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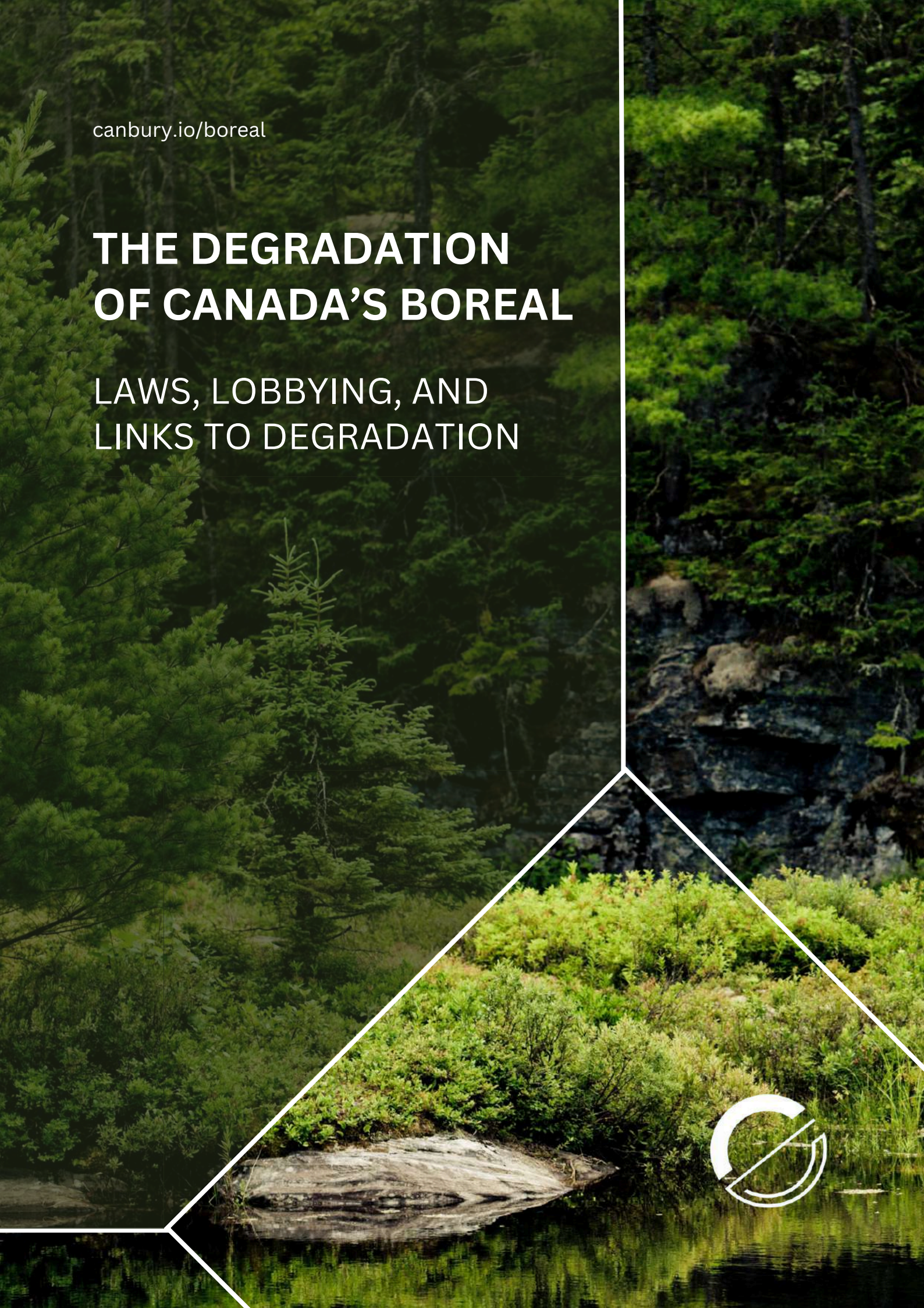
THE DEGRADATION OF CANADA'S BOREAL

LAWS, LOBBYING, AND LINKS TO DEGRADATION



CALL TO ACTION

This report examines the critical importance of Canada's boreal forest, the threats it faces, and the role of investors in addressing these challenges through responsible political engagement. It provides investors with tools to identify influential companies and trade associations lobbying on relevant policies, aiming to encourage more proactive engagement on boreal forest conservation.

WHY DOES THE BOREAL FOREST MATTER?

1. Largest carbon sink on land.
2. Largest intact forest globally.
3. Critical habitat for species at risk.
4. Great cultural and economic value to Indigenous Peoples and forest-dependent communities.
5. Links to global commodity supply chains (forestry, mining, and oil and gas industries)
6. Relevant to evolving regulations (e.g. EU Deforestation Regulation (EUDR), Corporate Sustainability Reporting Directive (CSRD), Corporate Sustainability Due Diligence Directive (CSDDD), and the Taskforce on Nature-related Financial Disclosures (TNFD) recommendations).
7. Often overlooked in investor priorities.

WHAT ARE SOME ACTIONS INVESTORS CAN TAKE?

1. Engage with companies on responsible political engagement and lobbying activities.
2. Engage with policymakers to strengthen forest-relevant legal frameworks.
3. Understand trade associations' roles in commodity supply chains.
4. Join a collaborative initiative focused on boreal forest conservation.
5. Register interest for collaborative engagement opportunities and further research (@info@canbury.io).

This research is authored by Canbury Insights but includes supplementary data and analysis by MSCI Sustainability Institute, using data from MSCI ESG Research, and is in partnership with BNP Paribas Asset Management. If of interest, Canbury will offer you a briefing on the contents of this research.

MSCI Sustainability Institute

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FOREWORDS

MSCI SUSTAINABILITY INSTITUTE

Preserving nature is rising on the agenda of global investors concerned about the systemic risks posed by a collapse of ecosystem services that underpin our economy and human health.

This report by Canbury Insights complements the PRI's Spring initiative and arrives at a pivotal time. Investors are seeking levers for change, and this report outlines an important one: stewardship of portfolio companies whose lobbying can either dilute or enhance protections for a critical natural resource.

Focusing on Canada's boreal forest, part of Earth's biggest terrestrial carbon sink, the report provides a unique and thorough educational guide for investors that:

- Highlights the **overlooked importance of the boreal forest** to the Canadian economy, to local Indigenous Peoples, to biodiversity globally, and to climate mitigation.
- Presents a compelling case for why measuring **forest integrity** and **forest degradation** are as important as monitoring deforestation.
- Details the **raft of policies — domestic and international** — that impact multiple dimensions of business activities throughout the boreal region
- Identifies the **specific trade associations and companies** engaged in lobbying on those policies

The MSCI Sustainability Institute believes that data improves transparency, and that transparency improves the investment process. For investors who choose to engage the companies that Canbury has identified in its analysis, we are proud to provide supplementary analysis in the report on the companies' asset locations, activities and environmental and community track records. Our aim is to provide a more holistic view of each company that can inform high-quality engagements.

Taken together, the Spring initiative and Canbury's report are a call to action for investors to integrate nature-positive outcomes into their stewardship strategies. Investors who proactively engage with companies on these issues can help strengthen the resilience of their investments in a climate-sensitive region, catalyze systemic changes to protect the ecological integrity of the boreal forest and ultimately preserve climate stability for future generations.

Linda-Eling Lee
Founding Director and Head of the
MSCI Sustainability Institute
MSCI Inc.

NATURAL RESOURCES DEFENSE COUNCIL

Our planet's health is intertwined with the boreal forest. At the heart of both climate regulation and the biodiversity crisis, the boreal is one of the last remaining intact forests in the world and supports the economies of many Northern communities in Canada.

Despite its importance, the benefits the boreal forest provides for people and the planet are increasingly at risk from ever-expanding industrial operations like logging, mining, and oil and gas extraction. In fact, there are more than 1.5 million kilometres of resource access roads in Canada — enough to circle the Earth 37 times. More than 90 percent of these roads are in British Columbia, Quebec, and Ontario[1].

Industrial activities will continue to degrade the forest's integrity in the absence of greater safeguards to protect environmental values and ensure the free, prior and informed consent of Indigenous Peoples. Threatened species like the boreal caribou, which rely on large swaths of boreal forest for their survival, are the canary in the coal mine; the well-documented loss of their critical habitat clearly signalling an imperilled forest.

The Natural Resources Defense Council is working to shed light on the significance of the boreal forest, as well as the financial risks created by its ongoing degradation: a degraded forest is one with permanently diminished biological resources. Investors must recognize these risks and push their investees to advocate for stronger policies which protect and manage the boreal forest for the long-term sustainability of communities, the conservation of ecological integrity and the future of our planet.

The oil and gas, mining and logging sectors have significant influence on the laws and policies that impact the boreal forest. This important report provides a foundation for investors to begin engaging with their investees on the positive influence their lobbying activity can have over lawmakers for the future of the boreal.

Shelley Vinyard
Corporate Campaign Director
Global Northern Forests, International
Natural Resources Defense Council
(NRDC)

CARDANO ASSET MANAGEMENT

The boreal forest represents one of the world's largest intact ecosystems and carbon sinks, playing a vital role in regulating our climate and supporting biodiversity. Yet it faces growing threats from industrial activities. As investors, we have a responsibility to understand and address these threats if we're to make progress on our climate and nature targets.

Importantly, this research highlights the interconnected nature of environmental and social concerns in the boreal, including Indigenous rights and community impacts. It underscores the need for investors to take a holistic view that considers both ecological and human dimensions. This aligns with our approach at Cardano, where we leverage innovative technologies like satellite data to monitor deforestation and support bioacoustics research to measure biodiversity levels, providing a more comprehensive understanding of environmental impacts.

The report's emphasis on responsible political engagement echoes the growing investor focus on corporate lobbying practices and policy advocacy. This focus is reflected in initiatives like Spring and Climate Action 100+, in which Cardano actively participates.

Greta Fearman
Advisory Committee Member, Spring
Head of Stewardship, Cardano

ACKNOWLEDGEMENTS

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- Tim Steinweg, Head of Stewardship – Nature, Principles for Responsible Investment
- Valérie Courtois, Executive Director – Indigenous Leadership Initiative

While we are grateful for their input, Canbury is solely responsible for the content, analysis, and conclusions in this report. The views expressed herein are those of Canbury and do not necessarily reflect the opinions of the acknowledged contributors.

EXECUTIVE SUMMARY

The boreal forest, spanning vast areas of Canada, is a crucial carbon sink and biodiversity hotspot that is under threat from industry. This report examines the critical importance of Canada's boreal forest, the threats it faces, and the role of investors in addressing these challenges through responsible political engagement.

Key findings include:

- **The boreal forest's global significance:** As the world's largest land-based carbon sink and intact forest ecosystem, the boreal plays a vital role in climate regulation and biodiversity conservation.
- **Threats to the boreal**: Unsustainable forestry practices, industrial expansion, and climate change-enhanced wildfires are degrading the forest at an alarming rate.
- **Indigenous Peoples' rights and stewardship**: The report highlights the critical role of Indigenous People in forest conservation and the need to respect their rights.
- **Policy and regulatory frameworks**: An overview of federal, provincial, and international policies affecting the boreal forest reveals gaps in protection and enforcement.
- **Industry influence**: The report identifies key industries (forestry, oil and gas, and mining) and their trade associations as significant influencers in shaping boreal forest legal frameworks.
- **Investor engagement opportunities**: The research provides a targeted list of influential companies and trade associations for investor engagement on responsible political activities, including a company short-list of 32 of the most influential companies.

The report calls for increased investor attention to the boreal forest, emphasising the need for engagement with companies on their lobbying activities and trade association memberships. The report recommends that investors work towards aligning corporate political engagement with sustainability commitments and advocate for stronger policies to conserve and protect the boreal forest.

By highlighting the interconnections between policy, industry practices, and forest integrity, this report aims to catalyse investor action in protecting the boreal forest for its ecological, cultural, and economic value.

INTRODUCTION

THE BOREAL FOREST

Canada's boreal forest is threatened by unsustainable forest management, and industry expansion and disturbances by the forestry, mining, and oil and gas industries. These threats are underpinned by flawed indicators of forest health and insufficient policy frameworks[2].

A study by Mackey et al. revealed that forest management practices in Ontario and Quebec have meant that more boreal caribou (a key indicator species) are at risk[3]. Current practices are disturbing the forest, and this is documented. A study by Cyr et al. details how current forest management is pushing the boreal out of its natural patterns[4]. This is made worse by the more frequent and severe wildfires predicted by climate change experts (and that we've seen in the news) – compounding the impacts of industry-linked degradation.

The boreal deserves more attention – from a conservation perspective; from an Indigenous Peoples' rights perspective; and from a climate change perspective. The biome has unique biodiversity, immense cultural value, and substantial carbon deposits.

Investors with concerns for nature, human rights, and climate change, are encouraged to focus on Canada's boreal forest if they aren't already. If not otherwise convinced, investors may consider their links to the boreal forest as it could have financial and regulatory implications on their portfolio companies, and if not directly, their portfolio companies' supply chains.

WHY FOCUS ON LEGISLATION, REGULATIONS AND POLICIES TO PROTECT THE BOREAL FOREST?

By setting goals, and mechanisms for enforcement, conservation-specific laws and policies provide the legal basis and the regulatory frameworks for protecting species, habitats and ecosystems. Simultaneously, industry-specific laws and policies influence supply and demand of commodities, ultimately controlling the extent of industry activity and consequently its environmental impact.

Specifically in Canada's context, 94% of Canadian forest is considered publicly owned, with provinces and territories managing most resources[5]. Because of this, government policies and regulations play a critical role in accountability and resource management. Given the federal system, policy frameworks can facilitate and establish the coordination between federal, provincial/territorial, and Indigenous governments. This is necessary for the effective conservation of the forest, and the balance between conservation goals and economic development.

WHY ADDRESS DEGRADATION THROUGH LOBBYING?

Spring (PRI's stewardship initiative for nature) identified the importance of policy alignment and responsible political engagement to protect nature from industry-associated land degradation. As of 19 June 2024, 204 investors managing $15 trillion (USD) in assets have endorsed this initiative[6].

Spring highlighted the role of policy arenas in deforestation and recognised the power and influence companies lobbying these arenas have in facilitating the adoption of policies that protect (or harm) nature.

This approach is distinct from engagement with a companies' direct supply chain and 'footprint'. Responsible Political Engagement (RPE) presents an additional responsible investment approach by which investors can exert their influence.

Spring chose to focus on RPE as decades of work on tropical deforestation and supply chains had highlighted that corporate voluntary commitments on supply chains did not lead to structural declines in deforestation rates. We've consequently seen a rise in conversation around the implementation of mandatory regulations, with the EU Regulation on Deforestation-free Products (EUDR) as a flagship policy. These realisations and developments make it reasonable to apply investor stewardship tools to public policy engagement. This approach can help ensure that regulations are not weakened or delayed by lobbying practices.

RPE is just one facet of engagement, and investors (and investee companies) are encouraged to continue to engage on risks in their own supply chains.

WHY ADDRESS LOBBYING IN CANADA?

Industry represents a significant voice in Canada's boreal forest. Activities by the oil and gas, forestry, and mining industries are extensive. Investors and their companies can make systemic changes by advocating for policies which promote conservation and sustainable land use.

Those holding significant assets directly located in the boreal forest or acting as major industry voices through trade association involvement, possess political power. Lobbying of policy frameworks is one method by which this power can be used. While lobbying can be used to further exploit the forest by weakening the governing policies, it can equally be used to advocate for conservation and protection. Aligning corporate actions with public policy engagement can be a powerful tool to drive change, involving collaboration across all sectors.

Lobbying affects global narratives on industrial impacts in the boreal forest, shaping policy approaches not just in Canada, but everywhere. By leveraging their influence, investors can play a crucial role in shaping the policy frameworks that govern industry practices. Practices that impact both Canada's boreal forest and the world's forests.

This research focuses on lobbying as a means to identify the most influential voices in policy and to encourage investors towards engaging proactively in policy development. Through this approach, investors can contribute to systemic changes that protect nature from industry-associated land degradation. We discuss the role and power of responsible political engagement in further detail here.

WHY TRADE ASSOCIATIONS?

Trade associations represent multiple companies or industry sectors, amplifying companies' collective lobbying power and impact on policy decisions. This unified approach is often more influential than individual corporate efforts. In this way, these associations play a significant role in shaping industry-wide positions on key issues, potentially accelerating or impeding progress.

At the same time, a company's lobbying activities via a board membership in a trade association may not be immediately apparent, meaning that potentially more influential activities can be less visible to public scrutiny.

It is well documented that companies' direct lobbying activities can contradict their public commitments (e.g. see LobbyMap and InfluenceMap, where numerous reports highlight a divergence between companies and their trade association's positions). To add to this, a recent PlanetTracker report highlighted misalignments between companies' climate commitments and their trade associations', revealing complex dynamics between individual and collective corporate advocacy[7].

THE IMPORTANCE OF THE BOREAL TO DIVERSIFIED INVESTORS

At COP26, 145 countries signed the Glasgow Leader's Declaration on Forests and Land Use[8], with the aim to "facilitate the alignment of financial flows with international goals to reverse forest loss and degradation" by 2030.

EUDR now requires companies to verify that products sold in the EU have not contributed to deforestation or degradation globally, which is likely to have substantial impacts on Canadian forestry exports to EU markets[9]. The EUDR, approved in 2023, broadened the definition of forest degradation in regulation. It now includes the conversion of primary or naturally regenerating forests to plantations or other wooded forests as a form of forest degradation. This highlights the importance of understanding and evaluating the risks of forest degradation, in addition to deforestation.

Investor obligations regarding human rights and Indigenous Peoples' rights due diligence are increasing. This aligns with the UN Guiding Principles on Business and Human Rights (UNGPs) and is reflected in EU directives such as the Corporate Sustainability Reporting Directive (CSRD) and the Corporate Sustainability Due Diligence Directive (CSDDD). These regulations will likely have a knock on effect of necessitating more rigorous due diligence for investments in the Canada's boreal region, and globally.

Climate change is intensifying wildfire risks in boreal areas, presenting significant supply chain risks to industries such as forestry, mining, agricultural supply chains, and transportation and logistics networks. The

impact extends to consumers as well. Some industrial practices can exacerbate wildfire impacts, creating a feedback loop of increasing risk.

The Taskforce on Nature-related Financial Disclosures (TNFD) framework, though voluntary, is gaining traction, and emphasises:

- The assessment of nature-related dependencies and impacts across value chains.
- The disclosure of material risks related to biodiversity loss and ecosystem degradation.

In this way, the TNFD framework has relevance for investors assessing Canadian forestry and resource extraction companies, or for investors with assets in the boreal.

Investors should carefully consider how these evolving frameworks and regulations may impact investee companies' supply chain risks, particularly for companies operating in sensitive ecosystems like Canada's boreal forests.

THE RESEARCH

For PRI in Person 2024, in Toronto, Canbury led an analysis of policy frameworks and trade association lobbying related to the degradation of Canada's boreal forest, providing a tool for investor engagement in partnership with BNP Asset Management and supported by MSCI Sustainability Institute. MSCI Sustainability Institute contributed supplementary analysis that included geo-locating assets of companies operating in the boreal forest and assessing their environmental performance.

Despite its ecological and cultural significance, Canada's boreal forest remains largely off international investors' radars. Initial conversations with investors revealed that despite increased and well-informed engagements regarding deforestation in tropical supply chains, little attention has been given to the boreal forest, and few understood the extent of the degradation. This research seeks to change this by encouraging investors to become more engaged with the boreal forest and to encourage investee companies on the boards of trade associations into identifying their roles and using their influence responsibly. This research seeks to achieve this by providing investors with:

- An introduction to the boreal, its threats, and other important considerations to help inform engagement.
- A targeted list of companies based on influence (we have set out the methodology in detail below).

These tools are supplemented with "Other considerations for engagement". The takeaways from this analysis can serve as additional considerations for investors seeking to engage investee companies.

Investors may seek to use this research to guide their sustainability and stewardship teams and initiate targeted engagement programs to address counterproductive lobbying practices in the boreal. As report authors, we will work with investors, NGOs, or any other interested party to initiate a collaborative engagement initiative, seeking to tackle the issue of degradation in the boreal more broadly.

THE BOREAL

GLOBAL IMPORTANCE

The boreal forest is the largest carbon sink on land, sequestering more carbon than any other forest type. It's estimated that Canada's boreal forest alone provides more than $700 billion (CAD) per year in ecosystem services[10].

Canada's boreal is also the largest intact forest, making it key to meeting the goals of global biodiversity frameworks like the Kunming-Montreal Global Biodiversity Framework[11], particularly in the conservation of species requiring vast expanses of undisturbed habitat and in the context that almost 75% of the world's total land area is degraded and transformed[12].

At the same time, industries operating in the boreal supply key commodities to the international market. This includes more than 50% of the United States' crude oil and petrol imports; pulp and paper to meet the US' and China's toilet paper demand; timber for construction; and key minerals to European customers such as Norway, Belgium, and the Netherlands[13]. The forest is even relevant in terms of the energy transition – a recent article highlighted Japan's dependence on British Columbia's wood pellets for renewable energy efforts[14].

The boreal forest's global relevance is clear, as is the world's reliance upon it. While its wildfires have made headlines, its deforestation – or more accurately, its *degradation* – has not received the same level of attention as that of tropical forests.

ECOSYSTEM

The boreal forest is a vast biome that stretches across the high northern latitudes of North America, Europe, and Asia, and is characterised by:

- long, cold winters, and short, mild summers
- **slow growth trees**, adapted to the harsh conditions of short summers, low temperatures, nutrient-poor, acidic soils, and permafrost
- **low rates of decomposition**, leading to build-up of debris
- **waterlogged soil systems** known as 'peatlands' (that store a significant amount of carbon)
- **fire,** regulating the debris and stimulating new vegetation growth to ensure a diverse mosaic of coniferous (Black Spruce, Jack Pine, and Tamarack) and deciduous trees (White Birch, Trembling Aspen, and Balsam Poplar)

To view a map of North America's boreal forest, click here.

BIODIVERSITY

As the world's largest intact forest, Canada's boreal consists of extensive old-growth forests with complex structures and a diversity of species. Species include charismatic mammals such as caribou, grizzly and black bears, beavers, and keystone species such as the snowshoe hare, Aspen, and Canada Lynx[15]. Rivers of the forest house more than 130 species of fish, and each year more than three billion birds migrate from the US, Central, and South America to their breeding grounds of the boreal[16].

ECONOMIC IMPORTANCE

The boreal forest and the industries that operate within it are a significant source of jobs. Forestry supports 345,825 direct and indirect Canadian jobs[17] (not specific to the boreal). Nonetheless, over the past three decades, forest employment has decreased by about half.

In addition to supporting local, forest-dependent communities and Indigenous communities, the boreal is an essential component of Canada's broader economy, with key forestry, mineral, and oil and gas exports. Beyond this, the boreal provides many non-industrial economic benefits, including serving as a tourist destination and as the source of forest foods (mushrooms and blueberries for example).

INDIGENOUS COMMUNITIES

For millennia, Indigenous Peoples have lived in and beside the boreal forest. For the more than 600 Indigenous communities that rely on the boreal, the forest holds great cultural value in addition to its economic importance. Indigenous Peoples hold significant

intergenerational knowledge of the forest, and of its maintenance, and are consequently at the forefront of its conservation, leading stewardship and protection efforts.

MANAGEMENT

In Northern Europe, forests are generally private, but in Canada, they're state-owned[18]. Over 90% of boreal forest land is publicly owned and often managed by provincial governments. 45% of this public land is managed specifically for forestry, with around 10% being legally protected[19]. Many land claims processes are currently underway where Indigenous Peoples are disputing this federal and provincial government jurisdiction.

THE IMPORTANCE OF THE BOREAL

In short, Canada's boreal forest provides a wide range of benefits and services, at a global, national, and local scale:

- **Global level**: helping to stabilise global climate as a major carbon storehouse; supporting a diversity of species, contributing to global biodiversity targets; providing commodities for global markets.
- **National level**: supporting the national economy through major industries such as forestry, mining, and oil and gas; providing ecosystem services such as water regulation and air purification.
- **Local level**: economically supporting local forest-dependent communities, in addition to serving economic, cultural and spiritual value to Indigenous communities while providing numerous recreational and non-industrial economic opportunities.

THE STATE OF THE BOREAL FOREST

PERCEPTION

From the outside – Canada's forests are sustainably managed. According to the Canadian government: “At 0.02% of its forested area, deforestation in Canada is among the world’s lowest”[2]. According to Food and Agriculture Organization of the United Nations (FAO), from 1990-2020, the deforestation rate of the boreal forest as a whole was lowest of all climatic domains, and Canada specifically had by far the most Forest Stewardship Council (FSC) certified area of any country in 2019, with 167 million ha [9]. Reasonably, this information alone would not suggest that Canada’s boreal forest is at threat from industry-driven deforestation, at least compared to other forests.

REALITY

Studies show a different, concerning reality: Canada’s boreal forest is at threat of degradation from industry. Takeaways from key studies have highlighted that:

- Current forest management practices are pushing the boreal forest outside its natural structural patterns, as disturbances are beyond what is historical to the forest[4].
- Disturbances from the oil and gas industry are likely contributing to woodland caribou decline[20].
- In Ontario and Quebec, forest management practices in older forests have, over time, “degraded the boreal forest environment and increased the prevalence of at-risk boreal caribou populations”[3].

UNDERSTANDING THE DIFFERENCES: *NOT ALL FORESTS ARE THE SAME*

Table 1: Definitions of primary, secondary, and old growth forest, taken from the Report of the ad hoc technical expert group on forest biological diversity[20].

Term	Definition
Primary forest	“A primary forest is a forest that has never been logged and has developed following natural disturbances and under natural processes, regardless of its age. It is referred to "direct human disturbance" as the intentional clearing of forest by any means (including fire) to manage or alter them for human use. Also included as primary, are forests that are used inconsequentially by indigenous and local communities living traditional lifestyles relevant for the conservation and sustainable use of biological diversity...”
Secondary forest	“A secondary forest is a forest that has been logged and has recovered naturally or artificially. Not all secondary forests provide the same value to sustaining biological diversity, or goods and services, as did primary forest in the same location...”
Old growth forest	“Old growth forest stands are stands in primary or secondary forests that have developed the structures and species normally associated with old primary forest of that type have sufficiently accumulated to act as a forest ecosystem distinct from any younger age class.”

Old-growth forests tend to be characterised by complex structures, harbouring a diversity of species which have developed over long periods of time without significant disturbance. Primary forests (which include intact forest landscapes) tend to support native and at-risk species; are resilient to natural disturbances; provide a full range of ecosystem services and store and sequester carbon better than forests that have been impacted by natural resource extraction[21].

Primary forests are important from a resilience perspective in the context of climate change due to great carbon sink capacity and fire adaptations, particularly in comparison to degraded forests and plantations[22]. Industry, although it may re-forest an area, or take measures to minimise the extent of deforestation, may still contribute to a decrease in overall forest integrity, including the loss of old-growth stands, which replanting efforts cannot remediate.

DEGRADATION VS. DEFORESTATION

Table 2: EU REDD, FAO, and IUCN definitions of deforestation and degradation

Organisation	Deforestation	Degradation
EU REDD	"…when agriculture, mining, urban development or other land uses replace forest"[23].	"…the gradual process through which a forest's biomass declines, its species composition or its soil quality declines"[23].
FAO	"The conversion of forest to another land use or the long-term reduction of the tree canopy cover below the minimum 10 percent threshold" [24].	"The reduction of the capacity of a forest to provide goods and services"[22].
IUCN	According to the IUCN, deforestation is "when forests are converted to non-forest uses, such as agriculture and road construction"[25].	Forest degradation is defined as "when forest ecosystems lose their capacity to provide important goods and services to people and nature"[25].

Forest degradation and deforestation are distinct from one another but are both relevant in measuring forest health. Because of this, it is important to understand and measure both deforestation and forest degradation. Negative impacts on biodiversity and ecological health occur long before an area is fully "deforested".

Specifically in Canada, forest management centres on the definitions of 'degradation' and 'sustainable management'. Canada states, "At 0.02% of its forested area, deforestation in Canada is among the world's lowest", and positions itself as a leader in sustainable forest management. Even if Canada's forests have a <0.02% deforestation rate, this statistic fails to capture the full picture of forest integrity, also understood as forest health. It does not capture forest degradation.

This discrepancy has been flagged (see this article, which lists the studies highlighting forest degradation to date). In particular, a study by Mackey et al. evaluated the impact of forest management in two provinces over time in Ontario and Quebec underscores this issue, documenting significant decreases in older forest areas due to degradation, including areas of critical habitat for boreal caribou[3].

Notably, the government report "The State of Canada's Forests: Annual Report 2023" (although seeking to provide an overview of the forests' health) omits the word degradation. Whilst there are measurement indicators such as "forest regeneration" and "forest area harvested", in addition to disturbance measures such as "forest insects" and "forest diseases", in this report, there do not appear to be indicators on the diversity of the forest, or the amount of intact forest – two components key to a healthy ecosystem.

THREATS TO THE BOREAL FOREST

Canada's boreal forest faces a range of threats, including wildfires, climate change, insect outbreaks, pesticides, and various industrial activities. Understanding these threats requires a nuanced approach, as the impacts are often interrelated and complex.

WILDFIRES

The natural forest of the boreal is not only resilient, but also reliant on wildfires to maintain the health of the forest (see this article here). However, the extent and severity of the wildfires we're seeing now, is not natural. In summer 2023, Canada was met with a new record of the "largest area burned by wildfires in a single year[26]. Fuelled by record temperatures and droughts, this is only expected to worsen with climate change. The scale of these wildfires has led to forest cover and biodiversity loss, which often disproportionately affects Indigenous communities living alongside the forest[27].

INDUSTRY: UNSUSTAINABLE FORESTRY

In Canada, the predominant method of harvesting is clear-cutting (roughly 85% of total harvesting) to then be processed into commodities such as timber, pulp and paper[28]. Most of this harvested area is then replaced with newer stands, as all harvested public forests must be replaced by law[29].

However, large-scale forestry practices like clearcutting significantly alter the unique structure and composition of the boreal forests, even if replaced by newer stands[4]. In removing mature and old-growth stands, forests become dominated by young, homogeneous forest areas. This is problematic for numerous reasons, including:

- **Reducing biodiversity** as many species rely upon a diverse, 'mosaic' forest. This reduces the ecosystem services that the forest can provide.
- **Decreasing resilience** to other threats such as wildfires and invasive species, and therefore amplifying these existing threats. For example, certain forest management practices can lead to increased wildfire risk. This includes fire suppression techniques leading to fuel accumulation, whereby materials such as deadwood accumulate over time with a lack of natural wildfires. 'Orphaned slash piles', remnants of logging operations, also lead to fuel accumulation and increased fire risk. Other industry techniques such as the use of herbicide spray can also increase vulnerability by killing fire-resistant deciduous species and replacing stands with conifer trees[28].

Unsustainable forestry not only puts pressure on the ecosystem but impacts forest-dependent communities as well. For example, during severe wildfire seasons, sawmills (and, consequently, pulp and paper mills) are forcibly shut down with supply chain disruption[30]. As a result, forest-dependent communities face job losses, in addition to any direct displacement and loss of homes caused by wildfires.

INDUSTRY: EXPANSION

The impacts of industry expansion in the boreal forest are two-fold:

1. **Direct expansion**: expansion in terms of industry activity, e.g. a mining or oil and gas operation such as the Athabasca oil sands in Alberta, covering 142,200 square kilometres.

2. **Expansion of surrounding infrastructure**: roads and pipelines, cross-cutting intact forests and fragmenting habitat, and reducing intact forest.

The effects of industry expansion extend beyond immediate habitat loss. Industrial operations can have secondary impacts like light, water, and noise pollution, disrupting ecosystems and adversely affecting biodiversity, local communities, and Indigenous Peoples.

Indigenous Peoples specifically are disproportionately impacted by industrial activities in the boreal forest: both negatively and positively. In this way, Canada's boreal forest demands coordination, and a multifaceted approach.

CUMULATIVE EFFECTS

Cumulative effects or impacts – the combined effects of multiple industries or disturbances – mean that relatively minor impacts of industry activity, combined, can have significant consequences over time. These impacts may be from one project, or multiple projects and activities in area, across different timescales. In Canada's context, "cumulative effects" are specifically addressed under the *Impact Assessment Act,* meaning they are assessed for projects that fall under the scope of the Act (see The Policy and Regulatory Frameworks).

THE POLICY AND REGULATORY FRAMEWORKS

Canada operates under a federal system of government, which divides powers and responsibilities between the federal government and provincial/territorial governments. This system affects the regulation and oversight of industries like forestry, mining and oil and gas, in addition to the conservation and protection of the forest.

The following sections offer a general overview and are not exhaustive. For comprehensive and up-to-date information, please consult official government websites and resources.

COMMODITY-SPECIFC LEGISLATION, REGULATIONS, AND POLICIES

Canada's provinces have primary jurisdiction over natural resources, including, mining, forestry, and oil and gas. Federal regulations also apply, particularly in the case of environmental protection and international or interprovincial trade. How Acts are then implemented is generally specific to the province.

Sectoral, industry-specific regulations with resulting consequences on production processes vary from region to region, depending on the activity and specificities of the land. For instance, in the oil and gas industry:

- The Canada Oil and Gas Operations Act is the key piece of federal legislation that regulates oil and gas activities of Canada.
- This legislation is underpinned by regulations such as Canada Oil and Gas Drilling and Production Regulations, with the Canada Energy Regulator regulating the international and interprovincial aspects.
- Despite this, under the Canadian constitution, provinces have jurisdiction over natural resources within their borders and therefore have their own legislation and regulatory bodies. In Alberta, the Responsible Energy Development Act is the key piece of legislation, which the Alberta Energy Regulator then regulates.
- The main international trade agreement governing and oil and gas trade for Canada is the Canada-United States-Mexico Agreement (CUSMA).
- Further information on the oil and gas frameworks of Canada can be found here.

For the forestry industry – forests, management, and their commodities primarily fall under provinces, including the regulation of harvesting practices and the issuing of licenses and permits. The federal government has responsibilities for international and interprovincial trade, and environmental regulations, such as the Species at Risk Act.

For the mining industry, provinces and territories bear the primary responsibility for regulating mining within their borders. Each province and territory has its own mines and minerals act or equivalent piece of legislation. The federal government has more limited responsibilities, but includes international and interprovincial trade, impact assessments, foreign investment, and select environmental regulations.

THE IMPACT ASSESSMENT ACT (IAA)

The Impact Assessment Act (IAA) replaced the Canadian Environmental Assessment Act (CEAA) in 2019, to introduce a more comprehensive approach to evaluating the impacts of major projects. The IAA broadens the scope of assessment beyond environmental impacts, to include social, health, economic, and cultural dimensions, considering both "positive and negative impacts"[31]. The IAA aims to promote and streamline cooperation between federal and provincial governments.

The IAA introduces a mandatory planning stage which emphasises early engagement with the public and Indigenous communities. This phase requires the collaborative development and incorporation of an "Indigenous Engagement and Partnership Plan" in support of the federal government's 'aims to secure free, prior and informed consent for decisions that affect Indigenous peoples' rights and interests"[32].

Applicable projects include developments such as oil and gas pipelines, mining operations, and hydroelectric dams. Because of this, the IAA has substantial implications for industries such as oil and gas and mining. Through comprehensive evaluation, the Act seeks to

balance economic development with environmental stewardship and social responsibility.

The IAA is relevant to the boreal because it involves the assessment of impacts of any projects that affect the boreal, including oil and gas, and mining projects – two industries highlighted for their links to deforestation and degradation. The Act considers 'cumulative effects', meaning that an assessment of the impacts of the additional project in addition to existing or planned projects is undertaken[33].

Since its introduction, there have been criticisms over the scope of the IAA. The major criticism was that the federally imposed assessment process interfered with the existing assessment processes of provinces, and in 2023, the Supreme Court of Canada determined certain components of the Act to be unconstitutional (see an insights article here, or the CBC news article here).

The consequences of this decision are dependent upon the province, and their own existing assessment processes. However, the overall decision means that provinces have greater power over the extent that industries that fall under IAA may impact the boreal forest, positively or negatively.

FOREST AND CONSERVATION-SPECIFIC LEGISLATION, REGULATIONS, AND POLICIES

The federal government has established legislation such as the Species at Risk Act, and the Fisheries Act, which fundamentally shape the interactions between the forest and industries operating within it. The federal government then works to ensure that management complies with international agreements.

However, autonomy is largely given to provinces, where provincial policies may underpin or override federal policies, and the federal government works to coordinate across provinces. The regulations governing forest management by province are available in the links below:

- Ontario: https://www.ontario.ca/page/ministry-natural-resources
- British Columbia: https://www2.gov.bc.ca/gov/content/industry/forestry
- Quebec: https://mrnf.gouv.qc.ca/forets/
- Alberta: https://www.alberta.ca/forestry

The important pieces of legislation for each province concerning the forest and biodiversity include:

- Ontario: Crown Forest Sustainability Act (CFSA), Endangered Species Act
- British Columbia: The Forest and Range Practices Act, Wildlife Act, Environmental Assessment Act
- Québec: The Sustainable Forest Development Act (Loi sur l'aménagement durable du territoire forestier), Natural Heritage Conservation Act
- Alberta: The Forests Act, Wildlife Act

SPECIES AT RISK ACT (SARA)

In 2002, the Species at Risk Act (SARA) was introduced to meet the Canadian government's commitments under Convention on Biological Diversity (CBD), establishing the federal government's responsibilities to protect species at risk and their critical habitats. The purposes of SARA are "to prevent Canadian indigenous species, subspecies, and distinct populations from becoming extirpated or extinct; to provide for the recovery of endangered or threatened species and to encourage the management of other species to prevent them from becoming at risk"[34].

Provinces and territories have primary responsibility for wildlife species, but SARA specifically seeks to promote cooperation between federal and provincial/territorial governments in species protection. The Act may affect activities on lands considered federal and in specific cases, on private or provincial lands (for example if select migratory birds are listed at risk, the Act's prohibitions are applicable anywhere they occur[35]. The Committee on the Status of Endangered Wildfire in Canada (COSEWIC) assesses and identifies species at risk under SARA. Industries such as forestry, mining, and agriculture can be affected by habitat protection measures or species recovery plans under the Act.

With the goal of protecting species, the Act directly related to the conservation of the boreal forest, and its species under threat. A notable example is the boreal caribou, listed under SARA as a threatened species (under woodland caribou). This means that under the Federal Recovery Strategy requirement of the Act (for all listed threatened species), at least 65% of boreal caribou habitat in each range needs to be protected and undisturbed – this percent was determined as the minimum protected area required for the boreal caribou to recover[36].

The boreal caribou is considered an 'umbrella' species. They require a large amount of undisturbed forest and therefore act as an indicator for the 'health' of the boreal forest. The boreal caribou, a subgroup of caribou, are also of great importance to Indigenous communities, holding strong cultural and symbolic value.

The implication of this is: where the boreal caribou is protected, its habitat is also protected, and (by extension) so are all other species residing within it. To see a map of the boreal caribou ranges, click here.

Despite the Act's provisions, there have been challenges in implementation, and criticisms, including:

- The species listing process by COSEWIC (e.g. determining whether a species is threatened) has inefficiencies and biases. Research undertaken by Creighton and Bennett (2019) demonstrated that 28.4% of species recommended for protection by COSEWIC were subsequently not listed[37].
- Turcotte et al. (2021) observed that the act of listing a species does not necessarily guarantee conservation measures beyond basic protections on federal lands. The same study emphasised the insufficient incorporation of Indigenous knowledge and collaboration in the species protection process[38].
- Despite federal-level protection measures, the degree of protection given to a listed species may significantly across provinces and territories due to disparate legislative frameworks and conservation approaches.

ONTARIO'S CROWN FOREST SUSTAINABILITY ACT (CFSA)

The Crown Forest Sustainability Act (CFSA) was introduced in 1994 with the goal to sustainably manage the 'crown' forests of Ontario. As defined in the Act, the exact purposes "are to provide for the sustainability of Crown forests and, in accordance with that objective, to manage Crown forests to meet social, economic and environmental needs of present and future generations"[39].

"Crown forest" is defined as "a forest ecosystem or part of a forest ecosystem that is on land vest in Her Majesty in right of Ontario", in other words, the forest that is defined as being public, under the jurisdiction of the province[39]. 90 percent of Ontario's forest is on public land, meaning most of the province's forest is considered under CFSA[40].

CFSA specifically applies to forest management, requiring forest management practices to mirror natural disturbances and minimise negative environmental, social, and economic impacts. CFSA implementation is primarily overseen by the Ministry of Natural Resources and Forestry and requires forest management plans.

INTERNATIONAL CONSERVATION AGREEMENTS

Following COP 15, the Kunming-Montreal Global Biodiversity Framework (GBF) established a series of targets for nature conservation. This ambitious framework set out to "catalyze, enable and galvanize urgent and transformative action" amongst policymakers across the globe[11].

Canada has since committed to all 23 of the GBF targets as part of their 2030 Strategy. Targets two and three of the GBF are particularly notable for the future of the boreal, which commit to the restoration of 30% of all degraded ecosystems and the conservation of 30% of land, waters and seas, all by 2030[41]. These targets work alongside federal legislation like the Species At Risk Act (SARA), which operates in conjunction with provincial/territorial laws, mandating the protection of listed species and habitats.

INDIGENOUS PEOPLES' RIGHTS

Indigenous rights and land titles are distinct from those of non-Indigenous citizens in Canada under Canadian common law. These rights are protected to varying degrees under regional and federal treaties, signed between Indigenous Peoples and the Canadian government, and likewise vary among First Nations, Métis and Inuit Peoples within Canada. Major Canadian common law treaties include the *Indian Act*; section 35 of the *Constitution Act, 1982* (whereby the Canadian government recognises Indigenous Peoples' inherent rights to self-government, followed by a guide to implementation and negotiation with Indigenous communities introduced in 1995), and the Numbered Treaties.

Over time, Indigenous rights under Canadian common law have evolved with precedent-setting court cases (for example, R v. Powley) and ongoing negotiations led by Indigenous Peoples.

At an international level, the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) sets a global framework of *minimum* standards for the rights of Indigenous Peoples. In 2021, Canada passed Bill C-15 to implement UNDRIP into Canadian common law.

Despite these treaties, Canadian common laws regarding Indigenous Peoples have been breached by some industries, and Canada has been in a state of legislative flux regarding land rights[42]. Recently, there was a First Nation suit against the government of Ontario over the *Mining Act*, challenging breaches of the right to Free, Prior and Informed Consent (FPIC) when granting permits[43].

Human Rights Reports throughout the last decade have highlighted Canada's failure to sufficiently address serious human rights violations concerning Indigenous Peoples. These issues reside within the larger historical context, where Indigenous Peoples' rights, voices and customs have not been considered by the Canadian government in the management of the forest and its resources. The management of the boreal forest is intricately linked to Indigenous Peoples' rights, as these rights encompass legal, cultural, environmental, and economic dimensions. Recognising and respecting Indigenous Peoples' rights is essential for sustainable forest management.

CONSERVATION OF THE BOREAL FOREST

Conservation measures include targets, frameworks, programs, and overarching policies, involving collaboration between a number of key actors and Indigenous Peoples. The Canadian government has sustainable forest management (SFM) standards and practices in place, and this includes national and international conservation targets such as the aim to protect 25% of its land by 2025 and 30% by 2030, in line with a commitment to the Convention on Biological Diversity.

In summary, sustainable forest management practices may promote and advocate for sustainable development practices, balancing conservation with economic activities in resource extraction areas. However, some of these measures may still allow boreal degradation. This may include prescribed burns, differently aged stands, a mixture of tree species, and conservation areas.

Measures facilitating the sustainable management of the boreal forest include:

- **Indigenous-led conservation:** There is growing recognition of Indigenous rights, knowledge, and governance in forest management. As part of this, since 2018, Canada has pledged $1.2 billion (CAD) to Indigenous-led conservation efforts, including four Indigenous Protected and Conserved Areas (IPCAs) and Indigenous Guardians programs[44]. In these programs, Indigenous community members are trained on the management of natural resources, ensuring their leadership in these spaces.
- **Legal frameworks:** Legislation include those at federal level such as the Species at Risk Act, and the National Parks Act, in addition to provincial policies.
- **Conservation frameworks and initiatives:** Initiatives include the Canadian Boreal Conservation Framework (endorsed by over 1,500 scientists, two Canadian provinces, and numerous First Nations), which advocates for protecting at least 50% of the boreal forest and supporting sustainable development in the rest, and the International Boreal Conservation Campaign (IBCC), launched in 2000 by the Pew Charitable Trusts, and uniting Indigenous Peoples, advocates, scientists, and leaders to preserve the boreal forest's natural, cultural, and economic values[45].
- **Protection of Intact Forest Landscapes (IFLs)**: Canada has the largest area of intact forest landscapes. International bodies such as the International Union for the Conservation of Nature (IUCN) advocate for the protection of these areas[46].

LOBBYING IN CANADA'S CONTEXT

The Canadian government's international-level lobbying efforts in relation to the boreal forest are well-documented, as discussed in detail in this CBC article. Efforts from both federal and provincial governments attempted to remove the boreal forest from deforestation-free procurement bills, succeeding in some cases[47].

Additionally, according to information received by the Natural Resources Defense Council via an Access to Information and Privacy (ATIP) request in Canada, the Canadian government coordinated closely with industry trade representatives in legislative lobbying abroad. In both California and New York, ATIP requests revealed that Canada's national forestry trade group, the Forest Products Association of Canada (FPAC), and provincial and federal government officials worked together to urge California and New York legislators to remove key provisions of bills that would require government contractors to avoid degradation and deforestation in boreal and tropical forests.

Like the government, companies and their trade associations can lobby legal frameworks protecting the forest, influencing these frameworks through mechanisms such as direct engagement with policymakers, media campaigns, or by developing research in support of their position.

REGULATION OF LOBBYING

The regulation of lobbying began with the Lobbyists Registration Act (1989) and was later renamed the Lobbying Act on July 2, 2008. This name change followed significant amendments aimed at regulating lobbying activities, rather than merely monitoring them through a registration system.

Lobbying in Canada is broadly defined as any paid communication with federal government officials regarding federal laws, policies, programs, and government contracts. This includes both written and oral communications - even public policy advocacy and government consultations may be considered lobbying. The Lobbying Act requires individuals who engage in such activities to register and disclose their lobbying efforts to ensure transparency and public awareness of who is attempting to influence government decisions[48].

Trade associations that engage in lobbying activities are subject to these rules under the Lobbying Act. If employees of a trade association are paid to communicate with public office holders about legislative proposals, policies, or other government-related matters, they must register as lobbyists. The most senior officer of the trade association is responsible for ensuring that all lobbying activities are registered and reported accurately. This ensures that trade associations, like other organisations, maintain transparency in their interactions with government officials.

IMPORTANCE AND POWER OF INVESTOR ENGAGEMENT

Political engagement is the process by which companies and interest groups influence the creation of laws, regulations, and policies that affect their business objectives and operating environment. This involvement takes various forms, such as financial contributions to political campaigns, policy consultation responses, and the exchange of personnel between private and public sectors. Political engagement is most often in the form of lobbying. Companies may also attempt to shape public perception through the media or by supporting grassroots organisations and think tanks. This engagement may occur directly by companies or through intermediaries like trade associations and industry groups.

Responsible Political Engagement (RPE) refers to companies, or other bodies such as trade associations, using their influence in political and public policy areas in a way that is transparent, accountable, and in alignment with the public interest.

RPE is important in that it can shape policies and regulations that affect not only the business environment that companies operate in, but also policies regarding pressing issues such as climate change, human rights, and biodiversity loss, by aligning corporate strategies with global efforts. Various frameworks exist to guide companies on undertaking transparent, accountable, and responsible political involvement, including:

- The OECD's principles for *Transparency and Integrity in Lobbying* for governments.
- Transparency International's *Wise Counsel or Dark Arts? Principles and Guidance for Responsible Corporate Political Engagement* report guides companies on how to manage activities such as political donations and engagement.
- The ICGN's *Political Lobbying and Donations* report presents principles and guidance for investors' engagement on the topic.
- The United Nations Global Compact's *Towards Responsible Lobbying* report provides a six-step diagram to help companies identify if their lobbying practices are being conducted responsibly.
- The *Responsible Lobbying Framework* identifies globally applicable principles and standards of responsible lobbying.
- *Responsible Climate Lobbying: The global standard*, is specific to aligning lobbying practices with the goals of the Paris Climate Agreement but can be applied and adapted to other issues.
- LobbyMap's report *Industry Influence on Biodiversity Policy,* identified US and EU trade associations' influence on biodiversity loss.

HOW DOES RPE RELATE TO THE BOREAL?

Effective policy frameworks are essential for mitigating deforestation and preventing the degradation of critical ecosystems like Canada's boreal forest. Investors, through the influence of their portfolio companies and their respective lobby group memberships, can also influence these frameworks. This activity can either weaken key policies, such as those aimed at protecting forests and Indigenous Peoples' rights, or, conversely, contribute to the creation of practical policy solutions that support conservation and sustainable management practices in the boreal, provided the company uses their political influence responsibly.

Investors can have a role in driving greater RPE, for example by greater transparency, by engaging companies to disclose their political activities, including lobbying efforts and trade association memberships. For example, a shareholder proposal on Paris Climate Agreement-aligned lobbying, drafted by BNP Paribas Asset Management, has had six majority votes since drafting[49].

It's encouraged that investors ensure their investee companies align their political engagement with any publicly stated sustainability commitments. This may mean advocating for policies supporting forest conservation and sustainable management. In doing so, investors can ensure consistency in corporate actions and contribute positively to environmental and social governance.

Investors can be active owners of their investments, and drive companies towards a transition that benefits business, people, and nature. RPE is a powerful tool for companies and investors to influence public policy in a manner that benefits both business and society.

DETERMINING WHAT'S INFLUENTIAL

COMPANY SELECTION METHODOLOGY

DEVELOPMENT OF THE COMPANY LONG LIST

This research investigates four provinces of Canada, selected on the basis of the presence of the boreal forest, significant industry activity, and economic importance:

- Alberta
- British Columbia
- Ontario
- Quebec

For each region, an industry linked to deforestation/degradation was selected based on the significance of the industry in the region. This meant, for Quebec, British Columbia, and Ontario, the forestry industry was selected, and for Alberta, oil and gas. Mining as an industry was later added to the research. In this instance, Quebec, British Columbia, and Ontario were further investigated, based on the size of the industry in the regions.

Table 3: Regions and industries investigated in research

Region	Industry
Alberta	Oil and gas
British Columbia	Forestry, Mining
Ontario	Forestry, Mining
Quebec	Forestry, Mining

After the scope was determined, a list of the key supply-side policies and regulations relevant to each industry's supply chain and region was developed. This included policies and regulations that are directly related to conservation. This was compiled using desk-based research. These policies and regulations were searched for at 3 levels:

- Provincial
- Federal
- International

Due to the scope and scale of this research, for the international level, 'trade agreements' were specifically searched for (i.e., we did not search for policies in other countries concerning the sourcing, or processing of a commodity), although further research might investigate wider international policy, such as the EU deforestation regulations. In this case, trade agreements between Canada and the key international consumers of the commodity were searched. Only active policies and regulations were included in this list. All policies and regulations were then subject to review to ensure applicability.

The rationale for searching for policies and regulations specifically relevant to the industries was that these policies and regulations influence the industry activity, activity which is linked to degradation.

After compiling this list, Large Language Models (LLMs) were used to find trade associations officially or unofficially lobbying these policies. We used search-enabled LLMs to search a wide range of websites and datapoints to identify trade associations lobbying the policies. The LLMs enabled us to undertake the search many multiples quicker (and wider) than traditional desktop research alone and allowed us to find instances of 'unofficial lobbying'. To do this, we used a consistent definition of 'lobbying', as shown:

> Lobbying includes but is not limited to, engaging directly with lawmakers, government officials, or their staff to present arguments and information in support of a specific position or policy (this can include face-to-face meetings, phone calls, or written communications), making public statements, issuing press releases, writing op-eds, or utilising social media to shape public opinion and build support for a particular issue or position, conducting and disseminating research, policy analysis, and reports to provide evidence and support for a lobbying position, drafting legislation or amendments, forming alliances with other organisations, or providing financial support.

In other words, for each policy and regulation, we searched for trade associations that lobbied it, under the premise of this definition, asking for the most accurate source. All sources were then stored, subject to human analyst review.

The lobbying activity was categorised into 'official' and 'unofficial'. In the case where the lobbying evidence was found on the official registry of lobbying activity by the Office of the Commissioner of Lobbying of Canada, the Registry of Lobbyists site, the lobbying activity was labelled as 'official'[50].

In the case of an alternative source, e.g. a statement on a public website hosted by the trade association, the lobbying activity was labelled as 'unofficial'. All trade associations listed as unofficially lobbying a policy were then searched on the Registry of Lobbyists site, to ensure there was not also an official instance of lobbying. If the trade association was found to lobby a listed or subject-relevant policy on the site, the 'unofficial' was changed to 'official'. Lobbying activity was recorded as a binary "1". When applicable, both the instances of official and unofficial were recorded. The list of trade associations obtained from these searches were then subject to expert review and overlay, to ensure no trade associations perceived to be active in lobbying were not picked up. In the instance where an additional trade association was recommended, the following steps were undertaken to ensure applicability and relevance.

After developing this list, each trade association's website was reviewed to determine company board members. When there were no board members listed, it was assumed that the trade association's members acted as board members and were also included in the research.

Then, a full list of companies from all of the identified trade associations was developed. The list was condensed where a company was a board member of multiple trade associations. Through a manual search, each company's status ('public' or 'private'), parent company (when applicable), and parent company's status was determined. All private companies were then omitted from this list. All government-owned companies were also removed. In this way, the remaining list became only public companies, or private companies with public parent companies.

This list was then further narrowed on the basis of 'official' and 'unofficial' lobbying. Companies that are not part of a trade association registered on the Registry of Lobbyists were removed.

After narrowing this list, each trade association's site page on the Registry of Lobbyists was reviewed. In the 12-Month Lobbying Summary 'details' section where the name of a policy, regulation, legislative proposal, bill or resolution was named, it was cross-referenced with the list of relevant policies and regulations already determined. If relevant (i.e. on our pre-determined list), we recorded the name of the policy/regulation. This was done for all trade associations. In some instances, although the trade association was registered on the site, there were no active instances of lobbying (i.e. in the last recorded 12 months). In this instance, the exact name of the legislation/regulation/policy and the evidence was taken from the 'unofficial' source and highlighted to distinguish between sources. We included both instances of in-house lobbying, and via an external consultant on behalf of the trade association, where applicable.

In many instances, more than the explicitly stated policies were recorded to be lobbied. In fact, several relevant topics were often listed to be lobbied but were too vague in their description to explicitly infer the Act lobbied, e.g. "caribou recovery actions". In this way, research limited to those explicitly stated on the Registry of Lobbyists site or 'other source' site. In this way, there are likely a lot more topics, policies and regulations lobbied than listed in the final list.

See Appendix for the company long-list.

PRIORITISATION OF COMPANIES AND THE DEVELOPMENT OF THE COMPANY SHORT-LIST

For each trade association, we then determined and recorded the number of monthly communications reports (over last 12 months, updated as of 11/09) recorded on the Registry of Lobbyists. Monthly communications reports "disclose prescribed details regarding "oral and arranged" communications between lobbyists and Designated Public Office Holders (DPOH)", and are submitted by registered lobbyists, as mandated under the Lobbying Act[51].

We then categorised policies into those that we determined to be highly relevant to the conservation and protection of the boreal, and those that we determined to be tangential (supply-chain specific policies). We then categorised the trade associations on this basis (Table 4).

In this way, on one end (Tier 1), there are trade associations highly active in lobbying and explicitly recorded to have been lobbying at least one highly relevant policy, and on the other end (Tier 3), there are trade associations that are inactive or lowly active on tangential policies. Each monthly communications report represents an instance of "oral and arranged communications" with a government institution.

Table 4: Trade association prioritisation key

Tier	Description	Explanation
1	Highly active trade associations, engaging on highly relevant policy.	> 40 monthly communications reports and engaging on at least one determined highly relevant policy.
2	Highly active trade associations on tangential policy, or lowly active trade associations, engaging on relevant policy.	> 40 monthly communications reports and engaging on only tangential policies OR 1-40 monthly communications reports and engaging on at least one determined highly relevant policy.
3	Trade associations that are not active and/are lobbying tangential policy.	Inactive (i.e. no monthly communications reports) or 1-40 monthly communications reports and engaging on only tangential policies.
Other	Trade associations 'unofficially' lobbying.	Trade associations identified but not registered on the Registry of Lobbyists. Only listed is also part of another 'officially' lobbying trade association.

On the basis of the determined prioritisation criteria, the trade associations were then categorised (Table 5).

Table 5: Trade association tier categorisation

Tier	Trade Associations
1	Business Council of Canada (BCC) Canadian Association of Petroleum Producers (CAPP) Canadian Gas Association (CGA) Forest Products Association of Canada (FPAC) Mining Association of Canada (MAC)
2	Alberta Forest Products Association (AFPA) Council of Forest Industries (COFI) Prospectors and Developers Association of Canada (PDAC) The Quebec Forest Industry Council (QFIC)
3	Association for Mineral Exploration (AME) Mining Association of British Columbia (MABC) Ontario Mining Association (OMA) Canadian Consumer Specialty Products Association (CCSPA)
Other	Canada China Business Council (CCBC) Ontario Forest Industries Association (OFIA)

After categorising each trade association, we determined how many 'Tier 1', 'Tier 2', 'Tier 3' and 'Other' trade associations each company is a board member on. The finalised short-list of companies became companies that are board members on more than one trade association and are part of at least one 'Tier 1' trade association. This list became 32 companies.

These are the companies that we believe have most influence on the policy frameworks designed to conserve and protect the boreal.

SUBSET ANALYSIS ON PRIORITISED COMPANIES

We searched each individual company on the Registry of Lobbyists site, and determined the number of monthly communications reports for each, if any. In the case where a company has a parent company, only the subsidiary was searched for (as this company is the one that is the member of the trade association). This was to determine the level of lobbying activity a company directly engages in, if any, or whether most lobbying is done via its trade association memberships.

COMPANY SHORT-LIST

This list represents companies that are board members (or members, if no board members are listed) of trade associations that we have identified to directly lobby (i.e. engage with a legislative body in Canada) a piece of legislation, regulation, or policy either directly governing the boreal, or a commodity linked to the degradation of the boreal.

The list of companies investigated and shortlisted is not intended to be comprehensive, nor to dictate whether a company is 'good' or 'bad' and is rather to highlight influence. With the scope and methodology, 32 companies were prioritised (Table 6), and for each trade association, the legislative, regulatory, and policy concerns were recorded (Table 7).

Table 6: Company short-list

Company (parent company)	TAs	Market Cap (billion CAD)*	No. of MCs**
Rio Tinto	MABC, MAC, CMA	110.82	131
Agnico Eagle Mines Ltd.	OMA, PDAC, MAC	56.21	130
Enbridge Inc.	CAPP, CGA	121.85	109
Suncor Energy Inc.	CAPP, MAC	63.42	94
Teck Resources Ltd.	MAC, AME, PDAC	33.20	91
Cameco Corp.	OMA, BCC, MAC	23.96	61
Canadian Natural Resources Ltd.	CAPP, MAC	93.25	46
Shell Canada Ltd. (Shell PLC)	BCC, CAPP	287.08	38
AtkinsRéalis	CCBC, MAC	8.81	37
Newmont Corporation	MABC, OMA, MAC	82.88	25
Barrick Gold Corporation	MABC, MAC, OMA	48.87	10
Western Copper & Gold Corp.	MABC, MAC	0.31	10
TC Energy Corporation	CGA, BCC	65.93	6
IAMGOLD Corporation	OMA, MAC	4.23	4
Eldorado Gold Corp.	MAC, OMA	4.94	1
Alberta-Pacific Forest Industries Inc. (Hokuetsu Corporation)	AFPA, FPAC	2.63	0
Avalon Advanced Materials Inc.	MAC, OMA	0.03	N/R
Canfor Corporation	AFPA, COFI, FPAC	1.96	N/R
Cementation Canada Inc. (Murray & Roberts Holdings Limited)	OMA, MAC	0.09	N/R
Copper Mountain Mining Corporation (Hudbay Minerals Inc)	MABC, MAC	4.04	N/R
De Beers Canada Inc. (Anglo American)	OMA, MAC	50.81	N/R
Hecla Mining Company	MABC, MAC	5.83	N/R
Interfor	OFIA, FPAC, QFIC	0.95	N/R
International Paper	FPAC, AFPA	23.53	N/R
McEwen Mining Inc.	MAC, OMA	0.90	N/R
Mercer International Inc.	FPAC, AFPA, COFI	0.58	N/R
SMS Equipment Inc. (Sumitomo Corporation)	OMA, MAC	36.00	N/R
Stantec Consulting Ltd. (Stantec Inc.)	OMA, MAC	12.29	N/R
Vale Base Metals (Vale S.A.)	OMA, MAC, PDAC	64.74	N/R
West Fraser Timber Co. Ltd.	OFIA, COFI, FPAC, QFIC	10.09	N/R
Weyerhaeuser Company Ltd.	FPAC, OFIA, AFPA, COFI	32.55	N/R
WSP Group Inc.	MAC, OMA	29.09	N/R

*The market capitalisation of the parent company is shown where relevant. Market capitalisation was recorded as of 17/09/2024.
** The number of monthly communications recorded over the previous 12-month period, updated as of 11/09. This does not necessarily mean over exact previous 12 months, and rather means the last recorded 12-month period.
***N/R stands for not recorded.

Table 7: Trade associations and their legislative, regulatory, and policy concerns, and number of monthly communications reports

TA	Legislative, regulatory, and policy concerns	No. of MCs**
BCC	Canadian Environmental Protection Act Impact Assessment Act Investment Canada Act Greenhouse Gas Pollution Pricing Act	123
MAC	Canadian Environmental Protection Act Fisheries Act Species at Risk Act Impact Assessment Act The Canadian Critical Minerals Strategy Metal and Diamond Mining Effluent Regulations Canadian Metals and Minerals Plan Explosives Regulations Extractive Sector Transparency Measures Act	120
CAPP	Greenhouse Gas Pollution Pricing Act Species At Risk Act Fisheries Act Transportation of Dangerous Goods Regulations Impact Assessment Act Canadian Environmental Protection Act Canadian Petroleum Resources Act Indian Oil and Gas Act	77
CGA	Environment Assessment Act	50
FPAC	Pulp and Paper Effluent Regulations Canadian Environmental Protection Act Fisheries Act Species at Risk Act	49
CCSPA	Canadian Environmental Protection Act Hazardous Products Regulations	32
PDAC	Critical Mineral Strategy Species at Risk Act Fisheries Act Canadian Environmental Protection Act Impact Assessment Act Canadian Minerals and Metals Plan Investment Canada Act	18
QFIC	Species at Risk Act	16
AFPA	Pulp and Paper Effluent Regulations Species At Risk Act	9
COFI	Investments in Forest Industry Transformation (IFIT) Program Species at Risk Act	5
AME	Extractive Sector Transparency Measures Act	0
MABC	The Mines Act (the Act) and Health, Safety and Reclamation Code for Mines in British Columbia	0
OMA	Mining Act	0

*The legislation, regulations, and policies in blue were found on other reputable sources.
** The number of monthly communications recorded over the previous 12-month period, updated as of 11/09. This does not necessarily mean over exact previous 12 months, and rather means the last recorded 12-month period.

TAKEAWAYS

These companies, through their board position of key industry trade associations, lobby and influence legislation, regulation, and policies directly impacting Canada's boreal forest, and relevant trade flows. The prioritised list includes the 32 companies that we have determined to be most influential, either strengthening or weakening public policy frameworks. To understand whether these companies are specifically strengthening or weaking these frameworks would require further direct engagement with the company itself. The list highlights the complexity of actors involved in lobbying, and the international presence within Canada's boreal forest – with multiple subsidiaries of large multinational corporations.

CAVEATS OF THE METHODOLOGY

This methodology represents one means to determine trade associations that are lobbying (what we determined to be) relevant legislation, regulations, and policies. This methodology also represents a means to reasonably prioritise companies but is not the only methodology with the potential to do this. Caveats include:

- The policies, regulations, and legislation listed in this research are only those that have been explicitly stated on the trade associations'/companies' Registry of Lobbyists site, unless otherwise highlighted. It is more than likely that the determined trade associations and companies have undertaken lobbying on additional policies.
- We have used the number of monthly communications report as a broad proxy for determining the level and extent of lobbying the trade association/and or the company has undertaken.
- There are very likely additional groups that lobby that are not listed as they do not appear on the Registry of Lobbyists site, because they have not lobbied/directly communicated with a government official. In fact, Business Europe was identified to unofficially lobby the European Critical Raw Materials Act, a European demand-side policy. However, due to its nature as an umbrella organisation comprising of several large trade associations and unions and because of our established methodology, we have excluded it from our dataset to maintain a focus.
- This research lists only publicly listed companies, to be most useful to diversified investors. However, while private companies are not included in this research, it bears noting that many public companies purchase materials from these private companies, which are relevant to investors by proxy. Similarly, there are significant privately held companies operating in the boreal, such as the Paper Excellence Group, which also work to influence policy and supply many major publicly held companies.

AREAS OF FURTHER EXPLORATION

This research could be expanded and explored further in a number of different directions, including via:

- Analysing specific companies' lobbying activities.
- Expanding the scope, by including more regions and industries.
- Evaluating the role of environmental impact assessments, and associated lobbying.
- A deeper-dive analysis on demand-side policies, and the role of the international market.
- Listing companies that purchase from the listed companies, and privately held companies.
- Policies in other countries concerning sourcing, such as the EU Deforestation Regulation.
- Trade groups not listed on the Registry of Lobbyists site, but noted to be lobbying, such as Business Europe.
- Other industry-relevant groups that are influential, such as the Forest Stewardship Council and Sustainable Forestry Initiative.

NEXT STEPS AND CALLS TO ACTION

Canada's boreal forest is just one area of engagement that should be part of a broader strategy. Its protection is crucial due to its unique ecosystem, financial implications for portfolios, and role in climate change mitigation. Additionally, emerging regulations and frameworks like EUDR and CSDDD underscore the growing importance of addressing boreal forest preservation in investment decisions, and in the assessment of investee companies' supply chains.

Investors can work to understand public policy frameworks and the evolving regulatory landscape of and related to Canada's boreal forest. Investors can assess their investments' direct, and indirect (via a trade association) lobbying activities, and whether they align with their sustainability commitments and policies. In assessing a company's lobbying activities, investors can work to understand the degree of influence a company can have on public policy.

Through undertaking a thorough analysis of the regulatory landscape, and of lobbying activities, combined with an analysis of a company's direct footprint, investors can develop a targeted engagement strategy in alignment with established global frameworks such as the Kunming-Montreal Biodiversity Framework and UNGPs-aligned HREDD Principles. At the same time, investors can undergo their own lobbying activities, partner with other investors, and work to strengthen the frameworks that protect the forest though collaborative initiatives.

FURTHER READING

DEGRADATION OF THE BOREAL

There are many more complexities of the degradation of the boreal forest that we would not be able to capture in entirety; a sample of sources include:

- *The World's Last Intact Forests are Becoming Increasingly Fragmented*
- *The State of Canada's Forests: Annual Report 2023*
- *The State of the Forest in Canada: Seeing through the Spin*
- *The Issue with Tissue Fifth Edition*
- *Forest management is driving the eastern North American boreal forest outside its natural range of variability*
- *Boreal Caribou Can Coexist with Natural but Not Industrial Disturbances*
- *Report on the implementation of the Section 11 agreement for the conservation and recovery of the woodland caribou in Alberta*
- *Assessing the Cumulative Impacts of Forest Management on Forest Age Structure Development and Woodland Caribou Habitat in Boreal Landscapes: A Case Study from Two Canadian Provinces*
- *Environment minister calls for an emergency decree to protect Quebec caribou from 'imminent threat'*
- *'Sustainable' logging operations are clear-cutting Canada's climate-fighting forests*

INDIGENOUS PEOPLES' RIGHTS

The issue of Indigenous Peoples' rights is a long-lasting and complex issue which we would not be able to capture in its entirety. For more information, here is a sample of research and websites which further consider Indigenous voices and perspectives:

- *Indigenous leaders burn pipeline agreement, set up B.C. Road blockade*,
- *Jean L'Hommecourt Wants You to Know What the Oil Sands Are Doing to Her People and Their Land*
- *Indigenous Law & Canadian Courts*
- *World Report 2024*
- *Groundbreaking Agreement Between Province and Tahltan Central Government Provides Further Certainty for Eskay Creek*
- *Tahltan Nation, B.C. sign historic consent-based decision-making agreement*
- *Indigenous-led Collaborations Are Transforming Conservation*
- *About treaties*

ADDITIONAL CONSIDERATIONS FOR ENGAGEMENT

Some companies can be highly influential in setting policy, regulatory, and legislative frameworks that may set the parameters of what environmental impacts by industry are permissible by the state. For the reasons already outlined, it is necessary to identify the use of influence by trade associations (and their companies) primarily through lobbying activities, and understand the policy, regulatory, and legislative frameworks through which these lobbying activities take place. In doing so, the report has intentionally not investigated the direct operations of companies.

However, we recognise that direct activity by industry is the primary means by which direct environmental impacts occur and is the typical focus of investor engagement.

This section focuses on company-level activity in more detail and is intended as supplementary analysis to support investor conversations. The companies covered are those which the Canbury Insights authors have identified to be engaged in lobbying through trade associations, as described above. This supplementary analysis offers investors a more complete picture of corporate influence and impact, supports more informed discussions with investee companies, and highlights the connection between policy influence and industry practices. By extending trade association lobbying analysis with direct company activity analysis, we aim to present a holistic view of how corporate actions affect boreal forest conservation efforts.

The research based on MSCI datasets indicated that the companies identified as engaging in trade association lobbying, as detailed in the report, not only are more often situated in environmentally sensitive areas in the boreal forest than was observed for the broader list of companies operating in Canada,[i] but were also associated with most of the environmental controversies relevant to the boreal forest.

These findings provide supporting rationale for why this particular set of companies engage in lobbying influence through trade associations: they tend to face elevated exposure to environmental risks, and lobbying likely comprises one among the range of corporate tools to mitigate those risks. The question for investors is whether trade industry lobbying, as a tool, is being wielded responsibly, with a view to the long term health of the boreal ecosystem and the stakeholders who depend on it.

The following analysis of company environmental impacts considered four perspectives on company activities: 1) exposure to biodiversity sensitive areas, 2) cumulative effects, 3) acute incidents, and 4) an overall risk management performance analysis.

1. IMPACTS ON BIODIVERSITY SENSITIVE AREAS

In this assessment, Biodiversity Sensitive Areas (BSA) in Canada were those identified by the Global Safety Net (GSN) as prime areas of conservation to ensure biodiversity resilience to climate change because they were either in areas of rare ecological phenomena or were in areas of highly intact forests. These areas are important because not only do they typically contain the most unique or diverse array of species, but they are also essential for climate regulation due to their role in ecological balance and their high density and variety of biomass as indicated earlier in the report.

The GSN was developed through the non-profit One Earth to support the goal of protecting 30% of the Earth's lands and waters by 2030 or 50% by 2050; a goal that is closely aligned with Canada's 2030 nature protection objectives.[ii]

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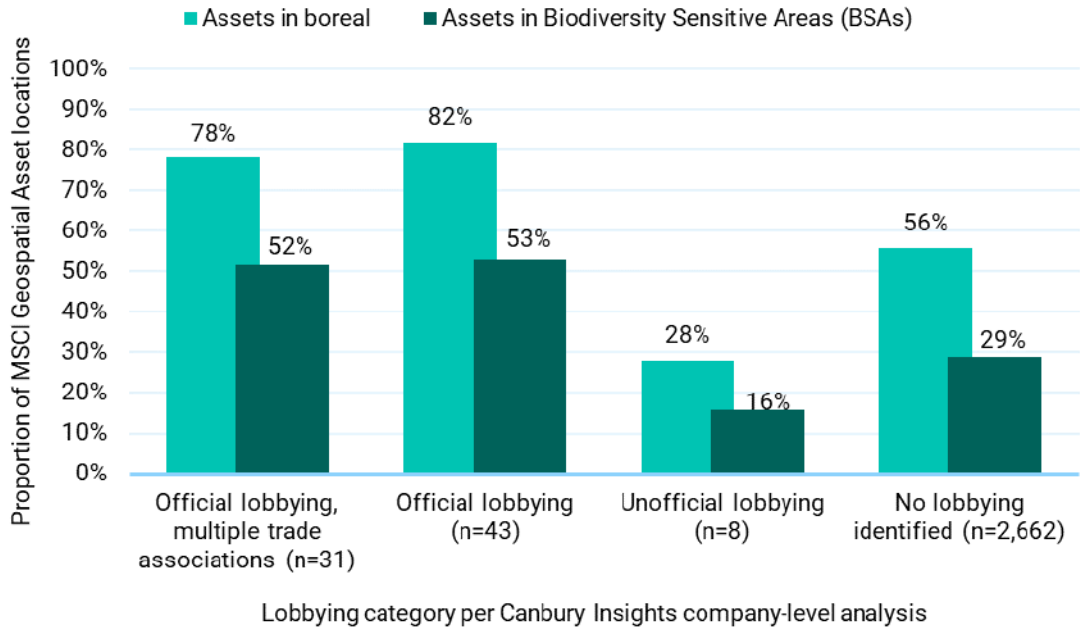
[i] The analytical set for this analysis was based on public companies with assets in Canada, according to MSCI Geospatial Asset Intelligence as of July 3, 2024.

[ii] Canada's 2030 Nature Strategy: Halting and Reversing Biodiversity Loss in Canada; See Target 3: "Ensure and enable that by 2030 at least 30 percent of terrestrial and inland water, and of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved".

Companies identified by the report's analysis as engaging in trade association lobbying may have a higher risk of disturbance of these biodiversity sensitive areas, as MSCI's supplementary analysis found them to have a higher proportion of assets in the boreal forest as well as within BSAs compared to those companies without lobbying activity. For instance, companies with official lobbying activities as detailed in the report had 53% of their Canadian assets in BSAs on average compared to only 29% of companies with Canadian assets without any lobbying activity identified.[iii]

Figure 1: Asset exposure to the boreal forest and Biodiversity Sensitive Areas (BSAs) in Canada per lobbying activity category



Note: The analysis above was based on 2,756 public companies identified with relevant assets in Canada according to the MSCI Geospatial Asset Intelligence. BSAs in Canada were either located within areas of rare ecological phenomena or were areas with an above-average measure of mean species abundance, according to the GLOBIO model.

Source: MSCI ESG Research analysis using MSCI Geospatial Asset Intelligence. Lobbying categories provided by Canbury Insights (2024).[52]

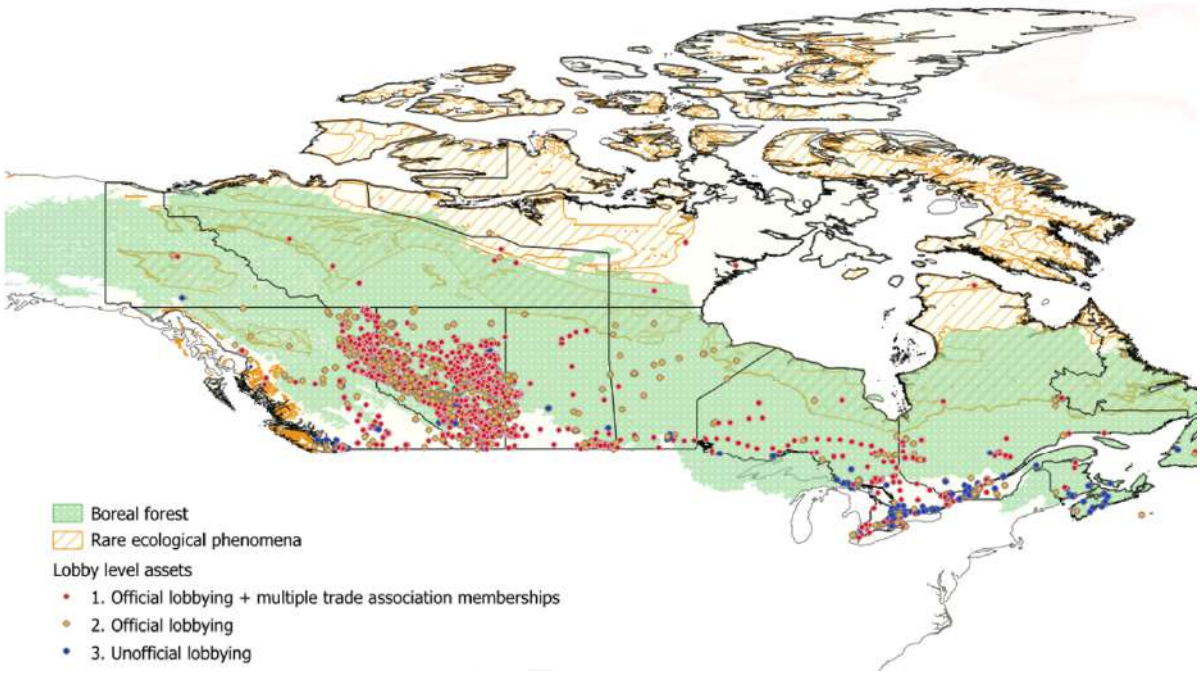
2. CUMULATIVE EFFECTS

As indicated earlier in the report, cumulative effects over a large landscape such as by oil pipelines or forestry operations or in combination with other industries can strain the fragile balance of ecosystems.

[iii] For this analysis, the analytical peer set comprised of public companies that were identified with assets in Canada by MSCI Geospatial Asset Intelligence. Companies were excluded from this analytical set if their only Canadian assets had minimal environmental impact such as offices, retail shops, residential buildings, and educational facilities for a total of 2,756 companies in the analytical set. The overlap of coverage between the full analytical set of companies with relevant Canadian assets and those companies identified by Canbury Insight's trade association lobbying analysis totalled 82 companies.

One way to look at cumulative effects is by the abundance of high impact industry operations in an area. The province with by far the most assets identified within BSAs is Alberta, primarily represented by the Energy sector. Alberta is where over 70% of the Canadian assets of the Oil, Gas, and Consumable Fuels GICs industry assets were located (according to MSCI Geospatial Asset Intelligence as of July 3, 2024).

Figure 2: Asset locations of companies identified with lobbyist activities



Note: The chart shows 3,372 assets found in Canada among 82 of the companies identified with lobbyist activity as detailed in the report. Assets with relatively minimal environmental impact such as offices, retail shops, residential buildings, and educational facilities were excluded.

Source: Map and analysis by MSCI ESG Research using MSCI Geospatial Asset Intelligence. Lobbying categories provided by Canbury Insights. (2024); Brandt, J. P. The extent of the North American boreal zone. Environ. Rev. 17, 101–161 (2009); Schipper, A. M. et al. Projecting terrestrial biodiversity intactness with GLOBIO 4. Glob. Change Biol. 26, 760–771 (2020).([52,53,54])

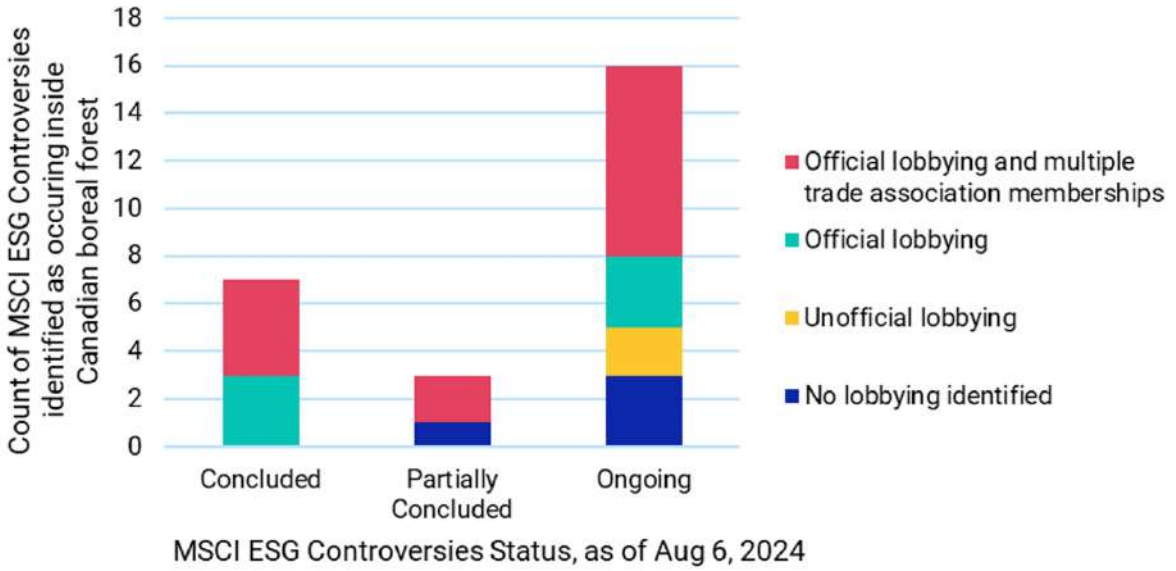
3. ACUTE IMPACTS

Acute impacts such as toxic spills, emissions, or destruction of a specific high conservation area can potentially also have devastating impacts on the local ecology.

Controversy cases in this analysis draw from a variety of sources including media reports, non-governmental organisations (NGOs), civil society groups, academia, regulators, and company disclosures. The MSCI Sustainability Institute searched for all controversies associated with publicly listed companies with assets located in Canada and filtered for cases that pertain to the forest. Of the 19 ongoing and partially concluded cases, 13 are associated with companies that were identified in the previous section with official trade association lobbying. Examining the now concluded as well as the 141 legacy, archived cases, the pattern remains the same: roughly two-thirds of controversy cases relating to the forest are associated with this set of identified companies.[iv]

Figure 3: Lobbyist activities for companies involved in controversies in the boreal

[iv] As of August 6, 2024



Notes: 167 controversies were identified as relevant to the forest, of which 26 were 'ongoing', 'partially concluded' or 'concluded' in the past year, according to the MSCI ESG Controversies database as of August 6, 2024, and the rest were considered archived (since 2010). These ongoing controversies related to various incidents and allegations including fines or investigations into toxic air emissions or spills into rivers, failures to protect wildlife, and opposition by indigenous and other communities to certain industry developments.[v]

Source: MSCI ESG Research based on the analytical set of companies with relevant assets in Canada per MSCI Geospatial Asset Intelligence, Lobbying categories provided by Canbury Insights (2024).[52]

4. ENVIRONMENTAL RISK MANAGEMENT PERFORMANCE

An environmental risk management performance analysis is intended to assess how well a company is able to mitigate the most important risks it faces i.e. the ability to mitigate disturbances in biodiversity sensitive areas or prevention of spills and pollution by heavy industry.

The environmental performance score reflects company's performance on its financially material environmental key issues, which vary from industry to industry, and can include Carbon Emissions, Toxic Emissions & Waste, Water Stress, Biodiversity & Land Use.[vi] Such assessment considers factors, including a company's strategies, policies, practices, and performance on each material key issue. Input data for the assessment comes from company disclosures as well as alternative sources such as regulatory datasets, NGOs, and media. This analysis is done at the global corporate level and is not specific to activities in Canada. More details on the methodology of these assessments can be found here: https://www.msci.com/esg-and-climate-methodologies

[v] The status of the controversies follow specific definitions: **Ongoing**: This status indicates that the controversy is currently active and unresolved. The issue is still under investigation or in the process of being addressed, and no final resolution has been reached i.e. the company has not implemented remediation steps to satisfy the claims of affected stakeholders. **Partially Concluded**: A case is considered partially concluded if there is reasonable evidence that the company has taken action towards the remediation of the relevant issue, while some concerns and disputes over the original claims may still be ongoing. **Concluded**: This status means that the controversy has been resolved. The issue has been addressed, and the company does not face pending legal action or ongoing criticism over the controversy. A controversy is archived one year after it is concluded.

[vi] https://www.msci.com/esg-and-climate-methodologies

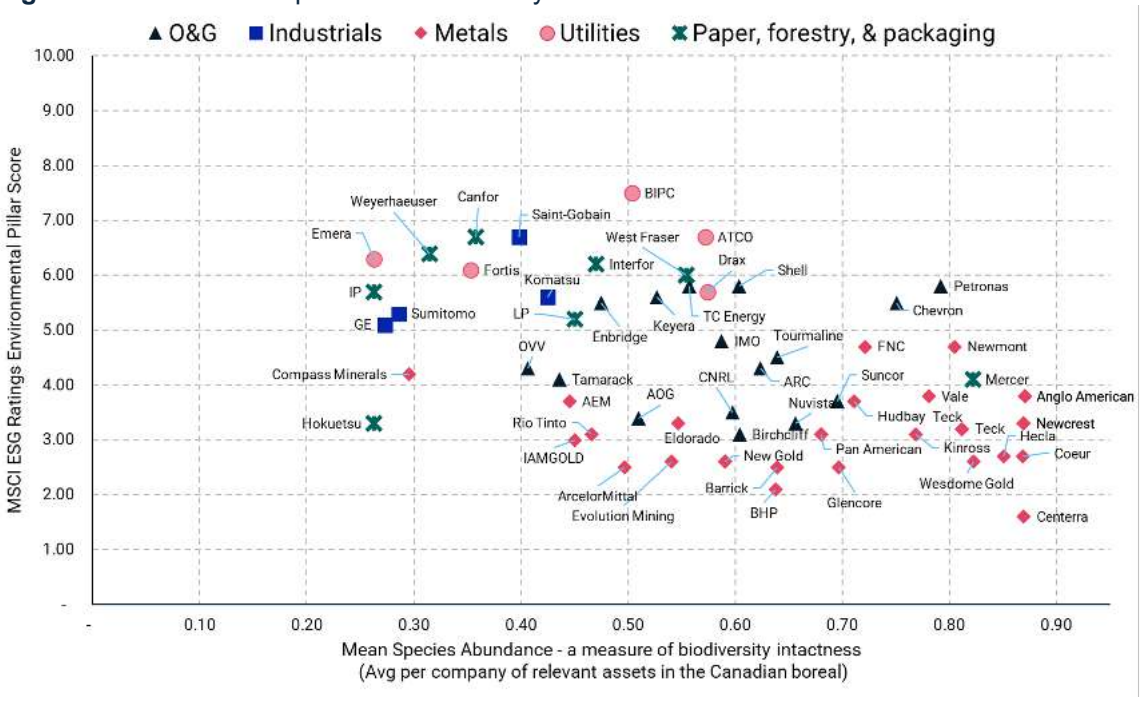
Mining companies tended to have lower environmental risk management performance scores due to their higher inherent risk exposure and higher frequency of environmental controversies.[vii] These companies also tended to operate in the more pristine or intact areas of the forest, as measured by the mean species abundance (MSA), a component of the GLOBIO model developed by the Netherlands Environmental Assessment Agency.[viii]

This was also the case among the companies listed on the lobbyist list i.e. mining companies tended to have the worst environmental performance, and their assets were located in areas with the highest MSAs on average. This highlights that these companies may face some of the highest risks of adverse environmental impacts or disturbance in the most pristine areas of the forest.

[vii] As of August 26, 2024. The Environmental Pillar Score reflects the assessment of companies' environmental risk management performance globally. The scores range from 0 (worst) to 10 (best) and are based on the weighted average score of the environmental key issues and weights – a unique combination per company chosen for their financial relevance. There are 13 potential environmental key issues including Carbon Emissions, Toxic Emissions & Waste, Water Stress, and Biodiversity & Land Use. The score reflects the performance of a company's environmental management relative to the inherent impact risks it faces, given the underlying assumption that adverse environmental impacts lead to greater financial risks.

[viii] As of August 26, 2024. The Mean Species Abundance (MSA) measure was based on the average of relevant assets for each company that were within the boundaries of the Canadian boreal forest. The MSA represents the intactness of an ecosystem, relative to an original state at a 1 km resolution. MSA value ranges between 0 and 1, where 1 implies the area is undisturbed, and 0 stands for a complete loss of the original biodiversity. MSA was developed as part of the Global Biodiversity Model for Policy Support (GLOBIO). The GLOBIO model is a calculation of local terrestrial biodiversity intactness through a pressure-impact relationship assessing six anthropogenic pressures on the environment: "land use, road disturbance, fragmentation, hunting, atmospheric nitrogen deposition and climate change." The GLOBIO model was developed by a group of scientists at the PBL Netherlands Environmental Assessment Agency.

Figure 4: Environmental performance of lobbyists in Canada's boreal forest



Note: The Environmental Pillar Score measures companies' management of and exposure to key environmental risks and opportunities, based on the weighted average of the underlying environmental key issues. Scores range from 10 (best) to 0 (worst). Alleged involvement in environmental controversies can lead to lower overall pillar scores. The MSCI ESG Ratings Environmental Pillar Score was based on an assessment of the company's global performance. The list comprised of 67 companies that were within both the list of companies with official lobbying efforts and within the coverage universe of the MSCI ESG Ratings, as of August 26, 2024.

Source: Analysis by MSCI ESG Research using MSCI Geospatial Asset Intelligence, List of companies with lobbying activity provided by Canbury Insights. Brandt, J. P. The extent of the North American boreal zone. Environ. Rev. 17, 101–161 (2009); Schipper, A. M. et al. Projecting terrestrial biodiversity intactness with GLOBIO 4. Glob. Change Biol. 26, 760–771 (2020). ([52,53,54])

For further insight into these findings, please visit https://www.msci.com/contact-us

ABOUT

CANBURY INSIGHTS

Canbury, a London-based sustainability consultancy, is working with institutional investors to address sustainability objectives, through the provision of decision-useful research on company supply chains.

In September 2023, Canbury was appointed by the United Nations Principles for Responsible Investment (PRI) to develop the company selection methodology for PRI's stewardship initiative on nature: Spring[6]. Canbury conducted an assessment of the policy frameworks on six global biomes and eight commodities that contribute to deforestation, assessing both the supply and demand sides of commodity production. Global investors, controlling £9Tn in assets, have signed-up to "Spring", encouraging them to put investor influence (engagement) on the identified companies to impact nature more positively.

Through the advanced application of AI, we map commodity trade flows, identify and assess policy frameworks, both demand and supply side, and company influence, through lobbying activities, and membership of trade associations.

MSCI SUSTAINABILITY INSTITUTE

The MSCI Sustainability Institute is on a mission to drive sustainable value through capital markets by tackling global challenges such as climate change. Our mission mirrors our belief that capital markets can help to build a better future for all of us.

We facilitate high-impact research and the exchange of knowledge to help investment professionals, academics, and policymakers address global challenges like climate change. By aligning data, analysis, policy and practice, we support informed decision-making that drives the creation of sustainable value.

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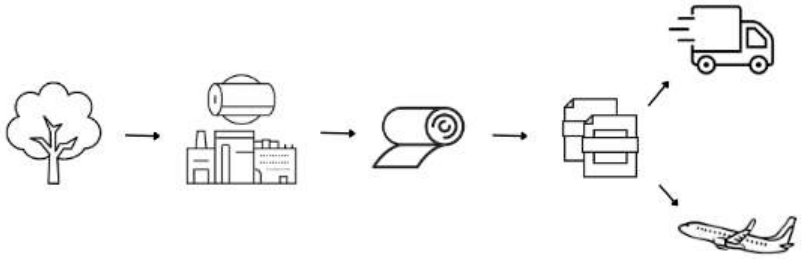
APPENDIX

INDUSTRIES DRIVING DEGRADATION

TIMBER, PULP AND PAPER

Pulp and paper are part of the larger forestry industry. The pulp and paper supply chain has 5 main stages: fibre sourcing (forestry), pulp production (at pulp mills), paper production (at paper mills), converting (at converting facilities), packaging, and distribution.



The largest international consumers of Canadian pulp and paper are the USA and China (see trade data here). Policies address sourcing of pulp and paper fibre (i.e. forest integrity), processing (e.g. regarding emissions related to processing chemicals and water), in addition to international trade agreements.

The Canadian timber sector (forestry, logging and solid wood product manufacturing) accounts for 64% of the forest sector's contribution to the Canadian economy in 2013[55]. The sector primarily harvests softwood species such as spruce, pine, fir, cedar, and hemlock. 168 million hectares are certified to third-party sustainability standards[56].

Canada is the world's second largest exporter of softwood lumber, with the majority of production concentrated in British Columbia, Quebec, and Ontario[57]. As of 2020, Canada's softwood lumber industry was valued at $10 billion; highly export-oriented with nearly 70% of production exported, with the majority of these exports to the U.S., China and Japan. This industry is expanding, with lumber production increasing 10.8% and sawmill output increasing 7.8% from January to February in 2024[58].

OIL AND GAS

Oil drilling and gas extraction is by far Canada's largest exporting industry. Commodities include crude oil, natural gas, and refined petroleum products (e.g. gasoline and diesel). Most of Canada's oil production is via oil sands (roughly 58%[59]). Oil sands, also known as tar sands, are a mixture of sand, clay, water, and a thick, viscous form of crude oil called bitumen, which requires extensive industrial processes for extraction and refining due to its low natural flowability). The wider supply chain includes exploration, drilling and production (upstream), transporting, processing, and storage (midstream), and if relevant, refining into final products (downstream). Most of Canada's oil and gas exports go to the USA.

Policies govern activities across the supply chain, from exploration to drilling, operations on First Nation reserve lands, specific projects like oil sands, related pollution, in addition to international trade agreements (United States-Mexico-Canada Agreement (USMCA)).

MINING

Commodities are diversified and include gold, coal, iron ore, potash, copper, nickel, zinc, lead, uranium, diamonds, sand and gravel, other metals (e.g. aluminium, molybdenum), and other non-metallic minerals (see Canada's mining and mineral map here).

Largest international consumers of Canadian minerals include USA, UK, China, and Japan. Consumers vary significantly with the mineral; for example, most of Canada's cobalt is exported to Norway.

Policies generally cover minerals and mining as a whole rather than specific commodities, however there are policies specific to critical minerals, which include lithium, nickel, cobalt, graphite, and zinc. Whilst there are federal-level policies, provinces have their own specific polices that govern mining activities, in addition to Indigenous mining agreements (see the map here).

ACRONYMS

Acronym	Term
BSA	Biodiversity Sensitive Area
CEAA	Canadian Environmental Assessment Act
CFSA	Crown Forest Sustainability Act
COSEWIC	Committee on the Status of Endangered Wildfire in Canada
CSDDD	Corporate Sustainability Due Diligence Directive
CSRD	Corporate Sustainability Reporting Directive
EUDR	EU Regulation on Deforestation-free Products
EU REDD	EU Reducing Emissions from Deforestation and forest Degradation in developing countries
FAO	Food and Agriculture Organization of the United Nations
FSC	Forest Stewardship Council
GSN	Global Safety Net
HREDD	Human Rights and Environmental Due Diligence
IAA	Impact Assessment Act
IUCN	International Union for Conservation of Nature
RPE	Responsible Political Engagement
SARA	Species at Risk Act
TNFD	Taskforce on Nature-related Financial Disclosures
UNDRIP	The UN Declaration on the Rights of Indigenous Peoples
UNGPs	United Nations Guiding Principles on Business and Human Rights

TRADE ASSOCIATION ACRONYMS

Trade association	Acronym
Alberta Forest Products Association	AFPA
Association for Mineral Exploration	AME
Business Council of Canada	BCC
Canada China Business Council	CCBC
Canadian Association of Petroleum Producers	CAPP
Canadian Consumer Speciality Products Association	CCSPA
Canadian Gas Association	CGA
Council of Forest Industries	COFI
Forest Products Association of Canada	FPAC
Mining Association of British Columbia	MABC

Mining Association of Canada	MAC
Ontario Forest Industries Association	OFIA
Ontario Mining Association	OMA
Prospectors and Developers Association of Canada	PDAC
Quebec Forest Industry Council	QFIC

TRADE ASSOCIATION DESCRIPTIONS

Alberta Forest Products Association (AFPA)

Alberta Forest Products Association (AFPA) represents over 40 members of the Alberta forest industry. The non-profit association connects with members, communities, government, and other Alberta industry representatives, including teachers, students, and NGOs. AFPA provides resources, guidance, and training to support its members and the forest sector. Members include small businesses and large corporations that produce pulp and paper, lumber, panel board, and manufactured wood products. The association helps companies adhere to industry and sustainability regulatory standards.

https://albertaforestproducts.ca/about/

Association for Mineral Exploration (AME)

The Association for Mineral Exploration (AME) serves as a representative for the mineral exploration and development industry in British Columbia. AME's membership comprises nearly 5,000 individuals and organisations from British Columbia and the global mining sector. The association works to support the industry through initiatives, policy development, event organisation, and provision of tools. These efforts aim to facilitate responsible project development.

https://amebc.ca/

Business Council of Canada

The Business Council of Canada represents interests across industry sectors and regions in Canada. The organisation states its purpose as working towards a better future for Canadians. BCC supports 170 members, which employ more than 2 million people and account for 50% of Canada's private sector GDP contribution. The association engages with member CEOs, stakeholders, government representatives, and media to promote policy and advocate for its priority initiatives. BCC offers commentary, analysis, and policy recommendations based on data.

https://www.thebusinesscouncil.ca/

Canadian Association of Petroleum Producers (CAPP)

The Canadian Association of Petroleum Producers (CAPP) functions as an industry association representing oil and gas companies across Canada. CAPP describes itself as non-partisan and research based. Member companies produce nearly three quarters of Canada's annual oil and natural gas output and contribute to about 450,000 direct and indirect jobs. CAPP interacts with government on industry-related issues. The association aims to address demand for energy that meets regulatory standards, focusing on Canada and global markets.

https://www.capp.ca/en/

Canadian Consumer Specialty Products Association (CCSPA)

The Canadian Consumer Specialty Products Association (CCSPA) represents 42 member companies in the consumer specialty products industry. The association works to promote policies, regulations,

and legislation based on risk assessment and scientific principles. CCSPA aims to support the interests of its members within this framework.

https://www.ccspa.org/

Canadian Gas Association

The Canadian Gas Association (CGA) serves as a representative for Canada's natural gas delivery industry. Its membership includes distribution companies, equipment manufacturers, and transmission companies. CGA works to enhance knowledge about natural gas, promote efficiency and innovation, and improve regulatory engagement, safety and integrity management, and energy service delivery in Canada. The association develops training programs to encourage discussions on energy policy and increase understanding of natural gas.

https://www.cga.ca/

Council of Forest Industries (COFI)

The Council of Forest Industries (COFI) represents most lumber, pulp and paper, and manufactured wood producers in British Columbia. COFI interacts with government, First Nations, communities, labour, and other partners to support a forest industry that contributes to British Columbia's economy. Member companies include small, specialised operators and large publicly-traded companies. COFI also provides Quality Control services to non-member companies.

https://cofi.org/about-us/

Forest Products Association of Canada (FPAC)

The Forest Products Association of Canada (FPAC) represents producers of wood, pulp, paper, and wood-based bioproducts in national and international affairs related to government, trade, and environment. FPAC member companies work with Indigenous leaders, government bodies, and other stakeholders to develop plans for forest health, workforce support, and community and environmental sustainability. The association seeks to cooperate with decision makers to support forest products companies' progress and objectives.

https://www.fpac.ca/about

Mining Association of British Columbia (MABC)

The Mining Association of British Columbia (MABC) represents companies involved in steelmaking coal, metal and mineral production, smelting, and advanced development in British Columbia. MABC's membership includes both BC-based and international mining companies. The association focuses on areas such as critical minerals, permitting and authorisations, Indigenous reconciliation, carbon pricing, and transboundary mining issues.

https://mining.bc.ca/

Mining Association of Canada (MAC)

The Mining Association of Canada (MAC) functions as a representative for the Canadian mining industry at national and international levels. MAC communicates with governments about policies that affect the mining sector and informs the public of mining's role. The association's members account for most of Canada's production of base and precious metals, uranium, diamonds, metallurgical coal, mined oil sands, and industrial minerals.

https://mining.ca/

Ontario Mining Association

The Ontario Mining Association (OMA) represents the mining industry in Ontario. OMA works with governments and community groups on industry-related issues. The association acts as a voice on public policy and opinion, aiming to address challenges to mining operations and promote mining's role in Ontario's economy. OMA supports its members through work on provincial policies, relationship building, research production, and efforts to increase public awareness about the mining sector.

https://oma.on.ca/en/index.aspx

Prospectors and Developers Association of Canada (PDAC)

The Prospectors & Developers Association of Canada (PDAC) represents 7,800 members from the global mineral exploration and development community. PDAC works to support the mineral sector. The association's focus areas include land access for prospecting, northern development and infrastructure, geoscience and innovation, Indigenous affairs, regulatory matters, responsible exploration practices, the mineral sector's role in low carbon technologies, capital access, and workforce skills development.

https://www.pdac.ca/home

The Quebec Forest Industry Council (CIFQ)

The Quebec Forest Industry Council (CIFQ) serves as a representative body for Quebec's forest industry. Its membership comprises over 94 companies from various segments of the forest sector, with most producing softwood and hardwood lumber and engineered wood products, and 11 manufacturers of pulp, paper, cardboard, and panels. CIFQ includes a further 130 associate members from various sectors. The organisation provides support to its members on industry issues and engages with government officials, the broader forest sector, and the general public.

https://cifq.com/fr/cifq/a-propos-1

COMPANY LONG LIST

Table 8: Company long-list

Company (parent company)	Trade association(s)
3M Canada Company (3M)	CCSPA
ABB Group	OMA
Advantage Energy Ltd.	CAPP
Agnico Eagle Mines Ltd.	OMA, PDAC, MAC
Alamos Gold Inc.	OMA, PDAC
Alberta-Pacific Forest Industries Inc. (Hokuetsu Corporation)	AFPA, FPAC
Anglo American PLC	MABC
ARC Resources Ltd.	CAPP
ArcelorMittal Exploitation Minière Canada et ArcelorMittal Infrastructure Canada (ArcelorMittal S.A.)	MAC
Argonaut Gold Inc.	OMA
Artemis Gold Inc.	MABC
ATCO Gas & Pipelines Canadian Utilities Ltd. (ATCO Ltd.)	CGA
AtkinsRéalis	CCBC, MAC
AV Group NB Inc. (Aditya Birla Group)	FPAC
Avalon Advanced Materials Inc.	MAC, OMA

B2Gold Corp.	MAC
Barrick Gold Corporation	MABC, MAC, OMA
BHP	MAC
Birchcliff Energy Ltd.	CAPP
BlackRock	BCC
BluMetric Environmental Inc.	PDAC, OMA
Boart Longyear	OMA
Brookfield Infrastructure Partners L.P. (Brookfield Asset Management Ltd.)	BCC
Calibre Mining Corp.	MAC
Cameco Corp.	OMA, BCC, MAC
Canadian Gypsum Company Inc. (Saint-Gobain)	OMA
Canadian National Railway Company	BCC
Canadian Natural Resources Ltd.	CAPP, MAC
Canadian Tire Corporation Ltd.	BCC
Canfor Corporation	AFPA, COFI, FPAC
Celeste Industries Corporation (Illinois Tool Works)	CCSPA
Cementation Canada Inc. (Murray & Roberts Holdings Ltd.)	OMA, MAC
Centerra Gold Inc.	MABC
CertainTeed Gypsum Canada Inc. (Saint-Gobain)	MABC
Chevron Canada Resources Ltd. (Chevron Corporation)	CAPP
CIBC	BCC
Clean Air Metals Inc.	OMA
Clorox Company of Canada, Ltd. (The) (Procter & Gamble)	CCSPA
Coeur Mining – Silvertip (Coeur Mining Inc.)	MABC
Compass Minerals International Inc.	OMA
CONIFEX Timber Inc.	COFI
Copper Fox Metals Inc.	MABC
Copper Mountain Mining Corporation	MABC, MAC
Covia Canada Ltd. (Covia Holdings Corporation)	OMA
Critical Resources Ltd.	OMA
Cummins Canada ULC (Cummins Inc.)	OMA
De Beers Canada Inc. (Anglo American)	OMA, MAC
DMC Mining Services Ltd. (KGHM Polska Miedz S.A.)	OMA
DRA Americas Inc. (DRA Global Limited)	OMA
Drax Global	AFPA
Dumas Contracting Ltd. (CIMIC Group)	OMA
Dupont Canada Inc. (DuPont de Nemours, Inc)	BCC
Eastman Chemical Company	CCSPA
Ecolab Ltd.	CCSPA
Eldorado Gold Corp.	MAC, OMA
Emera Inc.	BCC
Enbridge Inc.	CAPP, CGA

Energizer Holdings, Inc.	CCSPA
EPC Canada (Groupe EPC)	OMA
Equinox Gold Corporation	MAC
Evolution Mining Ltd.	OMA
Exploits Discovery Corporation	PDAC
Exponent, Inc.	CCSPA
First Mining Gold Corp.	OMA
First Quantum Minerals Ltd.	MAC
FKC Lake Shore (FLSmidth)	OMA
FLSmidth & Co.	OMA
Foran Mining Corp.	MAC
Fort Hills Limited Partnership (Suncor Energy)	MAC
FortisBC & FortisBC Energy Inc. (Fortis Inc)	CGA
Franco-Nevada Corporation	PDAC
Freehold Royalties Ltd.	CAPP
Frontier Lithium Inc.	OMA
G Mining Ventures Corporation	PDAC
Galore Creek Mining Corporation (Teck Resources and Newmont Corporation Joint Corporation)	AME
Gazifère Inc. (Enbridge Inc)	CGA
GE Canada (General Electric Company)	BCC
Giga Metals Corporation	MABC
Givaudan Fragrances (Givaudan S.A.)	CCSPA
Glencore Canada Corporation (Glencore Plc)	MABC, OMA, MAC
Gold Mountain Mining Corp.	MABC
Golder Associates Ltd. (WSP Global Inc)	MAC
Green Technology Metals Ltd.	OMA
Greenstone Gold Mines (Equinox Gold Corp.)	OMA
Hecla Mining Company	MABC, MAC
Henkel Consumer Goods Canada (Henkel AG&Co)	CCSPA
Hudbay Minerals Inc.	MAC
IAMGOLD Corporation	OMA, MAC
Impala Canada Ltd. (Impala Platinum Holdings Limited)	OMA
Imperial Metals Corp. (Imperial Metals Corporation)	MABC
Imperial Oil Resources Ltd. (ExxonMobil)	CAPP
Intact Financial Corporation	BCC
Interfor	OFIA, FPAC, QFIC
International Paper	FPAC, AFPA
Intertek Assuris Inc. (Intertek)	CCSPA
Iron Ore Company of Canada (Rio Tinto PLC)	MAC
Keyera Corp.	BCC
KGHM International Ltd. (KGHM Polska Miedz S.A.)	OMA
Kinross Gold Corporation	MAC

Komatsu Ltd.	OMA
Kutcho Copper Corp.	MABC
Lake Shore Gold Corp. (Pan American Silver Corp.)	OMA
Louisiana-Pacific Corporation	COFI, QFIC
LP Building Solutions Corp.	FPAC
Lundin Mining Corporation	MAC
Manulife Financial Corporation	BCC
Marathon Gold Corp.	MAC
Marsh Ltd. (Marsh McLennan Companies)	MAC
McEwen Mining Inc.	MAC, OMA
McLaughlin Gormley King Company (Sumitomo Chemical Co.)	CCSPA
Mercer International Inc.	FPAC, AFPA, COFI
Mondi Hinton Inc. (Mondi Group)	FPAC
Moneta Gold Inc.	MAC
National Bank of Canada	BCC
New Gold Inc.	OMA, MABC
Newcrest Mining Limited	MABC
Newmont Corporation	MABC, OMA, MAC
Nexgen Energy Ltd.	MAC
Niobay Metals Inc.	OMA
Northwest Copper Corp.	AME
NorZinc Ltd.	MAC
NuVista Energy Ltd.	CAPP
Ovintiv Inc.	CAPP
Pacific Ridge Exploration Ltd.	AME
Pan American Silver Corporation	MAC
Parsons Corp.	MAC
Perpetual Energy Inc.	CAPP
Pine Point Mining Limited (Osisko Metals Inc)	MAC
PNE	OMA
Power Corporation of Canada	BCC
Procter & Gamble Inc.	CCSPA
Progressive Planet Solutions Inc.	MABC
QC Copper and Gold Incorporated	PDAC
Reckitt	CCSPA
Rio Tinto	MABC, MAC, CMA
Rock Tech Lithium Inc.	MAC
Scotiabank	PDAC
Scottie Resources Corporation	AME
Scotts Canada Ltd. (Scotts-Sierra Investments)	CCSPA
Seabridge Gold Inc.	MABC
Shell Canada Ltd. (Shell PLC)	BCC, CAPP
Sherritt International	MAC

Sherwin-Williams	CCSPA
Sika Ltd.	MAC
Skeena Resources Ltd.	AME, MABC
SMS Equipment Inc. (Sumitomo Corporation)	OMA, MAC
Stantec Consulting Ltd.	OMA, MAC
Stepan Canada Inc. (Stepan Company)	CCSPA
Suncor Energy Inc.	CAPP, MAC
SVP E&P Services (Suncor Energy Inc)	CAPP
Talisker Resources Ltd.	MABC
Tamarack Valley Energy Ltd.	CAPP
Taseko Mines Limited	MABC
TC Energy Corporation	CGA, BCC
Technology Sciences Group, Inc. (Science Group)	CCSPA
Teck Resources Ltd.	MAC, AME, PDAC
Tourmaline Oil Corp.	CAPP
Vale Base Metals (Vale S.A.)	OMA, MAC, PDAC
Vanderwell Contractors (1971) Ltd.	AFPA
Vital Metals Ltd.	MAC
Volta Metals Ltd.	PDAC
Wesdome Gold Mines Ltd.	OMA
West Fraser Mills Ltd. (West Fraser Timber Co. Ltd.)	AFPA
West Fraser Timber Co. Ltd.	OFIA, COFI, FPAC, QFIC, AFPA
West Red Lake Gold Mines Ltd.	OMA
Western Copper & Gold Corp.	MABC, MAC
Western Forest Products Inc.	COFI
Weyerhaeuser Company Ltd.	FPAC, OFIA, AFPA, COFI
Wood Environment & Infrastructure Solutions Canada Ltd. (Wood PLC)	OMA
Wood PLC	MAC
WSP Group Ltd.	MAC, OMA

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