institutions, institutional investors, ENGOs, "deep green" and responsible investors

Success Factors:

- **Responsible investors** are driving high demand for green bonds
- **Project pipeline.** Due to specialized nature and high demand from institutional investors, average retail investors often do not have access – increasing the supply of projects to meet retail demand could scale the market significantly
- **Market-level returns.** Many green bonds have lower coupon rates than their non-green counterparts. Currently, sufficient responsible investors are willing to take lower returns, achieving competitive returns would further scale demand.

Conservation Impact Bonds

Impact bonds are privately financed performance bonds in which a payout only occurs when set targets are reached. An upfront investment is used to improve or conserve habitat, the payout is usually derived from an "outcome payer" who benefits from the conservation targets achieved. They are scalable as long as projects meeting investor needs are present (i.e. there is a willing outcome payer for the ecosystem service value stream). Returns can be comparable to other green bonds. The risk of generating returns is higher than a traditional bond model but this can be reduced if backed by a guarantor.

Canadian context: Carolinian Canada's Conservation Impact Bond is the first of its kind in Canada, where investors provide upfront capital for restoration and monitoring ecosystem improvements on indigenous land in the rare Carolinian ecosystem. Outcome payer funding is invested in an existing social impact fund (including affordable housing and social enterprises) targeting a 3% return, which is released to investors when conservation targets are met.

Carolinian Canada's specific interest is in native plants in the Carolinian landscape which exists mostly in southwestern Ontario. Their overall objective was to protect the landscape, involve local actors, and engage with a local First Nation. It is worth noting that rather than add the complexity of a bond structure, the philanthropic outcome payer could simply grant the funding directly. While the impact bond model is more complicated, it allows for:

- Engaging the community in local stewardship activities
- Attaching an economic value to restoration, highlighting benefits to the community
- The opportunity to "grow" values – the above factors may help shift local attitudes regarding how we account for and make decisions about nature
- The potential for higher returns in the future when more ecological values are captured

Example: A similar model is being explored in multi-country *Rhino Impact Investment Project,* a £50 million bond where the prime performance indicator is net rhino growth rate, along with interim performance metrics, trigger payouts. Implemented by a consortium of conservation organizations, funders are currently conducting a three-year feasibility assessment of the outcome-based financing[43].

Likely participants: High Net worth Individuals, "deep green" investors, financial institutions to issue the bond, and conservation organizations. In both examples above, large consortia were required for funding and implementation, which increases transaction costs but diffuses risk.

Success factors:

- Investors equally interested in conservation outcomes and financial returns
- **Risk-friendly investors** and financial institutions willing to take on novel arrangement with many partners
- **Outcome buyer** – returns are generated from an outcome payer who sees value in conservation target being achieved. Unlike the cost savings generated by resilience bonds, the business case may be less clear.

ECOLOGICAL RESTORATION

Investments in ecosystem restoration are a key part of the federal government's strategy to address climate change, through programs like the *Natural Climate Solutions Fund*. The Government of Canada has shared plans to restore large tracts of land as part of a multi-pronged strategy including planting two billion trees, expanding urban forests, and protecting trees from infestations and wildfire. Natural infrastructure investments have been identified as a viable pathway to job creation and resilient recovery strategies[44].

What is Driving Interest in Novel Financing?

- Growing appreciation for the need of **natural asset accounting**, which ensures that natural capital appears on balance sheets and influences infrastructure investment decisions
- **Availability of tools and technical resources** that assess ecosystem values and potential revenue streams, to support the business case for restoration
- **Climate resilience planning and healthy city initiatives** – integrating nature and natural infrastructure is central to municipal plans focused on meeting climate targets, adapting to future changes, and supporting physical and mental health
- **Government commitments and programs**, including the 2 billion trees initiative
- Ecological restoration is recognized as a significant opportunity to **build resilient infrastructure** and **create jobs** as part of an economic recovery from COVID-19

What is Slowing Implementation?

- Despite progress, it can be **challenging to connect restoration efforts to a specific level of ecosystem service delivery and associated cost savings**. While it is understood that wetland restoration can reduce flooding, estimating the extent and the effect on avoided costs requires a substantial dataset, ecosystem modelling capacity, and confidence in the model outputs.
- **Infrastructure funding programs are not structured to evaluate or reward natural infrastructure**. Many studies highlight the cost effectiveness of green infrastructure and restoration – e.g., the City of Surrey, BC calculated the benefit-cost ratio of its trees planted in 2013 at 3.18:1[45], and the net benefit-cost ratio of restoring water quality in Pellys Lake, MB was between 2.83 and 3.64[46]. However, ecosystem benefits that lead to positive benefit cost ratios are not evaluated or accounted for in most funding pools or decision-making processes.
- **Lack of enabling policy and creative policy design**. For example, markets for stormwater credits in the US incentivize the entry of new actors and landscape scale restoration, as compared to project – by – project approach permitted in Canada[47].

Resilience Bonds

Bond buyers provide initial capital to do an activity (e.g., fire suppression in forests), and after specific term (e.g., ten years) the investor is paid back with interest based on anticipated cost savings to beneficiary. The beneficiary may be a single entity or collection of organizations, who anticipate the payout will be less than the cost savings accrued from the improved management practices.

Example: The California *Forest Resilience Bond* was brought together private investors whose capital was deployed for deferred maintenance targeting fire prevention in state forests (e.g., activities like tree thinning and improving road access to speed intervention in the event of a fire[48]). The bond model yields return to the initial investors, paid by beneficiaries like energy utilities and municipalities for whom the outlay is less than the expenses incurred from a large fire. The payout is also spread over time, reducing the further cost of taking on a debt load in the immediate aftermath of a natural disaster. Fires cannot be prevented entirely but the preventative actions aim to reduce the area affected by fire and associated damages sufficiently to be cost effective. This bond involves several local governments, NGOs, state level utilities, and private investment including from the insurance sector.

Likely participants: Municipalities, energy utilities, property owners who bear the cost of damage from climate related events and natural disasters such as floods and fires.

Success factors:

The presence of **intermediaries** to coordinate, arrange terms, and create a financial mechanism that meets the needs of all partners.

- **Outcome buyers –** beneficiaries who are receiving a financial gain from the project and are positioned to pay for the return on investment.
- Robust evidence on the **ecological and economic impact** of the proposed intervention and associated cost savings.

Species and Habitat Mitigation Banking

Species and habitat mitigation and conservation banks are legal instruments of compensatory mitigation that involves creation and sale of credits for a specific species or ecosystem of concern. The landowner protects and conserves their land to earn credits which can be sold to a project developer to offset damages done elsewhere.

Canadian context: Canada has some experience with habitat banking in the fisheries context. Several fish habitat banks have been established in NS, QC, MB, AB and BC. In February 2021, DFO issued an *Interim Policy for Establishing Fish Habitat Banks to Support the Administration of the Fisheries Act and the Species at Risk Act*. A critical design feature is that "habitat credits are not transferrable to a third party (i.e., by sale, trade or barter) to be used to fulfill the third party's offsetting plan requirements"[49]. This significantly limits the opportunities to scale restoration through this instrument, as it limits participation from outside investors who could drive demand and enhance scale (as we see with wetland mitigation banking in the US).

Most habitat and species offsets in Canada are regulated under the *Impact Assessment Act* federally, and provincial policies also apply (e.g. *Alberta Wetland Policy*). Proponents are responsible for compensating for damage under the no-net loss principle, meaning that losses must be compensated with the creation of an area with equivalent or greater value. In the absence of tradable credits and third party participation, the regulated market for biodiversity and ecosystem credits in Canada is small. Policy design interventions to connect to carbon offsets or other regulatory strategies are likely needed to scale (for more on policy design implications of linking biodiversity considerations to carbon credits see SPI, 2020[50]).

Example: In 2007, Nova Scotia Department of Transportation and Infrastructure Renewal (NSTIR) created a 1.78 ha habitat bank under the *Lawrencetown Lake Salt Marsh Restoration Project* in Nova Scotia. The bank created a salt marsh habitat and created a passage for fish. The project helped NSTIR accumulate habitat credits that could

be used to offset damages to similar habitats in future road projects, though the credits are restricted to Department of Transportation projects and cannot be sold.

Likely participants: Regulatory bodies, investors, project developers, landowners, monitoring and evaluation agencies, consulting organizations, ENGOs.

Success factors:

- **Open data** – The *Regulatory In-Lieu Fee Bank Information Tracking System* (RIBITS) in the US allows project developers to check details of species conservation banks across the country. Such publicly available information compiled in one place helps expand the basket of potential buyers.

- Established evaluation guidelines to mitigate risk for investors.

    - Ecological viability of species/habitat bank is determined
    - Additional risks (such as wildfire and invasive species) at site are determined and addressed
    - Land is devoid of hunting, fishing and mining rights; a conservation easement is most suitable
    - An endowment, or similar financial assurance, to ensure permanence of the species bank

- A comprehensive and **rigorous monitoring and reporting infrastructure** need to be designed to evaluate the long-term success of habitat banks in maintaining their credit values over time.

- **Policy environment.** To scale restoration via habitat banking and conservation offsets, as has been seen in the US, **third-party participation** would need to be enabled in Canada.

Stormwater Management Credits

Stormwater management credits are a market-based mechanism to offset environmental damages from development through offsite restoration. Large development projects are mandated to meet stormwater requirements. If developers are unable to otherwise mitigate the impacts on stormwater drainage, they can purchase stormwater credits.

Canadian context: Several Canadian cities (such as Brampton, Guelph, Halifax, Kitchener, Mississauga, Saskatoon, and Waterloo) have instituted Stormwater Management Credit (SMC) programs. Under the program, landowners can save up to 50% of stormwater service fees by installing best management practices* "for onsite control of the quantity and quality of storm water runoff"[51]. However, these programs are meant for commercial and multi-apartment buildings, and suffer from a limited scale of operations.

Example: An innovative policy adaptation has scaled ecological restoration potential significantly in the US. In Washington D.C., project developers can either install green infrastructure or buy Stormwater Retention Credits (SRCs) from an ecosystem market. Through the Department of Energy & Environment's SRC Price Lock Program, the department agrees to purchase stormwater credits at a fixed price if an SRC seller is unable to find a higher price. The price floor provides certainty to project developers by offering an assured buyer without losing the option to sell at a better price. Against the backdrop of an assured buyer, NatureVest and Encourage Capital set up District Stormwater LLC to support project developers. They bundle projects to reduce risk and provide economies of scale to credit purchasers. A similar organization, Stormwater Currency, is working in the City of Grand Rapids, MI to develop a similar stormwater credit trading program.

Likely participants: Municipalities, project developers, accreditation agencies, and NGOs.

* Examples of best management practices include oil and grit separators, roof-top storage, green roofs/roof gardens, storm water ponds, rain gardens/ bio-retention systems, cisterns, among others.

Success factors:

- **Credit floor price** – provides confidence in restoration implementer to take action.
- **Guaranteed buyer** – government commitment to buy outstanding credits further incentivizes restoration action, knowing that capital investment will be recuperated.
- **Intermediaries to further scale** – with market established, motivation for intermediaries like Stormwater LLC to enter market and bundle projects, further scaling restoration action and reducing transaction costs on all sides
- **Policy environment** – regulations in US Clean Water Act associated with compensatory mitigation provide the basis for this policy innovation.

Environmental Impact Bonds/Pay-for-Performance Measures

Capital investment in conservation or restoration where revenue is generated from cost savings, paid out by beneficiaries who prefer to pay for risk reduction and predictable payment structure to a one-off costly disaster. This can include coastal restoration to provide climate resilience and reduce costs associated with climate risks including flooding and water management, while also providing the potential to generate carbon credits and provide key habitat.

Pay for performance measures are similar in design to the resilience bond model, but financing is based on financial inflows after a pre-agreed outcome is achieved. The objective of this form of financing is to create a robust business model and strive to achieve the targets.

Example: In 2018 in Athens County, Ohio, investors contributed US$2.4 million towards a US$5.4 million project to construct an 88-mile mountain biking trail in Wayne National Forest. The intended outcomes of this sustainable recreation infrastructure project were "increased number of mountain bikers, non-local visitors and registered businesses"[52]. If the targets were achieved, the city and county of Athens would pay at pre-defined rates. The aim was that increased visitors and businesses would increase economic activity in the region and raise more taxes than in the absence of the trail. US Forest Service assesses the possibility of pay-for-success financing in cases where the project cost is more than US$3 million[23]. This is because projects of this scale find it difficult to gain traction from other investment sources, and the transaction costs are manageable at this scale.

Likely participants: Investors, project developers, project beneficiaries, third-party evaluator, intermediary organization.

Success factors:

- **Risk reduced for outcome buyer** who pays out only if targets are met – a politically attractive attribute
- **Risk reduction** through due diligence of the initiative and **clarity/agreements of targets** beforehand.

Revolving Funds

A large pool of assets that allocate upfront capital to projects meeting specific criteria (such as coastal restoration) as a loan, to be paid back via cost savings over time. Revolving funds spread risk across many projects and deliver consistent returns. They can apply in agricultural contexts as well.

Example: Washington state's drinking water revolving fund provides low-interest loans for public and private projects that improve public health or increase drinking water compliance, often involving ecosystem restoration to reduce runoff in local water sources. Ducks Unlimited Canada's Revolving Land Purchase fund uses a similar model to buy land, restore it, and sell with a conservation easement attached.

Likely participants: Revolving Funds are often housed in community-based financial institutions, or municipalities to support local projects. Loanees tend to be private business or landowners. The Ducks example demonstrates how an NGO can serve as the intermediary.

Success factors:

- **Clear guidelines** for what types of projects meet fund objectives (in US, the Environmental Protection Agency regulates state revolving funds for watershed restoration)
- **Risk reduction** through project feasibility assessment to avoid delays and non-payments.
- **Project scale** meets a threshold so that the investment and returns are tangible.
- **Retail investors demand** investments that have a net positive environmental impact, rather than just screening out bad actors.

Insurance Products

There are several ways to engage the insurance industry in conservation finance. Insured parties can be rewarded with lower premiums when investing in natural infrastructure, such as ecological restoration efforts that reducing the risk of damage from floods. Parametric insurance pays the insured entity (municipality, town or city) after a pre-determined nature-based event is met, such as amount of rainfall or wind speed, recognizing the probability of damage associated with the event. Payouts can happen more swiftly and be applied to nature-based investments that provide resilience against damage from future events.

Canadian context: The Insurance Bureau of Canada is actively developing nature-based insurance solutions in Canada. In partnership with Swiss Re and the Municipal Natural Assets Initiative they are developing and seeking to pilot new insurance products linked to watershed conservation and restoration as a means to build climate resilience and support flood management.

Example: The Nature Conservancy and Swiss Re partnered on a restoration coral reef project off the coast of Cancun in Mexico. Landowners along the coast including hotels and tourism sites pay monthly premiums into a fund that supports coral reef restoration. In the event of severe storms, the arrangement ensures action within 24 hours of the storm and therefore reduces long-term harm to the reef, accelerates restoration, and provides better coastal protection to beach and other valuable coastal properties. This project also provides local jobs for those engaged in restoration.

Parametric insurance has been experimented with by several insurance companies. AXA Climate uses satellite data to assess soil moisture in a region. If the soil moisture level falls beyond a range (i.e., either above or below), payment to insured party is triggered. The insured party is hedged against drought and excess soil moisture. Quick payouts based on specific data collected daily is a unique element of parametric insurance products.

Likely participants: Insurance and re-insurance companies, municipalities, individual policy holders.

Success factors:

- **Ecological Data** – strong evidence base connecting parameter or ecosystem damage to restoration measures
- **Financial Data** – actuarial analysis of ecosystem service delivery to set premiums and assess level of payout
- **Intermediaries** – insurance arrangements require collaboration among multiple stakeholders and committed intermediaries to create an appropriate and mutually beneficial deal structure.

FORESTRY

Of the total geographical area of Canada, 34.8% is forest area. Notably, 77% of Canadian forest is owned by provincial governments while territories own 13% followed by private (6%) and Aboriginal and federal (2% each)[53]. The federal government balances forest protection alongside several programs to support the growth of the forestry sector, including the *Indigenous Forestry Initiative*, *Forest Innovation Program*, *Expanding Market Opportunities Program*, and *Green Construction through Wood Program*.

One-third of Canada's forest is 'unmanaged', mostly in the north (Figure 4), while only 7% of Canada's forests fall within protected areas[54]. As shown in Figure 5, more than half of the boreal forest is classified as 'no current commercial tenure'. There is an opportunity for conservation of currently unprotected, unmanaged areas, and for improved practices to increase carbon sequestration and biodiversity outcomes within managed areas. This section discusses several financing opportunities to attract funding for nature in forested settings.

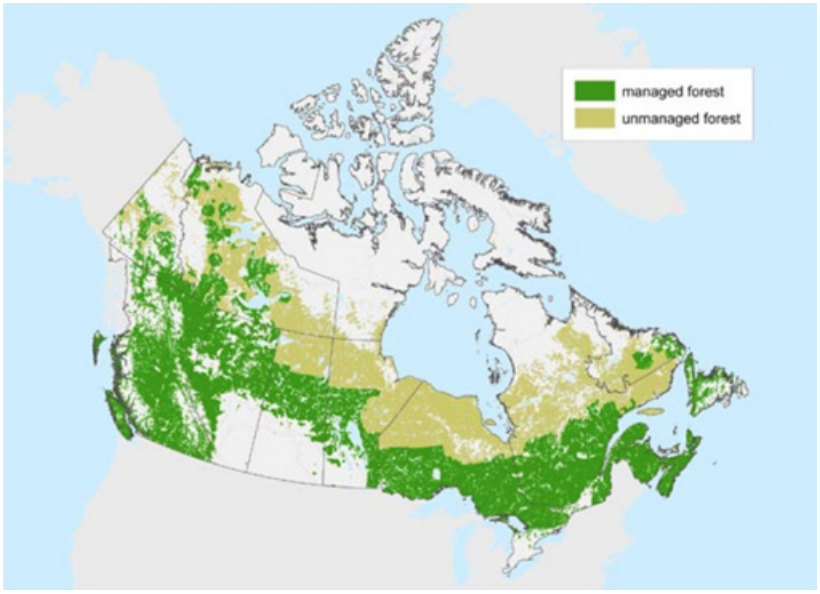


Figure 4: Managed and unmanaged forest lands in Canada

Source: https://www.nrcan.gc.ca/climate-change/impacts-adaptations/climate-change-impacts-forests/carbon-accounting/inventory-and-land-use-change/13111

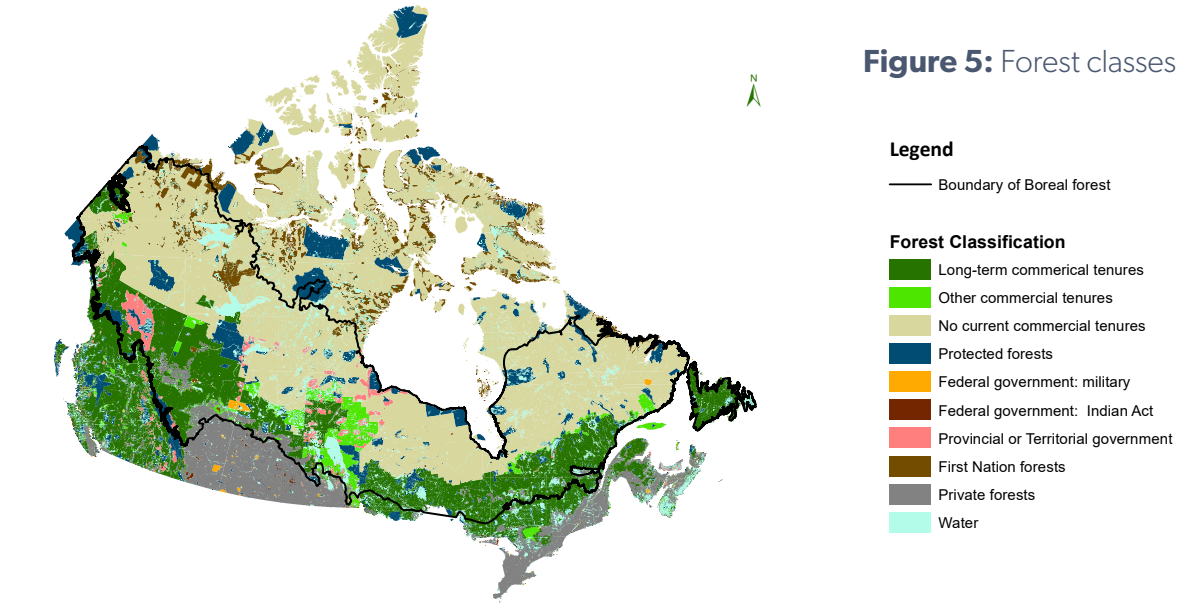


Figure 5: Forest classes and boreal forest

Data source: Baldwin, K.; Allen, L.; Basquill, S.; Chapman, K.; Downing, D.; Flynn, N.;MacKenzie, W.; Major, M.; Meades, W.; Meidinger, D.; Morneau, C.;Saucier, J-P.; Thorpe, J.; Uhlig, P. 2019. Vegetation Zones of Canada: a Biogeoclimatic Perspective. [Map] Scale 1:5,000,000. Natural Resources Canada, Canadian Forest Service. Great Lake Forestry Center, Sault Ste. Marie, ON, Canada. Map created by SPI.

What is Driving Interest in Novel Financing in Forestry?

- **International and domestic commitments – Government**. Canada has set several targets to achieve its commitments for climate action. Nationally, Canada has an ambitious plan to plant two billion trees under *Nature Smart Climate Solutions Fund*. Provinces are also on different trajectories towards achievement of provincial and national goals. For example, BC's Climate Change Accountability Act (2007) set the pathway to incrementally reduce the provincial government's carbon emissions, and forest carbon offsets have played a role.

- **International commitments – Industry**. The International Civil Aviation Organization's *Carbon Offsetting and Reduction Scheme for International Aviation* (CORSIA) aims to achieve carbon neutrality from international flights through aviation biofuels or carbon offsets. With Canada's participation in CORSIA, airlines committing to carbon neutral goals, and forest carbon offset projects an approved pathway to achieve carbon neutrality, CORSIA is expected to drive demand for forest carbon offset projects.

- **Corporate net-zero commitments.** Nature-based strategies are included in many voluntary corporate net-zero commitments. Walmart committed to zero carbon emissions by 2040 and "protect, manage or restore at least 50 million acres of land and one million square miles of ocean by 2030"[55]. Ten Tree International, a Saskatchewan-based apparel company, has planted 52 million trees and pledged to plant a billion trees by 2030 including projects in Canada[56]. Over 1,400 large corporations, including Amazon and PepsiCo, have pledged to achieve net-zero carbon emissions and are driving demand for carbon credits in the voluntary market.

- **Financial disclosures.** Climate risk is increasingly seen as a material risk to public companies, where investors seek more data and disclosures on how such risks are being mitigated. While decarbonizing operations is an overall goal, in the interim carbon offsets allow companies to demonstrate short-term action to reduce climate risk. Increased demand for forest and other nature-based offsets can be part of the risk alleviation strategy.

- **Creative policies.** BC's *Carbon and Air Benefit Sharing Agreement* has helped address the challenge in generating funding for carbon offsets on Crown land. This policy is applicable to all forest carbon emission offset projects on provincial Crown forest land in British Columbia. It enables land users to profit from selling offsets from land even if it is not owned by the user.

What is Slowing Implementation?

In many carbon-rich landscapes, especially in the north, there is no immediate threat of conversion, meaning conservation and land management are not eligible for carbon credits under current protocols. There is a need for protocols that reward stewardship and maintenance or other mechanisms to incentivize protection, as is seen with Australia's Aboriginal Carbon Foundation, where credits are generated through fire risk management.

- **Rules for Public and Private Land** – The extent of Crown land in Canada (89% of total forests) presents a challenge because some restrictions and limitations on resource extraction apply on crown land, which do not apply to private forests. Although Crown lands are leased to mining and logging companies for extraction, there is often a conflict between conservation and leasing for extraction on publicly owned land. The above example of the *Carbon and Air Benefit Sharing Agreement* demonstrates how policy innovation can address this challenge.

Carbon Credits (Regulatory Market)

Parties whose emissions are restricted by policy can purchase carbon credits to compensate for excess emissions. The restrictive policy defines what types of credits are eligible and what proportion of excess emissions may be covered by credits, and is typically accompanied by a protocol for government issuance of credits.

For nature-based carbon credits in a regulated market, policy design determines if and how biodiversity considerations are integrated. At a minimum, safeguards should be in place to avoid unintended harm. To drive demand for higher value credits, a percentage of compliance offsets could be required to include biodiversity accreditation, or price top-ups could be offered when biodiversity improvements are demonstrated[47].

Canadian context: Alberta and Québec have had regulatory markets for carbon credits in place since 2007 and 2012, respectively, while BC has had one for liquified natural gas facilities since 2014 and for public sector organizations since 2010. In Alberta and BC, only credits generated in the province are eligible, while in Québec, credits may be generated in any jurisdiction participating in the *Western Climate Initiative* carbon market. There is also a federal market created by the Output-based Pricing System for industrial emissions. This system accepts some provincially issued credits and the federal government has just released regulations authorizing the federal government to issue credits. For nature-based credits, soil carbon and extended harvest cycles in forestry will be the first accepted protocols to generate credits in the Federal system (Greenhouse Gas Offset Credit System Regulations)[57].

To address permanence concerns associated with biological carbon sequestration, Québec has proposed a "tonne-year" approach to quantifying emissions in their current draft protocol for afforestation and reforestation on private land. This means that credits are calculated annually based on the contribution to climate change that each tonne sequestered during that year would have made in that year if it were not sequestered. The allocation of credits does not come with any obligation to ensure permanent sequestration. This approach is advantageous in that it does not require long-term monitoring to ensure permanence, or the use of a buffer pool to insure against involuntary reversals. On the other hand, it means that credits are allocated more slowly, which could pose difficulties for projects requiring up-front capital investment.

Example: In Alberta, industrial facilities that do not meet their emissions intensity benchmark can (a) buy credits from other facilities which outperform their benchmark, (b) pay into a fund, or (c) buy emissions offset credits generated in Alberta. The possibility of paying into a fund effectively sets a price ceiling for credits, at $\$30/tCO_2e$ in 2020. Both types of credits are traded through bilateral agreements, so prices are opaque. Historically, credit prices have been well below the maximum price and fluctuated widely in response to policy changes and other factors[58]. Alberta currently issues credits for a variety of agricultural practices, renewable energy production, and energy efficiency measures.

Likely participants: Regulated industries, provincial and federal governments, Indigenous communities, NGOs, auditors, accreditation bodies.

Success factors:

For commercial forestry, to overcome lost production revenue and the cost of investing in expertise and equipment to produce credits:

- **Regulations** should be stringent, setting a high price for credits
- Generating credits should be simple and affordable
- Future credit prices should be **predictable**
- **Additionality**. To ensure emission reductions, issuers should consider standard industry practices and legal constraints on land use when determining a project's emission reductions and account for the displacement of logging activities to other areas and the re-release of carbon through forest fires, pests, and the natural death of trees.

For small scale forestry – Measuring carbon stock, third party certification and finding a buyer requires efforts beyond the capacity of an average forest owner.

- **Intermediary organizations** that handle verification and sales can facilitate small holder involvement. By playing this intermediary role, Community Forests International created the first forest carbon project in the Maritimes in Whaelghinbran, NB. They measured the carbon stock of a family forest, handled third party certification, and sold the carbon credits to raise funds to buy private forest[59].

Carbon Credits (Voluntary Market)

Credits are sold to voluntary buyers, rather than buyers seeking to meet legal requirements. Voluntary buyers may be seeking to reassure consumers, investors, or regulators of their commitment to climate action or to align with their values. Credits sold in voluntary markets are typically issued under protocols created by governments or by standard setting organizations such as Verra or Gold Standard. In response to net-zero targets, the *Taskforce on Scaling Voluntary Carbon Markets* estimates demand for voluntary carbon credits could increase by a factor of 15 and be worth over US$50 billion by 2030[60].

Example: The Cheakamus Community Forest (CCF) in BC sells carbon credits to voluntary market buyers. CCF is on Crown land and the tenure is held by the Lil'Wat and Squamish First Nations and the Regional Municipality of Whistler, with non-profit and private consulting organizations helping to plan, create, and market credits. CCF generates credits by reducing its timber harvest, increasing the proportion of old trees, and leaving more rare ecosystems and areas near rivers intact. Australia's Aboriginal Carbon Foundation generates carbon credits from improved fire management – a potentially viable strategy in Canada's north where generating credits from avoided deforestation is more challenging.

Canadian context: Many Canadian firms made net-zero pledges in 2020, including large emitters such as oil and gas producers. Together with regulatory markets, corporate engagement on climate targets points to increased demand for credits on the horizon. Corporate actors in the voluntary market are more likely to seek out carbon projects that deliver biodiversity and community benefits, since part of the attraction is not only GHG reduction but also the story of supporting broader environmental and social objectives. Globally, Shell pledged US$200 million in 2020 and 2021 to buy carbon offsets from forests, wetlands and other natural ecosystems. Shell Canada announced it will buy carbon credits from Darkwoods Conservation Area managed by the Nature Conservancy of Canada. In partnership with Tsilhqot'in First Nation, Shell Canada supported the plantation of 840,000 trees as part of a reforestation project in Chilcotin region, BC[61].

"In response to net-zero targets, the Taskforce on Scaling Voluntary Carbon Markets estimates demand for voluntary carbon credits could increase by a factor of 15 and be worth over US$50 billion by 2030."

Likely participants: Indigenous Governments, non-regulated industrial actors, corporate sustainability arms of businesses, individuals, ENGOs.

Success factors: Many of the success factors for regulatory carbon credit markets also apply to voluntary ones.

- The process for creating credits needs to be **simple and affordable** while maintaining its rigor

- **Financial support and capacity building** are needed to help small-scale projects produce and sell credits.

Layering Credits: Certification, Easements, Matching Funds

As carbon credits are an established revenue stream, they can be paired with other activities to collectively create more profitable and diverse revenue streams for sustainable forest management and other ecosystem benefits.

Canadian context: Family Forests: About 80,000 family forest owners own an average of 80 hectares in Prince Edward Island, New Brunswick and Nova Scotia[62]. The up-front costs to generate credits can be substantial for small-holders, while demand is not certain and price varies significantly. The relatively low price of carbon credits in voluntary market is due to considerable variation in quality of credits and reliability of vendors[63].

Power of collaboration: A recent initiative to protect 15,000 acres of ecologically valuable land in Nova Scotia is an example of collaboration between provincial government, federal government, and a Trust. The Nova Scotia Nature Trust created a 4:1 matching grant, where one dollar from the public would result in four dollars from federal, provincial, and other sources. The federal funds came from *Canada Nature Fund* while provincial funds came from a provincially endowed Trust (Nova Scotia Crown Share Land Legacy Trust)[64].

Example: The *Working Woodlands Program* of The Nature Conservancy in the US offered both conservation easements (which are permanent) and long-term management agreements (which are not). Under the program, private forest's potential to conserve wildlife habitat and fight climate change is assessed. If the site is found suitable, FSC certification and carbon stock assessment are undertaken. This ensures sustained flow of funds to forest owner while continuing to conserve the private forest.

Likely participants: Woodlot owners, certification agencies such as FSC, carbon stock assessment organizations, NGOs.

Success factors:

- **Intermediary** is present to support woodlot owners to identify certification agencies and buyers
- **Regulatory environment** provides credibility to credits
- **Consumer Demand** for sustainably produced forest products

Real Asset Management

Real asset managers in the United States, Australia, and Europe pool funds to purchase land, often with an intended end user in mind for resale. The sale may be immediate, as is the case with the Conservation Fund that primarily sells to the US Government. The alternative is to engage in sustainable resource management (usually forestry), diversify the income flows that in a forest context often includes offsets, some level of sustainable logging, conservation and mitigation banks, and the exit strategy is the sale of the now value-added land.

Canadian context: With 89% of Canadian forests classified as provincial and territorial crown lands, the opportunity for companies to purchase, manage and then sell forest lands is limited, unlike in the US where 60% of lands are private. Thus, the scope for real asset management is limited in Canada but still possible, as demonstrated through the example below.

Example: New Hampshire based Lyme Timber Company acquires and manages forest lands in US and Canada. The company raises capital through private equity "forest funds". The capital commitment of each forest fund is between US$100 million to US$300 million. While most of their business is in US, the model can be applied in Canada; in 2013, Lyme Timber bought high priority lands in Québec (between Montréal and Ottawa). In 2015, 12,000 acres were sold to NCC and 50,300 acres to a conservation buyer, with a conservation option to NCC resulting in long term conservation and financial returns to investors[65].

Likely participants: Real asset managers, large scale land owners, philanthropic organizations, High Net worth Individuals, ENGOs.

Success factors:

- **A large asset holder** is needed to conduct transactions at this scale
- **End buyer in place** – some real asset transactions are conducted to sell to government, though the model is less applicable to Canada due to Crown vs. private land imbalance.

Forest Impact Investment Funds

Impact Investment funds in the forestry sector produce revenue through sale of timber, permanent conservation, land value appreciation, sale of carbon offsets, and can generate returns between 8% and 10%[66]. The assets under management by these funds are typically in the hundreds of millions. They are appealing to investors due to low volatility and low correlation to other asset classes, providing diversification in an investment portfolio.

Example: Private investment companies such as Climate Trust Capital (Oregon), New Forests (Australia) and Criterion Africa Partners (Maryland) focus on investments in forests to generate returns for investors. New Forests has AUD 5.7 billion under management for forest and conservation lands in Asia-Pacific and the US. Their Forest Carbon Partners investment vehicle that supports sustainable forest management and generates carbon offsets sold into the California credit market. In 2019, The Nature Conservancy's *Cumberland Forest Project* in Kentucky, Tennessee and Virginia over 102,300 ha was managed through $130.8 million nature-based impact investments. Revenue through sustainable harvesting and eco-tourism generate returns for third party investors and support the local economy and create jobs. At the same time, FSC certified sustainable forest harvesting protects and conserves forests while increasing carbon and timber stock[67].

Likely participants: Large asset managers, private and institutional investors, financial institutions, philanthropic organizations, NGOs.

"Forest funds are appealing to investors due to low volatility and low correlation to other asset classes, providing diversification in an investment portfolio."

Success factors:

- **Competitive rates of return** attract mainstream investors
- **Intermediary** – expert teams are required to identify and design deal structures
- **Evaluation Frameworks** – screening tools and criteria for inclusion are needed to evaluate whether specific projects are appropriate for fund selection.

AGRICULTURE

Canada's agricultural sector employs 2.3 million people and contributes 6.7% to Canada's GDP. Of the total geographic area of the country, 3.8% is classified as cropland. It is a critical industry, where Canada has targets to increase overall production and exports while reducing the carbon footprint of the sector as a whole[68]. Recent nature and climate related commitments for agriculture include a national emission reduction target of 30% below 2020 levels from fertilizer manufacturing and use. The 2021 Federal Budget announced $200 million of new funding over two years to augment AAFC's Agricultural Climate Solutions program to almost $300 million. This is in addition to announcements included in the climate plan, which also included:

- Up to $631 million to restore and enhance wetlands, peatlands, grasslands, and agricultural lands (led by ECCC).

- $3.16 billion over ten years for the 2 billion trees program (led by NRCAN). Crown lands, municipal lands, Indigenous lands, private lands and farmland are all eligible. Budget 2021 allocated $60 million for the protection of wetlands and trees on farms specifically.

Investments for nature in the agriculture sector can support long-term environmental and economic sustainability, where healthier farmlands support productivity and alternative land uses or best management practices attract diverse revenue streams. Conservation agriculture practices that increase soil carbon can be applied globally, while trees on croplands can potentially sequester 1,040 million tons of CO_2 per year[69]. Financing tools applicable to the agriculture sector that aim to motivate action include beneficial management practice insurance, agriculture equity and bond funds, soil carbon credits, and payments for ecosystem services.

What is Driving Interest in Novel Financing?

- **Corporate commitments for regenerative agriculture** – Nestlé plans to support half a million farmers to implement regenerative agriculture and plans "to source over 14 million tons of our ingredients through regenerative agriculture by 2030"[70]. Similar commitments have been made by Maple Leaf Foods and The North Face.

- **Soil carbon offset protocols** and integration of soil carbon the federal offset systems

- **Other on-farm GHG protocols** that account for reduced fertilizer use, grassland restoration and improved grazing practices, and irrigation management.

- **Consumer demand** for local, sustainably produced products, and pressure on companies to make sustainability commitments associated with agricultural sourcing.

- New **intermediary organizations to increase market access,** motivated by increasing corporate sustainability commitments.

What is Slowing Implementation?

- **Financial incentives for best management practices** are relatively low, and often do not cover their opportunity costs – cost-share programs typically only target capital and professional agronomic service costs.

- **Conflicting incentive structures**. AgriStability is one of Canada's largest business risk management programs. As a whole-farm, margin-based program, AgriStability implicitly discourages crop diversification (which diversifies crop production and price risk) and reduces supports for multifunctional farming practices that

generate lower returns on average compared to more intensified farming systems (although the unintended effects of the program are likely to be modest).

- **Corporate requirements (and implicit consumer demand).** Many farm crop types and farming practices are dictated by processors or supply chains – for example, Russet potato varieties produced in PEI are far more water and nutrient-intensive than other potato varieties, but make McDonald's French fries long and crunchy. In this case consumer preferences drive buyer decision making, which is passed down to the farmer.

Best Management Practice Insurance

Best Management Practice (BMP) Insurance programs compensate farmers for reduced yields or profits resulting from the adoption of specific on-farm practices. This can encourage adoption of practices that advance restoration or conservation objectives but whose impact on farm profits is not yet fully understood. BMP insurance programs face the challenge of managing transaction costs while reassuring farmers that insurance payouts will accurately reflect their losses.

Example: From 2004 to 2014, the *Best Management Practice Challenge* program in the US compensated farmers for lost profits resulting from the adoption of conservation tillage and nutrient management practices. The program showed signs of success: on average, nitrogen use declined by 41 pounds per acre[71]. After the program was phased out, most participating farmers continued using BMPs.

Canadian context: In PEI, the *Ecological Goods and Services Pilot* insured farmers against yield losses resulting from the adoption of nutrient management practices. Farmers did not experience losses, so no payouts were made, increasing confidence in the practices themselves. The program had high administrative costs, but the PEI government has suggested that these could be reduced if the program was scaled. BMP insurance programs have the potential for widespread participation among farmers. In addition to the risk management benefits these programs offer, some BMPs also save farmers money. For example, nutrient management reduces input costs, which may increase overall profits for some producers (if they are applying more than the economically optimal fertilizer rate).

Likely participants: Farmers, agricultural associations, regional governments, insurance companies, NGOs.

Success factors:

- Compensating farmers for reduced profits, rather than reduced yields, is likely to encourage more participation by addressing risks associated with input and crop prices. However, this can be more difficult to measure.

Soil Carbon Credits

As part of global carbon mitigation strategies, credits for soil carbon sequestration are being tested in multiple jurisdictions. With half of carbon sequestered in below ground biomass, the volume of soil carbon offsets that can be traded is potentially significant. Like forest carbon credits, soil carbon credits can be calculated, verified, monitored, and certified. Verra published its first soil carbon quantification methodology in 2012. As agriculture practices result in significant soil disturbance, sustainable agriculture farming practices that increase soil carbon content can result in higher productivity as well as additional revenue through credit sales.

Canadian context: In Canada, soil conservation carbon offsets on agricultural land were established under Alberta's *Conservation Cropping protocol*, which is set to expire at the end of 2021. Under the protocol, farmers earn carbon offsets for carbon sequestered in their agricultural fields. An estimated one-third of seeded area in the province under the program resulted in the

sequestration of 600,000 to 700,000 tC per year[72]. However, the lenient eligibility criteria and penetration of no-till practices raised questions of additionality, resulting in the protocols' retirement. Under the recently proposed *Federal Greenhouse Gas Offset System*, one of the first four protocols is for soil organic carbon, where conservation cropping is unlikely to be an eligible protocol for the prairies, based on the Alberta retirement decision.

Related frameworks and methodologies for agricultural practices are emerging. The Climate Action Reserve designed a soil GHG methodology for Canadian grasslands[73], and Verra has developed generic methodologies[74] for grasslands, agriculture, livestock and manure, and wetlands. In 2020, Verra approved *Improved Agricultural Land Management* methodology to quantify GHG emission offsets. This methodology applies to reduced fertilizer usage and tillage, improved grazing practices, crop plantation, irrigation management, and harvesting techniques[75]. The price of soil carbon and other agricultural credits will be a major factor determining whether farmers take up practices to generate a credit income stream.

Example: Credit generation requires multiple players, and demand for regenerative agriculture is driving growth of a new intermediary market for soil carbon. Boston based Indigo Carbon (i) provides information on better land management practices and agronomic support to farmers to enhance carbon sequestration in farmlands, (ii) quantifies net reduction in carbon emissions, (iii) supports verification and validation of carbon credits from an independent organization, (iv) pays to landowner after the carbon credits are sold to corporate buyers[76]. The company projects potential gross income of up to US$30 per acre per year through soil enrichments, calculated at US$15 per carbon credit. By offering a minimum guarantee of US$10 per verified carbon credit generated in 2020, the organization is providing confidence and clarity for farmers to determine whether developing a project is economically viable.

Likely participants: Farmers, agricultural associations, provincial and federal governments, standards and accreditation bodies, NGOs.

Success factors:

- **Regulation** – the *Federal Greenhouse Gas Offset System's* inclusion of soil organic carbon is likely to drive demand for soil carbon projects
- **High carbon price and a price floor/ guaranteed buyer** where possible is likely needed for farmers to overcome transaction costs and opportunity costs of participation
- **Intermediaries** help small farmers overcome transaction costs and access carbon markets

Payment for Ecosystem Services

Payment for Ecosystem Services (PES) programs provide a financial incentive from a public or private entity to reward farmers for positive environmental practices. While implemented all over the world, there are opportunity costs when balancing the financial incentive from PES compared to other direct income supports to farmers. Harmonization of incentives needs to be considered when designing innovative funding strategies for improved agricultural management.

Example: In 2020, the European Commission reformed its *Common Agricultural Policy (CAP)* and introduced a program that delivers 20% to 30% of direct payments to farmers. The activities that can be practiced include precision farming, carbon farming (i.e. generating carbon credits through improved agricultural management practices), organic farming, integrated pest management practices, and agroforestry[77]. The *Soil and Water Outcomes Fund* by Qualified Ventures is a more innovative strategy to reward stewardship and increase payments to farmers while generating returns for investors. A fund created by investor capital supports sustainable farm practices leading to water quality improvement, carbon sequestration and other environmental outcomes valued by beneficiaries. Environmental outcomes are "stacked"

(i.e. rewarded separately) allowing farmers to receive higher payments and beneficiaries to pay only for the outcomes they desire, rather than the cost of the whole program. The initial roll out resulted in a direct benefit of $30 to $50 per acre to farmers that adopted sustainable agricultural practices over 9500 acres in Iowa, with plans to scale to 100,000 acres in 2021[78].

Likely participants: Federal and provincial governments, agricultural associations, farmers, NGOs, downstream beneficiaries of water quality improvements like municipalities and energy utilities.

Success factors:

- A conducive **policy environment** that delineates the rules and incentive structure
- **Intermediary organizations** to support farmers in assessing the feasibility of an intervention (agricultural practice) would result in ecological benefits
- Arm's length or third-party **monitoring and evaluation** organization to verify the achievement of ecosystem service outputs
- **Outcome payers** who are willing to compensate farmers for the benefits derived from land use management changes.

Agriculture Equity and Bond Funds

Due to the revenue streams present in agricultural businesses and products, traditional financing and investment models are often more easily applied in the agriculture sector than in types of nature investments. An equity fund invests in a range of enterprises, which can easily be targeted to businesses engaged in sustainable agriculture and environmental practices. A bond fund provides loans to farmers or businesses that use the capital infusion to improve ecological conditions, providing environmental returns alongside financial returns via debt repayments.

Examples: San Francisco-based Bonterra Partners provides consulting services to investors seeking to invest in business enterprises focused on sustainable agriculture, fisheries, forests and water. New York based SLM Partners Inc is an asset management company that acquires and manages rural lands. The land assets generate returns for investors through regenerative agriculture and forestry practices. Toronto based NEI Investments' offers responsible investment products like the *NEI Global Impact Bond Fund,* which invests in 11 sectors including sustainable agriculture and nutrition, and resource stewardship. Another type of fund that has gained traction among investors are farming-focused real estate investment trust (REITs). The trust buys agricultural land and leases it to farmers, distributing risk and reducing transaction costs to investors, while increasing access to farmland investment through shares traded on stock markets.

Canadian context: Area One Farms is a private equity investor providing capital support to Canadian farmland expansion. With $450 million AUM, they have supported the purchase and expansion of 140,000 acres of farmland in Canada. *Fair Finance Fund* is a social finance fund for Ontario farms. Returns are generated through bond issuance, with 4% returns for a 10-year term and minimum $50,000 investment, and 2% over 5 years, with a minimum $5,000 investment, enabling participation to investors of various scales.

Likely Participants: Agricultural businesses, asset managers, financial institutions, responsible investors.

Success factors:

- **Demand for responsible financial products.** Climate and nature-related financial disclosures are putting pressure on financial institutions to screen out environmentally damaging businesses and develop more nature positive financial products, such as these types of funds.
- **Intermediaries** that support financial institutions to identify appropriate companies
- Comparable **data on key metrics** of companies engaged in sustainable agriculture
- **Preferential tax treatment** for domestic impact investments. The investors could be allowed to carry forward losses, for a greater number of years as compared to traditional funds (if needed), while gains could be taxed at the normal rate.
- **Small-scale investment opportunities** (e.g., $5,000 minimum investment) to increase access to individual investors seeking responsible investment opportunities.

Table 1: Instrument Evaluation Summary.

Several newer instruments that could attract private capital score low on ease of transaction, where government support can de-risk and support market growth. Starred tools indicate top 5 highest potential instruments where government intervention could help scale impact

		Scoring Criteria				
Tool	**Government Role**	**Scalability**	**Potential Financial Returns**	**Potential Environmental Returns**	**Ease of Transaction**	**Comments**
****Conservation Trust Funds, Project Financing for Permanence**	Anchor funding	↗↗↗	+	+ + +	$	Need large capital inputs, endowments tie up large amounts of money for relatively little spend. PFPs increase flexibility of CTFs and are attractive for large landscape scale conservation.
****Tax Incentives: Conservation Easements and Exemptions**	Regulations	↗↗↗	+	+ +	$ $ $	Simple regulatory changes can boost project support funding or shift incentives for landowners. Potential for innovation in the space.
Biodiversity Credits and Offsets	Regulations	↗↗	+ +	+ +	$ $	High potential area but program design is critical to ensure carbon and biodiversity benefits are delivered.
Green Bonds	Support project pipeline	↗↗↗	+ +	+	$ $ $	Currently few nature conservation projects but model functions well if pipeline in place.
Conservation Impact Bonds	De-risk private capital	↗↗	+ +	+ +	$	Transaction costs high bringing many partners together

		Scoring Criteria				
Tool	**Government Role**	**Scalability**	**Potential Financial Returns**	**Potential Environmental Returns**	**Ease of Transaction**	**Comments**
****Resilience Bonds**	Project pipeline, de-risk					Multiple partners, high potential but outcome payer needed. Impact metrics needed for business case to attract outcome payer.
Species and Habitat Mitigation Banking	Rule change					Limited impact in Canada currently. If third party allowed could scale dramatically, design important.
Stormwater Management Credits (for Ecosystem Restoration)	Rule change					Limited impact in Canada currently. If third party allowed could scale dramatically, design important.
Environmental Impact Bonds/Pay-for-Performance Measures	De-risk					Multiple partners, high potential but outcome payer needed. Impact metrics needed for business case to attract outcome payer.
****Revolving Funds**	Anchor funding					With the initial funding infusion high potential model to provide capital
****Insurance Products**	De-risk					Currently a lot of uncertainty, once metrics in place high potential and insurance industry well-placed to ID financial opportunity.
Carbon Credits (Regulatory Market)	Set rules					Program design to limit loopholes and ensure additionality critical for success.
Carbon Credits (Voluntary Market)	Limited					Additionality critical for success, potential for greater biodiversity benefits.
Real Asset Management	Limited					Limited set of buyers and sellers but potential for market rate returns.
Forest Impact Investment Funds	Standards					Follows trusted financial model, appropriate projects and evaluation frameworks are needed for nature.

		Scoring Criteria				
Tool	**Government Role**	**Scalability**	**Potential Financial Returns**	**Potential Environmental Returns**	**Ease of Transaction**	**Comments**
BMP Insurance	Regulatory					De- risked opportunity for farmers to innovate.
Soil Carbon Credits	Regulatory					Additionality a key concern but new market for farmers in particular.
Payment for Ecosystem Services	Regulatory, Anchor funding					Incentive payments need to be significant enough to overcome transaction costs, fund models show promise.
Agriculture Equity and Bond Funds	De-risk					Screening tools needed, financial sector need to engage, but model well tested.

1. Scalability – if yes, get a point for total of 3
   - Can the size of the investment easily vary?
   - Can it be applied it anywhere?
   - Do ecological constraints limit its application?

2. Financial returns
   - Does the design generate 0% return (0)
   - Less than market returns for some participants (1)
   - Less than market returns for all (2)
   - Market returns for some/all (3)

3. Environmental returns – if funded, will biodiversity benefit?
   - Not sure – untested (1)
   - Perhaps – depends on instrument design (2)
   - Likely – strong track record/not too complex (3)

4. Likelihood for success – how hard is it to implement?
   - Transaction costs are very high due to complexity (1)
   - Need a lot of capital but if obtained it becomes straight forward OR Rules not yet clear (2)
   - Straight forward to implement, rules are in place (3)

4. WHAT IS HOLDING BACK MARKET EXPANSION?

Canada is well-positioned to become an innovator and leader in the conservation finance sector. The scale of the land and natural resource base, diversity of ecosystems, and the relative political stability presents a range of opportunities while limiting certain risks compared to less developed countries. The previous sections highlight that while there are high-level commitments to increase investments in nature in protected and conserved areas and beyond, application of innovative financing mechanisms in Canada has been limited. Several challenges are sector-wide. Others are more keenly felt by project developers, which influences supply, or project investors, which limits demand. We highlight them here to support understanding the existing landscape and identifying approaches to grow a market for nature-based investments in Canada.

CHALLENGES HOLDING BACK THE SECTOR IN GENERAL

High Transaction Costs

Engaging multiple partners, as is often the case with conservation finance and blended finance vehicles, increases complexity and time to bring a project to fruition. Some of the associated costs are fixed, others can be reduced as more projects are developed, models are tested in diverse environments, and markets are established.

Several of the most frequently cited Canadian examples of conservation projects that deliver financial and conservation outcomes have been large-scale one-off projects, often carbon projects, that are able to overcome sizable transaction costs due to motivated carbon offset buyers making significant investments into high impact landscapes. For small-scale projects, transaction costs remain a major hurdle.

Metrics and Impact Measurement

Financial actors and organizations concerned with ecosystem service delivery do not measure impact the same way. Environmental monitoring and evaluation strategies tend to align with a specific target (such as increasing population of a species at risk, hectares of conserved habitat, or tracking water quality). Even so, across Canada the availability of consistent ecosystem data is limited. For example, most of the data on watersheds and stormwater for municipalities are not integrated at regional or national scale. Likewise, while regional efforts and individual studies examine tree canopy extent and various ecosystem, climate, and health implications, there is no national database that would allow easy access to those looking to integrate ecosystem service data into their decision making or natural infrastructure project development.

For investors examining a diverse set of projects in equally diverse settings, it can be a challenge to:

- Identify and measure the most critical impact metrics
- Compare methodologies across unique conservation objectives
- Compare relative impact of diverse ecosystem outcomes.

Typical ecosystem measures do not easily connect to financial data, or other metrics that investors would seek to better understand how individual projects compare to others.

Scale of Projects vs. Desired Scale of Investment

There is a mismatch between the scale of needed investment – on the order of billions – compared to the thousands of smaller organizations seeking funding scaled to their organizational capacity. A few large and global organizations launch multi-million-dollar conservation investment projects, which are important, but they do not represent the norm. Banks and financial institutions looking for $50 million projects at minimum, do not find it worthwhile to conduct due diligence for (relatively) small sums. Bundling projects together can increase project size and spread risk, but such arrangements require further intermediary action to facilitate.

Limited Intermediaries for Project Development and Building Partnerships.

Most examples of functioning conservation finance projects involve a range of partners and participants. There is a clear need for more intermediary organizations in Canada, particularly when more complex blended financing mechanisms are in place, and when partners are new to conservation finance projects. Encourage Capital and Blue Ventures are examples of for-profit organizations that design and implement financial mechanisms for

investing in nature, but not yet in Canada. For those interested assessing the feasibility of a project, there is a lack of guidance and resources to help would-be participants connect to partners (or find appropriate ones). There is a need for more intermediaries and networking capacity at the national-level to connect investors to projects, such as the Conservation Finance Network in the US and the European Investment Bank's Natural Capital Financing Facility in the EU.

WHAT IS KEEPING THE SUPPLY OF PROJECTS LOW?

Lack of Project Development Capacity

Natural infrastructure projects are seen as an area of significant potential for investment based on returns derived from cost savings, especially those associated with flood regulation and climate resilience[79,80]. However, natural infrastructure projects require a wider range of expertise and partners compared to gray infrastructure projects, resulting in increased coordination, time and project development costs. Without support to access or develop expertise on ecosystem evaluation tools, legal requirements, and financial arrangements, expecting projects to emerge naturally is either slow or non-existent. A positive step in this direction is the federal budget 2021 announcement of $200 million over three years to create a *Natural Infrastructure Fund* to finance natural and hybrid infrastructure projects. This funding pool will motivate project proposals, though does not directly address the fundamental capacity issue.

Lack of Early-Stage Funding

Except investments that resemble traditional equity or debt investments, which involve familiar financial vehicles and are therefore less risky, conservation finance mechanisms tend to be multi-faceted. The complexity derives from blended finance models that include multiple investors and partners along with inherent ecosystem complexity. Pilots are needed to test whether projects deliver ecological and financial outcomes as planned to produce an evidence base on the effectiveness of investment vehicles in different contexts. Funding support to create and implement such projects that are not tied to returns is necessary to develop a track record – robust supporting data on risk and returns can attract more cautious investors and consequently project developers as well.

WHY IS DEMAND FROM INVESTORS LOW?

Risk – Novelty of Products and Systems

Mainstream financial actors tend to be risk averse, and several types of risk are present in nature-oriented investments as compared to other "green" investments.

- Novelty
- Uncertainty
- Financial metrics

Conservation investments are relatively new, there are inherent uncertainties in natural systems, and established financial metrics like risk adjusted rates of return are generally not available. More established performance records of various strategies are needed to attract mainstream investors.

Encourage Capital has developed several blended finance products that have become larger over time, as projects have been successful in delivering returns and ecological outcomes. Models in the form of "blueprints" can be exported and implemented elsewhere, though increased

confidence comes from working with organizations that understand a specific context when implementing models in new settings.

Liquidity

Projects that rely upon delivery of ecosystem outcomes tend to be long-term, which ties up capital and may not be attractive to certain investors.

"The inherent uncertainty and complexity of ecosystems mean that nature does not follow the same rules as other commodities or asset classes, and requires a different set of expectations."

Ecosystem-Specific Risks

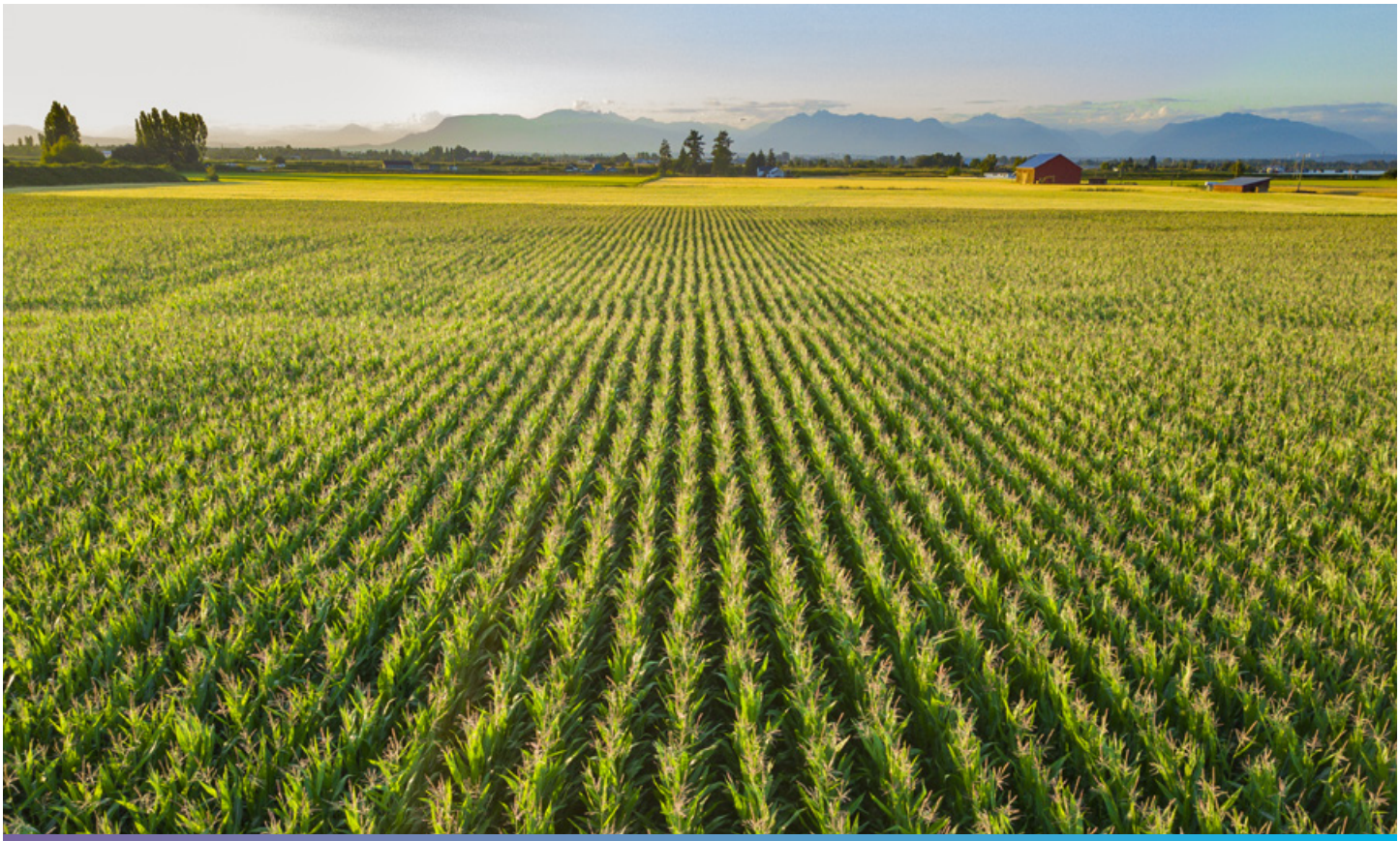
Natural systems are dynamic and complex. While uncertainty is inherent in any type of investment, natural systems present an additional challenge when anticipating impact. It is understood that tree planting can lead to carbon sequestration, and there are established methods to measure the extent of sequestration; however, in an open system, complications and associated uncertainties can arise. Risk of fire, or the influence of other external activities can lead to investments in nature being judged as riskier compared to a renewable energy project, if the primary metric of concern is GHG reduction.

Additionally, time scales for delivering impact can be difficult to anticipate, particularly when external factors may play a role. For example, water quality and fish habitat improvements resulting from riparian restoration may be undermined by upstream agricultural or industrial activity, influencing the rate at which recovery can be expected. The inherent uncertainty and complexity mean that nature does not follow the same rules as other commodities or asset classes, and requires a different set of expectations.

Financially-Relevant Metrics (for projects)

Just as environmental groups are used to dealing with specific measures to evaluate the success of conservation projects, investors are used to specific financial metrics to evaluate investments. Metrics such as risk adjusted rates of return and credit ratings for conservation or restoration projects are uncommon. Without such measures, it is easy to understand why an investor may shy away from an opportunity despite compelling arguments for the environmental impact.

Considering the range of challenges that collectively contribute to high transaction costs, uncertainty among project participants, lack of market support systems and enabling conditions (e.g., price floors, seed funding) and overall risk due to the novelty and limited application of conservation finance strategies to date, it is clear why there are not yet more projects of this nature being implemented.

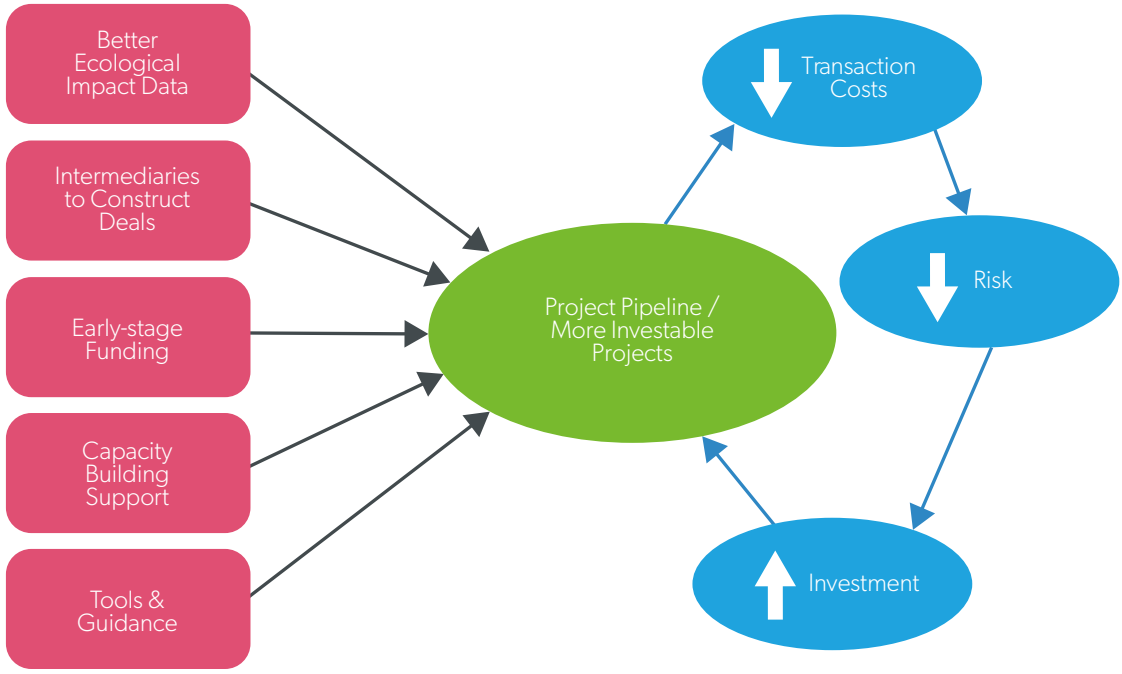


5. CATALYZING GROWTH

It is an opportune time to take steps that will scale conservation finance in Canada. There is a confluence of government commitments to climate, biodiversity, and significant funding streams for restoration and conservation, as well as corporate actors either seeking to lead or being pushed to advance supply chain sustainability and reach net-zero commitments. The scale of private capital markets is such that meaningful contributions to closing the funding gap are not primarily an issue of capital availability. The message that capital is available for viable investments and bankable projects has come from the private sector, philanthropy, and government in a variety of settings. Many benefits emerge from pilot projects, but interest in scalable models suggests that one-off or small projects (in terms of dollars invested) are less appealing than large scale and potentially transformative efforts.

The result of the various challenges presented in section 4 is that the scale of the conservation finance market in Canada is relatively small. The limited "project pipeline" results in investors seeking investable projects elsewhere, despite the desirable investment conditions in Canada (as seen in Box 1). Figure 6 illustrates how supporting specific initiatives can affect the project pipeline. Once a pipeline is more robust and there are more projects on the ground, like any new market, with more familiarity, transparency, and clear rules, implementation costs and risks decrease, which can attract more investment, and in turn lead to more investable projects.

Figure 6: Summary of supports needed to grow the project pipeline. With more investable projects transaction costs decrease, which leads to less risk, attracts new investors, and leads to a positive feedback loop for more projects and investment.



"The message that capital is available for viable investments and bankable projects has come from the private sector, philanthropy, and government."

In this section, we identify specific opportunities to overcome the challenges identified in section 4, and examine several policies that have been implemented elsewhere to grow ecosystem service-oriented markets. Table 2 connects the dots between the challenges and the opportunities, where we can see there are a range of strategies that can be implemented by multiple stakeholders to alleviate concerns and incentivize investment.

Government has a key role to play by providing sustained funding to existing protected areas, and augmenting investment in restoration and sustainable management of working landscapes. Strategic financial and policy support can help government commitments go further, attract philanthropic and private sector dollars, and boost market signals. Policy interventions can increase the supply of projects, drive demand, and create conditions in which projects are more likely to emerge. Reference to several international examples highlights how the following strategies have helped jump start activity in the conservation finance space and could be applied to the Canadian context.

GOVERNMENT - GROWING THE PIPELINE

Direct Financial Support

Direct cash infusions are particularly useful for novel and untested approaches where risk is high. Notable sources include government and philanthropic grants, which can fund various aspects of the project cycle. Specific pathways to provide funding that support growing a project pipeline for nature investment include:

- **Seed funding** – Can initiate a new project or be used to build the business case through further ecological or financial impact assessment.

- **Matching funds** – Can bring money from diverse stakeholders such as corporate actors and citizens, and can reduce overall risk as it is spread across participants.

- **Business Development Funds** – targeting entrepreneurs that develop carbon credit projects or other ecosystem markets that could eventually generate revenue.

- **Incentive Payments** – In the agriculture sector, incentive payments for best management practices that would otherwise be cost-prohibitive can enable landowners to access further capital via agriculture funds or bonds.

Government Opportunity: A Financing Fund to provide direct financial support to create pilots and spur investment, following the European Investment Bank's *Natural Capital Financing Facility*. Debt (up to 75% of project costs) and equity (up to 35% ownership) investments ranging from €5-15 million support the following project types:

- Green Infrastructure

- Biodiversity Offsets and Credits

- Payment for Ecosystem Services

- Pro-biodiversity and adaptation businesses

Impact Metrics and Standards

Internalizing the value of ecosystem services has long been a challenge to integrate nature into decision-making. Consistent and coherent metrics that are well understood by all parties are necessary for market development. The necessity is well-illustrated by carbon projects. Verra's *Verified Carbon Standard* provides the backbone for the voluntary carbon market, ensuring credibility, consistency, and ultimately trust for buyers and sellers. Standards organizations including Verra are moving into other ecosystem service-related methodologies including the *SD VISta* standard, which demonstrates a project meets further criteria associated with the UN sustainable development goals.

"Standardized ecosystem service metrics and protocols, technical capacity to collect and report impact data, as well as a venue to integrate and share data would play a significant role to advance many nature-related initiatives, beyond conservation finance."

Standardized ecosystem service metrics and protocols, technical capacity to collect and report impact data, as well as a venue to integrate and share data would play a significant role to advance many nature-related initiatives, beyond conservation finance. With this goal in mind, OPERANDUM is an EU-funded effort is consolidating tools and data across Australia, China, and 11 European countries to evaluate ecological indicators for efficacy, and market potential for nature-based approaches to hydrological risks[81,82].

Consistently understood ecosystem impact metrics simplify translating project benefits into economic terms, ease communication, and facilitate comparison across different projects. The Global Impact Investor Network's *IRIS+* system tracks methods and metrics associated with SDG categories and impact pathways, with these same investor needs in mind. Determining how these and other resources can best apply to the Canadian context is needed.

Following similar efforts for climate change risks, guidance for biodiversity and ecosystem risk reporting and evaluation led to the creation of the *Task Force on Nature-Related Financial Disclosures*. The group seeks to "provide a framework for corporates and financial institutions to assess,

manage and report on their dependencies on nature, aiding in the appraisal of nature-related risk and redirection of global financial flows away from nature negative outcomes and towards nature positive outcomes".[83] The Canadian government has committed Crown corporations to align with reporting standards from the *Task Force on Climate-Related Financial disclosures*. In joining the *Task Force on Nature-Related Financial Disclosures*, crown and government reporting on impacts to nature are likely to eventually follow suit.

Government opportunity: Support identification of key ecosystem metrics for different investment models and require collection of certain ecosystem relevant data as part of government granting programs. Monitoring and evaluation are already required when receiving funding, collecting investment-related ecosystem data would set standards for impact data, improve credibility, reduce project development costs, and facilitate nature-related reporting.

Open Data

Reliable and available data is a major barrier to produce credible analyses of ecological impact of particular interventions. Nevertheless, significant investment is already made annually to track a wide variety of ecological data. For example, many organizations collect longitudinal biodiversity data such as wildlife habitat by Alberta Biodiversity Monitoring Institute, conservation status ranking of plants and animals by Manitoba Conservation Data Centre, and species-at-risk in Saskatchewan in portal *HABISask* (Hunting, Angling and Biodiversity Information of Saskatchewan). However, the data are (a) mostly not available for open access, (b) not compiled in a central repository, and (c) insufficient for project developers to aid their decision-making process.

This can be overcome in a variety of ways:

- Systematic reviews of existing data collected by government agencies, determining which are most relevant to specific financial instruments
- Identify key metrics of interest for compilation
- Develop technical architecture to link updates to existing databases to conservation finance database, and enable open access
- Databases can be divided by:
    - Project type – The conservation bank open database *RIBITS* allows project developers to check details of species conservation banks across the country.
    - Ecosystem service type – The US Forest Service has an open-source national inventory of urban canopy – which provides an interactive tool for urban planning and other project development.

Government Opportunity: Oversee the creation of a database to track the impact of conservation finance projects to inform investors, reduce costs associated with project evaluation and monitoring, and improve ecosystem evaluation over time. Ecosystem data relevant to nature-based investing could be integrated into the census for the environment, which was funded as part of Budget 2021.

Tool Identification and Selection

Sharing the results of ecosystem valuations is only possible if tools to conduct monitoring and analysis are accessible. There are dozens of available tools, being equipped to know what fits the need for a specific project is critical. However, existing guidance on what to apply in particular contexts is limited.

Several existing ecosystem measurement and valuation tools include:

- IISD's *Sustainable Asset Valuation Tool* (SAVi) to account for social, environmental and economic risks. The tool helps investors understand the extent and value of ecosystem co-benefits.
- *Alberta Wetland Rapid Evaluation Tool* (ABWRET) assesses a wetland's ecosystem functions.
- Guelph, ON based Computational Hydraulics International has software *PCSWMM* for stormwater and wastewater modeling.

- US Forest Service developed free software suite *i-Tree* to help quantify the benefits of urban trees.

- US Geological Survey developed Database of Biodiversity and Habitat Quantification Tools Used for Market-based Conservation in the United States comprising of 69 tools to evaluate sites' ecological quality.

- WWF developed the *Protected Areas Benefits Assessment Tool* (PA-BAT) to provide policy makers with a standardized methodology to collect and catalogue information regarding the benefits of protected areas.

- *Ecosystem Services Toolkit* (EST) by the Canadian federal, provincial and territorial working group on biodiversity provides a blueprint on how to incorporate ecosystem service analyses in policy development.

- *ENCORE* (Exploring Natural Capital Opportunities, Risks and Exposure) provides data for financial institutions to assess the impact of their investment portfolio on biodiversity.

As ecosystem monitoring becomes more automated and can produce real-time data inexpensively, ecosystem impact can be more confidently reported and reduce risk and transaction costs, encouraging investment.

Government opportunity: Establishing a **central database to access tools** and details on when and where to apply them could advance feasibility studies, and if **tied to an open database**, could serve as a platform for sharing results and promoting learning.

Capacity Building – for project developers

Internal capacity to develop projects that meet investor needs is a barrier for NGOs and municipalities, unless explicitly part of their mandate. **Intermediary organizations** are often required for expert advice, or to provide resources and guidance at multiple project stages. Before even embarking upon conservation finance activities, there is a need to understand the feasibility/viability of a project before too much time or money is invested. Once moving ahead, support is needed to understand appropriate metrics, legal implications, financial details, and more.

To equip municipalities with skills and knowledge to integrate with ecosystem services, the Municipal Natural Assets Initiative (MNAI) has demonstrated how guidance to systematically measure, monitor, and manage natural assets builds local capacity and supports the integration of nature into decision-making. Natural asset inventories produce data to support investment decisions while building internal capacity. Investment and support for scalable guidance and tools are necessary to bring forward evidence-based rationales for investment, and to perform cost-benefit analyses to compare nature-based or green infrastructure project to traditional approaches.

Government Opportunity: Support municipalities for training and access tools/frameworks such as natural asset inventories. Providing financial support to generate ecosystem-related data as part of applying to infrastructure funding windows.

GOVERNMENT - ENABLING THE SECTOR

Regulatory Conditions

Though it can take longer for results to come to fruition than many of the direct investments or immediate policy strategies highlighted above, regulatory environments send strong signals to market participants about where government money is going and how the rules will lead to particular economic outcomes or areas of focus. The most significant driver of investment in carbon markets globally is the associated regulatory conditions. Despite anticipated growth in the voluntary carbon market, it is currently dwarfed by the regulated market by an order of magnitude[84]. Several examples demonstrate how well-structured policies and regulations can drive demand by providing clarity and transparency in a market setting, ultimately facilitating transactions.

> **"Program design can be an invisible barrier by implicitly restricting access to funding if ecosystem benefits or metrics associated with nature are not included or rewarded."**

These are three examples of how rules boosted ecosystem services markets in the United States:

- Stormwater credits – **Price floor and a guaranteed government buyer** if credits are not sold on the open market **reduces financial risk** and allows project developers to invest at scale and attract external investors.
- California carbon market design – An increasing **price floor**, performance-based rather than project-based standards, and rules that allow avoided conversion for private lands, which has been instrumental for Tribal and Indigenous communities to generate revenue.
- Wetland mitigation banking expansion – Wetland mitigation banking had always been in the Clean Water Act in the US, but a rule change in 2008 allowed it to scale dramatically by allowing **third-party investors**, i.e. non-proponents participating, and **creating banks in advance of projects**, i.e. cost-effective landscape-level restoration anticipating future development would generate demand for the bank[85].

Government Opportunities:

- Habitat and species mitigation banking. In Canada mitigation banks currently only apply to the single proponent, which constrains scale and results in mostly one-off projects.
- Expanded **federal carbon market** will drive more capital to eligible projects and new landscapes - new protocols for soil carbon and extended forest harvest time will drive investment in nature-based carbon projects. Along with a defined **carbon price**, confidence that demand is going to scale and a reliable price reduces risk and facilitates entry to project developers.
- **Natural Capital Accounting**. Updating accounting guidelines of the Public Sector Accounting Board to include natural assets as tangible capital assets, as seen in British Columbia.

New Rules and Regulations:

- **Carbon accounting** and the role of land use and land use change. Global carbon accounting for land use and land use change has evolved under the UNFCCC. Land use management will be central to achieving net zero targets, but global rules currently only include forestry. Proactive consideration of how new international rules may influence Canada will be critical to keep pace with global and national targets.

- **Guidelines and protocols for biodiversity offsets and credits** through a federal system could augment both regulated and voluntary participation of the private sector.

- **Tax innovation**. A favorable tax environment is an enabling factor highlighted in several instrument examples, including easements and impact investing incentives. Further tax innovation or relief may reduce barriers to entry, or favorable taxation can provide the needed financial incentive to attract landowners and investors.

Adapting Fund Rules and Regulations

Program design can be an invisible barrier by implicitly restricting access to funding if ecosystem benefits or metrics associated with nature are not included or rewarded. With natural infrastructure in mind, there are several funding pools in Canada that in theory could provide support for natural infrastructure projects but currently are doing so in a limited capacity.

For example, the *Disaster Mitigation and Adaptation Fund* provides funding support to communities for large-scale infrastructure projects that help prepare for natural disasters. Investments in restoration of ecosystems and natural infrastructure projects also can meaningfully help to achieve these goals. While they are not ineligible for funding, there has been limited rollout of restoration of natural infrastructure projects to date. The 2021 Federal Budget announced a further $1.3 billion in funding for DMAF, while a separate $200 million Natural Infrastructure Fund was announced to support natural infrastructure and hybrid projects. Within the context of DMAF and other existing programs, two further ways to promote investments in nature include:

1) **Reward ecological co-benefits**. Scoring projects such that there are criteria that account for benefits from nature. The challenge is this requires agreed upon metrics, which is a barrier discussed above as well as further costs associated with this data collection. Earmarking without these benefits can address this issue in the short term – a similar result has been achieved with the new Natural Infrastructure Fund.

2) Requiring consideration of **nature-based approaches as part of funding eligibility**. By including a precondition to indicate some level of preliminary analysis for a nature-based option was explored, project proponents may find opportunities that they had previously not considered.

Government Opportunity: Government programs are an opportunity to showcase the benefits of investing in nature, and can provide the framework and data inputs for metric evaluation. Including ecosystem data in existing monitoring and evaluation requirements can contribute to the data gaps highlighted above.

Knowledge Sharing and Agenda Setting

Collaboration across relevant partners and stakeholders is essential to produce a common language for conservation finance and develop an understanding of impact metrics, key ecosystem valuation tools and how international examples apply to the Canadian context. Conferences and some early guidance materials are being established and supported, although strategic investment to facilitate collaboration could advance thinking and implementation more rapidly. Practitioner and resource networks have supported the growth of ecosystem markets:

- **Conservation Finance Alliance** – International association for conservation finance practitioners, promotes awareness, expertise and innovation. The alliance has four working groups: environmental funds, protected areas financing, innovation, and marine and coastal.

- **Conservation Finance Network** – an initiative based at Yale University, convenes discussion, disseminates information, and provides training for conservation finance practitioners from the public, private, and non-profit sectors.

Government Opportunity: A National Conservation Finance Coalition

Project funding alone will not overcome data barriers, methodologies, and mechanisms to collaborate with the range of needed partners to create a functional conservation finance project. A coalition of organizations already participating in the space could advance conservation finance action by:

- **Bringing together key public and private partners to** develop priorities, consolidate resources, and coordinate research.
- **Aligning necessary metrics and tools to make investment cases for public and private spending**, by providing guidance associated with existing ratings and standards for investment screening, accounting standards, and how both financial and ecological metrics can be used in concert.
- **Informing policy discussions** with research and opportunities to advance the sector nationally.

Support Development of Intermediary Market

An ecosystem of intermediaries is necessary to rapidly scale projects and investment. In the case of carbon offset projects, a suite of peripheral actors and organizations is necessary to ensure credibility and quality – they include auditors, rating agencies, and standards and accreditation bodies – to ensure buyers are getting what they are paying for.

In relatively mature markets like the United States, several companies offer investment solutions for conservation finance. These organizations undertake due diligence, feasibility and assessment studies, and risk accounting, and communicate metrics that are meaningful to their audience. Notable intermediaries include:

- **Deal Makers:**
  - **Encourage Capital** - an impact investment that creates financial structures to facilitate investment and produce market-level returns in environmental markets.
  - **Quantified Ventures** - an impact investment firm, specializing in "pay-for-success" funding models and social impact bonds.
  - **NatureVest** – the impact investment arm of The Nature Conservancy, initial funding was provided by JP Morgan, Gordon and Betty Moore Foundation. Provided a means for philanthropy (corporate and otherwise) to boost attention to conservation finance, take risks, and develop investment models.
  - **The Conservation Fund** – an American non-profit, founded in 1985, which focuses on acquiring and protecting land and financing conservation and small green businesses in the United States.
- **Standard Setters:**
  - **Verra** – originally the verified carbon standard, has expanded to provide carbon and other environmental certification methodologies for construction, waste, agriculture, forestry, grasslands, and wetlands.
  - **Gold Standard** – launched by WWF and other ENGOs in 2003, Gold Standard develops carbon and biodiversity standards to provide project certification and assurance.
  - **Bond Ratings**, e.g., Moody's, research and assess the creditworthiness of bonds based on several criteria, such as financial stability and outlook, and guide investors.
  - **Sustainability Standards Accounting Board (SASB)** – the global model for sustainability accounting standards with a focus on ESG.

Developing an intermediary market requires appropriate market supports, but ultimately there needs to be a

clear business opportunity that investable projects provide. More projects need to take place for the market opportunity to be clear to entrepreneurs, but developing projects and financial mechanisms is difficult in the absence of intermediaries. NatureVest specifically sought to address this gap – providing funding to pilot projects that would not otherwise be financially viable, but in the process develop investment cases and attract more participation. It is not easy. In the five years since its inception, NatureVest has successfully implemented multiple $100 million+ projects, but also noted that along the path to implementation, many valuable projects have not come to fruition due to various impediments. Facilitating the growth of project pipelines requires more financial support and market clarity, attractive conditions for investors and intermediaries, and necessitates scaling private sector participation beyond corporate philanthropy.

Government Opportunity: Intermediaries emerge in response to opportunity, and thus there is a critical role for government to directly support the development of a project pipeline, attract private capital, create enabling conditions and institutions, as outlined in the summary table on page vii.

Creating New Offset and Credit Markets for Conservation

Regulatory frameworks for carbon offsets drive much of the global demand. A significant proportion of Canadian forests and other carbon rich landscapes do not currently qualify for carbon offset credits because they are not at risk of conversion and therefore do not meet additionality requirements. This poses a challenge for northern communities in particular, where there are vast carbon-rich landscapes, whose protection and maintenance are of global significance, but financial instruments to attract external support are currently limited[86].

Devising new financial mechanisms and strategies that could incentivize private investment towards protecting peatlands (for example) would drive globally significant carbon and biodiversity benefits by the habitats being conserved. Creativity is required to develop a credit market or other mechanisms for mosaic landscapes, where protection, resource management, and sustainable use are all present. There is a need for mechanisms to provide sustained financial support to new IPCAs and other protected areas where a case for additionality is not easily made. Doing so could lead to substantial influxes of capital to these regions.

"Devising new financial mechanisms and strategies that could incentivize private investment towards protecting peatlands (for example) would drive globally significant carbon and biodiversity benefits by the habitats being conserved."

Government Opportunity: Provide regulatory clarity and transparency for market development for:

- Biodiversity offsets and credits (e.g., financial incentive for new protected areas or maintaining existing ones)
- Carbon-rich landscapes (e.g., incentivizing keeping it in the ground)
- New accounting systems to shift the existing carbon market and account for land use change – (e.g., in the UNFCCC process)

SUPPORTING THE PIPELINE – PRIVATE AND PHILANTHROPIC SECTOR

Easier Access to Capital

Financial institutions can send price signals to encourage specific types of projects or business development. This can come in the form of reduced loan rates, easing access to funding, preferential loan rates for projects that meet certain environmental conditions (and acknowledging this can often result in reduced environmental risk). Capital infusions at opportune times can help overcome project development funding and transaction costs.

Philanthropic organizations are key intermediaries. Through their endowment funds, philanthropic organizations are often early investors in more innovative projects. Through granting, philanthropic organizations are well-equipped to provide financial support to seed new projects and directly finance and partner in large-scale projects. The Packard Foundation in the US was a key supporter of the creation of NatureVest, thus helping create a key intermediary organization to examine challenges and advance investment.

From a strict investment standpoint, philanthropic organizations can take different capital positions in nature investments, if such an arrangement leverages further private capital by creating more desirable terms for other partners. A philanthropic organization may be the "first in, last out" or take a lower net return to attract other less patient or risk-accepting capital.

Pricing Risk

Investors are used to precise risk assessments to make comparisons across projects as well as appropriately analyze risk, which is central to assessment and due diligence process. NatureVest has been able to attach credit ratings to Conservation Notes and other debt instruments. An AAA rating from Moody's to the *Conservation Fund's* $150 million fund facilitated investment from mainstream financial institutions[87]. Working with Bond Rating organizations to equip them to evaluate conservation finance projects could significantly affect the role of major banks and lenders.

Tax Incentives

Incentives manifest themselves in a variety of ways. From a regulatory standpoint, tax incentives can motivate investment or serve to distribute risk. In the UK, investments in social impact products are eligible for tax credits in certain situations.

In Canada, one could imagine distinct types of landowners receiving financial, tax or other types of incentives that enable or encourage them to engage in sustainable land use practices. Conservation easements are an example of this, where land is not sold, but where an easement places a legal structure on a piece of land to prevent future development. Conservation easements can lower the overall value of land and tax incentives are intended to help offset the loss. Taxing the transfer of land when it is under easement is another path to generate funding.

Attracting Large Investors – ESG commitments, Responsible Investors

Impact investment is growing rapidly, and ESG considerations are expected to become the norm – PwC estimates nearly 60% of all mutual fund products in Europe to be ESG by 2025, up from 17% in 2019[88]. Demand in the green bond market is being driven by the rise of responsible investment, where ESG screening (i.e. removing investments that are identified as particularly harmful) and investors actively seeking green financial products (i.e. investments that are actively doing good) are both addressed. Connecting conservation finance to green financial products is a clear opportunity, though also limited by the current project pipeline bottleneck.

The green bond market is oversubscribed, yet Canada has limited nature-based projects built-in. There is room to better connect sustainable finance activities to the realm of conservation finance, particularly if rules and definitions for what classifies as eligible for green mutual funds and environmental equity funds are rolled out. In the interim, specific types of investors, such as high net worth individuals and pension funds are best positioned to lead.

Pension funds offer the capacity to invest over the long-term to consider growth differently than other financial actors. While pension funds may be more risk avoidant, they can be driven by members to take positions that advance social and environmental considerations. The sheer scale of pension funds provides leverage in engaging with companies and organizations to take on more responsible practices.

Caisse de Depot et placement du Québec is at the forefront of responsible investing for pensions in Canada. It holds several public and parapublic pensions for the province of Québec and is the second-largest pension fund in Canada behind the Canada Pension Plan. Their focus to date has been on climate action, and it is the only fund that has set targets to increase low carbon investments and reduce the carbon intensity of its entire portfolio, where executive compensation is connected to reaching targets. Moving from carbon to nature-based considerations is a likely next step as pensions develop more sophisticated ESG strategies, which is being seen by global leaders in the Netherlands and Nordic countries.

New Investment Standards

Quarterly reporting will always be limiting for ecologically-based investment strategies, as it takes considerable time for benefits and impacts to accrue and be measured. Leadership from senior management is needed to reward more than quarterly financial returns as other types of non-financial returns are becoming of value and interest to investors.

The emergence of bond evaluators equipped to deal with not only environmental projects but specifically ecological projects and place bond ratings and other types of risk assessments on conservation finance vehicles will also help attract investors and provide confidence to those less familiar with the nuances of the space.

Investment standards for responsible investing and sustainable financial products are emerging in the EU as a result of their *Sustainable Finance Action Plan*. As the volume of investment opportunities that meet stringent sustainability criteria increases, value-based investors will be interested in seeing more diverse opportunities in the nature space. Developing standards and a taxonomy to address this demand will help facilitate overall market growth. The *Task Force for Nature-Based Disclosures* is creating a framework that will facilitate screening for financial institutions, and in turn motivate businesses to change practices to meet nature-based criteria.

Collaborative Efforts

Demonstration projects and funds that are intended to demonstrate how finance mechanisms apply to the conservation space will inevitably include a range of partners to diversify risk. International collaborative efforts are bringing major environmental and financial organizations, often with developing country conservation in mind.

The Coalition on Private Investors for Conservation (CPIC) collaborates to identify and overcome challenges to reduce transaction costs and scale investment in the conservation sector. CPIC is a key partner in the *Nature+ Accelerator Fund* (Figure 7).

Launching in 2021, the *Nature+ Accelerator Fund* is the first global nature fund intended to develop a proof of concept that will attract private sector actors at scale. It was developed by the IUCN, Mirova Natural Capital, and CPIC. From an initial $8 million investment from the Global Environment Facility, the fund seeks to develop a $200 million portfolio of over 70 investment deals that will measurably contribute to biodiversity, climate and community livelihood outcomes by 2030. Whether large-scale development finance models apply to Canada remains to be seen, but lessons from the Nature+ Accelerator will inform the growth of the sector as a whole.

Figure 7: Progression of Nature+ Accelerator fund

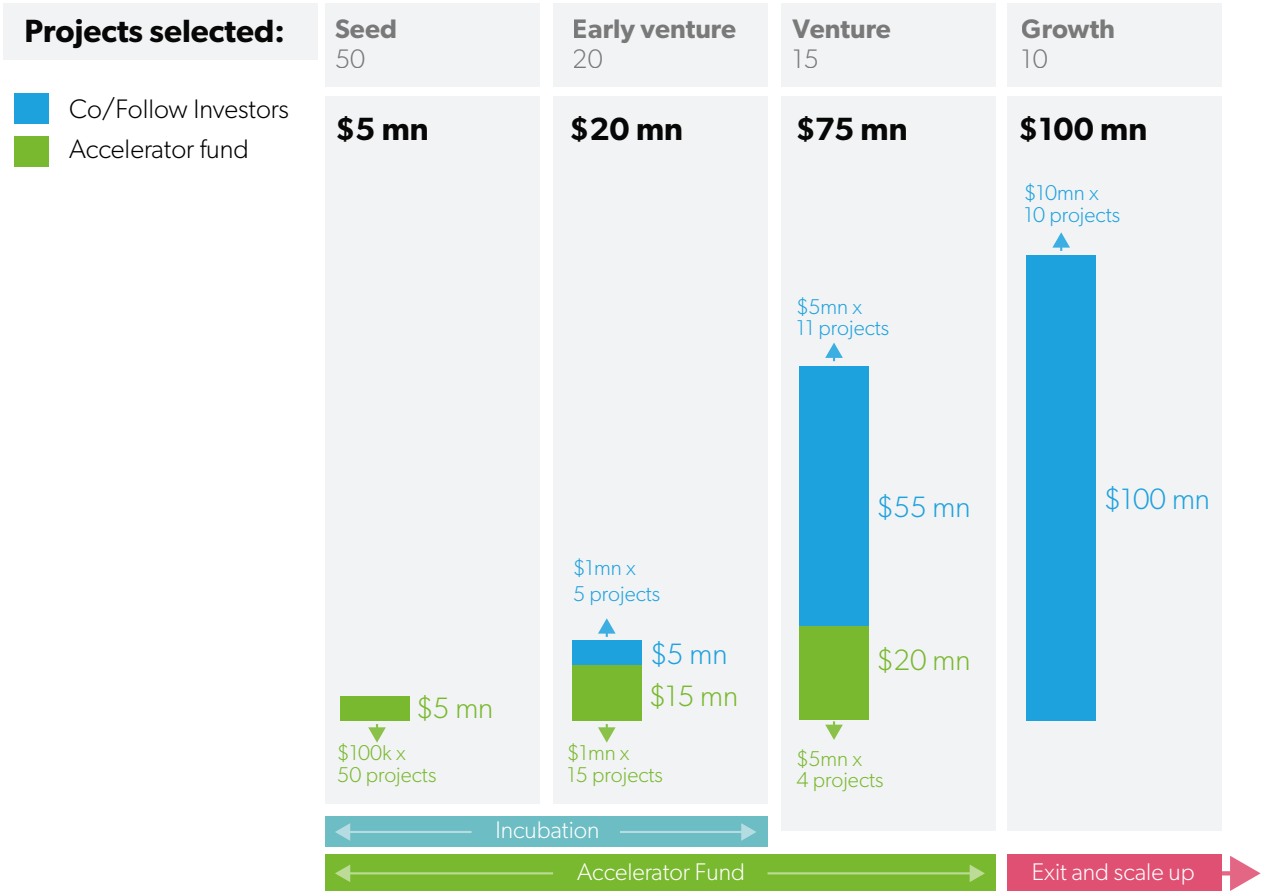


Table 2: Summary of Challenges and Opportunities solutions to scale conservation finance

Challenge	Need	Who
Metrics and impact measurement	• Clear articulation of which ecological impact methods areare appropriate for different ecosystems and investment vehicles (or at least a framework to determine in each case) • Access to tools and data, guidance for when to apply in what context • Regulations and incentives to normalize collecting these data – for those developing projects and for financial disclosure	• Collaborative effort between NGOs, municipalities, academia to determine what needs to be collected for specific projects • Government and financial institutions to mandate and provide platforms for collection
Scale imbalance	• Smaller/more niche financial institutions willing to invest lower dollar values • Funds that can bundle projects – requires due diligence and transaction costs • Non-traditional investors and/or HNWIs, philanthropic organizations taking loss leading positions	• Financial Institutions to engage in financial instrument and fund development • Collaboration with government and philanthropy to de-risk
Intermediaries - public and private	• More "deal makers" • Enough activity to attract entrepreneurs • Aggregators – policy design to encourage entry	• Entrepreneurs • NGOs in partnership with public or private funders
Project development capacity	• Financial support • Tools and guidance for when to do what type of project, understand data needs • Incubators • Blueprints	• Direct financial support from government and philanthropy • NGO and academic involvement
Early-stage funding	• Low or no interest loans • Seed funding to leverage private capital • Business development funding	• Direct financial support from government and philanthropy
Risk: Nature-based products are untested	• De-risk projects, guarantor, differentiated rates of return • Lessons from global coalitions and funds supported by risk tolerant capital	• Direct financial support • Project design considerations • Canadian coalition to apply/determine relevance of international examples
Risks not communicated in financial terms	• Knowledge translation to engage Bond evaluators to assess ecosystem risks • Intermediaries who can communicate and understand needs of various partners	• Collaborative effort between project developers, investors, with external funding support.
Risk from ecosystem complexity	• Built-in design features that reduce ecological uncertainty	• Collaboration and coordination among NGOs and other stakeholders on metrics and investment blueprints
Liquidity	• Development of shorter-term projects • Attracting longer term investors/patient capital	• Government and Philanthropy to de-risk projects

CONCLUSION: CHARTING A NEW PATH

The benefits we derive from nature are ubiquitous and have long been undervalued. While the growth of conservation finance globally is promising, the scale of the market remains small – especially compared to capital markets.

Many innovative and inspiring examples of conservation finance exist, although the activity is concentrated on models tied to existing revenue streams (as is seen in debt and equity tools in sustainable resource management), offset and credit sales, or blended finance mechanisms that take advantage of cost savings to one or more beneficiaries. Current investors in conservation finance

"Investments in nature will not be mainstreamed if natural assets continue to be external to accounting structures and evaluation strategies."

tend to be corporates with strong CSR mandates, high net worth individuals, philanthropic organizations, specific institutional investors like pension funds, and governments at all scales. Mainstream investors mostly limit their engagement to green bonds.

Conservation finance stakeholders including federal, provincial, and territorial governments, Indigenous governments and communities, NGOs, philanthropy, and the insurance industry have important work to do building a business case for investing in nature and stimulating supply and demand for these investments. This work includes direct public support for investment, policies that reduce barriers to entry and de-risk projects, clearly communicating the benefits that ecosystems deliver, and equipping financial institutions to deal with ecological impact metrics and their implications. Investments in nature will not be mainstreamed if natural assets continue to be external to accounting structures and evaluation strategies.

One of the clearest and most consistent messages from those operating in the conservation finance space is to increase the supply of investable projects and create incentives, programs, and drivers to increase demand. While conservation finance can help to address shortfalls in investment in nature in some contexts, the mentality that investing in nature is a "solution looking for a problem" must be avoided. Local contexts and specific needs must be understood to determine whether a conservation finance mechanism is appropriate. Better understanding and communicating what conditions best lend themselves to project development can help accelerate investment where they make the most financial and ecological sense.

At this stage, capacity and coalition building are key. Designing and implementing successful conservation finance projects requires expertise from many disciplines and the involvement of public and private actors. These success factors are more likely to come together if we invest in developing partnerships, in learning and professional development, and in engaging Indigenous leaders, and a range of stakeholders from the conservation, restoration, and sustainable resource management sectors in decisions about the allocation of public and private funds.

> **"Nature urgently needs more investment and with untapped opportunities Canada should seize this opportunity to innovate."**

We are at a moment where investing in nature is more critical than ever. The COVID-19 pandemic highlighted our vulnerability to shocks and our reliance upon the natural systems that sustain and protect us. Investing in nature supports livelihoods, safeguards biodiversity, and protects against diseases and future outbreaks. Investing in nature can also help us to mitigate and adapt to climate change and support the long-term sustainability of industrial and natural resource sectors to build a nature-smart economy.

There are currently barriers to scaling conservation finance in Canada, but with cohesive efforts, the country is well-positioned to activate new investments in nature. This will be helped by Canada's natural resource base, supportive public, and political will. Nature urgently needs more investment and with untapped opportunities Canada should seize this opportunity to innovate.

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