

FSC National Risk Assessment

For Canada

DEVELOPED ACCORDING TO PROCEDURE FSC-PRO-60-002 V3-0

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Summary of Risk

Indicator	Risk Designation
Category 1: Illegally harvested wood	
1.1	Low Risk for Canada
1.2	Low Risk for Canada
1.3	Low Risk for Canada
1.4	Low Risk for Canada
1.5	Low Risk for Canada
1.6	Low Risk for Canada
1.7	Low Risk for Canada
1.8	Low Risk for Canada
1.9	Low Risk for Canada
1.10	Low Risk for Canada
1.11	Low Risk for Canada
1.12	Low Risk for Canada
1.13	Low Risk for Canada
1.14	Low Risk for Canada
1.15	Low Risk for Canada
1.16	Low Risk for Canada
1.17	Low Risk for Canada
1.18	Low Risk for Canada
1.19	Low Risk for Canada
1.20	Low Risk for Canada
1.21	Low Risk for Canada
Category 2: Wood harvested in violation of traditional and human rights	
2.1	Low Risk for Canada
2.2	Low Risk for Canada
2.3	Specified Risk for Canada
Category 3: Wood from forests where high conservation values are threatened by management activities	
3.0	Low Risk for Canada
3.1	<p>Specified Risk for the following ecoregions:</p> <ul style="list-style-type: none"> • Southern Great Lakes forest • Eastern Great Lake lowland forest • Central Pacific coastal forest • Eastern Canadian forest • New England Acadian forest • Puget Lowland forest • Eastern Canadian Shield taiga • Central Canadian Shield forests • Eastern forest-boreal transition • Midwestern Canadian Shield forest • Mid-Continental Canadian forests • Southern Hudson Bay taiga • Northern Canadian Shield taiga • Canadian Aspen forests and parklands • Alberta-British Columbia foothills forests • Muskwa-Slave Lake forests • Northwest Territories taiga • Fraser Plateau and Basin complex • Northern transitional alpine forests • Central British Columbia Mountain forests • British Columbia mainland coastal forests

	<ul style="list-style-type: none"> • Northern Cordillera forests • Alberta Mountain forests • North Central Rockies forests • Okanagan dry forests <p>Low Risk for the following ecoregions:</p> <ul style="list-style-type: none"> • Queen Charlotte Islands • Gulf of St. Lawrence lowland forests • Western Great Lakes forests • Cascade Mountain leeward forests • Newfoundland Highlands forests • Interior Alaska-Yukon taiga • South Avalon-Burin oceanic barrens • Yukon Interior dry forests
3.2	Specified Risk for 91 IFLs identified in Table 5. Low Risk for all other IFLs identified in Tables 2, 3 and 4.
3.3	Low Risk for Canada
3.4	Specified Risk for Yukon and Northwest Territories. Low Risk for all provinces, and Nunavut
3.5	Low Risk for Canada
3.6	Low Risk for Canada
Category 4: Wood from forests being converted to plantations or non-forest use	
4.1	Specified Risk for the following Reconciliation Units: <ul style="list-style-type: none"> • RU 12 – Quebec Mixedwood Plains • RU 34 – Alberta Boreal Plains • RU 39 – British Columbia Boreal Plains Low Risk for all other Reconciliation Units.
Category 5: Wood from forests in which genetically modified trees are planted	
5.1	Low Risk for Canada

Preamble

Background

In 1997, FSC introduced the concept of 'controlled wood' - a new concept which was used to describe the successful avoidance of sources previously termed 'controversial'. One of the main goals of introducing controlled wood into the FSC system was to meet the demand for FSC material in the marketplace, while still avoiding unacceptable sources. Today, FSC Controlled Wood is defined as material from acceptable sources that can be mixed with FSC-certified material in products that carry the FSC Mix label.

FSC risk assessments are used to determine the risk of an organization obtaining material from unacceptable wood sources when sourcing controlled wood. For companies with, or seeking, chain of custody certification that need to source controlled wood from non-FSC-certified suppliers, risk assessments must be used. To ensure that risk assessments can be applied locally, taking into consideration countries' specific social and geographical settings, National Risk Assessments (NRAs) are being developed globally, and will replace risk assessments developed by companies.

Ultimately, the goal of Canada's NRA is to assess risk of non FSC-certified forest management activities in Canada against the 5 categories of controlled wood requirements. The 5 categories of unacceptable material are:

1. Illegally harvested wood;
2. Wood harvested in violation of traditional and human rights;
3. Wood harvested in forests in which high conservation values (HCVs) are threatened by management activities;
4. Wood harvested in forests being converted to plantations or non-forest use;
5. Wood from forests in which genetically modified trees are planted.

Each category includes one or more indicator(s) that evaluate specific aspects of the category.

Risk is designated as either 'Low' or 'Specified', and is defined as:

- **Low Risk:** A conclusion, following a risk assessment, that there is negligible risk that material from unacceptable sources can be sourced from a specific geographic area.
- **Specified Risk:** A conclusion, following a risk assessment, that there is a certain risk that material from unacceptable sources may be sourced or enter the supply chain from a specific geographic area.

The thresholds for determining Low or Specified Risk are identified for each category and indicator throughout the FSC-PRO-60-002a document.

Risk is designated for a specific spatial scale for each category and indicator. The spatial scale varies based on the attributes of the indicator, the availability of information to assess the indicator, and most importantly, the ability to make a homogenous risk determination at each spatial scale.

What the NRA Risk Designation means for FSC Chain-of-Custody Certificate Holders

If an area is designated as 'Low Risk' for all 5 categories, wood sourced from that area may be considered acceptable as 'controlled material' by the FSC Certificate Holder, and may be used as inputs to their FSC product groups (subject to FSC-STD-40-005 V3 requirements).

If an area is designated as 'Specified Risk', then the Certificate Holder must either:

- Not source from the Specified Risk area; or
- Implement control measures to mitigate the risk identified in the risk assessment

Control Measures for all specified risk areas are proposed in this NRA. If the Certificate Holder is able to demonstrate during the audit process that the control measures have been met, the wood sourced from the area can be considered acceptable as 'controlled material'.

It is important to note that the NRA does not apply to FSC-certified forest areas. FSC-certified forests have been specifically and rigorously evaluated to the applicable Forest Management standard, which include thresholds above and beyond that of the five controlled wood categories. Rather, the NRA applies to any non FSC-certified forests in Canada.

FSC Canada's NRA Development Process

The development of the National Risk Assessment for Canada began in 2011 with the passing of Motion 51 to strengthen the Controlled Wood system. This was followed by the formation of the initial Controlled Wood Working Group in 2012.

Between 2012 and 2015, FSC International underwent the process of drafting policies regarding the development and approval of Controlled Wood National Risk Assessments (FSC-PRO-60-002), a National Risk Assessment Framework (FSC-PRO-60-002a), and drafting a new version of the Controlled Wood standard (FSC-STD-40-005 V3).

However, it was not until 2015, following more clear guidance from FSC International on the process of developing a NRA that the Controlled Wood Working Group was revitalized and renamed the NRA-Working Group. The Working Group – a chamber-balanced group of 8 individuals representing each of FSC Canada's four chambers (Aboriginal, Economic, Environmental and Social) – filled the mandate of directing and refining the development of the NRA to ensure it took into consideration Canada's specific social, geographic and legislative context.

Concurrently, work on the centralized Risk National Assessment (cNRA) for Canada had begun. The role of the cNRA was to fill an immediate need for a robust Risk Assessment that allowed efficient implementation of the new NRA framework. The cNRA was produced by various consultants for FSC International who managed and approved this process. The cNRA Categories 1,2 and 5 were approved in 2015 and Categories 3 and 4 were developed in 2016, but never formally approved.

With the NRA Working Group in place, and the development of the cNRA mostly complete, FSC Canada more actively began developing Canada's NRA in 2016. The basis for much of the NRA stemmed from the outcome of the cNRA, notably for Categories 1, 2, 4 and 5. Category 3 underwent more notable refinement and divergence from the original cNRA, as did Indicator 2.3.

Draft 1 was submitted to FSC International for review in January 2018, followed by the release of Draft 1 for 60-day public consultation on March 1, 2018. Following several months of stakeholder feedback review, Draft 2 was released for 30-day public consultation on October 15, 2018. A final draft was submitted to FSC International on January 31, 2019, which was supported by the Working Group and endorsed by the FSC Canada Board of Directors for all controlled wood categories and indicators, with the exception of Indicator 2.3.

Refer to the publicly available *FSC Canada NRA Stakeholder Consultation Report* for more details regarding the NRA development process, as well as a summary of comments received during consultation periods and changes made as a result of the feedback from stakeholders and interested parties.

Various individuals participated as Working Group members since 2015, including:

- Laadaa Colin Richardson, Haida Nation (Aboriginal Chamber)
- Sean Brennan, Haida Nation (Aboriginal Chamber)
- David Flood, Individual (Aboriginal Chamber)
- Conrad Yarmoloy, Alberta-Pacific Forest Industries Inc. (Economic Chamber)
- Julee Boan, Ontario Nature (Environmental Chamber)
- Catharine Grant, Greenpeace Canada (Environmental Chamber)

- Vincent Lukacs, Unifor (Social Chamber)
- Cameron Shiell, Private and Public Workers of Canada (Social Chamber)

The Working Group members involved in the final drafting of the NRA (2018-2019) were:

- Chris Craig, South Nation Conservation Authority (Aboriginal Chamber)
- Darren Haines, Ratcliffe & Company LLP (Aboriginal Chamber)
- Florence Daviet, Canadian Parks & Wilderness Society (Environmental Chamber)
- John Cathro, Cathro Consulting Ltd. (Environmental Chamber)
- Charlene Strelaeff, Zellstoff Celgar LP (Economic Chamber)
- Etienne Bélanger, Forest Products Association of Canada (Economic Chamber)
- Nicolas Blanchette, INCOS Strategies (Social Chamber)
- Satnam Manhas, Ecotrust Canada (Social Chamber)

FSC Canada is grateful for the contribution of all Working Group members throughout the NRA development process. FSC Canada would also like to acknowledge the input from various experts, as well as the contribution of hundreds of stakeholders, interested and affected parties throughout this process. The lists of experts contacted for Categories 3 and 4 are noted within the risk assessment. A summary of stakeholders, interested and affected parties solicited during consultation as well as who provided feedback on drafts 1 and 2 is summarized in the *FSC Canada NRA Stakeholder Consultation Report*.

Challenges and Limitations

Data Quality & Availability

Key challenges in undertaking this draft NRA were the geographic size of Canada, environmental variation and regional contexts. Accessing relevant, up-to-date, consistent and publicly available data for all regions of the country that specifically address the risk elements of the controlled wood categories and indicators proved to be difficult in several instances. In some cases, very detailed data was available, but only for a specific region or a few provinces in Canada. As a result, proxies were often necessary to fill gaps where relevant data was not consistently available. Overall, best efforts were made to ensure the best available information was used in the assessment, given the spatial scale for evaluation. Future updates and revisions to the NRA will assist in incorporating the latest information and/or improved methodology for identifying and assessing risk.

Scale of Assessment & Indigenous Rights

Assessing the risk of violation of Indigenous rights (2.3), as well as the effectiveness of mechanisms to identify and mitigate threats to Indigenous values (e.g. HCV5 and HCV6) in the NRA was particularly challenging, primarily due to the scale of assessment. Legislation that acknowledges and protects Indigenous rights is established at the national level, however implementation itself occurs at the local and community level. It was outside the scope of this assessment to determine the risk to indicators 2.3, 3.5 and 3.6 at a local scale. The working group acknowledges the incompatibility between the scale of this assessment and the reality of the application of Canada's legal framework for Indigenous People and have provided recommendations to the FSC Canada Board of Directors on the implementation of a specific strategy to improve engagement with Indigenous communities as a means to address the gaps within the existing controlled wood framework. A copy of the NRA Working Group letter to the Board of Directors is included in the supplementary documentation for Draft 2 of the NRA.

Negligible Risk vs. No Risk

An important focusing concept of the NRA Working Group was 'negligible risk'. That is, concluding that an indicator or area is considered Low Risk does not mean that there is no risk. Rather, a Low Risk designation means that there is negligible risk of violation or threats to the value under consideration. The threshold for 'negligible' is inherently subjective, especially given the large scale and context to which this NRA applies. The NRA Working Group made best efforts to balance the Canadian context with the precautionary approach when determining risk.

Complexity in Supply Chains

One of the challenges when designing control measures to mitigate the identified risks was taking into account the complexity in supply chains. In some cases, a FSC Certificate Holder may source non-certified material through an indirect chain of suppliers (i.e. not directly from the forest). This is common for pulp mills that source non-FSC chips and co-products¹ from various other mills. In several cases, the range in supply areas can encompass several hundred thousand hectares, as well as dozens of suppliers, forests and communities. The NRA Working Group recognized that it may be difficult for Certificate Holders using the controlled wood system to confirm, beyond the first point of purchase, that sub-suppliers meet the requirements of control measures at the forest-level. Best efforts were made to take this complexity and in some cases, limited sphere of influence into account when designing control measures, while still ensuring that the control measures adequately mitigate the identified risk. This is reflected in the 'menu' approach to mandatory control measures, with some control measures addressing forest-level demonstration of risk mitigation, and others addressing non forest-level demonstration of risk mitigation.

Complaint Mechanisms

Although not specifically addressed in the NRA framework, the complaint mechanism that is a part of the controlled wood standard remains applicable to any party who wishes to bring forth a complaint regarding the risk designations identified in the NRA (refer to FSC-STD-40-005 V3-1 section 7). It is important to highlight that a determination of Low Risk does not preclude external parties (e.g. stakeholders, rights holders, interested parties, etc.) from identifying and submitting a complaint regarding the risk designations.

In the event of a complaint regarding the content of the NRA, the following Complaint Investigation Process will be followed:

1. FSC Canada acknowledges receipt of complaint within 2 weeks of receipt of complaint.
2. FSC Canada creates a complaint file establishing a timeframe and scope of complaint investigation, and a review team, if required.*
3. Evidence provided by the complainant is reviewed by the FSC Canada Review Team against the NRA framework requirements.
4. The review team makes a recommendation as to whether the complaint warrants consideration as a part of the NRA review and revision process. If the recommendation is accepted, the details of the complaint and evidence to support the complaint will be considered during the next NRA review and revision process.
5. FSC Canada will notify the complainant, in writing, of the decision taken.

*A customized complaint investigation processes may be developed for complaints or disputes regarding Indicator 2.3 : The rights of Indigenous Peoples are upheld.

FSC Canada's website includes more information regarding the complaint process.

NRA Maintenance and Revision

The default period of validity for the NRA is five years. FSC Canada will collect information and feedback related to the NRA during the period of validity.

Minor amendments to the NRA may occur at any time during this five-year period on account of information brought forward to FSC Canada, including:

- update of links of information sources;
- addition of information sources;
- updates on account of typographic or translation mistakes.

¹ Co-products : Output produced during the process of primary manufacturing of another (principal) product from the same inputs (e.g. sawdust and chips generated during lumber processing). (FSC-STD-40-005 V3-1)

More significant and urgent amendments may also be made during the period of validity resulting in changes to risk determination and/or mandatory control measures if clear and undisputable evidence requiring a change is presented to FSC Canada. Examples of clear and undisputable evidence may include, but are not limited to:

- changes in legislation;
- newly published scientific evidence;
- results of a complaint investigation.

Any changes to the NRA will result in a new version number (e.g. V1-1, V2-0), and are summarized at the end of this document.

All revisions to the NRA will follow the requirements outlined in FSC-PRO-60-002 V3-0: *The Development and Approval of FSC National Risk Assessments*.

Controlled Wood Category 1: Illegally Harvested Wood

Overview

Geographical Scope: The Canada NRA was done at a national level with examples from the provinces included for illustrative purposes.

Nearly 90 per cent of Canada's forests are on public lands, owned and managed on behalf of Canadians by the provincial and territorial governments. Almost two per cent of forest land is under federal jurisdiction and two per cent is owned and managed by Aboriginal peoples. The remaining six per cent of forest land is on private property.

The federal government has legislative authority over forest resources where those resources affect, or are affected by, matters related to: the national economy, trade and international relations; federal lands and parks; and the government's constitutional, treaty, political and legal responsibilities for Aboriginal peoples.

The country's ten provinces and three territories (the territory of Nunavut has little to no forested lands) that contain close to 90 per cent of Canada's forest land, have legislative authority over the conservation and management of forest resources on these public lands. This authority affords the provincial and territorial governments the ability to regulate and enforce how Canada's forests are managed.

Detailed files on all applicable legislation for each province, as well as forest classifications, permit types and how timber monitoring is done is available at <http://www.sfmcanada.org/en/forest-products/legal-forest-products>.

A risk designation is provided for each indicator, and is based on the comprehensive analysis of the sources and evidence listed for each indicator. "Low risk" is defined as:

A conclusion, following a risk assessment, that there is negligible risk that material from unacceptable sources can be sourced from a specific geographic area.

NOTE: 'Low risk' as determined by FSC is synonymous with 'negligible risk' as defined by Regulation (EU) No 995/2010 of the European Parliament and of the Council of 20 October 2010 laying down the obligations of operators who place timber and timber products on the market (known as the 'EU Timber Regulation'). (FSC-PRO-60-002a)

A comprehensive list of applicable laws and regulations related to the 21 indicators of this Category can be found in Annex A of the FSC National Forest Stewardship Standard of Canada (FSC-STD-CAN-01-2018 V1-0).

All federal and provincial legislation can be accessed via the Canadian Legal Information Institute (CanLII) at: <https://www.canlii.org>.

Sources of Legal Timber in Canada

Forest classification type	Permit/license type	Main license requirements (forest management plan, harvest plan or similar?)	Clarification
Public (crown) land	<p>In every province and territory, a permit or licence is required to harvest trees on crown land. The names of these permits and licences vary based on the length of the license term (e.g. 20-year Sustainable Forest Licence vs. up to 10-year Forest Resource Licence in Ontario), the volume harvested, or the destination of material harvested (fuelwood for personal use vs. commercial harvesting, etc.).</p> <p>Only Prince Edward Island does not allocate long-term timber rights for public land.</p> <p>A permit is also required to transport wood products, and is either included in the harvesting permit/licence or is a separate permit (e.g. Timber Mark in British Columbia or Authority to Haul in Ontario).</p>	<p>Forest Management Plan</p> <p>Annual Operating Plan</p>	<p>Comprehensive details regarding the types of licences and requirements for each province & territory are summarized at: https://www.sfmcanada.org/en/forest-products/legal-forest-products</p>
Private land	<p>Agreement with the legal landowner.</p> <p>In some cases, a tree-cutting permit is required for specially designated land with significant features, and/or in municipal/urban areas.</p> <p>In Newfoundland & Labrador, a harvesting permit is required for any private land larger than 102 ha.</p>	<p>Harvest with permission of landowner, in accordance with forest practices laws and regulations that apply.</p> <p>Requirements are highly variable by province, township, and municipality. As an example, in Newfoundland & Labrador, a Forest Management Plan for private land larger than 102 ha is required.</p>	<p>Comprehensive details regarding the types of licences and requirements for each province & territory are summarized at: https://www.sfmcanada.org/en/forest-products/legal-forest-products</p>

Risk Assessment

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
Legal rights to harvest			
<p>1.1 Land tenure and management rights</p>	<p>Applicable laws and regulations</p> <p>(Forestry is mostly a provincial jurisdiction in Canada)</p> <p>Land use laws for all provinces.</p> <p>Legal Authority</p> <p><u>For public land:</u> Regulated and managed at the provincial level via the ministry of forests.</p> <p><u>For private land:</u> Land title and registries are registered with provincial registry offices, and an assessment of property value takes place which determines the property tax rate.</p> <p>Legally required documents or records</p> <p>Forest tenure contracts for public land.</p> <p>Ownership titles for private lands. Online records of allocated tenures exist in most provinces.</p>	<p>Beckley, T. 1998. Moving towards consensus-based forest management: A comparison of industrial, co-managed, community and small private forests in Canada. <i>The Forestry Chronicle</i>, 74(5). http://www.cfs.nrcan.gc.ca/bookstore_pdfs/6008.pdf</p> <p>Natural Resources Canada. 2018. <i>Canada's Forest Laws: Legality and sustainability</i>. http://www.nrcan.gc.ca/forests/canada/sustainable-forest-management/13303</p> <p>Forest Legality Alliance. <i>Sourcing legally produced wood: A guide for business</i>. wri.org/sites/default/files/wri_report_4_c_report_legalityguide_final320.pdf</p> <p>Example: BC <i>Forest Act</i> part 3 Disposition of Timber by the Government, Division 1 — Forms of Rights to Crown Timber: http://www.bclaws.ca/civix/document/id/lc/statreg/96157_03</p> <p>Additional information on the forestry regulatory environment in Canada can be found in the <i>Compilation of Canadian Provincial and Federal</i></p>	<p>Low risk</p> <p>Land Use Rights on Public Land: In all provinces, public industrial forest leases/concessions (referred to as forest tenures in the rest of this document) are co-managed to varying degrees together by the ministry of natural resources of each province and the tenure holder (the entity that has the licence to operate, and often, also has management responsibility. Not the owner of the land). The vast majority of productive forest land is public (Crown) land that is administered by provincial natural resource agencies but leased to large forest product corporations.</p> <p>Ownership of Private Lands: Only 7% of Canada's forests are privately owned. Timber companies in some provinces own large tracts of forest (for example, in Nova Scotia, New Brunswick and British Columbia). The rest of the private forest land base is divided primarily among thousands of small family-owned forests and woodlots located across Canada. The stereotypical private woodlot is a rural resident's 5-75 hectares of forest land that may be used for hunting, berry-picking, maple syrup production, aesthetic enjoyment and other non-fibre uses in addition to moderate or occasional timber harvesting. The minority of woodlot owners that are interested in economic returns from fibre management are organized into formal woodlot owner associations, marketing boards and joint ventures.</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
		<p><i>Regulations Relevant to Forest Management Activities</i> published by the National Council for Air and Stream Improvement at https://www.ncasi.org/Programs/Forestry/Resources/Compilation-of-Canadian-Regulations/Index.aspx</p>	<p>Canada has established an extensive and rigorous system of forest governance to prevent abuses with regards to land tenure and ownership. In 2014, the World Resources Institute referred to Canada's record of the lowest prevalence of suspicious log supply and corruption of any country. A low level of corruption coupled with strong tenure governance systems throughout the country means a low risk of illegally obtained forest licenses or tax exemptions.</p> <p>Based on these findings, it is concluded that the risk is considered low in this indicator.</p>
1.2 Concession licenses	<p>Applicable laws and regulations</p> <p>All provinces have relatively similar legislation and procedures for allocating forest tenures. The conditions often entail the creation or maintenance of some production facility within or adjacent to the area covered by the licence or agreement, and some responsibility for forest management within the same area.</p> <p>Many different provincial forest tenure types exist, though two predominate on provincial Crown forest land: One generally takes the form of a longer-term, area-based agreement which delegates considerable management responsibilities to tenure holders, whereas the second type is usually of shorter duration, volume-based, and delegates fewer management</p>	<p>Beckley, T. 1998. Moving towards consensus-based forest management: A comparison of industrial, co-managed, community and small private forests in Canada. <i>The Forestry Chronicle</i>, 74(5). http://www.cfs.nrcan.gc.ca/bookstore_pdfs/6008.pdf</p> <p>Natural Resources Canada. 2018. <i>Forestry in Canada</i>. http://www.nrcan.gc.ca/forests/canada/13161</p> <p>Example: Ontario Forest Tenure Modernization Act: www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_11o10_e.htm</p> <p>Example from BC of tenure application and award (pages 14-16): https://www.for.gov.bc.ca/ftp/dpg/external/publish/web/tenures/timber-tenures-2006.pdf</p>	<p>Low risk</p> <p>Most timber harvest in Canada occurs on public land, where tenure rights are required. Forest tenures, along with forest legislation and regulations, help Canada's jurisdictions ensure that Crown forests are managed responsibly and that forest companies remain accountable to Canadians.</p> <p>In 2014, the World Resources Institute referred to Canada's record of the lowest prevalence of suspicious log supply and corruption of any country. A low level of corruption coupled with strong tenure governance systems throughout the country means low risk of obtaining forest licenses or tax exemptions illegally.</p> <p>Competition for forest concession is high amongst forest industries. The number of players also ensure a certain degree of scrutiny of the forest license allocation process.</p> <p>Based on these findings, it is concluded that the risk is considered low in this indicator.</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
	<p>responsibilities to tenure holders. Tenures of the first type are frequently held by large, integrated or pulp producing companies, while those of the second type are often held by smaller non-integrated logging and/or sawmilling enterprises.</p> <p>The more comprehensive, long-term tenures have various titles, such as: <i>garantie d'approvisionnement</i> (GA) in Québec (under Québec's <i>Sustainable Forest Development Act</i>, A-18.1), Tree Farm Licences (TFLs) in British Columbia, Forest Management Agreements (FMAs) in Alberta, Sustainable Forest Licences (SFLs) in Ontario, Forest Management Licence Agreements (FMLAs) in Saskatchewan, and Forest Management Licences (FMLs) in Manitoba. Both tenure types allow firms to harvest timber under certain conditions (stated above).</p> <p>Legal Authority</p> <p>Provincial ministry in charge of forests.</p> <p>Legally required documents or records</p> <p>Forest tenure contract.</p>	<p>Example: BC <i>Forest Act</i> part 3 Disposition of Timber by the Government, Division 1 — Forms of Rights to Crown Timber http://www.bclaws.ca/civix/document/id/lc/statreg/96157_03</p> <p>Compilation of Canadian Provincial and Federal Regulations Relevant to Forest Management Activities published by the National Council for Air and Stream Improvement at https://www.ncasi.org/Programs/Forestry/Resources/Compilation-of-Canadian-Regulations/Index.aspx</p>	

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
1.3 Management and harvesting planning	<p>Applicable laws and regulations</p> <p>Legal Authority</p> <p>Provincial ministry in charge of forests.</p> <p>Municipalities with by-laws covering forest management activities.</p> <p>Legally required documents or records</p> <p>Forest tenure contracts.</p> <p>Publicly available forest management plans.</p> <p>Private land titles.</p>	<p>Natural Resources Canada. 2018. <i>Forest Management Planning</i>. http://www.nrcan.gc.ca/forests/canada/planning/17493</p> <p>Natural Resources Canada. 2018. <i>Canada's Forest Laws: Legality and sustainability</i>. http://www.nrcan.gc.ca/forests/canada/sustainable-forest-management/13303</p> <p>Example of Forest tenures in BC and the responsibilities of the tenure holder for each type of tenure (pages 10-13): https://www.for.gov.bc.ca/ftp/dpg/external/publish/web/tenures/timber-tenures-2006.pdf</p> <p>Government of Australia. 2014. <i>Country Specific Guideline for Canada</i>. http://www.agriculture.gov.au/Style%20Library/Images/DAFF/_data/assets/pdffile/0003/2406072/canada-country-specific-guideline.pdf</p> <p>Canadian Council of Forest Ministers. 2018. <i>Sustainable Forest Management in Canada: Canada's Legal Forest Products</i>. https://www.sfmcanada.org/en/forest-products/legal-forest-products</p> <p>Compilation of Canadian Provincial</p>	<p>Low risk</p> <p>Forestry property rights have evolved differently across provincial jurisdictions, resulting in a mix of tenure arrangements across the country. However, the majority of Crown forest land is held in what are referred to as volume-based and area-based tenure agreements. Volume-based tenures allow companies to harvest a certain volume of timber from a broadly defined area, whereas area-based tenures require tenure holders to prepare forest management plans in return for the right to harvest timber over a specific land base.</p> <p>Private land is subject to management requirements, but they are not regulated to the same degree as public lands in Canada. The regulator in those cases is usually the municipal (or local) government.</p> <p>Forest management on private lands is primarily governed by provincial and municipal regulations and guidelines. Some provinces have laws that set standards for forest management practices on private lands, and many private landowners have forest management plans and participate in government programs to guide their stewardship and harvesting activities.</p> <p>Provinces in which harvesting on private land for commercial purposes is more common, often put in place legislation to regulate this activity. For example, the province of British Columbia has the <i>Private Managed Forest Lands Act</i>, the province of New Brunswick has the <i>Natural Products Act</i> which includes the development, conservation and management of forest resources on</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
		<p>and Federal Regulations Relevant to Forest Management Activities published by the National Council for Air and Stream Improvement at https://www.ncasi.org/Programs/Forestry/Resources/Compilation-of-Canadian-Regulations/Index.aspx</p>	<p>private woodlots and the <i>Scalers Act</i> in Nova Scotia applies to both public and private lands. Most provinces have regulatory mechanisms in place to track timber harvested from private lands so that it can be differentiated from public timber (for which royalties must be paid). These mechanisms include regulations for timber scaling, timber marking and transportation. In provinces where there are no specific statutes related to forest harvesting on private lands, landowners can rely upon laws of general application to protect their property from trespass or timber theft.</p> <p>Failure by a tenure holder to comply with approved plans and harvesting permits can result in stiff penalties, from fines or the suspension of harvesting authorities to seizure of timber and even imprisonment.</p> <p>Provincial forest authorities (ministries of forests) have established offices in the forested regions of the provinces. These offices have inspectors with capacity (GPS equipment, maps, 4x4 vehicles, ATVs and other vehicles) and authority to sanction forest operators if they do not respect the forest management as planned. Inspectors have the power to issue fines or suspend operations if they detect management outside of what was planned.</p> <p>Based on these findings, it is concluded that the risk is considered low in this indicator.</p>
1.4 Harvesting permits	<p>Applicable laws and regulations</p> <p>Provincial forest acts and other related documents regulating forest management, forest road construction, water crossings, etc.</p>	<p>Québec example (<i>Sustainable Forest Development Act</i> section VI Droits forestiers, line 73): http://www.canlii.org/en/qc/laws/stat/cqlr-c-a-18.1/latest/cqlr-c-a-18.1.html</p>	<p>Low risk</p> <p>Each provincial and territorial jurisdiction closely monitors the companies operating in public forests, and require formal reporting on their activities. As well, the provinces and territories use systems of checks and controls to track</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
	<p>Federal laws that apply to all forestry operations: While the provinces and territories have authority over the management of most forested land in their jurisdictions, forestry operations are also bound by national legislation. The comprehensive laws and regulations enforced by the provinces and territories are therefore designed to address the requirements of federal legislation relevant to forests, such as the <i>Species at Risk Act</i>, the <i>Fisheries Act</i> and the <i>Canadian Environmental Assessment Act</i>.</p> <p>Forestry activities must also comply with international agreements Canada has signed, such as the <i>Convention on Biological Diversity</i> and the <i>Convention on International Trade in Endangered Species of Wild Fauna and Flora</i>.</p> <p>Legal Authority</p> <p>Provincial ministries of the environment, of forests and natural resources.</p> <p>Legal authority for federal laws applicable to forest harvesting:</p> <ul style="list-style-type: none"> Minister responsible for the Parks Canada Agency 	<p>Natural Resources Canada. 2018. <i>Canada's Forest Laws: Legality and sustainability</i>. http://www.nrcan.gc.ca/forests/canada/sustainable-forest-management/13303</p> <p>Transparency International. Corruption Perceptions Index 2016. http://cpi.transparency.org/cpi2013/results/</p> <p>Example on conditions for obtaining harvesting permits in BC: BC <i>Forest Act</i> part 3 Disposition of Timber by the Government, Division 1 — Forms of Rights to Crown Timber: http://www.bclaws.ca/civix/document/lc/statreg/96157_03</p> <p>BC <i>Forest Act. Licence to Cut Regulation</i>: http://www.bclaws.ca/Recon/document/ID/freeside/221_2006</p> <p>Compilation of Canadian Provincial and Federal Regulations Relevant to Forest Management Activities published by the National Council for Air and Stream Improvement at https://www.ncasi.org/Programs/Forestry/Resources/Compilation-of-Canadian-Regulations/Index.aspx</p>	<p>the timber that is removed from these lands. Provincial government agencies responsible for enforcement conduct compliance audits. Where there is evidence of any contraventions, more detailed investigations may be carried out.</p> <p>Enforcement activities may lead to the issuance of warnings, tickets, fines or other penalties. The most serious infractions are prosecuted through the court system.</p> <p>Corruption associated with timber sales and harvest permits in Canada is rarely an issue. Canada has a very good Corruption Perception Index (82), as measured by Transparency International (2016).</p> <p>On private lands, discouraging illegal and unsustainable activities is done through landowners and nearby communities who tend to be diligent about monitoring activities in private forests because those forests provide sources of income, employment, recreational opportunities and important ecological benefits. In provinces without statutes related to forest harvesting on private lands, landowners can rely on general civic or commercial law to protect their property from trespass or timber theft.</p> <p>Based on these findings, it is concluded that the risk is considered low in this indicator.</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
	<ul style="list-style-type: none"> Minister of Fisheries and Oceans with respect to aquatic species Minister of the Environment <p>Legally required documents or records</p> <p>Province issued harvesting permits.</p> <p>Private forest landowners do not require permits for harvesting on their lands.</p>		
Taxes and fees			
1.5 Payment of royalties and harvesting fees	<p>Applicable laws and regulations</p> <p>As Canadian forests exist mainly on what is considered to be crown land, under the provincial governments' control, legislation dictates the fees that Canadian firms pay for stumpage, and long-term agreements are reached regarding the management and harvesting performed on crown land. These long term agreements, called tenures, commonly involve 20 year concessions, with "rolling renewable" provisions, whereby the firm is capable of retaining a given management area.</p> <p>Crown forest tenures confer the right to harvest timber. In return, tenure holders must pay different types of fees to the Crown, including stumpage fees, holding or rental charges, and</p>	<p>Québec example (<i>Sustainable Forest Development Act</i> section VI Droits forestiers, line 73): http://www.canlii.org/en/qc/laws/stat/cqlr-c-a-18.1/latest/cqlr-c-a-18.1.html</p> <p>Example: BC <i>Logging Tax Act</i>. http://www.bclaws.ca/civix/document/id/complete/statreg/96277_01</p> <p>Example Ontario's Forest Renewal Trust (<i>Crown Forest Sustainability Act</i> - Section V): http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_94c25_e.htm - BK54</p> <p>Transparency International. Corruption Perceptions Index 2016. http://cpi.transparency.org/cpi2013/results/</p>	<p>Low risk</p> <p>Royalties and harvesting fees (also called stumpage fees in Canada) are applicable to Crown land. They are administered at the provincial level. Provincial agencies who administer stumpage fees have well-developed programs for regulating timber and timber harvest. Provincial government inspectors verify and validate, often through sampling, the grading and measuring made by the company. Errors are sanctioned with penalties.</p> <p>Corruption associated with stumpage and harvest permits in Canada is rarely an issue. Canada has a very good Corruption Perception Index (82), as measured by Transparency International (2016).</p> <p>The relative low diversity of commercial species, which is typical of the temperate and boreal forests, reduces the risk of voluntary or involuntary errors in the determination of the stumpage.</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
	<p>protection or management fees.</p> <p>Provincial forest acts usually cover the payment of stumpage and other harvesting fees.</p> <p>Some provinces such as BC have a separate <i>Logging Tax Act</i>.</p> <p>Federal and Provincial tax policies.</p> <p>Legal Authority</p> <p>Provincial ministers of forests.</p> <p>Legally required documents or records</p> <p>Stumpage and other fee payment receipts, including fire and insect protection fee receipts.</p>		<p>Based on these findings, it is concluded that the risk is considered low in this indicator.</p>
1.6 Value added taxes and other sales taxes	<p>Applicable laws and regulations</p> <p>The Federal <i>Income Tax Act</i> (“ITA”) and <i>Excise Tax Act</i> (“ETA”) govern the Canada Revenue Agency’s (CRA) ability to collect income tax debts and HST debts, respectively.</p> <p>The Harmonized Sales Tax (HST) is a consumption tax in Canada. It is used in provinces where both the federal Goods</p>	<p>Canadian harmonized sales tax requirements: http://www.cra-arc.gc.ca/tx/bsnss/tpcs/gst-tps/menu-eng.html</p> <p>Québec sales tax: https://www.revenuquebec.ca/en/businesses/consumption-taxes/gsthst-and-gst/</p> <p>Canada Revenue Agency tax fraud conviction statistics: http://www.cra-</p>	<p>Low risk</p> <p>Sales tax collection and remittance fraud in Canada happens primarily in cash transactions. The CRA has a Criminal Investigations Program whose mandate is to investigate suspected cases of tax evasion, fraud and other serious violations of tax laws. Tax fraud and evasion represent the most flagrant instances of non-compliance with tax statutes.</p> <p>Data specifically for the forest sector is not available. Information on the monitoring and enforcement of tax laws</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
	<p>and Services Tax (GST) and the regional Provincial Sales Tax (PST) have been combined into a single value added sales tax.</p> <p>Canadian and provincial tax legislation.</p> <p>Sales taxes are administered both at the federal and the provincial level.</p> <p>Companies in Canada charge HST, GST and PST to their clients, and companies themselves pay HST, GST and PST sales taxes on their business purchases. Companies file a return showing the amount they collected in sales taxes but they also get a credit for the amount they paid on their own business purchases.</p> <p>Legal Authority</p> <p>The HST is in effect in five of the ten Canadian provinces: Ontario, New Brunswick, Newfoundland and Labrador, Nova Scotia and Prince Edward Island.</p> <p>The HST is collected by the Canada Revenue Agency, which remits the appropriate amounts to the participating provinces. The HST may differ across these five provinces, as each province</p>	<p>arc.gc.ca/nwsrm/cnvctns/menu-eng.html</p>	<p>in Canada in general is available. The Canada Revenue Agency (CRA) has taken measures to detect and prevent tax evasion. The Informant Leads Program gathers information on suspected or known tax evaders. Informants can report information online, by mail or by phone.</p> <p>Every corporation, estate, trust, or individual who has to pay taxes is required by law to determine their taxes payable for the year and to file a tax return. Tax audits are conducted to verify that these amounts are accurately reported, and the tax payable is correctly calculated. In 2013, there were 27.8 million tax returns filed in Canada. Of these, 25% were assessed by the Canada Review Agency, 36% were assessed in 2013. The audit process ensures that Canada's tax system is fair, and that everyone pays their required share.</p> <p>Audit workloads are segregated into three broad categories: International and Large Businesses (ILB), Small and Medium Enterprises (SME), and GST/HST.</p> <p>2012-13 Key Results:</p> <ul style="list-style-type: none"> • International and Large Businesses (ILB): completed 21,427 files and reassessed 85% of the files audited • Small and Medium Enterprises (SME): completed 171,028 files and reassessed 79% of the files audited • GST/HST: CRA completed 89,409 GST/HST audits, reassessed 67% of the files audited <p>During 2012-2013, 71 income tax and GST/HST investigations were referred to the Public Prosecution Service of Canada (PPSC) for prosecution, compared to 120 cases in the previous year. As a result of referrals to the</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
	<p>will set its own PST rates within the HST.</p> <p>In Québec, Revenu Québec administers the GST/QST.</p> <p>Legally required documents or records</p> <p>Tax payment receipts.</p> <p>Goods and Services Tax/Harmonized Sales Tax (GST/HST) Return Working Copy: http://www.cra-arc.gc.ca/tx/bsnss/tpcs/gst-tps/bspsbch/rtrns/wkcpy-eng.html</p>		<p>PPSC (current and previous years), 128 cases resulted in convictions for tax evasion or fraud in 2012-2013. The courts imposed \$9.95 million in fines and 53.5 years of jail sentences. These convictions related to revenue loss of \$32.6 million. The CRA obtained convictions in 96% of cases prosecuted.</p> <p>The Ministère du Revenu du Québec, on behalf of Canada Revenue Agency, referred 27 GST investigation cases for prosecution and, based on these and previous year referrals, Québec courts convicted individuals and businesses in 58 cases, and imposed \$3.1 million in fines. Québec GST convictions related to revenue loss of \$4.4 million.</p> <p>Court convictions are publicized in local, regional and national media to communicate the consequences of fraud committed against the Canadian public and to maximize the deterrent effect of these convictions.</p> <p>CRA is responsible for the <i>Excise Tax Act</i> (ETA), which lays out all the rules for the HST and the GST. The CRA conducts compliance audits to ensure compliance with the ETA. The Criminal Investigations Program investigates instances of tax evasion and refers cases to the Public Prosecution Service of Canada.</p> <p>Given the scale of the timber industry in Canada, it is extremely unlikely that wood products would be exchanged between companies as cash transactions. This means that sales tax fraud is less likely in the forestry context.</p> <p>Given the above statistics relate to all tax fraud in Canada</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
			and there is no information available that would indicate the timber industry is more at risk than another industry, it is concluded that this indicator is considered low risk.
1.7 Income and profit taxes	<p>Applicable laws and regulations</p> <p><i>Federal Income Tax Act - Part 1.</i></p> <p>Provincial income tax laws</p> <p>Income and profit taxes are levied at the federal and provincial level (in Québec only), and administered by the Canada Revenue Agency and Revenu Québec.</p> <p>Legal Authority</p> <p>Canadian Revenue Agency</p> <p>Revenu Québec</p> <p>Legally required documents or records</p> <p>Federal T2 Corporation Income Tax Return</p> <p>Provincial income tax returns</p>	<p><i>Canadian Income Tax Act.</i> http://laws.justice.gc.ca/eng/acts/l-3.3/</p> <p><i>Canadian Corporation Income Tax Return.</i> Canada Revenue Agency. http://www.cra-arc.gc.ca/tx/bsnss/tpcs/crprtns/rtrn/menu-eng.html</p> <p>Revenu Québec Income Tax Return: https://www.revenuQuebec.ca/en/citizens/income-tax-return/</p> <p>Canada Revenue Agency tax fraud conviction statistics: http://www.cra-arc.gc.ca/nwsrm/cnvctns/menu-eng.html</p> <p><i>Penalty for Tax Evasion in Canada.</i> Turbo Tax Canada. http://turbotax.intuit.ca/tax-resources/tax-compliance/penalty-for-tax-evasion-in-canada.jsp</p> <p><i>Tax Avoidance.</i> Canada Revenue Agency. https://www.canada.ca/en/revenue-agency/news/about-canada-revenue-agency-cra/tax-alert/tax-avoidance.html</p>	<p>Low risk</p> <p>Income and profit taxes are levied at the federal and provincial level (in Québec only), and administered by the Canada Revenue Agency and Revenu Québec. Federal and provincial revenue agencies control fraud by conducting tax audits.</p> <p>Data on instances of fraud and enforcement specifically for the forest sector is not available. Information on the monitoring and enforcement of tax laws in Canada is generally available. The Canada Revenue Agency (CRA) has taken measures to detect and prevent tax evasion. The Informant Leads Program gathers information on suspected or known tax evaders. Informants can report information online, by mail or by phone. The CRA has a Criminal Investigations Program whose mandate is to investigate suspected cases of tax evasion, fraud and other serious violations of tax laws.</p> <p>Tax fraud and evasion represent the most flagrant instances of non-compliance with tax statutes. Every corporation, estate, trust, or individual who has to pay taxes is required by law to determine their taxes payable for the year and to file a tax return. Tax audits are conducted to verify that these amounts are accurately reported, and the tax payable is correctly calculated. In 2013, there were 27.8 million tax returns filed in Canada, of which 25% were assessed by the Canada Review Agency. The audit process ensures that Canada's tax system is fair, and that everyone pays their</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
		<p><i>Individual income tax return statistic for the 2017 tax-filing season.</i> Canada Revenue Agency. https://www.canada.ca/en/revenue-agency/corporate/about-canada-revenue-agency-cra/individual-income-tax-return-statistics-2017-tax-filing-season.html</p>	<p>required share.</p> <p>Audit workloads are segregated into three broad categories: International and Large Businesses (ILB), Small and Medium Enterprises (SME), and GST/HST.</p> <p>2012-13 Key Results:</p> <ul style="list-style-type: none"> • International and Large Businesses (ILB): completed 21,427 files and reassessed 85% of the files audited • Small and Medium Enterprises (SME): completed 171,028 files and reassessed 79% of the files audited • GST/HST: CRA completed 89,409 GST/HST audits, reassessed 67% of the files audited <p>During 2012-2013, 71 income tax and GST/HST investigations were referred to the Public Prosecution Service of Canada (PPSC) for prosecution, compared to 120 cases in the previous year. As a result of referrals to the PPSC (current and previous years), 128 cases resulted in convictions for tax evasion or fraud in 2012-2013. The courts imposed \$9.95 million in fines and 53.5 years of jail sentences. These convictions related to revenue loss of \$32.6 million. The CRA obtained convictions in 96% of cases prosecuted. The Ministère du Revenu du Québec, on behalf of Canada Revenue Agency, referred 27 GST investigation cases for prosecution and, based on these and previous year referrals, Québec courts convicted individuals and businesses in 58 cases, and imposed \$3.1 million in fines. Québec GST convictions related to revenue loss of \$4.4 million.</p> <p>Court convictions are publicized in local, regional and national media to communicate the consequences of fraud</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
			<p>committed against the Canadian public and to maximize the deterrent effect of these convictions.</p> <p>Many forest companies are large corporations with public financial reports available. Given the above statistics relate to all tax fraud in Canada and that there is no information available that would indicate the timber industry is more at risk than another industry, it is concluded that the risk is considered low in this indicator.</p>
Timber harvesting activities			
1.8 Timber harvesting regulations	<p>Applicable laws and regulations</p> <p>The 10 different forest acts (one for each province) are in effect in Canada and include comprehensive sets of regulations covering the items identified in the indicator.</p> <p>Federal laws also apply to all forestry operations: While the provinces and territories have authority over the management of most forested land in their jurisdictions, forestry operations are also bound by national legislation. The comprehensive laws and regulations enforced by the provinces are therefore designed to address the requirements of federal legislation relevant to forests, such as the <i>Species at Risk Act</i>, the <i>Fisheries Act</i> and the <i>Canadian Environmental Assessment Act</i>.</p>	<p><i>Canada's Forest Laws: Legality and sustainability.</i> Natural Resources Canada. Government of Canada. http://www.nrcan.gc.ca/forests/canada/sustainable-forest-management/13303</p> <p>Example: Québec's Règlement sur l'aménagement durable des forêts du domaine de l'État (Regulation respecting standards of forest management for forests in the domain of the State, chapter A-18.1, r.7): http://legisquebec.gouv.qc.ca/fr/ShowDoc/cr/A-18.1.%20r.%200.01/</p> <p>Ontario's <i>Crown Forest Sustainability Act</i> (Part IV forest operations): http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_94c25_e.htm</p>	<p>Low risk</p> <p>In all provinces where forest harvesting on public land is a significant economic activity (all except P.E.I), provincial forest authorities (ministries of forests) have established offices in the forested regions of the provinces. These offices have inspectors with capacity (GPS equipment, maps, 4x4 vehicles, ATVs and other vehicles) and authority to sanction forest operators if they do not respect timber harvesting regulations.</p> <p>While infractions with harvesting regulations can be relatively common, they will usually be minor in nature and rarely on purpose or systematic. Failure by a tenure holder to comply with approved plans and harvesting permits can result in stiff penalties, from fines or the suspension of harvesting authorities to seizure of timber and even imprisonment.</p> <p>Provinces are transparent in the publishing of infractions with harvesting regulations. For example in Québec those are available online:</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
	<p>Forestry activities must also comply with international agreements Canada has signed, such as the <i>Convention on Biological Diversity</i> and the <i>Convention on International Trade in Endangered Species of Wild Fauna and Flora</i>. These are all translated into provincial laws.</p> <p>Legal Authority</p> <p>Regulated at the provincial level by each province's forestry services (Ministry of forests).</p> <p>Each province's Ministry of transport</p> <p>Provincial and federal ministries of environment.</p> <p>Legally required documents or records</p> <p>Provincial cut permits.</p> <p>Provincial government approved management plan.</p> <p>Wood transport slips</p>	<p>And</p> <p><i>Forest Operations and Silviculture Manual</i>. March 2017. Ontario Ministry of Natural Resources & Forests. https://files.ontario.ca/forest-operations-silviculture-manual.pdf</p>	<p>http://www.mffp.gouv.qc.ca/forets/infractions/</p> <p>BC Compliance and Enforcement annual reports: http://www.for.gov.bc.ca/hen/reports.htm</p> <p>Based on these findings, it is concluded that the risk is considered low in this indicator.</p>
1.9 Protected sites and	Applicable laws and regulations	IUCN. Protected Areas Categories. http://www.iucn.org/about/work/programmes/gpap_home/gpap_quality/gpa	Low risk Canada has legal structures surrounding the protection of

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
species	<p>The provinces and territories generally designate protected areas in Canada, although there are also protected areas on federal lands, such as national parks and migratory bird sanctuaries.</p> <p>Canadian jurisdictions classify over 95% of the protected areas in Canada in IUCN categories I to IV. This should mean these areas are strictly protected and there will be no harvesting, mining or development activities in these areas. However, most jurisdictions' legislative tools provide some discretionary powers.</p> <p>It is also becoming more common now to see protected areas created by communities who want to set aside and protect significant or cultural or spiritual aspects associated with their community. Here, the communities set whether and to what extent industrial activities are allowed.</p> <p>Relevant Legislation includes:</p> <p><i>Canada Wildlife Act (CWA)</i></p> <p><i>Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act (WAPPRIITA)</i></p>	<p>p_pacategories/</p> <p><i>Acts and Regulations: Protected Areas.</i> Government of Canada. https://www.canada.ca/en/environment-climate-change/services/national-wildlife-areas/protected-area-reference-documents/acts-regulations.html</p> <p><i>Canada Wildlife Act (CWA):</i> http://laws-lois.justice.gc.ca/eng/acts/W-9/</p> <p><i>Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act :</i> http://www.ec.gc.ca/alef-ewe/default.asp?lang=en&n=65FDC5E7-1</p> <p><i>Migratory Birds Convention Act (MBCA):</i> http://laws-lois.justice.gc.ca/eng/acts/M-7.01/index.html</p> <p><i>Species At Risk Act (SARA):</i> http://laws-lois.justice.gc.ca/eng/acts/S-15.3/index.html</p> <p><i>Canadian Environmental Assessment Act (CEAA):</i> http://laws-lois.justice.gc.ca/eng/acts/C-15.2/index.html</p>	<p>socially and ecologically important sites, as well as species and their critical habitat, administered at both the provincial and federal level. These include <i>Species at Risk Acts, Endangered Species Acts, Protected Natural Areas or Wilderness Areas Acts</i>, etc., depending on the specific province or territory. At the federal level, the <i>National Parks Act, Species at Risk Act (SARA), Migratory Bird Convention Act, the Canada Wildlife Act and the Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act</i> are the primary legal instruments addressing the protection of ecosystems and species.</p> <p>Though there are occasional incidents of illegal logging in parks and protected areas, these are few, and from the perspective of the Working Group, are mostly caused by individuals, not the result of commercial forest operations. These infractions are addressed according to the applicable legislation and corresponding penalty. Reports on the magnitude of these infractions do not exist, likely on account of their infrequency and non-systematic nature.</p> <p>However, in terms of the protection of critical species habitat, there do exist jurisdictional issues between federal and provincial legislation that has been cause for contention and litigation.</p> <p>The Federal <i>Species at Risk Act (SARA)</i> is a legislative tool which was developed to fill some of the gaps in addressing species at risk concerns in Canada. It has several requirements, including the protection of critical species habitat. According to a 1995 National Accord, there should also be reciprocal legislation in the provinces and territories. In theory, critical habitat for these species should be</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
	<p><i>Migratory Birds Convention Act (MBCA)</i></p> <p>Parksville Protocol</p> <p><i>Species At Risk Act (SARA)</i></p> <p><i>Canadian Environmental Assessment Act (CEAA)</i></p> <p>Wildlife Area Regulations (WAR)</p> <p>Migratory Bird Sanctuary Regulations (MBSR)</p> <p>Legal Authority</p> <p>Environment Canada</p> <p>Provincial ministries of the environment</p> <p>Canadian Wildlife Service</p> <p>Legally required documents or records</p> <p>Maps of protected areas in Canada: https://open.canada.ca/data/en/dataset/6c343726-1e92-451a-876a-76e17d398a1c</p>	<p>Wildlife Area Regulations (WAR): http://laws-lois.justice.gc.ca/eng/regulations/C.R.C.,_c._1609/index.html</p> <p>Migratory Bird Sanctuary Regulations (MBSR): http://laws-lois.justice.gc.ca/eng/regulations/C.R.C.,_c._1036/index.html</p> <p>Doucette, K. The Canadian Press. Nova Scotia forestry practices review to include clear cutting. https://globalnews.ca/news/3706801/nova-scotia-forestry-review-to-include-clear-cutting-minister-says/</p> <p><i>Failure to Protect: Grading Canada's Species at Risk Laws.</i> Ecojustice. October 2012. https://www.ecojustice.ca/wp-content/uploads/2014/08/Failure-to-protect-Grading-Canadas-Species-at-Risk-Laws.pdf</p> <p>The State of Canada's Parks: Parks under threat. http://cpaws.org/uploads/cpaws_park_report_2012.pdf</p> <p>Report of the Auditor General • Natural Resources • June 2016. Species at Risk: Management of Conservation and Recovery. https://oag-ns.ca/sites/default/files/publications/C</p>	<p>protected under this provincial legislation. However, some of the provinces do not have legislation to specifically protect species at risk, have wildlife protection legislation that does not require the protection of critical habitat, and/or have used discretionary powers to exempt certain activities and industries from the meeting habitat protection requirements (e.g. Ontario). Therefore, while the destruction of critical habitat may be technically legal at the provincial level, the result of the application of provincial regulations can create conflict with meeting federal SARA requirements.</p> <p>SARA itself allows differences in how critical habitat is protected, as long as the outcome on-the-ground is effectively the same. However, the federal government has conducted a number of assessments of provincial legal protection of critical habitat (e.g. Canada-British Columbia Southern Mountain Caribou (Central Group) Protection Study), and have found these to be insufficient due in part to their discretionary nature. In cases where an imminent threat to a species at risk is identified, and where provincial measures are challenged as not being enough to ensure the protection of a species, under SARA (section 80) emergency orders or Section 61 safety net orders may be enacted to provide for the protection of a listed wildlife species or its habitat on federal or non-federal lands. There are several examples demonstrating how emergency protection orders have been respected when mandated (e.g. Western Chorus Frog in 2016, Greater Sage-Grouse in 2013 and again in 2017). This demonstrates that when necessary, and where prompted, the federal <i>Species at Risk Act</i> remains an effective tool to enforce the protection of critical species and their habitats, even on non-federal lands.</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
		<p>hapter%203_0.pdf</p> <p><i>Protection assessment of Western Chorus Frog individuals, residences and habitat on federal and non-federal land.</i> Species at Risk Public Registry. Government of Canada. http://www.registrelep-sararegistry.gc.ca/default.asp?lang=En&n=2903667C-1</p> <p><i>Canada-British Columbia Southern Mountain Caribou (Central Group) Protection Study.</i> Species at Risk Public Registry. Government of Canada. http://www.registrelep-sararegistry.gc.ca/document/default_e.cfm?documentID=3106</p> <p>Boutis, P. and J.Weizenbluth. 2012. <i>'Species at Risk' Legislation in Ontario and Canada.</i> The Six-Minute Environmental Lawyer 2012. https://www.ilercampbell.com/blog/wp-content/uploads/Species-at-Risk-6-Minute-Environmental-Lawer-Paula-Boutis.pdf</p>	<p>Various enforcement agencies, including the Canadian Wildlife Service (CWS), Environment Canada, Fisheries and Oceans Canada, and Parks Canada Agency jointly enforce the federal species legislation. Provincially, the Ministry of Natural Resources (or equivalent agencies) enforce provincial species legislation. Generally, these agencies are effective at enforcing legislation protecting species from harvesting, hunting, as well as protected/conservation areas from encroachment through mechanisms such as permitting, monitoring and issuance of fines and/or charges for infringement.</p> <p>Overall, various national and provincial legislation exist and are enforced to prevent and deter illegal harvesting within legally designated protected sites which in Canada includes critical habitat for nationally threatened and endangered species, as well as the illegal harvest of protected species. For this reason, this indicator is considered low risk.</p> <p>Whether the federal legislation alone will ultimately be effective in mitigating the threat to the critical habitat of a wide-ranging terrestrial species on non-federal lands as a result of forestry and other industrial activities (namely woodland caribou) is currently actively in play. The current situation for the species itself is specifically addressed in Category 3 of this NRA.</p>
1.10 Environmental requirements	<p>Applicable laws and regulations</p> <p>Assessment of environmental impacts of forestry operations is covered by provincial timber harvesting regulations.</p>	<p>Example: Québec's Règlement sur l'aménagement durable des forêts du domaine de l'État; http://legisquebec.gouv.qc.ca/fr/ShowDoc/cr/A-18.1_r_0.01/</p>	<p>Low risk</p> <p>Harvesting regulations and guidelines covering environmental impacts in each province are elaborated under the authority of the provincial forest acts. These rules</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
	<p>The 10 different forest acts (one for each province) in effect in Canada include comprehensive sets of regulations covering the items identified in the indicator.</p> <p>Forest acts are accompanied by practical on the ground regulations like Québec's <i>Règlement sur l'aménagement durable des forêts du domaine de l'État</i>, which cover environmental impacts such as buffer zones for watercourses and breeding sites, requirements for machineries, water crossings, etc.</p> <p>Federal laws also apply to all forestry operations: While the provinces and territories have authority over the management of most forested land in their jurisdictions, forestry operations are also bound by national legislation. The comprehensive laws and regulations enforced by the provinces are therefore designed to address the requirements of federal legislation relevant to forests, such as the <i>Species at Risk Act</i>, the <i>Fisheries Act</i> and the <i>Canadian Environmental Assessment Act</i>.</p>	<p>Ontario's <i>Crown Forest Sustainability Act</i> (Part IV forest operations): http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_94c25_e.htm</p> <p><i>Forest Operations and Silviculture Manual</i>. March 2017. Ontario Ministry of Natural Resources & Forests. https://files.ontario.ca/forest-operations-silviculture-manual.pdf</p>	<p>and guidelines require the forest manager to assess and manage environmental impacts on soil, water, biodiversity, etc.</p> <p>Provincial forest authorities (ministries of forests) have established offices in the forested regions of the provinces. These offices have inspectors with capacity and authority to sanction forest operators if they do not respect harvesting regulations. Companies are fined for infractions.</p> <p>Failure by a tenure holder to implement environmental impact mitigation measures can result in stiff penalties, from fines or the suspension of harvesting authorities to seizure of timber and even imprisonment.</p> <p>Based on these findings, it is concluded that the risk is considered low in this indicator.</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
	<p>Legal Authority</p> <p>Regulated at the provincial level by each province's forestry services (Ministry of forests).</p> <p>Each province's Ministry of transport</p> <p>Provincial and federal ministries of environment.</p> <p>Legally required documents or records</p> <p>Provincial cut permits.</p> <p>Provincial government approved management plan.</p>		
1.11 Health and safety	<p>Applicable laws and regulations</p> <p>All provinces have comprehensive legislation with regards to worker's safety.</p> <p>At the federal level: Canada Labour Code</p> <p>Examples of Legal Authority</p> <p>Québec: Ministère de la Santé et des Services sociaux - Commission des normes, de l'équité, de la santé et de la</p>	<p>WorkSafeBC. <i>Part 26: Forestry Operations and Similar Activities.</i> http://www2.worksafebc.com/publications/ohsregulation/Part26.asp</p> <p>BC Forestry Industry Claims Statistics 2013-2017 https://www.worksafebc.com/en/health-safety/industries/forestry/statistics</p> <p>SafeWork Manitoba. Legislation: <i>Manitoba Workplace Safety and Health is responsible for the legal aspect of keeping the province's workers safe on the job.</i> https://www.safemanitoba.com/Topic</p>	<p>Low risk</p> <p>Workers unions, government organizations, independent auditors as well as the employers themselves regularly monitor and verify health and safety (H&S), safety equipment and use of safe practices by workers.</p> <p>Workers compensation boards have inspectors who sample work sites including forest operations, and can fine employers in case H&S regulations are not respected.</p> <p>Due to the closely regulated, controlled and enforced H&S regulations across Canada, as well as the strong H&S culture amongst companies and workers, the risk of significant illegal practices in the domain of H&S is</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
	<p>sécurité du travail (CNESST)</p> <p>BC: Ministry of Labour, Citizens' Services and Open Government's Worksafe BC.</p> <p>Legally required documents or records</p> <p>Proof of contribution to premiums for CSST (Québec), Worksafe BC, Workers Compensation Board – Alberta, and those of other provinces.</p>	<p>s/Pages/Legislation.aspx</p> <p><i>Saskatchewan Occupational Health and Safety Act (PART XXVIII Forestry and Mill Operations):</i> http://www.qp.gov.sk.ca/documents/English/Regulations/Regulations/O1-1R1.pdf</p> <p><i>Alberta Occupational Health and Safety Act:</i> http://work.alberta.ca/occupational-health-safety/307.html</p> <p>Alberta Occupational Health and Safety Regulation: http://www.qp.alberta.ca/574.cfm?page=2003_062.cfm&leg_type=Regs&isbncln=077971752X</p> <p>Alberta Occupational Health and Safety Code http://work.alberta.ca/documents/whs-leg_ohsc_2009.pdf</p> <p>Québec Health and Safety Regulation Specific to Forestry Operations: http://www2.publicationsduquebec.gouv.qc.ca/dynamicSearch/telecharge.php?type=3&file=/S_2_1/S2_1R12_1.HTM</p>	<p>considered low.</p>
1.12 Legal employment	<p>Applicable laws and regulations</p> <p>Labour is a provincial jurisdiction. All provinces have employment standards</p>	<p>Canada Labour Code: http://laws-lois.justice.gc.ca/eng/acts/L-2/index.html</p>	<p>Low risk</p> <p>A contract of employment need not be in written form in Canada. Terms can be made by express or implied oral</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
	<p>acts covering the elements described in the indicator (minimum wage, working age, content of contracts, freedom of association, etc.)</p> <p>Worker's compensation liability insurance requirements are regulated at the provincial level. All provinces require worker's compensation insurance (WorkSafe BC, CSST in Québec, Safe Manitoba, etc.).</p> <p>Legal Authority</p> <p>British Columbia: Ministry of Labour and Citizens' Services Employment Standards Branch</p> <p>Alberta: Employment and Immigration Employment Standards Branch</p> <p>Saskatchewan: Advanced Education, Employment and Labour Standards</p> <p>Manitoba: Manitoba Labour and Immigration Employment Standards</p> <p>Ontario: Ministry of Labour</p>	<p><i>BC Employment Standards Act:</i> http://www.bclaws.ca/Recon/docume nt/ID/freeside/00_96113_01</p> <p>Alberta Employments Standards Code: http://www.qp.alberta.ca/documents/a cts/e09.pdf</p> <p>Manitoba Employment Standards Code: http://www.gov.mb.ca/labour/standar ds/</p> <p>The Saskatchewan <i>Employment Act:</i> http://www.qp.gov.sk.ca/documents/E nGLISH/Statutes/Statutes/s15-1.pdf</p> <p>Quebec's <i>Act Respecting Labour Standards:</i> http://www2.publicationsduquebec.g ov.gc.ca/dynamicSearch/telecharge.p hp?type=2&file=/N_1_1/N1_1_A.html</p>	<p>agreement and even through the conduct of the parties. The absence of written contracts do not exempt employers and employees from compliance with labour laws.</p> <p>Unions are common in the forest industry and ensure a certain degree of compliance with collective agreements and labour laws for their members. For union as well as non-union workers, agencies of ministries of labour in each province perform inspections and can issue fines to employers who do not respect labour codes of the province.</p> <p>Like in many other countries of the Northern Hemisphere, forced or compulsory labour is uncommon in Canada, as is child labour. Legally hired migrant workers are increasingly present in tree planting and silviculture. While they are not immune to discrimination, very few are involved in harvesting (the only activity concerned by this indicator) and again, inspections by provincial labour agencies provide a certain guarantee their rights are respected.</p> <p>Based on these findings, it is concluded that the risk is considered low in this indicator.</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
	<p>Employment Standards Branch</p> <p>Québec: Commission des normes, de l'équité, de la santé et de la sécurité du travail</p> <p>New Brunswick: Department of Post-Secondary Education, Training and Labour</p> <p>Nova Scotia: Labour and Workforce Development Labour Standards Division</p> <p>Prince Edward Island: Communities, Cultural Affairs and Labour Employment Standards Branch</p> <p>Newfoundland and Labrador: Human Resources, Labour and Employment Labour Relations Agency</p> <p>Legally required documents or records</p> <ul style="list-style-type: none"> • Employment contracts • Proof of insurance • Competence certificates • Receipts of income tax payment 		
Third parties' rights			

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
1.13 Customary rights	<p>Applicable laws and regulations</p> <p>N/A. There are currently no laws and regulations in Canada regarding customary rights.</p> <p>Hence, according to FSC-PRO-60-002a V1-0 EN, this indicator is considered 'not applicable'.</p> <p>Legal Authority</p> <p>N/A</p> <p>Legally required documents or records</p> <p>N/A</p>	<p>V. Napoleon. 2007. <i>Thinking about Indigenous Legal Orders</i>. Research paper for the National Centre for First Nations Governance. http://fngovernance.org/ncfng_research/val_napoleon.pdf</p> <p>M. Colye. 2017. <i>Indigenous Legal Orders in Canada - a Literature Review</i>. Law Publications (92). https://ir.lib.uwo.ca/cgi/viewcontent.cgi?article=1092&context=lawpub</p>	<p>N/A</p> <p>Canada's state-centred legal system provides constitutional rights that recognize, among other rights, rights of Indigenous Peoples to use traditional lands (e.g. Aboriginal title, land claims) and resources (e.g. hunting, fishing and other subsistence activities). These are rights defined under Canadian law, and are referred to herein as legal rights, or legally enforceable rights.</p> <p>The second type of rights are customary rights, which are those rights arising out of the customary laws and traditions of particular Indigenous Peoples based on a history of social, political, economic and spiritual practices. These customary rights are the focus of this indicator.</p> <p>In recent years, there has been a growing trend in Canada to understand Indigenous customary laws as coherent sets of 'Indigenous legal orders', and some Indigenous Peoples are actively working to revitalize and strengthen their laws that have been negatively impacted by colonization. However, the Canadian government does not formally recognize Indigenous legal orders, and Canadian courts have so far generally avoided engaging with rights that exist within those orders.</p> <p>Therefore, there are currently no laws and regulations in Canada addressing Indigenous People's customary rights.</p> <p>There are also no laws or regulations in Canada related to non-Indigenous customary rights.</p>
1.14 Free prior and	Applicable laws and regulations	N/A	N/A

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
informed consent	<p>N/A. There are no relevant laws or regulations on Free prior and informed consent in Canada per se. Hence, according to FSC-PRO-60-002a V1-0 EN, this indicator is therefore considered 'not applicable'.</p> <p>However, at the time of preparation of this NRA, Canada has endorsed UNDRIP (United Nations Declaration on the Rights of Indigenous Peoples) and has begun to review the articles specific to FPIC in relation to Canadian common law and legislation.</p> <p>Legal Authority</p> <p>N/A</p> <p>Legally required documents or records</p> <p>N/A</p>		
1.15 Indigenous People's rights	<p>Applicable laws and regulations</p> <p>The 19th century <i>Indian Act</i> is a central piece governing indigenous rights, but there are also approximately 70 recognized pre-1975 treaties that form the basis of the relationship between 364 First Nations, representing over</p>	<p>Example: Saskatchewan's <i>Forest Resources Management Act</i> includes a duty to consult aboriginals-Clause 39 section 2(c): http://www.qp.gov.sk.ca/documents/english/statutes/statutes/f19-1.pdf</p> <p>Sustainable Forest Development Act (A-18.1) CHAPTER II Provisions</p>	<p>Low risk</p> <p>This assessment deals specifically with forest activities.</p> <p>Three distinct categories of Indigenous Peoples (or Aboriginal peoples) exist within Canada – First Nations, Métis and Inuit people.</p> <p>Aboriginal peoples own and manage two per cent of</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
	<p>600,000 First Nations people, and Canada. In addition, 24 modern treaties are currently in effect. Building upon the protections in the British Crown’s Royal Proclamation of 1763, Canada’s 1982 <i>Constitution Act</i> recognized and affirmed the Aboriginal and Treaty Rights of the Indian, Inuit, and Métis people of Canada.</p> <p>The provincial and federal Crown is under a duty to consult when its actions or decisions threaten to interfere with Aboriginal rights, lands, traditional land uses or interests.</p> <p>In the 2004 Haida case, BC’s Court of Appeal expanded the Crown’s fiduciary duty to consult with forest companies holding licenses for timber harvesting on public lands. The court held that the company, in acquiring an exclusive licence to harvest timber, assumed a fiduciary obligation to Aboriginal Peoples which carried with it a duty to consult and seek accommodation with them about their operations.</p> <p>The requirements of consultation may be delegated to forest companies, but the fiduciary obligations remain with the Crown.</p>	<p>Specific to Native Communities http://legisquebec.gouv.qc.ca/en/showDoc/cs/A-18.1?&digest</p> <p>Government of Canada. 2016. <i>Indigenous Peoples and Forestry in Canada</i>. http://cfs.nrcan.gc.ca/pubwarehouse/pdfs/36704.pdf</p> <p>Ross, M. and P.Smith. 2003. <i>Meaningful consultation with indigenous peoples in forest management: a focus on Canada</i>. http://www.fao.org/docrep/article/wfc/xii/1001-c1.htm</p> <p>CBC News. Tsilhqot’in First Nation granted B.C. title claim in Supreme Court ruling. June, 26, 2014. http://www.cbc.ca/news/politics/tsilhqot-in-first-nation-granted-b-c-title-claim-in-supreme-court-ruling-1.2688332</p> <p>Government of Canada. <i>Aboriginal Consultation and Accommodation: Updated Guidelines for Federal Officials to Fulfill the Duty to Consult</i>. March 2011. http://www.aadnc-aandc.gc.ca/DAM/DAM-INTER-HQ/STAGING/texte-text/intgui_1100100014665_eng.pdf</p> <p>R. Bains and K. Ishkanian. 2016. <i>The</i></p>	<p>Canada’s forests. According to the National Aboriginal Forestry Association, Aboriginal Peoples hold Crown land tenure exceeding 27 million m³ in annual sustainable timber harvest – more than 13% of the total Crown forest harvest volume in Canada in 2013. This volume is expected to continue to increase through various mechanisms including modern treaties, government-led tenure reform, and joint ventures with industry.</p> <p>Approximately 70% of Aboriginal communities in Canada are located in forested regions. Aboriginal communities can leverage their access to land and tenure to create economic opportunities and the forest sector is recognized as one mechanism to promote economic development in Aboriginal communities. The forest sector provides an important source of employment (11,000 jobs) for Aboriginal communities, representing two per cent of all jobs held by Aboriginal workers.</p> <p>Aboriginal people can access smaller volume timber allocations through personal use cutting permits. These permits are allowed under existing treaties and can be utilized to provide materials for shelter, cultural activities and heating.</p> <p><u>On Aboriginal rights to exclusive control over land use decisions:</u></p> <p>The risk of forest companies operating illegally on land where a First Nation has proven title (only 1 in Canada at this point, the Tsilhqot’in First Nation) is low. In a country with an effective rule of law like Canada, forest companies will abide by court decisions and will not harvest on titled</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
	<p>Forest management planning processes dictated by provincial forest acts include the duty to consult affected indigenous peoples and include grievance mechanisms.</p> <p>But most importantly, the recent <i>Tsilhqot'in decision</i> (2014) in Canada demonstrates that Aboriginal title may exist in Canada, and this title to land includes exclusive control over land use decisions. This means that where Aboriginal title is proven (or likely to be proven), industry will have to approach the First Nation to negotiate permission to use the land. In cases of claimed Aboriginal Title not yet proven, there is no change in the law and the government has a duty to consult and if warranted, accommodate the First Nation depending upon the strength of the claim. Industry, in cases of claimed but unproven Aboriginal Title, has no obligation to consult and if warranted, accommodate. In that case, that obligation remains on the Crown.</p> <p>As of this writing, no other First Nation has proven Aboriginal title in Canada's courts. Proof of Aboriginal title will require First Nations to bring their case to court for decision.</p>	<p><i>Duty to Consult with Aboriginal Peoples: A Patchwork of Canadian Policies.</i> The Fraser Institute. https://www.fraserinstitute.org/sites/default/files/duty-to-consult-with-aboriginal-peoples-a-patchwork-of-canadian-policies.pdf</p>	<p>land where they do not have permission to do so.</p> <p>It is likely other First Nations will try to obtain recognition of their ownership of the land in Canada. As Aboriginal Titles are proven in courts, forest companies operating on those lands will either obtain consent from the First Nation or will have to stop their operations on that land.</p> <p><u>On the right to be consulted and accommodated (on non-proven titles):</u></p> <p>Due to the closely regulated, controlled and enforced forest management planning regulations on public land across Canada, the incidence of logging companies operating illegally without a duly approved logging permit is very low. For this permit to be issued, forest management companies must have a government approved management plan. For this management plan to be approved, governments must uphold their legal duty to consult and accommodate Aboriginal peoples.</p> <p>Therefore, the risk of illegality with regards to violating existing legally-recognized Aboriginal rights around the duty to consult and accommodate on forest management activities is low.</p> <p>Refer to Category 2, Indicator 2.3 for a more full discussion of the rights of Aboriginal people in Canada within the context of a global standard of rights (e.g. UNDRIP).</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
	<p>Legal Authority</p> <p>Federal and provincial governments.</p> <p>Forest ministries of each province verify that consultation with the Indigenous has been carried out before approving the plans.</p> <p>Federal and provincial ministries of Indian affairs.</p> <p>Since the 2004 Haida case: Companies holding an exclusive licence to harvest timber</p> <p>Since the 2014 Tsilhqot'in First Nation ruling: First Nations with proven aboriginal title on the land.</p> <p>Legally required documents or records</p> <p>Government approved forest management plans incorporating demonstration of consultation with affected First Nations.</p> <p>First Nations proof of title rights.</p> <p>On land where a First Nations holds proven title, evidence of consent.</p>		
Trade and transport			

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
1.16 Classification of species, quantities, qualities	<p>Applicable laws and regulations</p> <p>Provincial laws on the cutting and measuring of timber and required payment of taxes (stumpage).</p> <p>Legal Authority</p> <p>Provincial ministries of forests</p> <p>Legally required documents or records</p> <p>Bills of lading. Receipts of payment of stumpage.</p>	<p>Québec Regulation for Timber Measurement: http://www2.publicationsduquebec.gouv.qc.ca/dynamicSearch/telecharge.php?type=1&file=40351.PDF</p> <p>New Brunswick Department of Energy & Natural Resource Development. <i>Manuel de mesurage du bois du Nouveau-Brunswick (4e édition)</i>. July 2012. http://www2.gnb.ca/content/dam/gnb/Departments/nr-rn/pdf/fr/ForetsEtTerresDeLaCouronne/ManuelDeMesurageDuBoisDuNB-4Edition-2012Juillet.pdf</p> <p>Government of British Columbia: Timber Pricing British Columbia Timber Pricing Branch Publications https://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry/timber-pricing</p>	<p>Low risk</p> <p>Provincial laws cover the cutting and measuring of timber and required payment of taxes. These requirements include a report showing the species, quantities and value of the harvested timber, and this information is required to be reported to the province. The risk of incorrect classification of harvested material to reduce/avoid payment of legally prescribed taxes and fees is low because of the controls that are made by provincial forest authorities. Provincial government inspectors verify and validate, often through sampling, the grading and measuring made by the company. Ministry of forests inspectors verify company measurements and species identifications by sampling harvested wood piles on roadsides, landings and log yards. Errors are sanctioned with penalties.</p> <p>Corruption associated with stumpage and harvest permits in Canada is rarely an issue. Canada has a very good Corruption Perception Index (82), as measured by Transparency International (2016).</p> <p>Also, the relatively low diversity of commercial species, which is typical of the temperate and boreal forests, reduces the risk of voluntary or involuntary errors in the determination of the stumpage.</p> <p>Therefore the risk of illegal activity with regards to this requirement is low.</p>
1.17 Trade and transport	<p>Applicable laws and regulations</p> <ul style="list-style-type: none"> <i>Bills of Lading Act</i> Freight Integration and Motor Carrier 	<p>Transport Canada. <i>List of Acts</i>: https://www.tc.gc.ca/eng/acts-regulations/acts.htm</p>	<p>Low risk</p> <p>Canada has laws and signed international agreements covering all aspects of trade and transport. Those are</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
	<p>Policy</p> <ul style="list-style-type: none"> • <i>Coasting Trade Act</i> • <i>Canada Marine Act</i> • <i>Canada Shipping Act</i> • <i>Canada Transportation Act</i> • <i>Canadian Environmental Protection Act</i> • <i>Canadian National Montreal Terminals Act</i> • <i>Canadian Transportation Accident Investigation and Safety Board Act</i> • <i>Department of Transport Act</i> • <i>Motor Vehicle Safety Act</i> • <i>Motor Vehicle Transport Act</i> • <i>Railway Safety Act</i> • <i>Safe Containers Convention Act</i> <p>Legal Authority</p> <p>Transport Canada</p> <p>Provincial forest ministries</p> <p>Global Affairs Canada</p> <p>International Standard for Phytosanitary Measures No. 15 (ISPM No. 15).</p> <p>Canada Borders Services Agency</p> <p>Legally required documents or</p>	<p>International Plant Protection Convention (IPPC). UN FAO. https://www.ippc.int/en/</p> <p>Transport Canada. Coasting trade in Canada. https://www.tc.gc.ca/eng/policy/acf-acfs-menu-2215.htm</p>	<p>controlled and enforced by various ministries and government agencies at the federal and provincial levels.</p> <p>Illegal transport of wood could be linked to illegal logging, which as we have seen in previous indicators is not a significant problem in Canada.</p> <p>Logs hauled by trucks from Canadian crown forests to mills are accompanied by trip tickets, copies of which are left at the forest gate and/or at the mill gate. Hauling trucks can be controlled by government agents for safety and to make sure the trip ticket accurately reflects the right volumes and species.</p> <p>Canada has a very good Corruption Perception Index (82), as measured by Transparency International. Corruption (2016) associated with trading permits and transport documents is rarely an issue.</p> <p>Based on these findings, the risk of illegal activity with regards to trade and transport is low.</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
	<p>records</p> <p>Load tickets or reports providing information on volume, species, origin, destination, etc.</p>		
1.18 Offshore trading and transfer pricing	<p>Applicable laws and regulations</p> <p>The Canada Revenue Agency (“CRA”) transfer pricing legislation:</p> <ul style="list-style-type: none"> Section 247 of the <i>Income Tax Act</i> (Canada) <p>Legal Authority</p> <p>Canada revenue agency (CRA)</p> <p>Legally required documents or records</p> <p>The CRA has rules requiring transfer pricing documentation:</p> <ul style="list-style-type: none"> Section 247 of the <i>Income Tax Act</i> requires that Canadian taxpayers document non-arm’s length transactions with non-residents and use arm’s length transfer prices Section 247 contains a provision that deems the taxpayer not to have made “reasonable efforts” to determine and use arm’s length 	<p>KPMG. Global Transfer Pricing Review Canada. October 2015. https://home.kpmg.com/content/dam/kpmg/pdf/2015/12/tp-review-canada-v5.pdf</p> <p>Canada - OECD Anti-Bribery Convention http://www.oecd.org/daf/anti-bribery/canada-oecdanti-briberyconvention.htm</p> <p>Exchange of Tax Information Portal: Canada. http://eoi-tax.org/jurisdictions/CA#default</p> <p>PriceWaterhouseCooper. International transfer pricing 2012. – Report by PriceWaterhouseCooper - https://www.pwc.com/gx/en/international-transfer-pricing/pdf/27185-itsp-2012.pdf</p> <p>Global Forum on Transparency and Exchange of Information for Tax Purposes. Peer Review Report - Combined: Phase 1 and 2, incorporating Phase 2 ratings - Canada. https://www.oecd-ilibrary.org/taxation/global-forum-on-</p>	<p>Low risk</p> <p>The international tax standard, developed by OECD and supported by the UN and the G20, provides for full exchange of information on request in all tax matters without regard to a domestic tax interest requirement or bank secrecy for tax purposes. Currently all 30 OECD member countries, including Canada have endorsed and agreed to implement the international tax standard.</p> <p>Canada has exchange of information relationships with 128 jurisdictions through 95 double taxation conventions (DTCs), 23 Tax Information Exchange Agreements (TIEAs) and 1 multilateral mechanism, Convention on Mutual Administrative Assistance in Tax Matters.</p> <p>Canada has recently been increasing its scrutiny of offshore trading and transfer pricing. Canada has extensive regulation on this matter and enforces it through the Canada Revenue Agency (CRA). Apart from audits, CRA measures to detect and prevent tax evasion include the Informant Leads Program, which gathers information on suspected or known tax evaders. Informants can report information online, by mail or by phone.</p> <p>The CRA also has a Criminal Investigations Program whose mandate is to investigate suspected cases of tax evasion, fraud and other serious violations of tax laws. Each CRA tax</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
	<p>transfer prices unless the taxpayer has compiled certain information and analyses in the form of contemporaneous documentation</p> <ul style="list-style-type: none"> • Taxpayers are required to update the documentation for any material changes, and provide the documentation to the CRA within three months of a written request that is served personally or by registered or certified mail 	<p>transparency-and-exchange-of-information-for-tax-purposes-peer-reviews-canada-2013_9789264205543-en</p>	<p>services office has international tax auditors who either conduct the transfer pricing audit or act in an advisory role to regular corporate auditors. Supporting these international auditors when necessary are teams of economists, lawyers or more senior international auditors located at the CRA's head office. The CRA may also engage outside consultants when necessary to provide expertise in specific areas; this is normally done at the appeal level when preparing for litigation, but may also occur during the audit process. As the CRA views transfer pricing audits as high risk, it is placing more international auditors and economists in the field.</p> <p>Companies face the following sanctions related to transfer pricing audits, adjustments and penalties:</p> <ul style="list-style-type: none"> • The statute of limitations is six years for Canadian-controlled private corporations and seven years for foreign controlled corporations and public corporations • Section 247 allows the CRA to adjust a Canadian taxpayer's transfer prices or cost allocations where the transfer prices or cost allocations do not reflect arm's length pricing • Where the CRA has made a transfer pricing adjustment, it can also impose penalties in circumstances where a taxpayer has failed to prepare and maintain contemporaneous documentation supporting transfer prices <p>Court convictions are publicized in local, regional and national media to communicate the consequences of fraud committed against the Canadian public and to maximize the deterrent effect of these convictions. Two important transfer pricing cases were considered by Canadian courts in</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
			<p>2010/2011:</p> <ul style="list-style-type: none"> On 24 March 2011 the Crown's application for leave to appeal to the Supreme Court of Canada (SCC) in the GlaxoSmithKline case was granted, as was the taxpayer's application for leave to cross-appeal. This will be the first transfer pricing case to be heard by the SCC. On 15 December 2010 the Federal Court of Appeal (FCA) dismissed the Crown's appeal of the 2009 Tax Court of Canada's (TCC) decision in the General Electric Capital Canada case, which favoured the taxpayer. <p>The CRA may not be targeting any particular industry for transfer pricing audits, but it has begun to adopt an industry-based audit approach by developing tax service offices (TSOs) that have expertise in specific industries, including pharmaceutical (TSO in Laval, Québec), automotive (Windsor, Ontario), banking (Toronto, Ontario) and oil and gas (Calgary, Alberta).</p> <p>Based on these findings, it is concluded that the risk is considered low in this indicator.</p>
1.19 Custom regulations	<p>Applicable laws and regulations</p> <p><i>Canada Customs Act.</i></p> <p><i>Convention on International Trade in Endangered Species (CITES)</i></p> <p><i>Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act (WAPPRIITA)</i></p>	<p>Canadian Food Inspection Agency. 2016. Forestry – Exports. http://www.inspection.gc.ca/plants/forestry/exports/eng/1300380523318/1300380612246</p> <p>Global Affairs Canada. 2017. Softwood lumber agreement. http://www.international.gc.ca/controls-controles/softwood-bois_oeuvre/other-autres/agreement-accord.aspx?lang=eng</p>	<p>Low risk</p> <p>Canada is the second largest exporter of primary forest products in the world, but it also imports wood and wood products. Most of these imports and exports are associated with cross-border trade with the United States, which is a low-risk jurisdiction for illegal harvesting and border/customs governance.</p> <p>The forest products sector in Canada and the United States is highly integrated, with logs and other timber products</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
	<p>The Canada–U.S. Softwood Lumber Agreement is an important policy issue affecting forest products trade and competitiveness between Canada and the U.S.</p> <p>The following regulations also apply when exporting Canadian wood:</p> <ul style="list-style-type: none"> • Technical Heat Treatment Guidelines and Operating Conditions Manual (PI-07) • Canadian Debarking and Grub Hole Control Program (CDGHCP) for the export of Cedar Forest Products to the European Union • Canadian Heat Treatment Wood Products Certification Program (CHTWPCP) • Canadian Wood Packaging Certification Program (CWPCP) • Guidelines for the Phytosanitary Certification of Lumber for Export • Wood Packaging Material Requirements to the United States • Phytosanitary Certification Requirements for the Export of Untreated Canadian Conifer Logs to China • Requirements for Firewood and Spruce Logs from Canada 	<p>US Customs and Border Protection. 2013. Beyond the Border Action Plan Single Window Initiative: Canada/United States Data Alignment. https://portal.iecanada.com/public/file/USCBP-CBSA%20data%20alignment%20package.pdf</p> <p>Natural Resources Canada. 2016. Legality and Sustainability. http://www.nrcan.gc.ca/forests/canada/sustainable-forest-management/13303</p>	<p>crossing the border to supply mills in both countries. Under the <i>Canadian Customs Act</i>, all goods imported into Canada must be reported to the Canada Border Services Agency. Border services officers may examine any goods that are imported or exported, and can detain goods until the agency is satisfied that the importation or exportation complies with the <i>Customs Act</i> or any other act of Parliament.</p> <p>This governance system as a whole, combined with the resources and rigour of Canadian and US customs agencies, result in a low risk of illegal practices with regards to customs regulations.</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
	<p>Legal Authority</p> <p>Canada Border Services Agency</p> <p>Transport Canada</p> <p>Environment Canada</p> <p>Legally required documents or records</p> <p>Customs declaration forms</p> <p>Treatment and phytosanitary certificates</p> <p>CITES permits</p>		
1.20 CITES	<p>Applicable laws and regulations</p> <p>Commercial trade in wildlife must be conducted in compliance with the <i>Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act</i> (WAPPRIITA). This law stipulates the federal permit requirements for the international trade of wildlife, their parts, and products made from them. WAPPRIITA is the legislation through which Canada enforces and administers its</p>	<p>Environment and Climate Change Canada. Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). http://www.ec.gc.ca/cites/</p>	<p>Low risk</p> <p>There are no Canadian tree species on the CITES list of species. Therefore, the risk of illegal harvest of CITES species is low.</p> <p>Canada is a party to CITES. Trade rules apply to CITES-listed tree species, such as ebony, ramin and rosewood. These materials cannot be imported without an accompanying CITES permit. To enforce the convention, Canada has enacted WAPPRIITA. Environment Canada is the lead federal agency responsible for enforcing this act.</p> <p>WAPPRIITA is used not only to enforce CITES in Canada, but also to control imports of non CITES-listed species that</p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
	<p>responsibilities under CITES.</p> <p>Legal Authority</p> <p>Environment Canada is the lead agency responsible for implementing CITES on behalf of the federal government</p> <p>Provincial ministries responsible for wildlife.</p> <p>Legally required documents or records</p> <p>If you are trading species or products that contain CITES listed species, you will need a CITES permit in addition to any other trade documents.</p>		<p>have been obtained illegally. Environment Canada works with a broad range of partners, including the Canada Border Services Agency, to ensure that imports comply with CITES and with relevant legislation and regulations in foreign countries for non CITES-listed species.</p> <p>Differentiating between wood products from CITES-listed tree species and tree species not listed under CITES can be technically challenging. To help address this problem, Environment Canada has created and internationally distributed the CITES Identification Guide – Tropical Woods. Canada is also working on ways to increase the reliability of species identification on trade permits, customs forms, border declarations and associated documents. For instance, through the Single Window Initiative Canada is examining the feasibility of a digital coding system for taxonomic names that international customs and other regulatory authorities could use to better capture electronic trade data for plants and animals. Digital coding would give authorities a greater ability to intercept timber and timber products from protected tree species, and even those harvested illegally.</p> <p>Environment Canada works with a broad range of partners, including the Canada Border Services Agency, to ensure that imports comply with CITES and with relevant legislation and regulations in foreign countries for non CITES-listed species. Therefore, the risk of this indicator is low.</p>
Diligence/due care procedures			
1.21 Legislation requiring due	<p>Applicable laws and regulations</p> <p>The <i>Wild Animal and Plant Protection and Regulation of International and</i></p>	<p>US Customs and Border Protection. 2013. Beyond the Border Action Plan Single Window Initiative: Canada/United States Data</p>	<p>Low risk</p> <p>Canada's <i>Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act (WAPPRIITA)</i></p>

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
<p>diligence/ due care procedures</p>	<p><i>Interprovincial Trade Act (WAPPRIITA)</i></p> <p>Legal Authority</p> <p>Environment Canada</p> <p>Provincial Ministries of Labour Relations and Workplace Safety</p> <p>Employment and Social Development Canada</p> <p>Provincial ministries of forests.</p> <p>Canada Border Services Agency</p> <p>Transport Canada</p> <p>Legally required documents or records</p> <p>Demonstration of due diligence</p> <p>CITES permits</p> <p>Customs declaration forms</p>	<p>Alignment. https://portal.iecanada.com/public/file/USCBP-CBSA_data_alignment_package.pdf</p> <p>Natural Resources Canada. 2016. Legality and Sustainability. http://www.nrcan.gc.ca/forests/canada/sustainable-forest-management/13303</p> <p>Australian Government. 2014. Country Specific Guideline for Canada. http://www.agriculture.gov.au/Style/Library/Images/DAFF/_data/assets/pdffile/0003/2406072/canada-country-specific-guideline.pdf</p>	<p>legislation and its enabling regulations (the Wild Animal and Plant Trade Regulation) prohibit the import of illegal timber and timber products.</p> <p>For interprovincial transport subsection 7.(2) of WAPPRIITA states: ‘No person shall transport from a province to another province any animal or plant, or any part or derivative of an animal or plant, where the animal or plant was taken, or the animal, plant, part or derivative was possessed, distributed or transported, in contravention of any provincial Act or regulation.’</p> <p>For imported materials subsection 6.(1) of WAPPRIITA states: ‘No person shall import into Canada any animal or plant that was taken, or any animal or plant, or any part or derivative of an animal or plant, that was possessed, distributed or transported in contravention of any law of any foreign state.’</p> <p>The Act also states that no person shall knowingly possess an animal or plant, or any part or derivative of an animal or plant</p> <ul style="list-style-type: none"> a) that has been imported or transported in contravention of this Act; b) for the purpose of transporting it from one province to another province in contravention of this Act or exporting it from Canada in contravention of this Act; or c) for the purpose of distributing or offering to distribute it if the animal or plant, or the animal or plant from which the part or derivative comes, is listed in Appendix I to the

Indicator	Applicable laws and regulations, legal Authority, & legally required documents or records	Sources of Information	Risk designation and determination
			<p>Convention.</p> <p>This legislation and regulation makes it illegal to transport from a province to another province timber products into which were produced or acquired in contravention of any provincial laws.</p> <p>This governance system as a whole result in a low risk of illegal practices with regards to due diligence.</p>

Control Measures

N/A – No Specified Risk areas identified.

Controlled Wood Category 2: Wood harvested in violation of traditional and human rights

Overview

Category 2 has been evaluated at the national level except in instances where provincial (regional) legal and regulatory frameworks governed and were therefore more appropriate. For example, the regulation of minimum age is the jurisdiction of the provinces or territories in Canada.

The sources analysed for this category began with those prescribed in Section 4.3.1 of *FSC National Risk Assessment Framework* (FSC-PRO-60-002a V1-0). When sources appeared inconclusive or when national experts had information to share, more research was completed and sources added to accurately determine risk.

For Indicator 2.1 and 2.2:

Each source concludes with a risk indication, which summarizes the risk according to a specific source. When the content of a source appears to lead to a low risk determination it is listed as low risk.

“Low risk” is defined as:

A conclusion, following a risk assessment, that there is negligible risk that material from unacceptable sources can be sourced from a specific geographic area.

NOTE: ‘Low risk’ as determined by FSC is synonymous with ‘negligible risk’ as defined by Regulation (EU) No 995/2010 of the European Parliament and of the Council of 20 October 2010 laying down the obligations of operators who place timber and timber products on the market (known as the ‘EU Timber Regulation’).

When the content of a source appears to lead to a specified risk determination it is listed as specified risk.

“Specified risk” is defined as:

A conclusion, following a risk assessment, that there is a certain risk that material from unacceptable sources may be sourced or enter the supply chain from a specific geographic area. (FSC-PRO-60-002a)

The resulting risk conclusion of the indicator is then based on the collective assessment of all the sources analyzed and evidence found. In some instances, a source may contain varying conclusions and low and specified risk may both be indicated. However, the conclusion at the end of the indicator contains the final risk designation for that indicator.

For Indicator 2.3:

The assessment for Indicator 2.3 follows the FSC ‘context and considerations’ provided in FSC-PRO-60-002a V1-0 Table 2. Six questions were established as the framework for the evaluation of Indicator 2.3:

- 1) Are there Indigenous Peoples, and/or traditional peoples present in the area under assessment?
- 2) Are the provisions of ILO Convention 169 and United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) enforced in the area concerned?
- 3) Is there evidence of violation or infringement of legal and customary rights of Indigenous Peoples?
- 4) What formal/legal mechanisms exist to mitigate the violation or infringement of the rights of Indigenous Peoples by forest management activities?
- 5) Are there any conflicts of substantial magnitude pertaining to the rights of Indigenous Peoples as a result of forest management activities?

- 6) Is the conflict resolution process broadly accepted by affected Indigenous Peoples as being fair and equitable?

Relevant sources as prescribed in FSC-PRO-60-002a V1-0 section 4.3.1 were referenced in the evaluation of these six questions, as applicable.

Rationale for the resulting risk conclusion for Indicator 2.3 is summarized at the end of the evaluation of the six questions, including the relevant risk thresholds met.

Category 2 Summary of Risk Assessment

Indicator	Sources of Information	Scale of Assessment	Risk designation and determination
2.1. The forest sector is not associated with violent armed conflict, including that which threatens national or regional security and/or linked to military control.	See “Detailed analysis”, below.	Country	Low risk All low risk thresholds (1, 2, 3, 4 and 5) are met. None of the specified risk thresholds are met.
2.2. Labour rights are respected including rights as specified in ILO Fundamental Principles and Rights at work.	See “Detailed analysis”, below.	Country	Low risk Low risk threshold 11 is met. None of the specified risk thresholds are met.
2.3. The rights of Indigenous and Traditional Peoples are upheld.	See “Detailed analysis”, below.	Country	Specified risk Specified risk threshold 27 is met.

Control Measures

Indicator	Recommended Control Measures
2.1	N/A
2.2	N/A
2.3	<p>For sources of material originating directly from the forest of origin, <i>primary producers</i>* may demonstrate one or a combination of the following control measures:</p> <ol style="list-style-type: none"> 1. Indigenous Peoples with legal and/or customary rights within the Forest Management Unit do not <i>oppose</i>* the Forest Management Plan. <p>Guidance: *<i>oppose</i> = <i>opposition demonstrated through active litigation, blockade, protest or other significant conflict of substantial magnitude.</i></p> <ol style="list-style-type: none"> 2. An agreement exists between Indigenous Peoples and the resource manager/supplier that follows the principles of Free, Prior and Informed Consent (FPIC). 3. An Indigenous-led or co-developed land use plan is in place within the supply area. <p>Guidance: <i>A land use plan in the context of this control measure is considered ‘Indigenous-led’ or ‘co-developed’ if the following</i></p>

Indicator	Recommended Control Measures
	<p><i>criteria are in place. Either:</i></p> <ul style="list-style-type: none"> • <i>one or more Indigenous communities have entered into a government-to-government agreement with a province regarding the creation and implementation of a land use plan (“Agreement”), OR</i> • <i>the affected Indigenous community has consented to the process and plan outcome, as evidenced by a public declaration and resolution of the Indigenous governing body (“Consent”).</i> <p><i>If there is an Agreement, it must:</i></p> <ul style="list-style-type: none"> • <i>address forest management activities, AND</i> • <i>establish a mutually agreed mechanism to monitor the implementation of the land use plan.</i> <p><i>If there is Consent but not an Agreement, the land use plan must:</i></p> <ul style="list-style-type: none"> • <i>address forest management activities.</i> <p>4. Best efforts to engage with Indigenous Peoples with legal and customary rights within the Forest Management Unit to understand if/how these rights are violated as a result of forest management activities, is demonstrated.</p> <p>Guidance: ‘Best efforts to engage’ should be aligned with the attributes of a ‘culturally appropriate’ engagement process. Refer to the FSC Canada National Forest Stewardship Standard (FSC-STD-CAN-01-2018) for a definition and discussion of ‘culturally appropriate’ engagement.</p> <p>For non-primary producers (applicable for sources of material not originating directly from the forest of origin):</p> <p>5. A dispute resolution process is established specifically to address issues arising from violations of the right of Indigenous People related to forest management activities. The dispute resolution process is implemented in the event a dispute of substantial magnitude arises with the supply area.</p> <p><i>*Primary producer:</i> An entity that receives materials (roundwood or chips) directly from the forest of origin.</p>

Risk Assessment

General Information Sources

Sources of information	Evidence	Scale of Assessment	Risk indication
Context			
<ul style="list-style-type: none"> General Sources from FSC-PRO-60-002a V1-0 EN 			
World Bank: Worldwide Governance Indicators http://info.worldbank.org/governance/wgi/#home http://info.worldbank.org/governance/wgi/index.aspx#reports	In 2017 (latest available year) Canada scores between 89 and 98 on the percentile rank among all countries for all six dimensions.	Country	Low risk
Carleton University: Country Indicators for Foreign Policy: the Failed and Fragile States project of Carleton University examines state fragility using a combination of structural data and current event monitoring https://carleton.ca/cifp/failed-fragile-states/	Canada scores 'low' on State fragility map 2011.	Country	Low risk
Human Rights Watch: http://www.hrw.org World Report 2017: https://www.hrw.org/world-report/2017/country-chapters/canada	“Inadequate access to clean, safe drinking water continues to pose a major public health concern in a number of indigenous communities.” No mention of the forest sector in Canada.	Country	Specified risk for Indigenous Communities
US AID: www.usaid.gov Search on website for [country] + 'human rights' 'conflicts' 'conflict timber'	No information found on specified risks.	Country	Low risk
Global Witness: www.globalwitness.org Search on website for [country] + 'human rights' 'conflicts' 'conflict timber'	No information found on specified risks.	Country	Low risk
Amnesty International Annual Report: The state of the world's human rights Information on key human rights issues, including: freedom of expression; international justice; corporate accountability; the death penalty; and reproductive rights. https://www.amnesty.org/en/documents/pol10/4800/2017/en/ https://www.amnesty.org/en/countries/americas/canada/report-canada/	Report 2016/2017: There appear to be cases involving the permitting of projects despite unresolved court cases concerning obligations under a historic treaty with affected First Nations and acknowledgment of the need to address the impact of the resource sector on the safety of Indigenous women and girls. It is unclear how the government will collaborate with Indigenous Peoples to implement the UN Declaration on the Rights of Indigenous Peoples.	Country	Specified risk for Indigenous Communities

<p>The Global Peace Index. Published by the Institute for Economics & Peace. This index is the world's leading measure of national peacefulness. Source: The Guardian: http://economicsandpeace.org/research/iep-indices-data/global-peace-index Global Peace Index 2017: http://visionofhumanity.org/app/uploads/2017/06/GPI17-Report.pdf</p>	<p>The state of Peace in Canada is labelled 'Very High' with Canada ranking number 8 out of 162 countries (p. 10)</p>	<p>Country</p>	<p>Low risk</p>
<p>Additional sources of information Searching for further data on: level of corruption, governance, lawlessness, fragility of the State, freedom of journalism, freedom of speech, peace, human rights, armed or violent conflicts by or in the country, etc.</p>	<p>Evidence</p>	<p>Scale of risk assessment</p>	<p>Risk indication</p>
<p>Fund for Peace - Failed States Index of Highest Alert The Fund for Peace is a US-based non-profit research and educational organization that works to prevent violent conflict and promote security. The Failed States Index is an annual ranking, first published in 2005, of 177 nations based on their levels of stability and capacity http://www.fundforpeace.org/global/?q=cr-10-99-fs In 2014 the FFP changed the name of the Failed State Index to the Fragile State Index: http://fundforpeace.org/fsi/country-data/</p>	<p>In 2017, Canada is ranked 169 out of 178 countries on the failed states index (1 being the most failed state). This ranks Canada in the category 'sustainable' state.</p>	<p>Country</p>	<p>Low risk</p>
<p>Reporters without Borders: Press Freedom Index https://rsf.org/en/ranking</p>	<p>Canada ranks 22 out of 180 countries worldwide with a score of 16.53 on the 2017 World Press Freedom Index.</p>	<p>Country</p>	<p>Low risk</p>
<p>Transparency International Corruption Perceptions Index http://cpi.transparency.org/cpi2013/results/</p>	<p>Canada scores 82 points on the Corruption Perceptions Index 2016. Canada ranks 9 out of 176 with rank 1 being the most clean country.</p>	<p>Country</p>	<p>Low risk</p>
<p>Chatham House Illegal Logging Indicators Country Report Card http://www.illegal-logging.info http://www.illegal-logging.info/regions/canada http://www.illegal-logging.info/content/addressing-eutr-requirements-through-sfi-certification</p>	<p>No mentioning of links with illegal logging.</p>	<p>Country</p>	<p>Low risk</p>

Freedom House http://www.freedomhouse.org/ https://freedomhouse.org/report-types/freedom-world https://freedomhouse.org/report/freedom-world/2017/canada	The status of Canada on the Freedom in the World index is 'free'.	Country	Low risk
WWF Global. 2017. Illegal Logging. http://wwf.panda.org/about_our_earth/about_forests/deforestation/forest_illegal_logging/	No mention of the forest sector in Canada. Canada not found on map of countries with higher rates of illegal logging.	Country	Low risk
World Bank Harmonized List of Fragile Situations: http://siteresources.worldbank.org/EXTLICUS/Resources/511777-1269623894864/Fragile_Situations_List_FY11_%28Oct_19_2010%29.pdf	Canada does not feature on this list.	Country	Low risk
Committee to Protect Journalists: Impunity Index CPJ's Impunity Index calculates the number of unsolved journalist murders as a percentage of each country's population. http://cpj.org/reports/2014/04/impunity-index-getting-away-with-murder.php http://cpj.org/killed/americas/canada/	Two journalists killed in Canada since 1992 (1 in 1995 and 1 in 1998). No mention of the forest sector in Canada.	Country	Low risk
Conclusion on General Country Context: Canada scores very well on almost all indicators reviewed in this section on the country context, such as in relation to press freedom, peace, governance and absence of corruption. Some issues are reported mainly in relation to the rights of Indigenous Peoples.			

Indicator 2.1 Sources of Information and Detailed Analysis

Indicator 2.1. The forest sector is not associated with violent armed conflict, including that which threatens national or regional security and/or linked to military control.

Guidance:

- Is the country covered by a UN security ban on exporting timber?
- Is the country covered by any other international ban on timber export?
- Are there individuals or entities involved in the forest sector that are facing UN sanctions?
- Is the area a source of conflict timber?
- Is the conflict timber related to specific operators? If so, which operators

General sources from FSC-PRO-60-002a V1-0 EN	Information found and specific sources	Scale of Assessment	Risk indication
Compendium of United Nations Security Council Sanctions Lists https://www.un.org/sc/suborg/en/sanctions/un-sc-consolidated-list	There is no UN Security Council ban on timber exports from Canada Canada is not covered by any other international ban on timber export. There are no individuals or entities involved in the forest sector in Canada that are facing UN sanctions.	Country	Low risk
US AID: www.usaid.gov			
Global Witness: www.globalwitness.org			
US AID: www.usaid.gov http://pdf.usaid.gov/pdf_docs/pnact462.pdf Conflict Timber is defined by US AID as: <ul style="list-style-type: none"> • conflict financed or sustained through the harvest and sale of timber (Type 1), • conflict emerging as a result of competition over timber or other forest resources (Type 2) 	No mention of the forest sector in Canada.	Country	Low risk
Global Witness: www.globalwitness.org/campaigns/environment/forests	No mention of the forest sector in Canada.	Country	Low risk
Human Rights Watch: http://www.hrw.org/	No mention of the forest sector in Canada.	Country	Low risk
World Resources Institute: Governance of Forests Initiative Indicator Framework http://pdf.wri.org/working_papers/qfi_tenure_indicators_sep09.p	This work resulted in a publication: Assessing and Monitoring Forest Governance. This tool has not yet been	Country	Low risk

df Now: PROFOR http://www.profor.info/node/1998	applied to Canada.		
Amnesty International Annual Report: The state of the world's human rights Information on key human rights issues, including: freedom of expression; international justice; corporate accountability; the death penalty; and reproductive rights https://www.amnesty.org/en/documents/pol10/4800/2017/en/	See Amnesty source above. Armed conflict in forestry sector not mentioned in Canada.	Country	Low risk
World Bank: Worldwide Governance Indicators http://info.worldbank.org/governance/wgi/index.aspx-reports	In 2017 (latest available year) Canada scores 89 in the category of political stability/absence of violence/terrorism. 0 corresponds to the lowest ranked countries and 100 to the highest.	Country	Low risk
Greenpeace: www.greenpeace.org Search for 'conflict timber [country]'	No mention of the forest sector in Canada.	Country	Low risk
Google the terms '[country]' and one of following terms or in combination 'conflict timber', 'illegal logging'	No mention of the forest sector in Canada. Several conflicts related to indigenous peoples and forestry found but these cannot be classified as 'armed conflict' and are presented under 2.3 below.	Country	Low risk

Summary of Evaluation of Indicator 2.1:	Scale	Risk Designation
<p>Although several conflicts with Indigenous Peoples were found in relation to forestry these cannot be classified as 'armed conflicts'.</p> <p>The following low risk thresholds apply:</p> <p>(1) The area under assessment is not a source of conflict timber; AND</p> <p>(2) The country is not covered by a UN security ban on exporting timber; AND</p> <p>(3) The country is not covered by any other international ban on timber export; AND</p> <p>(4) Operators in the area under assessment are not involved in conflict timber supply/trade; AND</p> <p>(5) Other available evidence does not challenge 'low risk' designation.</p>	Country	Low risk

Indicator 2.2 Sources of Information and Detailed Analysis

Indicator 2.2. Labour rights are respected including rights as specified in ILO Fundamental Principles and Rights at work.

Guidance

- Are the social rights covered by the relevant legislation and enforced in the country or area concerned? (refer to category 1)
- Are rights like freedom of association and collective bargaining upheld?
- Is there evidence confirming absence of compulsory and/or forced labour?
- Is there evidence confirming absence of discrimination in respect of employment and/or occupation, and/or gender?
- Is there evidence confirming absence of child labour?
- Is the country signatory to the relevant ILO Conventions?
- Is there evidence that any groups (including women) feel adequately protected related to the rights mentioned above?
- Are any violations of labour rights limited to specific sectors?

General sources from FSC-PRO-60-002a V1-0 EN	Information found and specific sources	Scale of Assessment	Risk indication
<p>Status of ratification of fundamental ILO conventions: http://www.ilo.org/dyn/normlex/en/f?p=1000:11001:0::NO:: or use: ILO Core Conventions Database: https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:1:0::NO:: ⋮</p> <ul style="list-style-type: none"> • C29 Forced Labour Convention, 1930 • C87 Freedom of Association and Protection of the Right to Organise Convention, 1948 • C98 Right to Organise and Collective Bargaining Convention, 1949 • C100 Equal Remuneration Convention, 1951 • C105 Abolition of Forced Labour Convention, 1957 • C111 Discrimination (Employment and Occupation) Convention, 1958 • C138 Minimum Age Convention, 1973 • C182 Worst Forms of Child Labour Convention, 1999 	<p>As of January 2019, all 8 of the fundamental conventions are in force in Canada.</p>	<p>Country</p>	<p>Low risk</p>

<p>Canada: http://www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200_COUNTRY_ID:102582.</p>			
<p>ILO Declaration on Fundamental Principles and Rights at Work. Country reports. http://www.ilo.org/declaration/lang--en/index.htm Source of several reports. Search for 'racial discrimination', 'child labour', 'forced labour', 'gender equality', 'freedom of association'</p> <p>Accelerating action against child labour, 2010: https://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/documents/publication/wcms_126752.pdf</p> <p>The cost of coercion (2009): https://www.ilo.org/global/topics/forced-labour/publications/WCMS_106268/lang--en/index.htm</p> <p>World of Work report (2014): https://www.ilo.org/global/research/global-reports/world-of-work/2014/lang--en/index.htm</p> <p>Resource guide on Gender issues in employment and labour market policies (2014): https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/instructionalmaterial/wcms_243015.pdf</p>	<p>Constitutional law includes provisions on human rights, fundamental freedoms prohibiting discrimination on different grounds, including disability. No mention of the forest sector in Canada. No specified risk information found on child labour in Canada.</p> <p>The lack of ratification of Convention 138 (minimum age convention) was the only specific critique of Canada in the <i>Accelerating Child Labour</i> report (2010). However, in 2016, Canada ratified Convention 138 (minimum age convention).</p> <p>The Cost of Coercion report describes growing attention to the forced labour conditions that can be experienced by foreign workers in domestic service, agriculture and other sectors of the economy in both Canada and the US. However, In both countries, the creation of new task forces and strengthened law enforcement against human trafficking in both countries has served to bring increased attention to these cases.</p> <p>World of Work report (2014): Canada shows a lower rate of excessive work hours compared to most countries. Canada is mentioned as one of the countries where labour provisions are proliferating. No specified risk information found on Canada in this report.</p> <p>Resource guide on gender issues (2014): No specified risk information found on Canada in this report.</p>	<p>Country</p>	<p>Low risk</p>
<p>ILO Child Labour Country Dashboard: http://www.ilo.org/ipecc/Regionsandcountries/lang--en/index.htm</p>	<p>Canada does not feature in the ILO Child Labour Country.</p>	<p>Country</p>	<p>Low risk for child labour</p>

<p>Office of the United Nations High Commissioner for Human Rights (OHCHR), Committee on Rights of the Child: http://www.ohchr.org/EN/HRBodies/CRC/Pages/CRCIndex.aspx</p> <p>Concluding observations on the combined third and fourth periodic report of Canada, adopted by the Committee at its sixty-first session (17 September – 5 October 2012): http://docstore.ohchr.org/SelfServices/FilesHandler.ashx?enc=6QkG1d%2FPPRiCAqhKb7yhsh8%2FU426pHwccUxzN5kmnhLtdnrWm1hJzGwfirOtSF7im+tj4+J5n5CPlpDWXA35DpHXskxTdDvCoa0RW9yOJTACORyOJ17Auf+pplqz6CB</p>	<p>Economic exploitation, including child labour: “The Committee regrets the lack of information provided in the State party’s report regarding child labour and exploitation, and notes with concern that data on child labour is not systematically collected in all provinces and territories. The Committee is also concerned that the State party lacks federal legislation establishing the minimum age of employment within the provinces and territories. The Committee also expresses concern that in some provinces and territories, children of 16 years of age are permitted to perform certain types of hazardous and dangerous work.”</p> <p>See evidence from CNRA Consultation regarding minimum wage below.</p> <p>82. The Committee urges the State party to provide systematic and adequate training to law enforcement officials and prosecutors with the view of protecting all child victims of trafficking and improving enforcement of existing legislation. The Committee recommends that such training include awareness-raising on the applicable sections of the Criminal Code criminalizing child trafficking, best practices for investigation procedures, and specific instructions on how to protect child victims.</p> <p>No mentioning of indications of significant child labour or child trafficking.</p>	Country	Low risk for child labour / child trafficking
<p>ILO Helpdesk for Business on International Labour Standards: http://www.ilo.org/empent/areas/business-helpdesk/lang-en/index.htm</p>	No information found on serious violations of Labour rights in Canada.	Country	Low risk
<p>Committee on the Elimination of Discrimination against Women http://www.ohchr.org/en/hrbodies/cedaw/pages/cedawindex.aspx http://docstore.ohchr.org/SelfServices/FilesHandler.ashx?enc=6QkG1d%2FPPRiCAqhKb7yhsoVqDbaslinb8oXqzpehivi+CkIAE</p>	<p>Employment and poverty reduction “54. Aboriginal women’s labour market participation and employment rates trail that of both non-Aboriginal women and Aboriginal men.”</p> <p>No mention of the forest sector in Canada related to labour</p>	Country	Specified risk for discrimination against aboriginal women

<p>Ad2xed4nKovdMpvO4pMAFcHnHXbMJdAzkJJEzzWFixxcKDwKYkmJUItNIKNIFAsaHPdUE9mthZABK</p> <p>Convention on the Elimination of All Forms of Discrimination against Women. Consideration of reports submitted by States parties under article 18 of the Convention. Eighth and ninth periodic reports of States parties due in 2014.</p> <p>http://tbinternet.ohchr.org/_layouts/TreatyBodyExternal/Countries.aspx?CountryCode=CAN&Lang=EN</p>	<p>market participation.[...]</p> <p>43. The Committee is concerned at the fact that aboriginal women and women of various ethnic and minority communities continue to suffer from multiple forms of discrimination, particularly in terms of access to employment, housing, education and health care.</p>		
<p>Human Rights Watch: http://www.hrw.org/</p>	<p>No information found on serious violations of Labour rights in Canada.</p>	<p>Country</p>	<p>Low risk for labour rights</p>
<p>Child Labour Index 2014 produced by Maplecroft.</p> <p>http://maplecroft.com/portfolio/new-analysis/2013/10/15/child-labour-risks-increase-china-and-russia-most-progress-shown-south-america-maplecroft-index/</p>	<p>Canada scores 'low risk' on the Child Labour Index 2014</p>	<p>Country</p>	<p>Low risk for child labour</p>
<p>http://www.verite.org</p>	<p>No mention of the forest sector in Canada.</p>	<p>Country</p>	<p>Low risk for forced labour</p>
<p>The ITUC Global Rights Index</p> <p>Ranks 139 countries against 97 internationally recognised indicators to assess where workers' rights are best protected, in law and in practice.</p> <p>https://www.ituc-csi.org/ituc-global-rights-index-2017?lang=en</p>	<p>Canada has a rating of 2: repeated violations of rights. Countries with a rating of 2 have slightly weaker collective labour rights than those with the rating of 1. Certain rights have come under repeated attacks by governments and/or companies have undermined the struggle for better working conditions.</p>	<p>Country</p>	<p>Specified risk for freedom of association and collective bargaining</p>
<p>Additional general sources</p>		<p>Additional specific sources</p>	
<p>Google the terms: '[country]' and one of following terms 'violation of labour rights', 'child labour', 'forced labour', 'slave labour', 'discrimination', 'gender gap labour', 'violation of labour union rights' 'violation of freedom of association and collective bargaining'</p> <p>https://labourrights.ca/issues/restrictive-labour-laws-canada</p> <p>http://www.globalslaveryindex.org/report/</p>	<p>Summary of Legislation Restricting Collective Bargaining and Trade Union Rights in Canada 1982 – 2017</p> <p>The assault on the rights of working Canadians</p> <p>The right to organization and collective bargaining is still, at times, contested on the provincial and federal level as well as in the private and public sector in Canada.</p> <p>The Global Slavery Index (2016) presents a ranking of 162 countries.</p> <p>Canada ranks 138 with an estimated percent of the</p>	<p>Country</p>	<p>Specified risk for freedom of association and collective bargaining</p> <p>Low risk for</p>

http://ottawacitizen.com/news/national/liberals-promise-proactive-pay-equity-legislation-to-close-wage-gaps	<p>population in slavery being at 0.018.</p> <p>The federal government is promising new pay-equity legislation that will put the onus on employers in federally regulated industries to ensure men and women are paid equally for work of equal value. Legislation was tabled in October 2018.</p> <p>No mention of the forest sector in Canada.</p>		<p>forced labour.</p> <p>Low risk on gender wage gap.</p>
<p>Other NGOs:</p> <p>UN Document: A/HRC/WG.6/16/CAN/3: Summary prepared by the Office of the High Commissioner for Human Rights in accordance with paragraph 5 of the annex to Human Rights Council resolution 16/21 - Canada https://documents-dds-ny.un.org/doc/UNDOC/GEN/G13/104/53/PDF/G1310453.pdf?OpenElement</p>	<p>59. FAFIA recommended designing a labour force strategy that will address longstanding structural inequalities experienced by women.</p> <p>60. "SCFEL-VCC recommended that Canada uphold the constitutional right to freedom of association and form unions and strike, and set measurable goals to utilize internal labour sources in low unemployment areas including Aboriginal communities."</p>	Country	Specified risk for discrimination of women in the labour market and for freedom of association
<p>The Income Gap Between Aboriginal Peoples and the Rest of Canada https://www.policyalternatives.ca/publications/reports/income-gap-between-aboriginal-peoples-and-rest-canada</p>	<p>A 2010 study shows that Aboriginal women who have obtained a Bachelor's degree or higher enjoy higher median incomes than non-Aboriginal Canadian women with equivalent education. The phenomenon of Aboriginal women making more than non- Aboriginal women has only become evident with the 2006 census figures.</p>	Country	Specified risk for discrimination of women in the labour market
<p>Ontario Ministry of Labour. Minimum Wage https://www.labour.gov.on.ca/english/hs/min_age.php</p>	<p>There are minimum age requirements for certain industries and workplaces set by laws other than the Employment Standard Act. The <i>Occupational Health and Safety Act</i> sets the minimum ages to work as follows:</p> <p>...</p> <p>16 years of age for construction and logging operations</p>	Province	Low risk for child labour
<p>Manitoba "Young Employees" http://www.gov.mb.ca/labour/standards/doc_young_workers_factsheet.html</p>	<p>Employees under 18 years old cannot work in the following industries:</p> <p>Forestry Saw or pulp mills</p> <p>...</p> <p>Additional restrictions may be put on permits to ensure the work will not harm the safety or wellbeing of the child.</p>	Province	Low risk for child labour

<p>Alberta. Employees under 18 fact sheet https://work.alberta.ca/employment-standards/employees-under-18.html</p>	<p>Employees 12 to 14 years old need a permit from Employment Standards to work at jobs other than clerking in an office or retail store, delivering flyers, or certain approved duties in the restaurant industry</p> <p>Employees 15 to 17 years old have special restrictions when employed by restaurants, bars, all retail stores, gas stations, hotels and motels</p> <p>New employment standards came into effect on January 1, 2018. Read about the changes.</p>	Province	Low risk for child labour
<p>British Columbia: http://www.labour.gov.bc.ca/esb/facshts/youth_general.htm</p>	<p>A child under 15 years of age can be employed if the written consent of the child's parent or guardian is obtained.</p>	Province	Low risk for child labour
<p>Search of major forest companies note a minimum of grade 12 for all entry level positions:</p> <p>AlPac - https://alpac.ca/working-with-us/education-and-age-requirements</p> <p>Tolko - http://tolko.com/work-with-us/you</p>	<p>Local hiring policies for forest-based companies and manufacturing facilities require the completion of grade 12 education which is 17 to 18 years of ages in almost all of Canada except in the province of Québec (16 to 17 years of age).</p> <p>A minimum age of 15 (or the age of completing of compulsory schooling) is allowed based on ILO 138 as long as to not to jeopardise the health, safety or morals of young persons. Ages 13 - 15 are allowed for light work where it is not likely to be harmful to the health and development or to prejudice attendance at school.</p>	Country	Low risk for child labour
<p>Public Service Labour Union Relations Board Collective Bargaining https://www.tbs-sct.gc.ca/agreements-conventions/index-eng.aspx</p>	<p><u>The rights to organize and collective bargain</u> PPWC: Rights to organize and collective bargain are upheld for federal public employees by the Public Service Labour Relations and Employment Board of Canada that administers the collective bargaining process for public service under the <i>Public Service Labour Relations Act</i>.</p> <p>The right to organize and collective bargain is upheld for all regions of Canada through Provincial and Territorial <i>Labour Relations Boards</i> for unionized labour and through</p>	Country	Low risk for Freedom of Association and collective bargaining

<p>Ministry of Labour – collective bargaining agreements: http://www.labour.gov.on.ca/english/lr/services/</p>	<p>the Provincial and Territorial <i>Ministries of Labour, Employment Standards Branches</i> for non - unionized labour. Both protect for workers’ rights, such as pay, hours of work, overtime, vacation or holiday entitlements, termination or severance pay.</p> <p>Ministries also provide detailed information on collective bargaining in each province. Ontario’s Ministry of Labour, for example, has 11,000 collective bargaining agreements on file.</p> <p>Free legal consultation is also available for employees through the Employment and Standards Branches, the Labour Relations Boards, or through unions.</p> <p>Unions play a key role in protecting workers’ rights, especially the right to organize and collective bargain. The Canadian forest sector is a heavily unionized industry, providing a reliable mechanism to collective bargaining. This keeps wages competitive with other industrial sectors and consistent with the non-unionized forest sector.</p> <p>The right for Canadian Workers to associate and to engage in meaningful collective bargaining is constitutionally protected under the Charter of Rights and Freedoms.</p>		
<p>Saskatchewan Federation of Labour v. Saskatchewan. January 30, 2015. http://www.sgmlaw.com/en/about/SaskRttoStrike.cfm</p>	<p>In 2015, the Supreme Court of Canada recognized the constitutional right to strike in Saskatchewan Federation of Labour v. Saskatchewan. The Court found that the right to strike is an indispensable component of the right to collective bargaining.</p> <p>This decision, along with two others (MPAO and Meredith) in 2015, are argued to resoundingly affirm that the right to strike is protected by section 2(d) of the Charter of Rights and Freedoms.</p>	Country	Low risk for right to organize and collective bargaining
<p>Conversation and Collaboration Building the future</p>	<p>In 2011, the Forest Products Sector Council commissioned</p>	Country	Low risk for

<p>Canadian forest products sector with Aboriginal talent http://www.fpac.ca/publications/FPSC-CSPF-Final-English-Report-Conversation-and-Collaboration.pdf</p>	<p>a report titled “Conversation and Collaboration, Building the Future Canadian Forest Products Sector with Aboriginal Talent Report” where over 300 people were engaged in sessions across Canada.</p> <p>The report shows that in 2006 census, Aboriginal people represented 3.8% of Canadian population, and in 2010, Aboriginal people represented 6% of the forest products sector labour force. The report identifies that more should be done to further increase and deepen Aboriginal participation in the forest sector, and includes recommendations in this regard.</p>		<p>discrimination of Aboriginal People in the labour market</p>
<p>BC Forest Sector Labour Market & Training Needs Analysis http://www.tla.ca/sites/default/files/news_policy/bc_coastal_forestry_final_report_october_2013_final.pdf</p> <p>David Elstone, May 2018. <i>Addressing the forest industry labour shortfall.</i> https://www.woodbusiness.ca/addressing-the-forest-industry-labour-shortfall-4893/</p>	<p>Following a 2013 report by the BC Forest Sector Labour Market & Training Needs Analysis, an Aboriginal Forest Industry Workgroup was created to increase the numbers of aboriginal people, youth, women, and newcomers employed in the Coastal Forest Industry workforce. Currently, 6% of Aboriginal peoples comprise BC’s forestry workforce. The report, and more recent reports on the labour shortfalls in BC (2018) highlight the current labour shortage and major projected shortages into the future.</p> <p>The 2013 report states that Aboriginal representation in the forest sector is higher than the BC provincial average, yet workers tend to be concentrated in lower-skilled, part-time and seasonal positions. They are less likely to be employed in management or professional occupations relative to non-Aboriginal employees. With forest industry operations often located in more rural and remote regions, Aboriginal communities are able to serve as an increasingly important source of labour, despite the overarching challenge employers face in finding both Aboriginal and non-Aboriginal workers who are well-trained and competent to meet their staffing needs. While the evidence focuses on BC, more information would be required to conclude that the lack of Aboriginal</p>	<p>Province</p>	<p>Specified risk for discrimination of Aboriginal People in the labour market</p>

	representation in forestry-related management positions is not a symptom of discrimination.		
FPAC, 2014. Vision2020 Report Card: 2010 to 2012. Pathways to Prosperity for Canada's Forest Products Sector. http://www.fpac.ca/wp-content/uploads/temp_file_Vision2020_ReportCard_20141.pdf	"Through existing and expanding relationships with Aboriginal peoples and communities, the industry aims to attract more Aboriginal workers, contractors and suppliers to the sector. As part of the Vision2020 goals, the industry is working towards finding tangible ways to do so."	Country	Low risk for discrimination of Aboriginal People in the labour market

Summary of Evaluation of Indicator 2.2:	Scale	Risk Designation
<ul style="list-style-type: none"> • There is sufficient evidence that regulations and policies to protect the right to Organise and Collective Bargaining and Minimum Age are in place in the forestry sector and new court rulings have affirmed the right to Organise and Collective Bargaining. • Rights like freedom of association and collective bargaining are in some cases not upheld, but no specific evidence of this was found in the forestry sector. • All 8 of the ILO Fundamental Conventions have been ratified by Canada, including C138 Minimum Age Convention, 1973, and C98 Right to Organise and Collective Bargaining Convention, 1949. • The last convention in the ILO Fundamental Principles and Rights at Work.- C098 - Right to Organise and Collective Bargaining Convention, 1949 (No. 98) – will enter into force for Canada on 14 Jun 2018. • There is no evidence confirming complete absence of compulsory and/or forced labour, however the presence of compulsory and/or forced labour is very limited compared internationally. No specific evidence of this was found in the forestry sector. • There is no evidence confirming complete absence of discrimination in respect of employment and/or occupation, and/or gender, but its presence is very limited compared internationally. There appears to be discrimination in relation to Aboriginal women in the labour market. However, evidence demonstrates that in general the percentage of Aboriginal workers in the forest sector is higher than in other sectors and some new policies in the forestry sector are favourable for Aboriginal women. • Violations of labour rights are not limited to specific sectors and are very limited when compared internationally • There is no evidence confirming complete absence of child labour, however it is not reported on a large scale. <p>The following Low Risk threshold applies, based on the evidence: (11) Applicable legislation for the area under assessment does not cover all key provisions of ILO Fundamental Principles and Rights at work but other regulations and/or evidence of their implementation exist. Reports do not lead to conclusions of systematic violations of rights. When labour laws are broken, cases are efficiently followed up via preventive actions taken by the authorities and/or by the relevant entities.</p>	Country	Low Risk

Indicator 2.3 Sources of Information and Detailed Analysis

Indicator 2.3. The rights of Indigenous and Traditional Peoples are upheld.

Guidance:

- Are there Indigenous Peoples (IP), and/or Traditional Peoples (TP) present in the area under assessment?
- Are the regulations included in the ILO Convention 169 and is UNDRIP enforced in the area concerned? (refer to Category 1)
- Is there evidence of violations of legal and customary rights of IP/TP?
- Are there any conflicts of substantial magnitude pertaining to the rights of Indigenous and/or Traditional Peoples and/or local communities with traditional rights?
- Are there any recognized laws and/or regulations and/or processes in place to resolve conflicts of substantial magnitude pertaining to TP or IP rights and/or communities with traditional rights?
- What evidence can demonstrate the enforcement of the laws and regulations identified above? (refer to Category 1)
- Is the conflict resolution broadly accepted by affected stakeholders as being fair and equitable?

See 'Sources of Information' section below for the full citation of the references identified in the Assessment.

Assessment
Scale: Country
1) Are there Indigenous Peoples, and/or Traditional Peoples present in the area under assessment?
Three distinct categories of Indigenous Peoples (or Aboriginal peoples) exist within Canada – First Nations, Métis and Inuit people (1). As of 2016 more than 1.67 million people in Canada identify themselves as an Aboriginal person, representing around 4.9% of Canada's population (1). The majority of people who report Aboriginal identity self-identify as First Nations, a category which includes a number of diverse Indigenous Peoples across more than 50 cultural groups and over 630 First Nation communities, while a significant minority self-identify as belonging to a single cultural group, the Métis (1, 2). A map identifying First Nation communities in Canada, and associated community profiles can be found on the federal government website (3). Indigenous Peoples inhabit all provinces and territories in Canada.
2) Are the provisions of ILO Convention 169 and United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) enforced in the area concerned?
In 2007, when the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) was adopted by the UN, Canada was one of four countries (including the US, Australia and New Zealand) that voted against its adoption (6). To this day, Canada has not ratified ILO Convention 169 (4).
In 2010, Canada issued a Statement of Support endorsing the principles of UNDRIP, and in 2016, the federal government began formal steps to

Assessment

implement UNDRIP, including announcing Canada's full support, without qualification, of the declaration in 2016. (5)

An important step in the process of adopting the principles of UNDRIP began on April 2016, when Private Members Bill C-262 was proposed in the House of Commons, which would require the Government of Canada to take all measures necessary to ensure that the laws of Canada are in harmony with the Declaration (7). On May 30, 2018, the House of Commons passed the third reading and adoption of Bill C-262, which was supported by several Indigenous groups and representatives across Canada (8,9,10,11).

At the time of development of this Risk Assessment, a review of relevant federal laws, policies and operational practices is underway by a working group of Ministers. While Bill C-262 has not yet been passed by Parliament into Canadian law, and while there exist critiques of the federal government's approach to adopting and implementing UNDRIP in Canada to date (13, 14), Bill C-262 could, if passed into law, provide a potentially important legislative framework for the federal government to move forward with the implementation of UNDRIP.

At the time of development of this Risk Assessment, British Columbia is the only province to have publicly committed to implementing UNDRIP, and it remains unclear how that province will accomplish that goal (36).

While organizations have commended Canada's announcement of its full support of UNDRIP, the absence of accountability mechanisms to monitor its implementation and Canada's commitment under the Declaration to uphold the principle of FPIC remain a concern, including with regard to the development of natural resource projects (24). Given the importance of provincial legislation to forestry practices and management, the lack of commitments or plans by the majority of provinces to implement UNDRIP also remains a concern.

3) Is there evidence of violation or infringement of legal and customary rights of Indigenous People?

This question seeks to address two types of rights: legal rights and customary rights. Canada's state-centred legal system provides constitutional rights that recognize, among other rights, rights of Indigenous Peoples to use traditional lands (e.g. Aboriginal title, land claims) and resources (e.g. hunting, fishing, trapping, shelter and other subsistence activities including trade). These are rights defined under Canadian law, and are referred to herein as legal rights, or legally enforceable rights.

The second type of rights are customary rights, which are those rights arising out of the customary laws and traditions of a particular Indigenous People based their unique cultural and spiritual worldview and social, political and economic structures.

FSC Canada's FPIC Guidance document defines customary rights this way:

A customary right is defined in the Glossary of the Standard; however, its application in the context of management activities may not be well understood. In Canada, the term "customary right" is not commonly used in Indigenous rights discourse. It is much more common to come across references to customary law, traditional law, Natural Law or legal traditions that are codified in written (e.g. wampum belts or sacred scrolls) and unwritten forms (e.g. songs, dances) and passed on through the generations. More importantly, the values, beliefs, and understandings of such laws are conveyed through the continuing practices, customs and traditions of the society. These practices, as defined in the Glossary of the

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Standard, make up the customary rights of Indigenous Peoples.

These Indigenous customary laws play a significant role in Indigenous Peoples' worldview, and vary across cultural and linguistic groups (37). In recent years, there has been a growing trend in Canada to understand Indigenous customary laws as coherent sets of 'Indigenous legal orders' (37) (38), and some Indigenous Peoples are actively working to revitalize and strengthen their laws that have been negatively impacted by colonization. However, the Canadian government does not formally recognize Indigenous legal orders, and Canadian courts have so far generally avoided engaging with rights that exist within those orders (38).

On one hand Canadian laws exist and are well understood, and violations or infringements of rights recognized under Canadian laws can be assessed (legal rights). On the other, Indigenous customary rights and customary laws exist, but these are ill-understood in the Canadian legal system and they exist at a traditional territory or regional scale rather than national scale, proving a national-scale assessment of violations against customary rights to be challenging. Although advancements in incorporating customary rights into Canada's legal framework will serve as an important component of fostering the broader mission of reconciliation and advancing the aspirations of Indigenous Peoples towards self-determination (38), in the context of controlled wood, the focus herein is the violation of rights of Indigenous Peoples that are recognized within Canadian law.

Assessing Violations of Indigenous People's Legal Rights

Historical Context

The relationship between the Crown and Indigenous Peoples in Canada has evolved since it was first established over 300 years ago. It has been affected by commercial and economic pressures, by shifting alliances and external threats, and by policies of protection and subordination (39).

In terms of land use, the Royal Proclamation of 1763 stipulated that only the British Crown could negotiate treaties with Indigenous Peoples for the purchase of their lands in Canada. The British government and (subsequent) Canadian government concluded treaties with some but not all Indigenous groups in Canada in order to legitimize European settlement in their lands (40). Over time, either as part of those treaties, or through unilateral action by the state, Indigenous Peoples' customary rights to steward their traditional territories outside of small areas known as reserves were not recognized by Canada. First Nations land currently encompasses approximately 3.5 million hectares across (41), which is ~1% of the total forested landbase in Canada. Only in the past 30 years, through many legal challenges, have Indigenous Peoples gained some ability to influence land management decision making in their broader traditional territories, including decision making related to forest management and forestry.

Current Context

A core concept within UNDRIP is the affirmation of the inherent or pre-existing collective human rights of Indigenous Peoples, as well as the individual human rights of Indigenous women, men and children. Whether governments recognize and uphold these rights through the establishment of laws and regulations are a different matter.

In 1985, the Canadian constitution was amended by section 35 of the Constitution Act, 1982, which recognizes and affirms existing Aboriginal and

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treaty rights. However, this provision does not define the breadth of those rights, nor the extent or content of any specific right. Due to this absence, Indigenous Peoples have had to bring complex court cases to the Supreme Court of Canada (SCC). Through those cases, the SCC and the lower courts have developed legal tests that set the extent and limits of section 35 rights (see table below for case examples).

The burden of proving the existence of rights is always on Indigenous People (15). The Canadian government acknowledges and accepts that Indigenous rights may exist, however, the onus is on Indigenous Peoples to specifically describe where the rights exist and, in the absence of a negotiated agreement between the government and a particular Indigenous group (e.g. a land claims settlement or “modern treaty”), this must be determined through the court system (17). To date, most Indigenous People in Canada have not concluded a modern treaty, nor have they proven the full extent of their rights in court (16, 42).

It cannot therefore be concluded that there is ‘no violation of legal rights of Indigenous People in Canada’. The nature and content of Indigenous peoples’ rights to land and use of resources continue to evolve in Canadian common law, and the assessment of the extent of those rights across the country continues to be the subject of study, negotiation and litigation. Thus, infringement of rights occurs every day in areas where rights may not have yet been formally asserted by Indigenous Peoples through the courts or government regulatory processes, where treaties have not been signed or where treaties and land claim negotiations are ongoing, or where free, prior and informed consent related to activities that affect their rights has not been obtained.

4) What formal/legal mechanisms exist to mitigate the violation or infringement of the legal rights of Indigenous People by forest management activities?

Section 35 recognizes and affirms existing Aboriginal rights, and its status within the constitution means that the government cannot override these with ordinary legislation. Although constitutionally protected, the legal tests to prove the existence of rights can in some cases be difficult for Indigenous Peoples to meet, in part because they require historical evidence of traditional practices at a point in the past that, for some Indigenous Peoples, can be up to 300 to 400 years ago. Once proven, the government has stated it has the right to infringe Section 35 rights, but it can only do so if it can justify such infringement on specific grounds, for compelling and justifiable reasons.

Given the challenges involving historical evidence, the types of rights that are relatively easy for Indigenous Peoples to prove in court include those involving subsistence harvesting within territories that are widely known to be traditionally held by a particular Indigenous group (45). Rights that are more difficult or even impossible to prove include those that have an economic component or that involve Aboriginal title, the latter being a special type of Aboriginal right that gives the rights-holding group a strong form of land tenure. For example, in a claim for Aboriginal title, the legal test requires an Indigenous group to prove that their ancestors had the exclusive use and occupation of specific areas of their territory at the time the Crown asserted sovereignty over that territory. A very large amount of historical evidence is required to show exclusive use and occupation that is sufficient to support a finding of Aboriginal title. For example, in the only case to date in which Aboriginal title has been proven, the trial lasted for over 330 days of hearings, and with multiple appeals, the case took 20 years to reach a final decision at the SCC (43, 44).

The legal hurdles involved in proving Section 35 rights make litigation complex, expensive, risky and slow. Many Indigenous groups choose instead to

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negotiate with government on the basis of asserted rights, without attempting to prove those rights in court. This led to the development of a legal duty on the Crown to consult Indigenous groups even before they prove their asserted rights, whenever the Crown is contemplating an action that might infringe on those rights (e.g. approving a forest management plan). Depending on the strength of the Indigenous group's claim (i.e. how likely they would be to prove the right in court) and the severity of the potential infringement, the Crown may also have a legal duty to take steps to mitigate the impact of its actions. The law prohibits Canadian governments from delegating this legal duty to consult with Indigenous Peoples to third party interests (e.g. forest companies), although in some circumstances the government may delegate certain procedural aspects of consultation. Many of the hundreds of cases brought forward by Indigenous groups about their Section 35 rights have been at least partially won by those groups, and subsequent legal challenges have been built on important legal precedence set in each effort (21). A list of some of the key court challenges testing Section 35 to date include:

R. v. Sparrow (SCC 1990)	Court recognized and affirmed the "existing aboriginal and treaty rights" of the Aboriginal Peoples of Canada and has been at the centre of many court battles over land and resource rights. https://www.cbc.ca/news/canada/6-landmark-rulings-on-native-rights-1.1316961
Van der Peet trilogy of cases (SCC 1996)	An important case in Canadian law because the Supreme Court ruling defined and restricted the scope of Indigenous rights in section 35(1) of the <i>Constitution Act, 1982</i> . Criticized for narrowing the scope of Indigenous rights, the Van der Peet test (a set of criteria established by the court to prove Indigenous rights) stipulates that the Indigenous custom, practice or tradition in question must be integral to the distinctive culture of the Aboriginal group claiming the right and originate from before contact with the Europeans. https://www.thecanadianencyclopedia.ca/en/article/van-der-peat-case/
Delgamuukw v. British Columbia (SCC 1997)	Court confirmed that aboriginal title entails rights to the land itself, not just the right to extract resources from it. The court also ruled that the government has a duty to consult with First Nations on issues concerning Crown land and in some instances may have to compensate them for infringing on their rights to that land. https://www.cbc.ca/news/canada/6-landmark-rulings-on-native-rights-1.1316961
R. v. Sundown (SCC 1999)	Court confirmed that harvesting trees and building a traditional hunting cabin is reasonably incidental to a treaty right to hunt. https://canliiconnects.org/en/summaries/43712
Haida Nation v. British Columbia (Minister of Forests) (SCC 2004) and Taku River Tlingit First Nation v. British Columbia (SCC 2004)	In November 2004, the Supreme Court of Canada released its decision in two cases: <i>Haida Nation</i> and <i>Taku River Tlingit</i> , two important decisions which dealt with aboriginal consultation and accommodation obligations related to resource development. In the <i>Haida Nation</i> case, the Supreme Court held that asserted aboriginal rights can trigger government's obligation to consult. The Court ruled that the duty to consult arises when government knows or ought to know about, the potential existence of an aboriginal right or title and contemplates a decision that might adversely affect it. In addition, the Court indicated that the ultimate legal responsibility for consultation and accommodation rests with the Crown and cannot be delegated. Another significant aspect of the decisions is the Supreme Court's recognition that government may determine how aboriginal consultation and accommodation should be carried out in relation to government decision-making. In <i>Taku River Tlingit</i> , the Court ruled "the adequacy of the consultation process must meet the standard of reasonableness: the process selected by government must be a reasonable means of considering aboriginal rights in government decisions, and must represent a reasonable effort to consult and inform." Overall, the two decisions have provided greater clarity regarding the role and responsibilities of government, aboriginal groups and industry in consultations with aboriginal communities and accommodation of aboriginal concerns. https://www.lawsonlundell.com/media/news/236_Negotiatorarticle.pdf

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<p>Mikisew Cree First Nation v. Canada (Minister of Canadian Heritage) (SCC 2005)</p>	<p>Court judgment found that the federal government did not adequately consult with the First Nation and that it breached its duty to consult. The Mikisew First Nation is located on Treaty 8 territory and so this judgment affirmed that the duty to consult also applies to historic treaty areas and not just reserve and traditional territory lands. It also clarified that, when governments propose to “take up” lands in treaty areas, they need to consult with First Nations, including whether the “taking up of land” impacts the rights of First Nations people, such as those to hunting and trapping, First Nations are able to claim infringement on their rights and should be accommodated accordingly. https://www.ictinc.ca/blog/mikisew-case</p>
<p>R. v. Sappier; R. v. Gray (SCC 2006)</p>	<p>These Supreme Court decisions uphold the right for Maliseet and Mi’kmaq in New Brunswick to harvest logs for domestic uses, which is a communal right exercised under Section 35. A significant implication of these rulings is that there must be considerable flexibility in placing traditional practice in a modern context. http://canliiconnects.org/en/commentaries/36083</p>
<p>Behn v. Moulton Contracting Ltd. (SCC 2013)</p>	<p>The issue of whether families, groups or other factions of a First Nation could claim the Nation’s rights has been a longstanding concern. Behn v. Moulton (SCC, 2013) clarified that only authorized representatives of a Nation can raise its rights in respect of resource development. Further, aboriginal individuals are not entitled to assert aboriginal or treaty rights to justify a blockade or other interference with private parties’ exercise of government-issued licences or other rights to develop natural resources. Aboriginal peoples who wish to challenge regulatory permits must do so in court. https://www.firstpeopleslaw.com/index/articles/143.php</p>
<p>Tsilhqot’in Nation v. British Columbia (SCC 2014)</p>	<p>This case represents the first time in Canadian history that Aboriginal title for a First Nation has been granted on territory outside an Indian reserve. This case significantly alters the legal landscape in Canada relating to land and resource entitlements and their governance. In doing so, the Court confirmed that the doctrine of terra nullius (that no one owned the land prior to Europeans asserting sovereignty) has never applied to Canada, affirmed the territorial nature of Aboriginal title, and rejected the legal test advanced by Canada and the provinces based on “small spots” or site-specific occupation.</p> <p>This judgment provides a clear test for when Aboriginal title can be recognized on traditional territory. Where Aboriginal title has been recognized, economic development will require the consent of the First Nation that holds title. However, the Crown can push through development without the consent of the First Nation if it is able to demonstrate a compelling and substantial public purpose for the proposed activity. The judgment reaffirms that consultation processes and the justification of infringements of Aboriginal rights and title are the responsibility of the Crown and not of project proponents. Where there is no consent, and the potential infringement cannot be justified, proposed projects may be set aside by the court. This judgment requires that, in addition to consultation, consent is required from First Nations on land where aboriginal title has been established.</p> <p>http://www.mandellpinder.com/tsilhqotin-nation-v-british-columbia-2014-scc-44-case-summary/ http://www.mondaq.com/canada/x/325088/indigenous+peoples/Case+Comment+Tsilhqotin+Nation+v+British+Columbia+2014+SCC+44</p>
<p>Chartrand v. British Columbia (Forests, Lands and Natural Resource Operations), BC Court of Appeal 2015</p>	<p>The court found that First Nations cannot be faulted for not participating in consultation when the scope of consultation offered by the Crown is inappropriately narrow.</p> <p>The Court of Appeal determined that the Kwaikw’ik First Nation’s (“KFN’s”) Treaty rights “occupy the high end of the spectrum of claims demanding deep consultation” and upheld the finding of the BC Supreme Court that there is a prima facie claim that the Douglas Treaties did not extinguish KFN’s Aboriginal rights and title. The Court made it clear that the Crown must proceed on a correct basis regarding the rights at issue, and provide a meaningful consultation process, before a First Nation can be faulted for not engaging. The Court also made it clear that in consultation regarding high-level decisions, First Nations need only demonstrate that the decisions would impact their decision-making in relation to their claimed lands; they need not provide evidence of specific on-the-ground impacts. Lastly, the Court noted that BC had wrongfully denied economic accommodation to KFN that had been provided to non-Douglas Treaty First Nations, and that this limited KFN’s ability to engage in consultation.</p> <p>www.mandellpinder.com/chartrand-v-british-columbia-forests-lands-and-natural-resource-operations-2015-bcca-345-case-summary/</p>

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<p><i>Tsleil-Waututh Nation v. Canada (Attorney General) (Federal Court of Appeal 2018)</i></p>	<p>The Court found that Canada had failed to satisfy the standard of consultation owed to Indigenous Peoples and First Nations regarding the Kinder Morgan Trans Mountain Pipeline Expansion Project.</p> <p>According to the Court, at the last stage of the consultation process (the “Phase III” stage), Canada had failed to “engage, dialogue meaningfully and grapple with the real concerns of the Indigenous applicants so as to explore possible accommodation of those concerns”.</p> <p>The Court ordered Canada to redo its Phase III consultation, and held that the pipeline project could only be put before the Governor in Council for re-approval once that consultation was completed.</p> <p>https://www.siskinds.com/envirolaw/federal-court-appeal-quashes-order/</p>
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It is important to note that the ‘duty to consult’ is not the same as ‘consent’. FSC Canada’s FPIC Guidance document describes this concept within the Canadian context (35). Specifically, the right to FPIC is not granted through the Constitution Act, 1982, nor is it explicitly mentioned as a complete principle in Canadian case law. However, the concept of ‘consent’ is not foreign to the Canadian legal system or forestry regulations. And it has long been established in case law that the potential infringement of Aboriginal and treaty rights triggers the duty to consult and, in some cases, accommodate infringement through consent-based agreement (35).

The Canadian courts have determined that resource extraction activities, such as forestry, require at a minimum “good faith” consultation and in some cases even consent (e.g. Delgamuukw v. BC 1997: Paragraph 168). Good faith implies that the parties make every effort to reach an agreement, conduct genuine and constructive negotiations, avoid delays in negotiations, respect agreements concluded and give sufficient time to discuss and settle disputes (35).

FSC Canada is not aware of any Canadian forestry regulations that specifically require forest licensees to obtain FPIC from affected Indigenous Peoples. However, jurisprudence around the duty to consult and accommodate Indigenous Peoples has significantly impacted the implementation of forestry regulations across the country. In fact, many of the legal challenges related to the duty to consult and accommodate originate in the forest sector with the Crown and/or forestry companies (35).

The most recognizable outcome of the evolving jurisprudence has been the development of provincial consultation and accommodation guidelines. Since the Delgamuukw decision, each province has developed and updated their policy and procedural guidelines (to varying degrees) to incorporate new guidance arising from legal decisions on the duty to consult (35). Each province has its own guideline on consultation, which can differ greatly from province to province (22).

5) Are there any conflicts of substantial magnitude pertaining to the rights of Indigenous People as a result of forest management activities?

As noted in the most recent UN Human Rights Council Universal Periodic Review report for Canada stakeholder submission (23), “the situation of Indigenous Peoples was one of the most pressing human rights issues facing Canada. Across the country, many First Nations and Indigenous

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communities continued to live without equitable access to quality health, education and other social services, and without access to safe drinking water and suitable sanitation, food security, and adequate housing. Indigenous women experienced systemic discrimination and bore a disproportionate burden of violence, and were murdered or went missing at a disproportionately high rate. The legacy of the residential school system loomed large over many aspects of Indigenous lives.” This is supported by other sources (14, 26, 27), calling to light the challenges that Indigenous People continue to face today, including the effects of intergenerational trauma stemming from the residential school system.

In terms of the resource sector, mining industry abuses, notably issues associated with Canadian mining companies operating abroad (26), as well as controversy over the approval of the Site C dam (14, 27) and Mount Polley mine (14) are well noted. These are, however, not directly related to forest management activities.

A high-profile case of gross injustice and discrimination as reported by Amnesty International (27) is related to Grassy Narrows First Nation, who have and continue to endure the effects of poisoning to their rivers and drinking water as a result of illegal toxic dumping of chemicals (primarily mercury) into the Wabigoon-English River system from a pulp and paper mill in the 1960s (28). This conflict, which is still being resolved, is not directly related to forest management activities within the last 50 years.

While there are recent examples of Indigenous People blockading forest operations (30), measures have been put in place to mitigate the impact on communities (e.g. a logging moratorium of the traditional territory of Grassy Narrows First Nation in response to their blockade (30)). Other recent examples exist of Indigenous blockades (29), however, there was no evidence to suggest that the blockades stem from a gross violation of Indigenous rights.

Cases of violence against Indigenous people, destruction of property, presence of military bodies or systematic acts of intimidation related to forest management activities are an unfortunate part of Canada’s historical relationship with Indigenous Peoples, but no such cases have been identified in the last 10 years.

6) Is the conflict resolution process broadly accepted by affected Indigenous Peoples as being fair and equitable?

Since governments could not come to a consensus during constitutional negotiations about Indigenous rights, these issues are often left to the courts to decide. Most specifically, the Supreme Court has clarified and guaranteed rights to land and resource activities as well as other issues (32) (refer to Table 1 for a brief list of key decisions). Hundreds of active and ongoing court cases exist brought on by Indigenous people in Canada.

However, there are concerns that litigation is costly, time-consuming and ineffective, and is often the only remedy, rather than seeking free, prior and informed consent (14).

Mediation, arbitration, and negotiation and combinations of these are alternative avenues that can be pursued. These are less costly and can be designed to be more aligned with a culturally appropriate approach to dispute resolution (33).

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It is not possible to determine whether Indigenous Peoples find the court system to be fair and equitable in resolving or mitigating conflict. Given that the court system stems from a colonial worldview of the law, and the legal hurdles created in that system to proving Section 35 rights, it may be more likely that Indigenous Peoples do not find it to be fair and equitable (33). There is, however, a substantial legal history available for review regarding the evolution of the duty to consult and accommodate the infringement of Aboriginal rights in Canada (35), which makes it clear that the Canadian courts will uphold and enforce the honour of the Crown and the Crown’s duty to consult with Indigenous Peoples on activities that may infringe or violate Aboriginal or treaty rights on public and private lands (35).

Summary of Evaluation of Indicator 2.3:

The evidence related to Indicator 2.3 presented in the risk assessment is mixed related to the rights of Indigenous Peoples. The summary below addresses evidence supporting low risk (A), followed by the evidence supporting specified risk (B), based on the evidence presented in the risk assessment above.

A) Elements that support a Low Risk conclusion include:

- Recently, Canada has taken a stance of support of UNDRIP, and there is a parliamentary process underway (Bill C-262) which could implement UNDRIP into federal legislation.
- It is possible to assess whether violations occur against Indigenous Peoples legal rights – rights that are constitutionally protected and enforceable in the court system. These include rights related to land use and resource use, which are most applicable to impacts of forest management activities. However, violations against Indigenous customary rights or laws are much more challenging to assess at a national scale, as they are ill-understood in the Canadian legal system, and vary across traditional territories and regions. For this reason, evaluation of customary right violations are not included in this risk assessment, but are noted as being important component of fostering the broader mission of reconciliation and advancing the aspirations of Indigenous Peoples towards self-determination (38).
- Indigenous Peoples are required to be consulted on infringements via the Constitution, section 35 (duty to consult and accommodate) (supports component of Low Risk threshold 18);
- Consultation led by the government and companies, and litigation initiated by Indigenous Peoples with the Courts are mechanisms which attempt to mitigate the risk and impact of infringement to the rights of Indigenous Peoples, until such a time that FPIC is legally required (supports component of Low Risk threshold 18);
- Several examples exist where the Indigenous rights were upheld in the courts (supports component of Low Risk threshold 18);
- No recent cases were identified of conflicts of substantial magnitude as a result of forest management activities (Low Risk threshold 19 met).

Scale

Canada

Risk Designation

Specified Risk

B) However, it cannot be concluded that there is 'no violation of legal rights of Indigenous People in Canada'. The following elements support a Specified Risk designation:

- The legacy of the Indian Act, including the residential school system, undermined Indigenous culture across Canada, disrupted families for generations, and contributed to a general loss of language and culture that still affects Indigenous Peoples today.
- As Canada works through a reconciliation process with Indigenous People, Indigenous governance development is in early stages, and most communities have yet to establish engagement capacity due to lack of resources.
- The nature and content of Indigenous Peoples' rights to land and use of resources continue to evolve in Canadian common law, and the assessment of the extent of those rights across the country continues to be the subject of study, negotiation and litigation. Thus, infringement of rights occurs every day in areas where rights may not have yet been formally asserted by Indigenous Peoples through the courts or government regulatory processes, where treaties and land claim negotiations are ongoing, or where free, prior and informed consent related to activities that affect their rights has not been obtained.
- On this basis, there is strong opposition from key directly affected stakeholders (notably the Aboriginal chamber) to a low risk designation across the country. In cases where infringements occur, the impact of infringements to the rights of Indigenous Peoples related to forest management activities is primarily experienced at the community level. However, it was not within the scope of this assessment to assess the level of risk at a community scale. The NRA framework (FSC-PRO-60-002a section 2.4.4) permits the application of the precautionary approach in situations where additional risk factors and circumstances may exist, or may not be known at the scale of assessment (section 2.4.9).

Overall Conclusion of Risk:

Applying a precautionary approach results in a designation of **Specified Risk** for Canada for Indicator 2.3. The establishment of additional risk thresholds is permitted as per the NRA framework (refer to FSC-PRO-60-002a section 2.4.2). Therefore, the following additional Specified Risk threshold has been met:

(27) Data are not available or are insufficient to determine the extent to which violations to Indigenous rights as a result of forest management activities, is occurring.

It is noted that within the CoC supply chain, the organizations in the best position to assess the risk of infringement at the community level is the *primary producer** – i.e., entities that receive wood and materials directly from the forest of origin. Primary producers are the closest entity within the CoC supply chain to the forest manager - who, along with the Province, is responsible for addressing issues related to Indigenous rights and forestry activities (through the Forest Management Plan or Annual Work Schedule) within the forest management unit. Primary

producers are in a position within the supply chain to access information from the forest manager regarding Indigenous communities with traditional territory in their supply area, and whether their rights related to forest management activities are being recognized and upheld.		
<i>*Primary producer:</i> An entity that receives materials (roundwood or chips) directly from the forest of origin.		

Sources of Information

No.	Source of Information
1	Government of Canada: <i>Indigenous People and Cultures</i> https://www.canada.ca/en/services/culture/canadian-identity-society/indigenous-peoples-cultures.html
2	Statistics Canada: <i>Aboriginal Peoples in Canada: Keys results from the 2016 census</i> https://www150.statcan.gc.ca/n1/daily-quotidien/171025/dq171025a-eng.htm
3	Government of Canada: <i>First Nations Profile Interactive Map</i> https://geo.aadnc-aandc.gc.ca/cippn-fnpim/index-eng.html
4	ILO: Up-to-date Conventions & Protocols not ratified by Canada http://www.ilo.org/dyn/normlex/en/f?p=1000:11210:0::NO:11210:P11210_COUNTRY_ID:102582
5	Indigenous & Northern Affairs Canada: <i>United Nations Declaration on the Rights of Indigenous Peoples</i> http://www.aadnc-aandc.gc.ca/eng/1309374407406/1309374458958
6	First Nations & Indigenous Studies, UBC: <i>Indigenous Foundations – UN Declaration on the Rights of Indigenous Peoples</i> https://indigenousfoundations.arts.ubc.ca/un_declaration_on_the_rights_of_indigenous_peoples/
7	Openparliament.ca: <i>Bill C-262</i> https://openparliament.ca/bills/42-1/C-262/?tab=mentions
8	Newswire: <i>Historic Day for the Recognition of First Nations' Rights Following the Adoption of Bill C-262 in Third Reading</i> https://www.newswire.ca/news-releases/historic-day-for-the-recognition-of-first-nations-rights-following-the-adoption-of-bill-c-262-in-third-reading-684172651.html
9	Union of BC Indian Chiefs: <i>Public Statement - Bill C-262: An essential framework for implementation of the United Nations Declaration on the Rights of Indigenous Peoples</i> https://www.ubcic.bc.ca/support_billc262
10	iPolitics: <i>A Vote for Bill C-262 is a Vote for Reconciliation and Human Rights</i> , by Peter Bellegarde https://ipolitics.ca/article/vote-bill-c-262-vote-reconciliation-human-rights/
11	Native Women's Association of Canada: <i>NWAC Statement of Support – Bill C-262</i> https://www.nwac.ca/2017/12/05/nwac-statement-support-bill-c-262-2/

12	Catherine Bell, William B. Henderson. 2006. <i>Rights of Indigenous Peoples in Canada</i> . Last edited 2017. https://www.thecanadianencyclopedia.ca/en/article/aboriginal-rights/
13	CBC News: <i>Nothing For Indigenous people in Canada to celebrate on 10th anniversary of UN rights declaration</i> , by Russ Diabo. September 13, 2017. https://www.cbc.ca/news/indigenous/opinion-10th-anniversary-of-undrip-1.4286449
14	UN Committee on the Elimination of Racial Discrimination. <i>Concluding observations on the combined twenty-first to twenty-third period reports of Canada</i> . CERD/C/CAN/CO/21-23. Sept. 13, 2017. https://tbinternet.ohchr.org/_layouts/treatybodyexternal/Download.aspx?symbolno=CERD%2fC%2fCAN%2fCO%2f21-23&Lang=en
15	McNeil, Kent. (1999). <i>The Onus of Proof of Aboriginal Title</i> . Osgoode Hall LJ. 37. https://www.researchgate.net/publication/228164823_The_Onus_of_Proof_of_Aboriginal_Title Globe and Mail: <i>Trudeau promises government recognition of Indigenous rights</i> . Feb. 14, 2018 https://www.theglobeandmail.com/news/politics/liberals-to-change-how-indigenous-rights-cases-are-handled-in-courts/article37979282/
16	Government of Canada, Indigenous and Northern Affairs Canada: <i>Aboriginal Rights</i> http://www.aadnc-aandc.gc.ca/eng/1100100028605/1100100028606
17	First Nations & Indigenous Studies, UBC: Indigenous Foundations – <i>Aboriginal Rights</i> https://indigenousfoundations.arts.ubc.ca/aboriginal_rights/
18	Government of Canada: <i>Comprehensive Land Claims</i> http://www.aadnc-aandc.gc.ca/eng/1100100030577/1100100030578
19	1982 Constitution Act, Section 35: Recognition of existing aboriginal and treaty rights http://laws-lois.justice.gc.ca/eng/Const/page-16.html
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Controlled Wood Category 3: Wood from forests in which high conservation values are threatened by management activities

Overview

High Conservation Value 1: Species diversity. Concentrations of biological diversity including endemic species, and rare, threatened or endangered species that are significant at global, regional or national levels.

HCV Identification

The assessment of HCV1 is based on the presence of critical habitat for identified Species at Risk (SAR). For the purpose of this evaluation, Species at Risk were identified as forest-dwelling species (mammals, birds, reptiles, amphibians, fish, vascular plants and lichens) listed as Threatened or Endangered according to the Species At Risk Act (Schedule 1), as of June 2018 (C1). Non forest-dwelling species were not assessed as these species were unlikely to be impacted by forest management activities. For each SAR, specific critical habitat or general area of critical habitat was identified according to the Species at Risk Act Recovery Strategy².

Two approaches were taken to identify HCV1:

- 1) Concentrations of SAR Critical Habitat;
- 2) Critical Habitat for SAR of Special Significance.

This two-pronged approach to identifying HCV1 occurrence is to address the need to identify concentrations of species (per the definition of HCV1), but also to account for stand-alone species of national or cultural importance, or those species that have been identified as known conservation priority in Canada.

1) Concentrations of SAR Critical Habitat

Both the federal and provincial governments have responsibilities for managing biodiversity in their jurisdiction and on the lands that they manage. As a result, each jurisdiction collects different information and at varying levels, and there is very little consistent data regarding biodiversity across Canada, including concentrations of biodiversity or mapping of species. Likewise, there does not exist a national database or recent assessment which identifies RTE (rare, threatened or endangered) ecosystems or habitats that was found to be acceptable by all members of the Working Group. Therefore, the Working Group developed their own assessment based on the information that could be found nationally, which was of concentration of species at risk (SAR) critical habitat identified in the recovery strategies under the federal Species at Risk Act. This information was used as a means to address the concentration of SAR aspect of HCV1 as well as the RTE habitat component of HCV3.

To identify areas of concentration of SAR critical habitat, the location of SAR critical habitat within each forested ecoregion (C3) was determined. (Note: SAR critical habitat considered under *HCV1: Species of Special Significance* were removed from this assessment). To account for variation in species richness between ecoregions, the number of SAR with critical habitat within each ecoregion was weighed against species richness for the ecoregion (based on averaged species richness data – refer to C32). The ecoregions with the highest SAR critical habitat to species richness ratio (>3) were considered to be HCV1.

² In some cases, specific (e.g. site level) locations of critical habitat is not identified in the recovery strategies due to concerns around sensitivity in identifying sites of vulnerable species. Refer to C1 for guidance identifying critical habitat.

Refer to Appendix I for a map of Canada's terrestrial ecoregions, and Appendix II for a list of the corresponding scientific codes for each forested ecoregion considered in this assessment.

2) Critical Habitat for SAR of Special Significance

There does not exist a formal database for SAR of special significance in Canada. Therefore, the species considered for this aspect of HCV1 were based on the following criteria, developed and agreed upon by the Working Group:

- Species federally listed as endangered or threatened by SARA (C1);
- Species considered a species of national significance;
- Species of significant cultural importance to Indigenous and non-Indigenous people;
- Species known to be impacted by forest management activities;
- Species identified as a known conservation priority in Canada; and
- Species not adequately represented in the concentration of SAR HCV evaluation.

Threat Assessment

Threats to critical habitat of those species identified as HCV1 was assessed. Based on the species' federal recovery strategy:

- forestry activities having no or low impact on species habitat resulted a **Low Risk** designation for the species;
- forestry activities having a medium or high impact on species habitat resulted a **Specified Risk** designation for the species.

Mechanisms to Mitigate Risk

In order to identify whether mechanisms exist that may be protecting the SAR critical habitat, the Working Group considered the following:

1. *Does the federal government consider the critical habitat "protected" in their federal assessment?*
Assessing whether there are measures in place that act to protect critical habitat from the threats caused by forestry activities across Canada is challenging giving the multitude of jurisdictions and legal structures, and considering both public and private lands. However, the federal Species at Risk Act is a back-stop across the country for all the critical habitat of federally listed SAR. As part of this responsibility the federal government is required to do an assessment (Section 63 reports) (C20) of where the critical habitat on non-federal lands (which is most relevant for forestry-related threats to critical habitat), including private lands, remains unprotected (Section 63, Species at Risk Act (SARA)). Where the federal government finds that there is protection for any portion of the critical habitat pertaining to forestry activities, based on their review, the critical habitat can be considered **Low Risk** for the purposes of this risk assessment. Any portion of critical habitat listed as "unprotected" from forestry in Section 63 reports is included as **Specified Risk**. Where no Section 63 report exists for a species, then the following steps are assessed.
2. *Is the specific location of SAR critical habitat in a provincial or national park or protected area?*
If SAR critical habitat was wholly encompassed within an area protected from forestry activities, then the SAR critical habitat was considered **Low Risk**. If the critical habitat was not encompassed within a protected area, the next step was assessed.
3. *Does a federal SARA Action Plan exist which includes specific measures that address threats from forestry activities?*
The Species at Risk Act (SARA) section 47 requires the development of one or more Action Plans based on the Recovery Strategy. If a SARA Action Plan existed which covered the entire critical habitat

area, and which specifically included recovery measures addressing threats from forestry activity, the SAR critical habitat was considered **Low Risk**.

Otherwise, the risk designation was concluded to be **Specified Risk**.

Note: For *HCV1: Concentrations of Critical Habitat*, an evaluation of the effectiveness of regulations in protecting critical habitat from threats due to forestry activities was not undertaken on account that all critical habitat for species considered in this step were located entirely or partially within private land, to which provincial regulations do not wholly apply.

High Conservation Value 2: Landscape-level ecosystems and mosaics. *Intact forest landscapes and large landscape-level ecosystems and ecosystem mosaics that are significant at global, regional or national levels, and that contain viable populations of the great majority of the naturally occurring species in natural patterns of distribution and abundance.*

The assessment of HCV2 focused on the identification and location of IFLs across Canada. In a Canadian context, IFLs are the appropriate mechanism to evaluate HCV2, since its core value (large intact forests void of development) addresses the other elements of the HCV2 subcategories.

The latest IFL data available (C2) was used as the basis of this evaluation³. IFLs that straddled the Canada/US border were reviewed, and where the Canadian portion of the IFL was less than 50,000 ha, and where it was assessed that the majority of the US portion of the IFL had some level of protection (e.g. encompassed within a National Park or Wilderness area), these IFLs were removed from the assessment.

HCV2 and associated risks were analyzed at the scale of each individual IFL. Setting thresholds for risk were largely driven by guidance provided in the FSC Advice Note (C29) which includes the parameters that IFLs cannot be impacted by more than 20% and cannot fall below 50,000 ha. Although this guidance is written for the assessment of IFLs within an FSC-certified forest management unit, it was considered by the Working Group as the best available guidance for IFL thresholds at the time of the assessment.

Individual IFL Assessment:

Impact of Forestry Operations

- IFLs that have no overlap with forestry tenure areas were considered Low Risk.
- For large IFLs (> 62,500 ha⁴):
 - Where < 20% of the IFL is located within forestry tenure, the IFL is considered Low Risk
- For small IFLs (< 62,500 ha):
 - Where total IFL area minus overlapping forestry tenure area is greater than 50,000ha, then the IFL is Low Risk

Threats from Forest Management Activities

- Large IFLs: IFLs not threatened by commercial forestry practices were considered to be those IFLs that were either:
 - a) Not in forest tenure (C28)
 - b) Formally protected from development (e.g. Protected Areas) (C5)

³ Note: IFL identification follows the naming protocol as per intactforest.org (C2) IFL identification (e.g. NAM_##).

⁴ This accounts for the restrictions within the FSC Advice Note (C29) that the proportion of IFLs within tenure cannot be impacted by more than 20% and cannot fall below 50,000 ha.

c) Within FSC-certified forest management units (C31)

A sliding scale was applied based on the size class of the IFL, following the baseline core size class guidance for IFLs (C30).

IFL Size Range (ha)	Protection threshold
62,500 – 75,000	Where more than 80% of the IFL is not threatened, IFL is Low Risk
75,001 – 200,000	Where more than 70% of the IFL is not threatened, IFL is Low Risk
200,001 – 500,000	Where more than 65% of the IFL is not threatened, IFL is Low Risk
+500,001	Where more than 55% of the IFL is not threatened, IFL is Low Risk

- **Small IFLs:** Where the vast majority (>90%) of IFLs are not threatened from commercial forestry practices, these IFLs were considered Low Risk. 'Not threatened' was considered to be IFLs that were either:
 - a) Not in forest tenure (C28)
 - b) Formally protected from development (e.g. Protected Areas) (C5)
 - c) Within FSC-certified forest management units (C31)

All remaining IFLs that were not identified Low Risk based on the outcome of the above methodology were considered **Specified Risk**.

High Conservation Value 3: Ecosystems and habitats. *Rare, threatened, or endangered ecosystems, habitats or refugia.*

Rare, Threatened or Endangered Ecosystems

The identification of HCV3s in Canada is challenging, given then the lack of a national or systematic assessment of rare, threatened or endangered (RTE) ecosystems in Canada. Therefore, a consistent assessment or prioritization of RTE ecosystems across the country using systematized data sources was not possible. As recommended in the *Common Guidance for the Identification of HCVs* (HCVnetwork.org), the Working Group assessed the IUCN Ecosystem Red List to determine the presence of internationally recognized RTE forested ecosystems in Canada.

Rare, Threatened or Endangered Habitats

Neither a national database nor recent assessment which identifies RTE habitats exists for Canada. Additionally, a proxy found to be acceptable by all members of the Working Group was not identified. Therefore, the Working Group developed their own assessment to identify concentration of species at risk (SAR) critical habitats. The methodology for identifying concentrations of SAR critical habitat is described in the HCV1 methodology above, under Part I: Concentration of SAR Critical Habitat. This assessment was used to address the RTE habitat component of HCV3. Refer to HCV1 assessment for the methodology and evaluation.

High Conservation Value 4: Critical ecosystem services. *Basic ecosystem services in critical situations, including protection of water catchments and control of erosion of vulnerable soils and slopes.*

This HCV has the following sub-categories (per FSC CNRA HCV Methodology Feb 2016):

- a) Protection from flooding;
- b) Protection from erosion;
- c) Barriers from destructive fire; and
- d) Clean water catchments.

The sub-category of destructive fires was considered generally non-applicable in Canada as forests are not considered as barriers to destructive wildfires. Fire is an important disturbance factor and fire suppression is generally effective so that fire losses are well below pre-industrial levels. From the perspective of biodiversity maintenance, the concern in most parts of Canada, is that there is insufficient fire present in forest ecosystems.

The remaining three HCV sub-categories were grouped into 2 sections for HCV identification and threat assessment.

Protection from Erosion: Landslides

Erosion was assessed by looking at landslide susceptibility and fatalities. These were considered the most readily identifiable factors related to erosion as they indicate the presence of steep terrain and abundant precipitation. Assessing landslides is one way to assess threats to water quality, as steep terrain can aggravate the severity of erosion and the impact of sedimentation on water quality.

Flood Prevention and Water Quality for Fish & Wildlife

To assess flooding and clean water catchments, provincial and federal regulations concerning water quality for fish and aquatic wildlife as well as flood prevention (e.g. riparian buffer protection) were considered.

Clean water catchments can be thought of as forested areas important for the provision of ecological services associated with waterbodies (e.g. watercourses, wetlands) and watersheds. This differs from HCV 5 which is meant to protect forested areas that are of interest for the provision of water for a community (e.g. Community Watersheds in BC).

Threats that may cause flooding and/or damage to clean water catchments include:

- 1) physical damage to waterbodies as a result of improper management practices causing sediment erosion and soil compaction; and
- 2) indirect contamination of waterbodies as a result of surface runoff or subsurface leakage.

Collectively, these address threats to water quantity (e.g. flooding), water quality (e.g. sedimentation and compaction) and impacts to human health (e.g. contamination).

In the case of provinces that have risk related to erosion (landslides) or water quality and flooding, the secondary question asked was whether or not the province also has sufficient regulatory measures in place to mitigate these threats. If regulatory measures are in place, then a low risk determination is applicable. This aligns with the conclusion of Category 1 that laws are in place and are enforced, and also aligns with Canada's high standing in the global Corruption Perception Index (CPI) (C36). If a province lacks sufficient regulatory measures then they are given a specified risk designation.

High Conservation Value 5: Community needs. *Sites and resources fundamental for satisfying the basic necessities of local communities or indigenous peoples (e.g. for livelihoods, health, nutrition, water, etc.).*

To determine risk for this broad category, two general types of HCV5 related to sites fundamental to the basic needs of communities were evaluated:

- 1) Water, including water sources for irrigation and sources for community water;
- 2) Areas of subsistence harvesting for Indigenous Peoples, including hunting, fishing, trapping and plant collection.

Although HCV 5 may appear to encompass more than this, the assessment is limited by the availability of data and framed by the existence of legislation and protocols in place at the provincial scale.

1) *Water Sources for Irrigation and Sources for Community Water*

For the evaluation of water resources, as in HCV 4, threats from forestry to areas that are critical for community water supplies include:

- Physical damage to watercourses as a result of improper management practices causing sediment erosion, soil compaction; and
- Indirect contamination of watercourses as a result of surface runoff or subsurface leakage.

Where provinces delineate community watersheds as sources for community drinking water or irrigation, the secondary question is whether or not the province also has sufficient regulatory measures in place to mitigate these threats. If regulatory measures are in place, then a low risk designation is applicable. This aligns with the conclusion of Category 1 that laws are in place and are enforced, and also aligns with Canada's high standing in the global Corruption Perception Index (CPI) (C36). If a province lacks sufficient regulatory measures then a specified risk designation was assigned.

2) *Areas of Subsistence Harvesting for Indigenous People*

Due to the ubiquitous nature of areas used by Indigenous Peoples for subsistence harvesting, specific HCV5 related to these sites could not be identified, but this does not negate the importance of these areas and resources to Indigenous Peoples. A review of the legal mechanisms in place to mitigate potential impacts of forest management activities to areas used for subsistence harvesting, was undertaken, and a risk designation determined.

High Conservation Value 6: Cultural values. *Sites, resources, habitats and landscapes of global or national cultural, archaeological or historical significance, and/or of critical cultural, ecological, economic or religious/sacred importance for the traditional cultures of local communities or indigenous peoples.*

Within this document, "sites" is used broadly to refer to both discrete landscape features as well as broader areas that make up habitats or landscapes themselves. The HCV is divided into two categories:

- 1) nationally recognized historical and natural heritage sites;
- 2) sites of critical cultural importance to Indigenous Peoples.

Nationally recognized historical and natural heritage sites relates to sites primarily of global or national importance. The second category relates to sites that are of critical importance to an Indigenous People in whose traditional territory the site lies, and are therefore of a more local and/or regional importance. For both types of HCV6, threats from forestry to these sites include the destruction or disturbance of sites. National regulations in Canada were assessed to determine the risk to these sites. In the case of sites of critical importance to Indigenous Peoples, an assessment of the mechanisms to identify and mitigate the impact of damage to these sites was conducted.

Summary of the Risk Assessment for Category 3

Indicator	Sources of Information	Scale of Assessment	Risk designation and determination
3.0 HCV Data Quality Assessment	See “Detailed analysis”, below.	Country	Low Risk for Canada
3.1 HCV 1: Species diversity. Concentrations of biological diversity including endemic species, and rare, threatened or endangered species that are significant at global, regional or national levels.	See “Detailed analysis”, below.	Ecoregion	Specified Risk for the following ecoregions: <ul style="list-style-type: none"> • Southern Great Lakes Forest • Eastern Great Lake lowland Forest • Central Pacific coastal Forest • Eastern Canadian Forest • New England Acadian Forest • Puget Lowland Forest • Eastern Canadian Shield taiga • Central Canadian Shield forests • Eastern forest-boreal transition • Midwestern Canadian Shield forests • Mid-Continental Canadian forests • Southern Hudson Bay taiga • Northern Canadian Shield taiga • Canadian Aspen forests and parklands • Alberta-British Columbia foothills forests • Muskwa-Slave Lake forests • Northwest Territories taiga • Fraser Plateau and Basin complex • Northern transitional alpine forests • Central British Columbia Mountain forests • British Columbia mainland coastal forests • Northern Cordillera forests • Alberta Mountain forests • North Central Rockies forests • Okanagan dry forests Low Risk for the following ecoregions: <ul style="list-style-type: none"> • Queen Charlotte Islands

			<ul style="list-style-type: none"> • Gulf of St. Lawrence lowland forests • Western Great Lakes forests • Cascade Mountain leeward forests • Newfoundland Highlands forests • Interior Alaska-Yukon taiga • South Avalon-Burin oceanic barrens • Yukon Interior dry forests
<p>3.2 HCV 2: Landscape-level ecosystems and mosaics. Intact forest landscapes and large landscape-level ecosystems and ecosystem mosaics that are significant at global, regional or national levels, and that contain viable populations of the great majority of the naturally occurring species in natural patterns of distribution and abundance.</p>	See “Detailed analysis”, below.	Individual IFL	<p>Specified Risk for IFLs identified in Table 5.</p> <p>Low Risk for IFLs identified in Tables 2, 3 and 4.</p>
<p>3.3 HCV 3: Ecosystems and habitats. Rare, threatened, or endangered ecosystems, habitats or refugia.</p>	See “Detailed analysis”, below.	Country	<p>Low Risk for Canada</p> <p>Refer to HCV1 for Specified Risk ecoregions related to critical habitat.</p>
<p>3.4 HCV 4: Critical ecosystem services. Basic ecosystem services in critical situations, including protection of water catchments and control of erosion of vulnerable soils and slopes.</p>	See “Detailed analysis”, below.	Province & Territory	<p>Specified Risk for the following territories: Yukon, Northwest Territories</p> <p>Low Risk for the following provinces and territories: Newfoundland and Labrador, Nova Scotia, New Brunswick, Prince Edward Island, Québec, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Nunavut.</p>
<p>3.5 HCV 5: Community needs. Sites and resources fundamental for satisfying the basic necessities of local communities or indigenous peoples (e.g. for livelihoods, health, nutrition, water, etc.).</p>	See “Detailed analysis”, below.	Province & Territory, Country	<p>Low Risk for Canada</p>

3.6 HCV 6: Cultural values. Sites, resources, habitats and landscapes of global or national cultural, archaeological or historical significance, and/or of critical cultural, ecological, economic or religious/sacred importance for the traditional cultures of local communities or indigenous peoples.	See “Detailed analysis”, below.	Country	Low Risk for Canada

Risk Assessment

See ‘Information Sources’ section below for the full citation of the references identified in the Assessment.

Indicator 3.0	
Scale of Assessment:	Province & Territory or Ecoregion
HCV occurrence and threat assessment	Risk designation and determination
<p>Indicator 3.0 assesses whether:</p> <ol style="list-style-type: none"> 1. Data is available, sufficient for determination of HCV presence and distribution within the area under assessment, according to the requirements of this document? 2. Data is available, sufficient for assessment of the threats to HCVs from forest management activities according to the requirements of this document? <p>Based on the evidence and sources of information detailed in the risk assessment below, as well as associated discussion regarding the quality and availability of data for each HCV indicator, it is concluded that data is available and sufficient to determine HCV presence and threats from forest management.</p> <p>For this reason, the Indicator 3.0 is assessed as Low Risk.</p>	<p>Low Risk: Canada</p>

Indicator 3.1 – HCV 1

Scale of Assessment: | Ecoregion

HCV occurrence and threat assessment

Risk designation and determination

1) Concentrations of SAR Critical Habitat

HCV Identification

The evaluation of the ecoregions in Canada with the highest concentration of Species At Risk (SAR) critical habitat revealed the following:

Ecoregion	# of SAR Critical Habitat	Average Species Richness	SAR Critical Habitat : Species Richness Ratio
Southern Great Lakes forest	39	374	10.43
Eastern Great Lake lowland forests	25	324	7.72
Central Pacific coastal forest	12	219	5.48
Eastern Canadian Forest	8	175	4.57
New England Acadian Forest	10	256	3.91
Puget Lowland Forest	9	248	3.63
Queen Charlotte Islands	3	110	2.73
British Columbia mainland coastal forest	7	259	2.70
Okanagan dry forests	7	313	2.24
North Central Rockies forests	6	274	2.19
Gulf of St. Lawrence lowland forests	5	256	1.95
Western Great Lakes forests	5	270	1.85
Eastern forest-boreal transition	5	281	1.78
Eastern Canadian Shield taiga	2	120	1.67
Fraser Plateau and Basin complex	4	267	1.50
Cascade Mountain leeward forests	4	294	1.36
Alberta-British Columbia foothills forests	3	257	1.17
Canadian aspen forests and parklands	3	259	1.16
Alberta Mountain forests	3	280	1.07
Central Canadian Shield forests	2	221	0.90
Northern transitional alpine forests	2	234	0.85
Central British Columbia mountain forests	2	243	0.82
Newfoundland Highlands forests	1	145	0.69
Northwest Territories taiga	1	157	0.64
Muskwa-Slave Lake forests	1	196	0.51
Northern Cordillera forests	1	203	0.49
Midwestern Canadian Shield forests	1	214	0.47
Mid-Continental Canadian forests	1	239	0.42
Southern Hudson Bay taiga	0	-	-
Interior Alaska-Yukon taiga	0	-	-

The following ecoregions are

Low Risk:

- Queen Charlotte Islands
- Gulf of St. Lawrence lowland forests
- Western Great Lakes forests
- Cascade Mountain leeward forests
- Newfoundland Highlands forests
- Interior Alaska-Yukon taiga
- South Avalon-Burin oceanic barrens
- Yukon Interior dry forests

The following ecoregions are

Specified Risk:

- Southern Great Lakes Forest
- Eastern Great Lake lowland Forest
- Central Pacific coastal Forest
- Eastern Canadian Forest
- New England Acadian Forest
- Puget Lowland Forest
- Eastern Canadian Shield taiga
- Central Canadian Shield forests
- Eastern forest-boreal transition
- Midwestern Canadian Shield forests
- Mid-Continental Canadian forests

Indicator 3.1 – HCV 1

Scale of Assessment: | Ecoregion

HCV occurrence and threat assessment

Northern Canadian Shield taiga	0	-	-
South Avalon-Burin oceanic barrens	0	-	-
Yukon Interior dry forests	0	-	-

Risk designation and determination

- Southern Hudson Bay taiga
- Northern Canadian Shield taiga
- Canadian Aspen forests and parklands
- Alberta-British Columbia foothills forests
- Muskwa-Slave Lake forests
- Northwest Territories taiga
- Fraser Plateau and Basin complex
- Northern transitional alpine forests
- Central British Columbia Mountain forests
- British Columbia mainland coastal forests
- Northern Cordillera forests
- Alberta Mountain forests
- North Central Rockies forests
- Okanagan dry forests

Ecoregions with the highest SAR critical habitat to species richness ratio (>3) were considered to be HCV1. These ecoregions are:

- Southern Great Lakes forests
- Eastern Great Lake Lowland forests
- Central Pacific Coastal forests
- Eastern Canadian forests
- New England Acadian forests
- Puget Lowland forests

Threat Assessment

Within the six ecoregions identified as HCV1, critical habitats of 79 SAR were identified. Some critical habitats exist within more than one ecoregion. The threat assessment identified the critical habitat for 31 species to be medium to highly impacted by forestry activities. The remaining 48 SAR critical habitats were removed from consideration.

Mechanisms to Mitigate Risk

1. Federal Assessment of Protection of Critical Habitat:
There are currently no Section 63 reports available for species that have been identified under HCV 1: Concentrations of SAR Critical Habitat.
2. Protection from Harvesting Activities:
Evaluation of the each of the 31 SAR critical habitats revealed only one (Hill's Thistle) to encompassed almost entirely within a protected area, and is considered **Low Risk**.
3. Critical Habitat Fully Addressed by Federal Action Plan:
Three SAR species have federal Action Plans that encompass the entire critical habitat. These species (Cucumber Tree, Voles Ears Lichen and Boreal Felt Lichen) are therefore considered **Low Risk**.

Indicator 3.1 – HCV 1

Scale of Assessment: | Ecoregion

HCV occurrence and threat assessment

Risk designation and determination

Conclusion:

Critical habitat for the resulting SAR are considered **Specified Risk**:

Table 1: Specified Risk Ecoregions and associated Species at Risk (SAR) Critical Habitat

Ecoregion	SAR Critical Habitat*
Southern Great Lakes forest	<ul style="list-style-type: none"> • Acadian Flycatcher (<i>Empidonax virescens</i>) • Prothonotary Warbler (<i>Protonotaria citrea</i>) • Massasauga (Great Lakes St. Lawrence population) (<i>Sistrurus catenatus</i>) • Blanding's Turtle (<i>Emydoidea blandingii</i>) • Heart-leaved Plantain (<i>Plantago cordata</i>) • Wood-poppy (<i>Stylophorum diphyllum</i>) • Large Whorled Pogonia (<i>Isotria verticillata</i>) • False Rue-anemone (<i>Enemion biternatum</i>) • Goldenseal (<i>Hydrastis canadensis</i>) • Round-leaved Greenbrier (<i>Smilax rotundifolia</i>) • Dwarf Hackberry (<i>Celtis tenuifolia</i>) • Blanding's Turtle (<i>Emydoidea blandingii</i>) • American Ginseng (<i>Panax quinquefolius</i>) • Jefferson Salamander (<i>Ambystoma jeffersonianum</i>) • Massasauga (Carolinian population) (<i>Sistrurus catenatus</i>)
Eastern Great Lake lowland forests	<ul style="list-style-type: none"> • Pale-bellied Frost Lichen (<i>Physconia subpallida</i>) • Allegheny Mountain Dusky Salamander (<i>Desmognathus ochrophaeus</i>) • Wood Turtle (<i>Glyptemys insculpta</i>) • Massasauga (Great Lakes St. Lawrence population) (<i>Sistrurus catenatus</i>) • Dwarf Hackberry (<i>Celtis tenuifolia</i>) • Blanding's Turtle (<i>Emydoidea blandingii</i>) • American Ginseng (<i>Panax quinquefolius</i>) • Jefferson Salamander (<i>Ambystoma jeffersonianum</i>) • Massasauga (Carolinian population) (<i>Sistrurus catenatus</i>)
Central Pacific coastal forest	<ul style="list-style-type: none"> • Marbled Murrelet (<i>Brachyramphus marmoratus</i>) • Northern Goshawk laingi subspecies (<i>Accipiter gentilis laingi</i>)
Eastern Canadian Forest	<ul style="list-style-type: none"> • American Marten (Newfoundland population) (<i>Martes americana atrata</i>)
New England Acadian Forest	<ul style="list-style-type: none"> • Rainbow Smelt (Lake Utopia small-bodied population) (<i>Osmerus mordax</i>) • Furbish's Lousewort (<i>Pedicularis furbishiae</i>)

Indicator 3.1 – HCV 1

Scale of Assessment:		Ecoregion		
HCV occurrence and threat assessment				Risk designation and determination
			<ul style="list-style-type: none"> Blanding's Turtle (<i>Emydoidea blandingii</i>) Van Brunt's Jacob's-ladder (<i>Polemonium vanbruntiae</i>) 	
Puget Lowland Forest		<ul style="list-style-type: none"> Coastal Giant Salamander (<i>Dicamptodon tenebrosus</i>) Pacific Water Shrew (<i>Sorex bendirii</i>) Oregon Spotted Frog (<i>Rana pretiosa</i>) 		
<p>*Refer to C1 for information and sources identifying Critical Habitat for the listed species.</p> <p>Therefore, Specified Risk threshold (8) <i>HCV 1 is identified and/or its occurrence is likely in the area under assessment and it is threatened by management activities</i> is met for above identified SAR critical habitat within the following ecoregions:</p> <ul style="list-style-type: none"> Southern Great Lakes Forest Eastern Great Lake lowland Forest Central Pacific coastal Forest Eastern Canadian Forest New England Acadian Forest Puget Lowland Forest <p>2) Critical Habitat for SAR of Special Significance</p> <p><i>HCV Identification</i></p> <p>Of all the SARA-listed threatened or endangered forest-dwelling species, none have arguably received more national attention than woodland caribou. Critical habitat for the woodland caribou (<i>Rangifer tarandus caribou</i>), including the boreal population, southern mountain population and Atlantic-Gaspésie population extends across the boreal forest in 6 provinces and 2 territories.</p> <p>Woodland caribou are considered an 'indicator species' for wilderness areas, as they are sensitive to habitat change. They play an important ecological role in the forest, and are an integral part of First Nation communities throughout the boreal region (C21). FSC Canada has a history of recognizing the importance of this species, and FSC Canada's new National Forest Management Standard has dedicated an entire indicator within Criterion 6.4 (Rare and Threatened Species) to the management of woodland caribou habitat.</p> <p>This species is therefore nationally significant from an ecological and cultural perspective, and thus woodland caribou critical habitat (boreal, southern mountain and Atlantic-Gaspésie populations) is considered an HCV1.</p>				

Indicator 3.1 – HCV 1

Scale of Assessment: | Ecoregion

HCV occurrence and threat assessment

Risk designation and determination

Threat Assessment

The Federal Recovery Strategies for the three populations of woodland caribou clearly identify habitat alteration and disturbance as a result of human land-use activities to be one of the most significant threats to woodland caribou. Forestry in particular is well documented as affecting caribou via combination of functional habitat loss, decreased habitat quality and development of linear features such as roads which increases access by predators (C22).

Mechanisms to Mitigate Risk

Atlantic-Gaspésie Population

1. Federal Assessment of Protection of Critical Habitat:

There are currently no Section 63 reports available for the Atlantic-Gaspésie Population of caribou to identify whether there is or is not legal protection for those areas outside of the Gaspésie National Park.

2. Protection from Harvesting Activities:

Much of the critical habitat for the Atlantic-Gaspésie population is located within the Gaspésie National Park. However, the federal recovery plan does identify critical habitat outside the National Park. Therefore, not all of the critical habitat is protected from harvesting activities.

3. Critical Habitat Fully Addressed by Federal Action Plan:

There is no federal Action Plan for the Atlantic-Gaspésie population. Therefore, critical habitat for the woodland caribou Atlantic-Gaspésie Population is considered **Specified Risk**.

Boreal Population

1. Federal Assessment of Protection of Critical Habitat:

In February 2018, the Government of Canada published the *Action Plan for the Woodland Caribou (Rangifer tarandus caribou), Boreal Population, in Canada - Federal Actions*, which outlines the recovery measures that the federal government is taking or will take to help achieve recovery for boreal caribou. In April 2018, the *Progress report on unprotected critical habitat for the Woodland Caribou (Rangifer tarandus caribou), Boreal population, in Canada* was released (also referred to as a “Section 63 report”) (C23), which provides a summary of steps taken to protect critical habitat on non-federal lands to date, as well as additional steps to be taken in the near future. The report identifies that while there have been some actions taken to protect some portions of the critical habitat identified in the 2012 recovery strategy, most of these are ‘not subject to constraints

Indicator 3.1 – HCV 1

Scale of Assessment: | Ecoregion

HCV occurrence and threat assessment

Risk designation and determination

consistent with those under SARA', and therefore cannot constitute as protection of the critical habitat.

A second progress report was published in December 2018, and again highlighted gaps, specifically noting that *“Despite the progress being made, the gaps in protection, as described in the first Progress Report, remain. [...] This report highlights that, while encouraging steps are being taken, more effort, innovation, investment, and collaboration are needed both to put in place protection for the species’ critical habitat, and to ensure that meaningful, on-the-ground actions are being taken to restore critical habitat and recover the species.”* (C34)

In addition, other non-governmental reports (C24, C25) assessing the effectiveness of the legislative framework in protecting critical habitat conclude that caribou critical habitat remains largely unprotected across the country. For these reasons, critical habitat of the woodland caribou boreal population is considered to be **Specified Risk**.

Southern Mountain Population

1. Federal Assessment of Protection of Critical Habitat

In February 2017, the federal government and government of British Columbia released a protection study reviewing legislation used to manage Southern Mountain Caribou and their critical habitat in British Columbia (C26). The report describes that “in areas where there are no legislative instruments in place to constrain any activity in the context of caribou habitat, or where instruments prohibit or constrain some but not all activities, or where discretion is exercised to allow certain activities, there is potential for activities to occur that could result in destruction of critical habitat”. In terms of forestry activities, all lands with the Timber Harvesting Land Base (THLB) are considered available for harvest in the long term, with significant percentage of areas within the study boundaries not protected by relevant legislation instruments. Overall, the study indicates the existence of gaps in the protection of southern mountain caribou critical habitat. Following the release of the report, the federal government issued an imminent threat assessment for southern mountain caribou (C27) due to the immediate threats facing the population and the very unlikely probability of achieving the recovery objectives of the population without immediate intervention. For these reasons, critical habitat of the woodland caribou southern mountain population is considered to be **Specified Risk**.

Therefore, **Specified Risk** threshold (8) *HCV 1 is identified and/or its occurrence is likely in the area under assessment and it is threatened by management activities* is met for ecoregions with Atlantic-Gaspésie, boreal and southern mountain populations of woodland caribou critical habitat:

- Eastern Canadian forests
- Eastern Canadian Shield taiga

Indicator 3.1 – HCV 1

Scale of Assessment:	Ecoregion	
HCV occurrence and threat assessment		Risk designation and determination
<ul style="list-style-type: none"> • Central Canadian Shield forests • Eastern forest-boreal transition • Midwestern Canadian Shield forests • Mid-Continental Canadian forests • Southern Hudson Bay taiga • Northern Canadian Shield taiga • Canadian Aspen forests and parklands • Alberta-British Columbia foothills forests • Muskwa-Slave Lake forests • Northwest Territories taiga • Fraser Plateau and Basin complex • Northern transitional alpine forests • Central British Columbia Mountain forests • British Columbia mainland coastal forests • Northern Cordillera forests • Alberta Mountain forests • North Central Rockies forests • Okanagan dry forests 		
<p>For the remaining ecoregions, Low Risk threshold (6) is met for HCV1 : There is low/negligible threat to HCV 1 caused by management activities in the area under assessment.</p>		

Indicator 3.2 – HCV 2

Scale of Assessment: Individual IFL

HCV occurrence and threat assessment

Risk designation and determination

Refer to “HCV2 – IFL Draft 2 Data & Analysis” in the Supplementary Documents folder for specific details of the HCV2 assessment.

Individual IFL Assessment

In total, 249 IFLs were considered for the IFL assessment. Refer to *Supplementary Document* folder for the complete IFL assessment information.

Impact of Forestry Operations

Ninety-two IFLs were identified as being fully outside of forestry tenure. These IFLs are considered Low Risk.

Table 2: Low Risk IFLs based on no forest tenure within the IFL.

IFL: NAM_###	103, 133, 143, 158, 159, 168, 174, 175, 177, 180, 182, 183, 185, 189, 191, 192, 193, 194, 199, 200, 204_2, 204_3, 207, 209, 215_1, 220_2, 240, 252, 253, 265_2, 266, 267_1, 268, 270, 271, 273, 275, 276, 277, 281, 283, 287, 288, 290, 292, 293, 294, 296, 297, 301, 302, 307, 308, 310, 311, 313, 314, 315, 318, 319, 320, 324, 326, 329, 332, 336, 338, 339, 340, 341, 342, 343, 346, 347, 359, 376, 377, 379, 380, 383, 384_1, 384_2, 386, 387, 391, 392, 64, 68, 77, 78, 80, 84
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Forty-two IFLs were identified as having low amount of IFL area within forest tenure. These IFLs are considered Low Risk.

Table 3: Low Risk IFLs based on low forest tenure within the IFL.

IFL: NAM_###	115, 123, 124, 125, 139, 141, 146, 148, 151, 160, 164 170_2, 179, 188, 195, 197, 203, 204_1, 204_4, 220_1, 234, 258, 259, 263, 264_2, 265_1, 267_2, 282_3, 300_2, 303, 337, 351, 82, 85, 88, 91, 92, 94, 95, 97, 98, 99
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Note: The Canadian portions of IFLs NAM_94, 97 and 99 met the low risk threshold based on forest tenure within the IFLs. However, these IFLs also extend beyond Canada’s borders, and the US portion of these IFLs were verified as being well within the boundaries of National Forests, which have restrictive activities regarding forestry.

Low Risk threshold (10) met: *There is low/negligible threat to HCV 2 caused by management activities in the area under assessment.* The remaining 115 IFLs were assessed further.

Specified Risk for IFLs identified in Table 5.

Low Risk for IFLs identified in Tables 2, 3 and 4.

Indicator 3.2 – HCV 2

Scale of Assessment: Individual IFL

HCV occurrence and threat assessment

Risk designation and determination

Threats from Forest Management Activities

Twenty-four IFLs were identified as meeting the threshold for not being threatened by commercial forestry practices. These IFLs are considered Low Risk.

Table 4: Low Risk IFLs based on low threat from forest management activities.

IFL:	106, 117, 122, 127, 128, 129, 130, 132, 135, 144, 150, 153_3, 202, 210, 211, 236, 242, 254, 299,
NAM_###	69, 70_1, 81, 86, 93

Low Risk threshold (11) met: *HCV 2 is identified and/or its occurrence is likely in the area under assessment, but it is effectively protected from threats caused by management activities.*

The remaining 91 IFLs are considered to meet the **Specified Risk** threshold (12) : *HCV 2 is identified and/or its occurrence is likely in the area under assessment, and it is threatened by management activities.*

Table 5: Specified Risk IFLs, by IFL Size Class

IFL Size Class (ha)	Specified Risk IFL (NAM #)
50,000 – 62,500	108, 110, 113, 116, 118, 120, 138, 152, 162, 167, 173, 187, 201, 218, 229, 235, 243, 278, 70_2, 76,
62,501 – 75,000	121, 126, 161, 166, 222, 231, 233, 282_1, 285
75,001 – 200,000	100, 134, 136, 140_1, 140_2, 145, 153_1, 156_1, 165, 178, 184, 186, 196, 198, 212, 214, 215_2, 216, 223, 232, 239, 241, 245, 246_1, 247, 248, 249, 251, 264_1, 282_2, 284, 286, 295, 298, 300_3, 66, 71
200,001 – 500,000	131, 137, 153_2, 156_2, 163, 171, 206, 226, 238, 250, 255_1, 257
+500,001	147, 149, 169, 170_1, 176, 190, 213, 221, 225, 237, 246_2, 255_2, 274

See Appendix III for a map of Specified Risk IFLs.

Indicator 3.3 – HCV 3

Scale of Assessment:	Country	
HCV occurrence and threat assessment		Risk designation and determination
<p>Rare, Threatened or Endangered Ecosystems</p> <p>The identification of HCV3s in Canada is challenging, given then the lack of a national or systematic assessment of rare, threatened or endangered (RTE) ecosystems in Canada. While some provinces have databases that identify RTE communities at a fine scale (e.g. British Columbia red and blue-listed ecological communities), most provinces and territories do not maintain such databases. Therefore a consistent assessment or prioritization of RTE ecosystems across the country using systematized data sources was not possible.</p> <p>As recommended in the <i>Common Guidance for the Identification of HCVs</i> (HCVnetwork.org), the Working Group assessed the IUCN Ecosystem Red List to determine the presence of internationally recognized RTE forested ecosystems in Canada. Only the Great Lakes alvar ecosystem was listed as being critical, endangered or vulnerable in Canada, and this is not considered to be a forested ecosystem. Further, according to the Nature Conservancy of Canada (C35), forestry is not identified as a key threat to alvar ecosystems in Canada.</p> <p>Based on the above sources, Low Risk threshold 14 was considered met for RTE ecosystems in Canada: <i>There is low/negligible threat to HCV 3 caused by management activities in the area under assessment.</i></p> <p>Rare, Threatened or Endangered Habitats</p> <p>Both the federal and provincial governments have responsibilities for managing biodiversity in their jurisdiction and on the lands that they manage. As a result, each jurisdiction collects different information and at varying levels, and there is very little consistent data regarding biodiversity across Canada, including mapping of habitats based on their level of vulnerability. Likewise, there does not exist a national database or recent assessment which identifies RTE habitats that was found to be acceptable by all members of the Working Group.</p> <p>Therefore, as part of HCV1, the Working Group developed their own assessment to identify concentration of species at risk (SAR) critical habitats. This assessment, which is incorporated into HCV1: Concentration of SAR Critical Habitat, was used to address the RTE habitat component of HCV3. Refer to HCV1 assessment for a description of the methodology and evaluation of critical habitats for species at risk. Overall, the risks to habitats component of HCV3 are evaluated and addressed in HCV1.</p>		<p>Low Risk for Canada</p> <p>Refer also to HCV1.</p>

Indicator 3.4 – HCV 4

Scale of Assessment: Province & Territory

HCV occurrence and threat assessment

Risk designation and determination

1) Protection from Erosion: Landslides

All Provinces

The Atlas of Canada's *Major Landslides Causing Fatalities* map (C4) was evaluated, as well as the Landslide Susceptibility Map of Canada (C4).

HCV Occurrence and Threat Assessment

Newfoundland and Labrador

Less than 1% Newfoundland and Labrador is considered vulnerable to landslides (C4), and this amount of vulnerable area is insufficient to justify their consideration as HCV4. This province is considered **Low Risk**.

Nova Scotia, New Brunswick, Prince Edward Island

There were no areas identified as vulnerable to landslides (C4). These provinces are considered **Low Risk**.

Québec

A small number of landslides in Québec since 1906. Most are located near main rivers (St. Lawrence, Gatineau, Saguenay). Conservation Biology Institute's *Global Landslide Hazard Distribution* map (Q5) gives all of Québec a low hazard rating. There are therefore no areas identified as vulnerable to landslides in Québec, and is therefore **Low Risk**.

Ontario

There are areas in northern and southern Ontario that are identified as being susceptible to landslides, and are classed as categories 5 and 6 for landslide susceptibility (C4). In northern Ontario, these areas are primarily poorly vegetated slopes and steep riparian embankments (C4). In southern Ontario these areas are located on non-forested lands. Consequently, there are no primarily forested areas in Ontario that could be considered as HCV4 candidates for risk of landslides, and is therefore **Low Risk**.

Manitoba

There is considerable area in western Manitoba within existing tenured licence areas that is rated as moderate to high potential for landslide susceptibility (C4).

Although Manitoba has very little rocky or mountainous terrain, steep and rolling slopes do occur locally. However, slopes that are prone to landslides, are addressed through two mechanisms: 1) The Riparian Management Guidelines (M1) contain slope-based direction for riparian buffers along with restrictive measures based on the risk of soil erosion; and, 2) for site-specific issues,

Low Risk for the following provinces and territories: Newfoundland and Labrador, Nova Scotia, New Brunswick, PEI, Québec, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Nunavut

Specified Risk for the following territories: Yukon, Northwest Territories

Indicator 3.4 – HCV 4

Scale of Assessment: Province & Territory

HCV occurrence and threat assessment

Risk designation and determination

direction is provided by guidelines related to control of rutting and local erosion (M2, M3, M4). In addition, by virtue of the distribution of population in the province, industrial forest operations are always conducted in unpopulated or sparsely populated areas. These mechanisms are assessed as being sufficient to mitigate the threat of landslides, and is considered **Low Risk**.

Saskatchewan

Saskatchewan south of the Churchill River is classed as vulnerable to soil instability and landslides according the map of major landslides causing fatalities (C4). While most of this part of the province is flat, the river valleys and gully areas in southern Saskatchewan (Palliser Triangle area) are vulnerable to landslides since they are worn into Cretaceous bedrock and glaciolacustrian deposits of clays and fine silts (S1). Erosion, including landslides, occurs along numerous river valleys and gullies due to the nature of these sediments which were generally deposited during the advance and then retreat of the Late Wisconsin Laurentide Ice Sheet.

HCV4's are present in the river valleys and gullies within the area of Saskatchewan shown in the soil stability map (C4). However, forest operations cause little erosion because operations generally avoid steep slopes and the sides of river valleys. These areas are not integral to the wood supply in the province and can be avoided at little cost to wood supply levels. Therefore, Saskatchewan is considered **Low Risk**.

Alberta

The majority of Alberta is classed as vulnerable to soil instability and landslides according the map of major landslides causing fatalities (C4). The Rocky Mountains and foothills are vulnerable due to their steepness while the flatter parts of the province to the east are underlain by Cretaceous bedrock and glaciolacustrian deposits of clays and fine silts (A1). East and north of the foothills, landslides occur along numerous river valleys and gullies due to the nature of these sediments which were generally deposited during the advance and then retreat of the Late Wisconsin Laurentide Ice Sheet.

HCV4's are present in the river valleys and gullies within the area of Alberta shown in the landslide map (C4). However, most forest companies operating on public land do not harvest in river valleys (e.g. A2). The provincial ground rules prescribed fixed buffers by stream/water body class (A3) as well as additional provisions for grizzly bear, caribou and other ungulate habitat in valleys (these provisions are largely related to access). These measures are considered sufficient to mitigate the risk of landslides, and therefore, Alberta is considered **Low Risk**.

British Columbia

BC has a lot of mountainous terrain and steep slopes. HCV4 forests that provide for ecosystem services by protecting terrain stability exist throughout British Columbia.

Indicator 3.4 – HCV 4

Scale of Assessment: Province & Territory

HCV occurrence and threat assessment

Risk designation and determination

Road construction and forest harvesting occur throughout the province on steep terrain where there is a risk of landslides. Historically, there have been many cases of severe erosion and landslides related to forest harvesting and road construction and the risks are well known.

Section 37 of the province’s Forest Planning and Practices Regulation (BC1) states that any person carrying out a primary forestry activity “must ensure that the primary forest activity does not cause a landslide that has a material adverse effect in relation to one of more of the subjects listed in Section 149 of the Act”. The 11 subjects listed in the Act (BC2) include soils, water, fish, wildlife and other values.

Safe work legislation also requires an assessment of unstable terrain that causes hazards and risks to forest workers.

Terrain stability is assessed at regional scales to identify areas that are unstable and unstable areas are excluded from the timber harvesting landbase. These are referred to as Environmentally Sensitive Areas (ESA). Prior to any road construction or timber harvesting, forest companies must employ qualified professionals to conduct “Terrain Stability Field Assessments”. These assessments occur at landscape scales to allow planning to avoid unstable areas. Prior to operations assessments at site level scales are conducted by registered professionals so that specific stand level sites can be avoided or special measures implemented to reduce risk of landslides. (BC3)

Given the provincial framework of legislation, along with the inventory and the terrain stability field assessments undertaken at regional, watershed and stand/site levels, and the long professional experience, harvest planning practices and road building have improved and it is unlikely that harvesting or road-building would take place on high-risk areas. Therefore, BC is considered **Low Risk**.

Yukon and Northwest Territories

There are numerous areas in the Yukon identified as categories 5 and 6 for erosion susceptibility (see C4) and the western half of the NWT is identified as being susceptible to landslides.

Therefore, there are many HCV4’s present in the Yukon and NWT associated with the risk of landslides.

High susceptibility occurs in mountainous and rugged areas, where it is unlikely that forestry will take place, but also along river valleys (especially the Mackenzie Valley in NWT), which may be attractive for forestry since these areas often have the most productive stands of timber.

Indicator 3.4 – HCV 4

Scale of Assessment: Province & Territory

HCV occurrence and threat assessment

Risk designation and determination

In the absence of regulation other than standard riparian buffers, no additional regulatory or common practice elements were found that are intended to prevent or mitigate the risk of erosion, including landslides. As a result, the Yukon and NWT are assessed as **Specified Risk**.

2) Flood Prevention and Water Quality for Fish/Aquatic Wildlife

National Regulations

The federal *Fisheries Act* (C11) provides for the protection of fish habitat. Under this Act, no one may carry out any work or undertaking that results in the harmful alteration, disruption or destruction of commercial fish habitat, unless authorized by the Minister of Fisheries and Oceans Canada.

Alongside this, there is general direction regarding protection of water in the *Environmental Protection Act* (1999) (C12). Together, these Acts contain prohibitions related to working around or in water, altering fish habitat, and controlling pollution and managing wastes.

For example, a permit is required for any activities or projects near water that are considered CRAs (Commercial, Recreational or Aboriginal fisheries) (C6). Provincial regulations often quote that the proponent is also responsible for federal advice or permits regarding CRAs.

However, since forestry is regulated at the provincial level in Canada, these Acts were assessed insufficient to allow for a low risk determination across the country. Further analysis at the provincial level was deemed warranted.

HCV Occurrence and Threat Assessment

Newfoundland and Labrador

There are no watersheds or bodies of water that have been designated as of special significance for the provision of ecological values and services. Since there is no formal characterization of ecological values and services, there is potential for the occurrence of HCV4 throughout Newfoundland & Labrador.

At a national level, the federal *Navigation Protection Act* (C17) prohibits the construction, placement, alteration, repair, rebuild, removal or decommission of a work in, on, over, under, through or across any navigable water listed. This would apply to

Indicator 3.4 – HCV 4

Scale of Assessment:	Province & Territory	
HCV occurrence and threat assessment		Risk designation and determination
<p>shorelines along the Atlantic Ocean, and Lake Melville.</p> <p>Provincially, the <i>Water Resources Act</i> (section 48) requires written approval from the Minister of Environment before undertaking any work which may affect a body of water. Such approval will be granted, provided there is sufficient justification for the project, and no adverse effects will result from the undertaking (NL5).</p> <p>Regarding forestry activities on crown land, which represents the vast majority of forestry operations in the province, operators are required to follow the <i>Environmental Protection Guidelines for Forestry Operations in Newfoundland and Labrador</i> (NL1) which include guidelines for road construction around waterbodies, buffer zones around waterbodies (e.g. 20-metre, no harvesting activity buffer zone around all water bodies that are identified on the latest 1:50,000 topographic maps and along streams greater than 1.0 metre in width that do not appear on the maps), and other erosion/sedimentation avoidance measures.</p> <p>The provincial <i>Environmental Protection Act, Pesticide Control Regulations</i> require both a licence to apply the pesticide for a specific project (operators licence), as well as an applicators licence (NL1).</p> <p>Since several regulatory measures are established to mitigate the threats of forestry operations on water quality, Newfoundland & Labrador is assessed as Low Risk.</p> <p>Nova Scotia</p> <p>There are no watersheds or bodies of water that have been designated as of special significance for the provision of ecological values and services. Therefore, there is potential for the occurrence of HCV4 throughout Nova Scotia.</p> <p>At a national level, the federal <i>Navigation Protection Act</i> (C17) prohibits the construction, placement, alteration, repair, rebuild, removal or decommission of a work in, on, over, under, through or across any navigable water listed. This would apply to shorelines along the Atlantic Ocean, Bras d'Or lake, Great Bras d'Or lake and the LaHave River.</p> <p>Provincially, Nova Scotia's <i>Environment Act</i> provides the overall authority to protect watercourses (including wetlands). Prior to any activity that changes a watercourse, a water resource, or the flow of water, approval from, or notification to the Department of Environment is required. The Nova Scotia <i>Watercourse Alterations Standards</i> (NS4) provides the guidelines for any activity potentially altering a watercourse. This would be most applicable to bridge and road construction threats. General best practices for all work in or near a watercourse are outlined in the <i>Guide to Altering Watercourses</i> (NS5).</p> <p>Under the <i>Forest Act</i>, the <i>Wildlife and Watercourse Protection Regulations</i> (NS6) require the implementation of a Special</p>		

Indicator 3.4 – HCV 4

Scale of Assessment: Province & Territory

HCV occurrence and threat assessment

Risk designation and determination

Management Zone separating forestry operations from all watercourses and wetlands with standing or flowing water. This applies to all forestry activities carried out in public and private forests. These regulations outline the size of special management zones and activities that are permitted within these zones.

Regarding pesticide use, under the *Pesticide Regulations* and the *Activities Designation Regulations*, Nova Scotia Environment and Labour regulates the sale, use, storage, and disposal of pesticides. Applicators of restricted or commercial class pesticides must be certified. Approvals are required to apply pesticides on forested land (NS7).

Since several regulatory measures are established to mitigate the threats of forestry operations on water quality, Nova Scotia is assessed as **Low Risk**.

New Brunswick

There are no watersheds or bodies of water that have been designated as of special significance for the provision of ecological values and services. Therefore, there is potential for the occurrence of HCV4 throughout New Brunswick.

At a national level, the federal *Navigation Protection Act* (C17) prohibits the construction, placement, alteration, repair, rebuild, removal or decommission of a work in, on, over, under, through or across any navigable water listed. This would apply to shorelines along the Atlantic Ocean and Saint John River.

Provincially, the *Watercourse and Wetland Alteration Regulation* of the *Clean Water Act* regulates the activities that can be performed around watercourses and wetlands. Any person working in or within 30 metres of a watercourse or a wetland is required to obtain a Watercourse and Wetland Alteration permit prior to doing so. Table 4 of the *Watercourse and Wetland Alteration Technical Guidance* document (NB2) lists the documentation required for regulatory review of various alteration activities, including water crossings and tree removal. This is most applicable to private land alteration, as there is a separate provision for Crown land.

On Crown Lands, “alterations undertaken on a watercourse that drains an area of 600 hectares or less at the site of the alteration or to a wetland do not require a *Watercourse and Wetland Alteration Permit* provided that an operating plan approved by a Regional Director of the New Brunswick Department of Natural Resources is in place”. However, crown forestry operations are guided by the *Forest Management Manual for New Brunswick* (NB1), specifically the *Watercourse and Wetland Buffer Zone Policy*, which details buffer width thresholds around watercourses and wetlands, as well as harvesting restrictions within these buffer zones. Requirements pertaining to watercrossing and road building are outlined in the *Guidelines for Roads and Watercourse Crossings* (NB5).

Indicator 3.4 – HCV 4

Scale of Assessment: Province & Territory

HCV occurrence and threat assessment

Risk designation and determination

Regarding impacts of herbicide application, the *Pesticides Control Act and Regulations* required that “any individual or business wishing to apply pesticides (including herbicides or insecticides) is required to obtain a permit authorizing the application. This permit contains operating conditions that outline the type of application, pesticides to be used, requirements for certification, setbacks from homes, water bodies and other environmentally sensitive areas (if needed), maximum wind speeds for application, reporting and public notification. The permit conditions vary with the type of pesticide application and are in place to provide additional safety measures.” (NB8). Any individual wishing to apply a pesticide must obtain a Pesticide Applicator's Certificate and renew it yearly.

In summary, regulatory measures exist to minimize the impact of forestry activities on watercourse and wetland functions and quality, and New Brunswick is therefore considered **Low Risk**.

Prince Edward Island

There are no watersheds or bodies of water that have been designated as of special significance for the provision of ecological values and services. Therefore, there is potential for the occurrence of HCV4 throughout Prince Edward Island.

At a national level, the federal *Navigation Protection Act* (C17) prohibits the construction, placement, alteration, repair, rebuild, removal or decommission of a work in, on, over, under, through or across any navigable water listed. This would apply to shorelines along the Atlantic Ocean.

Provincially, the *Watercourse & Wetland Protection Regulations* under the *Environmental Protection Act* require a 15 metre vegetated buffer along all watercourses (including the ocean) and wetlands for all land uses (including existing properties). A permit is required to undertake certain activities within this buffer area, including tree removal and installation of bridges and culverts. (PE1). Management guidelines are detailed in the *Prince Edward Island Watercourse, Wetland and Buffer Zone Activity Guidelines* (PE3).

Because close to 90% of PEI is privately owned, the management of watercourse and wetlands highly dependent on stewardship and education of private landowners. PEI Watershed Alliance is a co-operative of watershed groups and was founded on principles of information and sharing. They have published a technical manual that outlines best management practices for watershed management (PE2). Currently, watershed groups today are actively involved in watershed planning, education, improving management practices, as well as stream restoration.

In Prince Edward Island, pesticides are regulated under the *Pesticides Control Act* and regulations (PE4). Pesticide Applicator

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Scale of Assessment: Province & Territory

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Risk designation and determination

certificates are required for the use of forestry-related pesticides (e.g. Class F-1 and F-2).

Since there very little commercial forestry is conducted by private landowners in PEI, and most forestry activity is relatively small scale, and given the buffer regulations required around all water courses, PEI is assessed as **Low Risk**.

Québec

There are no watersheds or bodies of water that have been designated as of special significance for the provision of ecological values and services. Québec has a single legal instrument, the *Règlement sur l'aménagement durable des forêts du domaine de l'État (RADF)* (Q9), which prescribes standards for watercourse and wetland protection on public forestlands. The *Environment Quality Act (Q6)*, and the *Act Respecting Land Use Planning and Development* have recently been strengthened with the introduction of the new *Act Respecting the Conservation of Wetlands and Bodies of Water* in 2017 (Q7) which modernizes measures regarding protection of water courses and water bodies. This results in a **Low Risk** designation.

Manitoba, Ontario, and British Columbia

These provinces have a high density of freshwater streams, rivers, and lakes throughout its forests. Commercial forest operations are faced with the challenge of avoiding impacts on aquatic systems. However, because of the existence of regulatory protection and direction, these provinces are assessed as **Low Risk**.

In Manitoba, forest management occurs primarily in sparsely populated and in areas that are only somewhat proximal to population centres.

Manitoba uses a Risk Management Decision Framework provided in its Riparian Guidelines (M1) to identify appropriate management zone (buffer) protection and water quality direction for riparian areas. Risk decisions are based on social values, water quality assessment, fish habitat assessment, erosion potential, and wildlife habitat assessment and forest health assessment. In addition the Riparian Guidelines identify a non-normative strategy of maintaining the percentage of drainage basins logged to < 25% to manage for flow control, sediment deposition, and evapotranspiration.

In addition, the *Manitoba Water Protection Act* (M5) provides a regulatory basis for watershed management, pollution control and other stewardship related to water bodies.

In Ontario, forest management occurs in much of northern and central Ontario, in areas that are either unpopulated or sparsely populated and in areas that are reasonably proximal to population centres. Neither Ontario's Stand and Site Guide (O1) nor its Landscape Guides (O2, O3) provide direction specifically related to the proportion of watersheds or catchments that can be

Indicator 3.4 – HCV 4

Scale of Assessment: Province & Territory

HCV occurrence and threat assessment

Risk designation and determination

disturbed by forest management. The Stand and Site Guide provides rationale for why this direction was not provided:

“During the development of the Stand and Site Guide, careful consideration was given to catchment scale effects of forest management and the need for additional direction. Given current understanding of these effects, the cumulative application of related coarse and fine filter direction (natural landscape pattern, minimizing site damage, retention of residual forest, protection of hydrological linkages, etc.) was thought to adequately address catchment scale effects and therefore explicit catchment direction is not prescribed”.

In other words, the Ontario direction is based on the premise that guidance related to maintenance of natural landscape patterns and other factors mitigates the need for more explicit direction regarding limits on disturbance as a percent of watersheds. Ontario’s Stand and Site Guide also contains explicit direction regarding harvesting in riparian areas, leaving debris in waterways and use of chemicals.

In British Columbia, protecting the quality and quantity of freshwater streams and lakes has been a major consideration in forest management for more than 50 years.

Many provincial regulations provide protection for water quality and quantity, and many operational practices are in place to protect water quality in the streams, rivers and lakes from the impacts of forest harvesting and road construction, maintenance and use (BC4). The regulatory framework for this protection is in the *Forest and Range Practices Act* (BC2) and Forest Planning and Practices Regulation (FPPR) (BC1). Section 35 of the FPPR for example requires that soil disturbance associated with logging must not exceed specified limits. All foresters and forest workers are trained in implementing measures to reduce impacts on water quality.

British Columbia also has operational guidance related to rate of harvesting which limit the amount of the forested area of a watershed that can be cut in a defined period of time. In situations where the rate of harvest exceeds, watershed assessments involving detailed field assessment of “watershed sensitivity” are carried out (BC4)

Saskatchewan and Alberta

Saskatchewan and Alberta have a generally dry climate and water supplies are of critical importance. Most of the surface water is found in rivers and streams, as well as reservoirs that have been created to provide hydro power.

Although the province of Alberta is supporting the development of management plans for the major watersheds in the province – these are at various stages of completion (A4).

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Scale of Assessment: Province & Territory

HCV occurrence and threat assessment

Risk designation and determination

In terms of impacts from forestry operations, the *Alberta Public Lands Operational Handbook* (A8) applies to all industrial and commercial ventures on public lands. Section 8 of the Handbook focuses on water management, and states that "timber harvest operations in the forested areas shall incorporate measures to protect the watershed in accordance with the Alberta Timber Harvest Planning and Operating Ground Rules or Forest Management Agreement Timber Planning and Operating Ground Rules, and any additional terms/conditions prescribed". The *Alberta Timber Harvest Planning and Operating Ground Rules Framework* (A3) includes specific provisions (section 6) for watershed protection that aim to manage the implications of timber operations on water, quality and flow regime, as mandated by the *Water Act* (A9), *Water Regulations* (A10) and *Code of Practice for Watercourse Crossing* (A11), and detail specific requirements when operating beside watercourses.

These legal regulations and guidelines, combined with compliance inspections by the Ministry of Environment & Parks (*Water Act*) and Ministry of Agriculture & Forestry (*Forest Act*) (A12) offer some assurance that measures related to watercourse protection are enforced. Accordingly, Alberta is considered **Low Risk**.

In Saskatchewan, the *Environmental Management and Protection (General) Regulations* (S2) identifies requirements for development activities when operating near watercourses. An *Aquatic Habitat Protection Permit* is required on private and public land prior to conducting any work in or near water (within a minimum of 5 meters from the top of water bank), which aims to prevent habitat alteration, soil erosion and sedimentation, impacts to aquatic species, discharge of chemicals, and the protection of aquatic and riparian vegetation (S3).

Industrial forestry operations, which are also bound by the *Forest Act* (including lengthy provisions for forest management and operational planning), are issued Aquatic Habitat Protection Permits through the Forest Service branch of the Ministry of Environment on an annual basis as a part of their Operating Plan Approval for the Forest Management Agreement (FMA) area. Aquatic Habitat Protection Permits outline the 41 specific conditions that must be addressed for any operations near watercourses, and include provisions around machinery use, spills, watercrossing installation, maintenance and reclamation.

Each Forest Management Agreement holder identifies their own specific set of operations standards and guidelines in their FMP, per the Forest Management Planning Standard (S4). These standards and guidelines identify general operating practices for riparian management, including watercourse buffers, stream crossings, as well as surface drainage and other erosion control methods (e.g. see (S8) for Mistik FMA Standards and Guidelines).

While the specific operational methods on how to achieve provincial objectives are up to the forest manager to demonstrate (S5), the Province is undergoing the process of creating one central forest management Standard and Guidelines for all FMA-holders in

Indicator 3.4 – HCV 4

Scale of Assessment: Province & Territory

HCV occurrence and threat assessment

Risk designation and determination

Saskatchewan. The Forest Operations Standard is expected to be completed in early 2019, with immediate implementation to be required by FMA-holders as a condition for renewal of operating plans and licenses. The Forest Operations Standard is targeted for inclusion in the Saskatchewan Environmental Code in 2020.

The Ministry of Environment (i.e. relevant ecologists, wildlife biologists, operations & compliance staff) review each FMA’s annual operation plan in detail (S6) including all planned activities near watercourses, to verify that operations meet the requirements of *The Environmental Management and Protection Act, 2010* and *The Forest Resources Management Act*. Annual compliance reports, including outcomes related to the protection of watercourses and water quality are made publicly available (S7).

Given the provincial regulatory processes in place to mitigate impacts of forest operations on water quality and watercourses, as well as the level of oversight on the implementation of guidelines, Saskatchewan is assessed as **Low Risk**.

Yukon

There are numerous streams and rivers in the Yukon as well as many lakes. The strategic management plans may identify specific streams or lakes of importance; however there are no territory-wide assessments.

The Forestry Handbook (Y2) sets out the riparian buffer requirements for timber harvesting. The buffer zone consists of a Reserve Zone alongside the water feature and a Management Zone at a further distance. The width of the zones varies depending on stream width and slope. No harvesting is permitted in the Reserve Zone - modified harvesting may be permitted in the Management Zone. Therefore, the measures are enforced by the Yukon Forestry Branch of Energy, Mines and Resources and are sufficient to protect water catchment areas and the Yukon is assessed as **Low Risk**.

Northwest Territories

There are numerous streams and rivers in the NWT as well as many lakes. There have been no territory-wide assessments of critical areas.

Regulations in the *Forest Management Act* (NW2) prohibit the harvesting of timber within 60 m of the high water mark of a water body unless specifically authorized to do so. Commercial timber procedures (NW1) provide for a range of buffer widths depending on the size /width of the water body /river, and restrictions on equipment use within 10 m of intermittent and ephemeral streams, draws and water source areas. These measures are considered to be sufficient to protect water catchment areas and NWT is assessed as **Low Risk**.

Indicator 3.5 – HCV 5

Scale of Assessment: Province & Territory, Country

HCV occurrence and threat assessment

Risk designation and determination

1) Water Sources for Irrigation and Sources for Community Water Supplies

Scale: Province & Territory

HCV Occurrence and Threat Assessment

Newfoundland and Labrador, Nova Scotia, New Brunswick

On average, there is no shortage of rainfall in eastern Canada, and as a result, there is very little irrigation in these provinces (C7). Since the Maritimes as a whole utilizes 0.5% of the total national irrigation water usage (C8), and less than 2% of the farms in the Maritimes are irrigated (C9), there are no water sources for irrigation that are identified as specified risk.

In Newfoundland & Labrador, under the *Water Resources Act*, municipalities in Newfoundland & Labrador have the option to protect their water supply by submitting an *Application for Protection of a Water Supply Area* to the Department of Environment and Conservation (NL2). Refer to NL3 for the list of protected water supply areas. These areas can also be found via the *Newfoundland & Labrador Water Resources Portal* (NL4). The protected water supply areas are considered HCV5.

In this province, any development activity proposed in a protected water supply area requires a permit from the Department of Environment and Conservation. The permit process evaluates the application, including whether stream crossings or watercourse alterations are proposed, and prepares environmental protection guidelines (NL1), which outline the methods, practices and control measures to minimize negative impacts on the environment and water resources. Developers are required to strictly adhere to these guidelines (NL2).

Considering the provincial oversight, that NRA Category 1 assessment confirms law enforcement occurs, and restrictions on forestry activities that apply to areas surrounding water supply areas, Newfoundland and Labrador is considered **Low Risk**.

In Nova Scotia, there are 25 designated Protected Water Areas. These are located in watersheds where municipalities rely on surface water sources for drinking. All Protected Water Areas are considered HCV5. Refer to NS1 for a map of these areas.

Nova Scotia's Source Water Protection Plans are established to regulate activities that may harm water quality within the source water supply area. These plans are developed by a committee of local and interested parties, and undergo public consultation. The planning process includes an assessment of risks, including the impacts of forestry, and best management practices are identified in the Plan.

Low Risk for Canada

Indicator 3.5 – HCV 5

Scale of Assessment: Province & Territory, Country

HCV occurrence and threat assessment

Risk designation and determination

Formal designation of a Protected Water Area (PWA) is one possible management option available to protect or manage potential threats in the source water supply area. The designation applies a regulatory approach supported by the *Environment Act*, and prohibits or restricts activities that may impair water quality within the source water supply area. (NS2)

PWA regulations are specific to the area designated (NS3), and identify measures to mitigate the threats, including restrictions to forestry activities within the PWA, where forestry is assessed as a threat. Since regulatory measures are in place to protect Protected Water Areas, and since Category 1 of the NRA confirms that there is a high level of legal enforcement in Canada, Nova Scotia is considered **Low Risk**.

New Brunswick has identified 30 surface watersheds used for municipal drinking water supplies. Within New Brunswick, the 30 surface watersheds used for municipal drinking water supplies are protected under the *Clean Water Act*. The Watershed Protected Area Designation Order regulates the use of and activities permitted on land and water within 3 zones of protection within the designated watersheds:

- Zone A - designated watercourses
- Zone B - the 75-metre riparian setback
- Zone C - the balance of the watershed area

Within the 75 metre buffer (Zone B), activities are restricted to minimize physical effects that harvest could have on water quality (NB3). In terms of forestry activity, depending on the distance from public water supply intake, selection harvesting (with additional guidelines) may occur between 30-75 metres of the watercourse (if within 1 km of public water supply intake) or between 15-75 metres of the watercourse (if beyond 1 km of public water supply intake). In Zone C, restrictions regarding clearcut size, buffer strips, and soil impacts (from logging yards, scarification practices or road/landing activities) are in place (NB4). The Watershed Protected Area Designation Order requires individuals to apply for a Ministerial Exemption in order to undertake or continue a restricted or prohibited activity.

Considering the provincial oversight, that NRA Category 1 assessment confirms law enforcement occurs, and restrictions on forestry activities that apply to areas surrounding watercourses and water supply intake areas, New Brunswick is considered **Low Risk**.

There are no watersheds or bodies of water in Prince Edward Island that have been formally designated as being of special significance for sources of community water supplies, likely due to the fact that PEI has more than 250 watersheds that provide drinking water for the province (PE5). Therefore, PEI is considered **Low Risk**.

Indicator 3.5 – HCV 5

Scale of Assessment:	Province & Territory, Country	
HCV occurrence and threat assessment		Risk designation and determination
<p>Québec</p> <p>In general, there is no shortage of rainfall in eastern Canada, and as a result, there is very little irrigation in Québec (C7). Since Québec utilizes 1.5% of the total national irrigation water usage (C8), and only 2.5% of the farms in Québec are irrigated (C9), there are no water sources for irrigation that are considered as specified risk.</p> <p>Québec’s Ministry of Environment has identified 316 municipalities whose water supply is from surface water (79 lake supply; 5 lake/river supply; 10 stream; 199 river; 23 underground plus at least one surface supply) (Q8). While they were not all mapped to see if they were in a forested area, these areas were all considered as potential specified risk areas.</p> <p>Provincially, the Québec Government implemented a Water Policy in the fall of 2002. The policy introduces measures and government commitments to implement a watershed-based management to reform water governance and protect water quality and aquatic ecosystems.</p> <p>In the wake of this policy, 40 watershed organizations (<i>Organisme de bassin versant</i> – OBV) were created to develop integrated water management plans with local stakeholders (Q4). These plans address water quality, quantity, access, safety, ecosystem and cultural issues, via objectives and an action plan.</p> <p>On public lands, the Regulation respecting standards of forest management for forests in the domain of the State (<i>Règlement sur les normes d'intervention dans les forêts du domaine de l'État</i> – RNI) has several water protection measures with respect to harvesting, road construction or maintenance in the form of buffer zones or distances from a stream or lake (articles 2, 10 – 14, 17 – 19, 21, 40, 42). From 1999 to 2013, the conformance rate to these protection measures has increased from 78% to 91% (Q1). Since April 1, 2018 the RNI has been replaced by the <i>Règlement sur l'aménagement durable des forêts du domaine de l'État</i> (RADF) (Q9), which is more stringent than the RNI on matters of water and fish habitat protection (30).</p> <p>Regardless of tenure, the <i>Environment Quality Act</i> (Q6) requires the deliverance of a permit for any disturbance of a wetland. The application process involves an analysis of the project in light of environmental quality.</p> <p>Québec’s <i>Act Respecting Land Use Planning and Development</i> requires that each regional county municipality (RCM) have an RCM plan, which must “identify zones where land occupation is subject to special restrictions for reasons of public safety such as flood zones, erosion zones, landslide zones or zones subject to other disasters or for reasons of environmental protection regarding riverbanks and lakeshores, littoral zones and floodplains.” This act also allows municipalities to “regulate or prohibit all or certain land uses [...] taking into account the topography of the landsite, the proximity of a stream or lake, the danger of flood, rockfall, landslide or other disaster [...] for reasons of public safety or of environmental protection regarding riverbanks and lakeshores, littoral zones or floodplains [...]” (Q2). Both instances apply to private woodlots.</p>		

Indicator 3.5 – HCV 5

Scale of Assessment: Province & Territory, Country

HCV occurrence and threat assessment

Risk designation and determination

The *Environment Quality Act* includes a *Protection Policy for Lakeshores, Riverbanks, Littoral Zones and Floodplains*, which sets standards, among others, for a 10m riparian buffer (15m if the slope is above 30%; 3m for agricultural land). If an RCM's land use plan does not meet these standards, le MELCC may require its modification to correct the situation (Q3).

The *Environment Quality Act* (Q6), and the *Act Respecting Land Use Planning and Development* have recently been strengthened with the introduction of the new *Act Respecting the Conservation of Wetlands and Bodies of Water* in 2017 (Q7) which modernizes measures regarding protection of water courses and water bodies.

Considering the extent of provincial oversight, that Category 1 of the NRA confirms that there is a high level of legal enforcement in Canada, and the restrictions on forestry activities that apply to areas surrounding watercourses and water supply intake areas, Québec is considered **Low Risk**.

Ontario

There is very little agriculture in northern Ontario, as the soil and climate are not conducive to crop production. In southern Ontario, only 2.3% of water use is for irrigation (C7 & C8). This indicates that there are no water sources for irrigation that are considered as specified risk.

While much of the province's commercial forest management activities occur far from communities, it is likely that a small proportion occurs sufficiently proximal to communities so as to have the potential to affect the quality of their water supply. The protection measures regarding water quality identified in HCV4 are applicable to this aspect of HCV5 too. Considering the extent of provincial oversight, that Category 1 of the NRA confirms that there is a high level of legal enforcement in Canada, as well as restrictions on forestry activities that apply to areas surrounding watercourses and water supply intake areas, Ontario is considered **Low Risk**.

Manitoba

There is little agriculture in the tenured licence areas in northwestern Manitoba. In addition, only 2.9% of water use in the agricultural region of Manitoba is used for irrigation (C7 & C8). These factors indicate that there are no water sources for irrigation that are considered as specified risk.

While much of the province's commercial forest management activities occur far from communities, it is likely that a small proportion occurs sufficiently proximal to communities so as to have the potential to affect the quality of their water supply. The protection measures regarding water quality identified in HCV4 are applicable to this aspect of HCV5 as well. Considering the

Indicator 3.5 – HCV 5

Scale of Assessment: Province & Territory, Country

HCV occurrence and threat assessment

Risk designation and determination

extent of provincial oversight, as well as restrictions on forestry activities that apply to areas surrounding watercourses and water supply intake areas, Manitoba is considered **Low Risk**.

Saskatchewan

While Saskatchewan utilizes 5.4% of the total national irrigation water usage (C8), less than 1% of the farms in Saskatchewan are irrigated (C9). Irrigation is most important in the drier parts of the province, which are far to the south of the productive forested areas within the province. These factors indicate that there are no water sources for irrigation that originate from productive forest areas that could be considered as specified risk.

While much of the province’s commercial forest management activities occur far from communities, it is likely that a small proportion occurs sufficiently proximal to communities so as to have the potential to affect the quality of their water supply.

In Saskatchewan, the *Environmental Management and Protection (General) Regulations (S2)* identifies requirements for development activities when operating near watercourses. An *Aquatic Habitat Protection Permit* is required on private and public land prior to conducting any work in or near water (within a minimum of 5 meters from the top of water bank), which aims to prevent habitat alteration, soil erosion and sedimentation, impacts to aquatic species, discharge of chemicals, and the protection of aquatic and riparian vegetation (S3).

Industrial forestry operations, which are also bound by the *Forest Act* (including lengthy provisions for forest management and operational planning), are issued Aquatic Habitat Protection Permits through the Forest Service branch of the Ministry of Environment on an annual basis as a part of their Operating Plan Approval for the Forest Management Agreement (FMA) area. Aquatic Habitat Protection Permits outline the 41 specific conditions that must be addressed for any operations near watercourses, and include provisions around machinery use, spills, watercrossing installation, maintenance and reclamation.

Each Forest Management Agreement holder identifies their own specific set of operations standards and guidelines in their FMP, per the Forest Management Planning Standard (S4). These standards and guidelines identify general operating practices for riparian management, including watercourse buffers, stream crossings, as well as surface drainage and other erosion control methods (e.g. see (S8) for Mistik FMA Standards and Guidelines).

While the specific operational methods on how to achieve provincial objectives are up to the forest manager to demonstrate (S5), the Province is undergoing the process of creating one central forest management Standard and Guidelines for all FMA-holders in Saskatchewan. The Forest Operations Standard is expected to be completed in early 2019, with immediate implementation to be required by FMA-holders as a condition for renewal of operating plans and licenses. The Forest Operations Standard is targeted

Indicator 3.5 – HCV 5

Scale of Assessment: Province & Territory, Country

HCV occurrence and threat assessment

Risk designation and determination

for inclusion in the Saskatchewan Environmental Code in 2020.

The Ministry of Environment (i.e. relevant ecologists, wildlife biologists, operations & compliance staff) review each FMA's annual operation plan in detail (S6) including all planned activities near watercourses, to verify that operations meet the requirements of *The Environmental Management and Protection Act, 2010* and *The Forest Resources Management Act*. Annual compliance reports, including outcomes related to the protection of watercourses and water quality are made publicly available (S7).

Given the provincial regulatory processes in place to mitigate impacts of forest operations on water quality and watercourses, as well as the level of oversight on the implementation of guidelines, Saskatchewan is assessed as **Low Risk**.

Alberta

Agriculture is a major sector in Alberta, and being a generally dry province, there is a great deal of irrigation. Statistics Canada reports that 28% of farms irrigate their land, and Alberta accounts for 68% of all irrigated land in Canada (C13). Alberta farmers also consume 73% of all water used in Canada for irrigation. Equally, water supplies are important for communities some community water supplies are protected by the presence of forests in the watersheds.

Commercial forestry is widespread in Alberta and there are risks that it may negatively affect the quantity and quality of water supplies if sufficient precautions are not taken.

In response to these concerns, Alberta developed a Water for Life Strategy in 2003 (A4) that provided a catalyst for the development of watershed management plans, a process which includes the preparation of a state of the watershed report. Depending on the location of the watershed, key uses and impacts may include agricultural (including irrigation and provision of water for cattle), forestry (potential impacts through access construction and harvesting), the oil and gas sector (access roads, water for numerous purposes, pipelines), other industrial users such as miners. The relative impacts of forestry can be fairly low or high, depending on the circumstances in each watershed.

A small number of Watershed Management Plans have been completed. The completed plans are non-binding however and they do need to be considered in planning decisions. (A5-A7). As such, there is a great deal of variation between plans, and watersheds, the existence of a watershed plan does not itself ensure a certain level of water quality is achieved.

In terms of impacts from forestry operations, the *Alberta Public Lands Operational Handbook* (A8) applies to all industrial and commercial ventures on public lands. Section 8 of the Handbook focuses on water management, and states that "timber harvest operations in the forested areas shall incorporate measures to protect the watershed in accordance with the Alberta Timber

Indicator 3.5 – HCV 5

Scale of Assessment: Province & Territory, Country

HCV occurrence and threat assessment

Risk designation and determination

Harvest Planning and Operating Ground Rules or Forest Management Agreement Timber Planning and Operating Ground Rules, and any additional terms/conditions prescribed”. The *Alberta Timber Harvest Planning and Operating Ground Rules Framework* (A3) includes specific provisions (section 6) for watershed protection that aim to manage the implications of timber operations on water, quality and flow regime, as mandated by the *Water Act* (A9), *Water Regulations* (A10) and *Code of Practice for Watercourse Crossing* (A11).

These legal regulations and guidelines, combined with compliance inspections by the Ministry of Environment & Parks (*Water Act*) and Ministry of Agriculture & Forestry (*Forest Act*) (A12) offer some assurance that measures related to watercourse protection are enforced. Accordingly, Alberta is considered **Low Risk**.

British Columbia

There is extensive use of water for irrigation in some parts of British Columbia (lower Fraser, Okanagan, and Central Cariboo-Chilcotin region).

Many BC streams and rivers provide drinking water to communities and individuals. There are nearly 500 provincially designated Community Watersheds that provide water to communities. In addition there are thousands of Water Licences which allow individuals the right to use water for domestic purposes. Many streams, rivers and lakes are also occupied by fish that depend on water quality and quantity.

This indicates that there are some water sources for irrigation and communities that would be considered as potentially at risk in British Columbia.

Commercial forestry has the potential to cause a reduction in the quality and quantity of water available for irrigation and use by communities. However, the legislation and the operational forest practices that serve to protect water quality, generally (BC4), and water that has domestic use, also serve to protect the quality and quantity of water available for irrigation.

In addition there are extra measures to protection of water quality as it relates to drinking water and human health. These are provided in Section 59 of the Forest Planning and Practices Regulation (BC1) as follows:
“An authorized person who carries out a primary forest activity must ensure that the primary forest activity does not cause material that is harmful to human health to be deposited in, or transported to, water that is diverted for human consumption by a licensed waterworks.”

Many community watersheds have specific measures in place to protect water quality from impacts (BC5). Individual water users

Indicator 3.5 – HCV 5

Scale of Assessment: Province & Territory, Country

HCV occurrence and threat assessment

Risk designation and determination

actively protect the quality of their drinking water through various stakeholder consultation processes, and forest companies operating on crown lands exercise diligence, both to meet legal requirements but also to avoid confrontations with domestic water users. Water users also have opportunity to file complaints about practices that might threaten their water quality or quantity with an independent watchdog organization, the Forest Practices Board. Thus all forest companies carry out active operational measures to prevent threats to water quality during harvesting and road construction in both community watersheds and for individual domestic water users.

Considering the extent of provincial oversight, that Category 1 of the NRA confirms that there is a high level of legal enforcement in Canada, and the restrictions on forestry activities that apply to areas surrounding watercourses and water supply intake areas, British Columbia is assessed as **Low Risk**.

Yukon and Northwest Territories

There is no agriculture that requires irrigation in these territories. Hence, there are no water sources for irrigation that are considered as specified risk.

In the Yukon, most people's drinking water, including the drinking water supply for Whitehorse, is obtained from groundwater (Y1). Forest activities do not meaningfully affect groundwater.

Of the 34 municipal water systems in NWT, 27 rely on water from rivers and lakes, 4 from groundwater and 3 have water trucked in from other locations (NW2). There are water quality strategies that have been developed however these do not take into account the amount of disturbance in a watershed (NW3). Map 8 in NW4 shows percentage of each watershed that is protected. The Southern Great Slave Lake watershed (#34 on Map 7 in NW4) is between 25 and 50% protected, which exceeds the Aichi target. This watershed overlaps with the portion of the mid-Continental Canadian forest ecoregion in NWT. Other watersheds located within the Muskwa - Slave Lake forest ecoregion have a lower level of protection, with most being less than 5% protected. However, the riparian buffer zones required in forest management are assessed as sufficient to safeguard water quality from any forestry activities that might occur. As a result, NWT is considered to be **Low Risk**.

2) Areas of Subsistence Harvesting for Indigenous People

Scale: Canada

HCV Occurrence and Threat Assessment

Indicator 3.5 – HCV 5

Scale of Assessment: Province & Territory, Country

HCV occurrence and threat assessment

Risk designation and determination

Indigenous Peoples have a unique relationship with the land that continues to this day. Harvesting natural resources for subsistence and/or to maintain cultural traditions is a common practice by Indigenous Peoples throughout forested parts of Canada. Forest-based harvesting activities can include hunting, fishing, trapping and gathering plants. These activities are still very much a part of the Indigenous way of life, especially in those few forested areas where access to natural resources has not been diminished by overuse and industrial exploitation (C19). These traditional activities are in many cases the basis for Aboriginal rights and/or treaty rights, which are protected by the *Constitution Act, 1982*. In the case of treaty rights, the extent of the right depends on the terms of the treaty (C18).

Areas that are used by Indigenous Peoples for subsistence harvesting are ubiquitous and extend throughout the country. At a large (e.g. regional and beyond) scale, there is no public database identifying sites of special significance for subsistence harvesting to Indigenous Peoples.

However, as discussed in Indicator 2.3 (rights of Indigenous Peoples), legally enforceable mechanisms exist to mitigate the impact of the infringement of Indigenous rights, including rights to hunt, fish, trap, etc. Mechanisms include the Crown’s duty to consult with Indigenous people where decisions or actions may adversely impact asserted or established Aboriginal or treaty rights.

Opportunities exist for Indigenous communities during the forest management planning process to identify areas important for hunting, fishing and gathering. In Canada, forest management planning and associated regulations on public lands are highly controlled and enforced. For management plans to be approved, Indigenous Peoples must be consulted according to government policy on consultation and accommodation. Each province has its own guideline on consultation, which can differ greatly from province to province (C33), and each province incorporates their own approach to Indigenous involvement in the forest management planning process. For example, Ontario’s forest management planning manual (O4) identifies the requirements for First Nation and Métis involvement in forest management planning.

In British Columbia, the Forest Planning And Practices Regulation (section 20-22) outlines requirements for consultation of forest management plans, as well as requirements for efforts to consult with First Nations (BC1). During the forest management planning process and determination of the annual allowable cut (AAC), the chief forester must consult with First Nations on the impacts of the AAC on rights to hunt and trap wildlife (BC6). The *Forest and Range Practices Act* (section 77) also details the process by which modifications to the forest plan shall be made if potential infringement of an Aboriginal right or title is identified (BC2).

It is worth acknowledging that there do exist challenges for Indigenous Peoples in participating in the forest management planning process. These challenges include community capacity that has been negatively impacted by colonization, lack of resources, and

Indicator 3.5 – HCV 5	
Scale of Assessment:	Province & Territory, Country
HCV occurrence and threat assessment	Risk designation and determination
<p>governments being slow to implement truly meaningful consultation processes. While consultation processes are far from perfect, systems do exist to identify sites of importance to Indigenous Peoples and mitigate forest management impacts.</p> <p>Because legally enforceable mechanisms are in place to identify and mitigate impacts to areas used for subsistence harvesting by Indigenous People as a result of forest management activities, Threshold 25 was considered to be met: <i>HCV 5 is identified and/or its occurrence is likely in the area under assessment, but it is effectively protected from threats caused by management activities.</i> Therefore, this Indicator is considered Low Risk for HCVs related to subsistence harvesting.</p>	

Indicator 3.6 – HCV 6	
Scale of Assessment:	Country
HCV occurrence and threat assessment	Risk designation and determination
<p>1) Nationally Recognized Historical and Natural Heritage Sites</p> <p><u>HCV Occurrence</u></p> <p>Sites and landscapes of global and national significance have been identified over many years and are incorporated into national or provincial parks or other forms of protective reserves (C10).</p> <p>There are also sites of critical importance to Indigenous Peoples across the country. At times, these are public and known. In other instances, they may be either undisclosed or contested.</p> <p><u>Threat Assessment</u></p> <p>All Provinces & Territories</p> <p>In Canada, globally and nationally significant sites are well known and most are included within existing protected areas, or are protected under various mechanisms (C10).</p> <p>Parks Canada plays a leading role in federal government activities related to recognizing places representative of Canada's natural heritage and places of national historic importance (C10).</p>	<p>Low Risk for Canada</p>

Indicator 3.6 – HCV 6

Scale of Assessment:	Country		
HCV occurrence and threat assessment		Risk designation and determination	
<p>The legislation mandating Parks Canada activities includes the <i>National Parks Act</i>, the <i>Historic Sites and Monuments Act</i> and the <i>Department of Transport Act</i>. The Canadian Heritage Rivers program is operated under Cabinet authority and federal - provincial agreement between parks ministers respectively.</p> <p>In some cases, activities are focused on formal designations by the Government of Canada and, where mandated, providing support for the preservation and interpretation of designated heritage properties that are managed by others. These include most Canadian heritage rivers.</p> <p>Parks Canada contributes to an international heritage agenda through its leadership role in, participation in, or support for, international conventions, programs, agencies and agreements. These include, among others:</p> <ul style="list-style-type: none"> • UNESCO's World Heritage Convention; • the Ramsar Convention on Wetlands of International Significance; • the Convention on Biological Diversity; • the Venice Charter for the Conservation and Restoration of Monuments and Sites; • the International Charter for Archaeological Heritage Management; • the World Charter for Nature; • UNESCO's Biosphere Reserves Program; • the International Council for Monuments and Sites (ICOMOS); • the International Centre for the Study of the Preservation and Restoration of Cultural Properties (ICCROM); and • the International Union for the Conservation of Nature (IUCN). <p>Sites and landscapes of global and national significance have been identified over many years and are incorporated into national or provincial parks or other forms of protective reserves. Therefore, Canada has in place a nation-wide mechanism to ensure the protection of sites of national cultural significance related to the country's history since the enactment of the <i>Constitution Act, 1867</i> (then called the <i>British North America Act, 1867</i>). Since protection measures are in place to prevent these globally or nationally significant sites being damaged by forestry operations Threshold 29 is considered to be met for historical and natural heritage sites in Canada: <i>HCV 6 is identified and/or its occurrence is likely in the area under assessment, but it is effectively protected from threats caused by management activities</i>. Therefore, this Indicator is considered to be Low Risk for historical and natural heritage sites.</p>			

Indicator 3.6 – HCV 6

Scale of Assessment: | Country

HCV occurrence and threat assessment

Risk designation and determination

2) Sites of Critical Cultural Importance to Indigenous Peoples

HCV Occurrence and Threat Assessment

Indigenous Peoples use of the landscape across the country is evident in many different forms that are now recognized as heritage resources, cultural sites or archaeological sites. These sites remain important to Indigenous Peoples. In addition, Indigenous Peoples retain a deep cultural connection to the lands and territories that they occupied and used for many, many generations over thousands of years. This cultural connection extends beyond specific sites and many continue to use these landscapes in traditional ways.

Sites of critical cultural importance to Indigenous Peoples are widespread, often unknown and/or not shared by Indigenous Peoples. It is not possible to systematically determine which of these sites are of particular significance at a 'regional or national' scale, because from an Indigenous perspective, there may not be a hierarchy to importance – for example, all sacred sites may be of equal concern and value. It is not within the ability of this risk assessment to identify and assess the specific threats to local sites of critical importance across Canada. However, it is possible to assess the mechanisms in place for Indigenous Peoples to make known these sites to governments and/or forest managers so that measures can be taken to mitigate the impact of forest management activities to these sites.

As described in HCV5, there exists the opportunity for Indigenous communities during the forest management planning process to identify areas of cultural significance. In Canada, forest management planning and associated regulations on public lands are highly controlled and enforced. For management plans to be approved, Aboriginal groups and communities must be consulted according to government policy on consultation and accommodation. Each province has its own guideline on consultation, which can differ greatly from province to province (C33) and each province incorporates their approach to Indigenous involvement in the forest management planning process. For example, Ontario's forest management planning manual (O4) identifies the requirements for First Nation and Métis involvement in forest management planning.

It is worth acknowledging that there do exist challenges for Indigenous Peoples in participating in the forest management planning process. These challenges include community capacity that has been negatively impacted by colonization, lack of resources, and governments being slow to implement truly meaningful consultation processes. When it comes to cultural sites specifically, there are instances where Indigenous Peoples may not feel comfortable sharing information with governments and forest companies because of a lack of trust, which can create further challenges in ensuring the protection of these values. While consultation and accommodation processes are far from perfect, and are at times the subject of disputes between governments and Indigenous Peoples (refer to discussion under Indicator 2.3), the fact that governments are constitutionally obligated to consult and

Indicator 3.6 – HCV 6

Scale of Assessment:	Country	
HCV occurrence and threat assessment		Risk designation and determination
<p>accommodate means that these processes represent legally enforceable mechanisms for Indigenous Peoples to mitigate forest management impacts to cultural sites.</p> <p>There are instances of Indigenous Peoples in Canada seeking greater control over their cultural heritage. Laws concerning repatriation and trade of material culture, heritage site protection, treatment of ancestral remains, and control over intangible heritage is governed by a complex legal and policy environment (C14).</p> <p>First Nations in British Columbia continue to assert that government decisions regarding a massive dam which will flood the Peace Valley will lead to the destruction of the Treaty 8 First Nations burial and sacred sites (C15). In 2017, the Supreme Court of Canada ruled against the Ktunaxa First Nation’s efforts to prevent the development of a ski resort in an area of spiritual importance where the Ktunaxa believe the Grizzly Bear Spirit resides. The court concluded Canada’s Charter of Rights “protects the freedom to worship, but does not protect the spiritual focal point of worship.” (C16). Although the courts did not rule in favour of the First Nations in these cases, neither of these cases are related to impacts to Indigenous cultural sites as a result of forest management activities.</p> <p>Because legally enforceable mechanisms exist to identify and mitigate impacts to sites of critical cultural importance to Indigenous Peoples resulting from forest management activities, Threshold 29 is considered to be met: <i>HCV 6 is identified and/or its occurrence is likely in the area under assessment, but it is effectively protected from threats caused by management activities.</i> Therefore, this Indicator is considered to be Low Risk for sites of critical cultural importance to Indigenous Peoples.</p>		

Control Measures

Indicator	Mandatory Control Measures
3.0	N/A
3.1 HCV 1	<p>For each species whose <i>critical habitat</i>* has been identified within a Specified Risk ecoregion (<i>Table 1</i>), <u>one or more</u> of the following control measures shall be demonstrated, as applicable.</p> <p>Terms marked with an (*) are referenced in the Notes located at the end of the Control Measures.</p> <p>For all species:</p> <ol style="list-style-type: none"> 1. Evidence demonstrates that: <ul style="list-style-type: none"> • harvesting does not take place in <i>critical habitats</i>* for Specified Risk species identified; OR • harvesting activities are consistent with the federally-approved Action Plan or Range Plan; OR • harvesting is permitted through SARA (section 73 permit). <p><i>Guidance: Experts* are consulted who confirm that there is no critical habitat for species at risk within the sourcing area.</i></p> 2. Evidence demonstrates that the <i>critical habitat</i>* in the sourcing area is deemed protected by the federal government under the SARA. <p><i>Guidance: This can be demonstrated using Section 63 reports or a conservation agreement as per Species at Risk Act (SARA) Section 11. The conservation agreement must stipulate that it is intended to provide effective protection of portions of critical habitat under section 61(4)(a) SARA and constitute effective protection of the critical habitat from forest management activities.</i></p> 3. An Indigenous-led or co-developed land use plan is in place within the supply area and addresses threats to <i>critical habitat</i>* of identified Species at Risk. <p><i>Guidance: A land use plan in the context of this control measure is considered 'Indigenous-led' or 'co-developed' if the following criteria are in place. Either:</i></p> <ul style="list-style-type: none"> • <i>one or more Indigenous communities have entered into a government-to-government agreement with a province regarding the creation and implementation of a land use plan ("Agreement"), OR</i> • <i>the affected Indigenous community has consented to the process and plan outcome, as evidenced by a public declaration and resolution of the Indigenous governing body ("Consent").</i> <p><i>If there is an Agreement, it must:</i></p> <ul style="list-style-type: none"> • <i>address forest management activities, AND</i> • <i>establish a mutually agreed mechanism to monitor the implementation of the land use plan, AND</i> • <i>identify measures, strategies or management objectives to be included in the land use plan that address critical habitat* of identified</i>

species at risk.

If there is Consent but not an Agreement, the land use plan must:

- *address forest management activities, **AND***
- *identify measures, strategies or management objectives to be included in the land use plan that address critical habitat of identified species at risk.*

For all species on private Small & Low Intensity Managed Forests (SLIMFs):

4. Evidence demonstrates that owners and/or managers of privately-owned forests are informed about:
 - the *critical habitats** of species within their managed forests; **AND**
 - the threats to the *critical habitat**; **AND**
 - best management practices to reduce threats to *critical habitat**; **AND**
 - applicable legislation.

***Guidance:** Refer to FSC-STD-01-003 for the definition of a SLIMF, and addendum document FSC-STD-01-003a for specific size thresholds for Canada.*

For all species, except woodland caribou:

5. Evidence demonstrates that actions are implemented within the sourcing area to mitigate the threats caused by forest activities to *critical habitat** identified in the Federal Recovery Strategy.

***Guidance:** Threats caused by forest activities are detailed in each species' Federal Recovery Strategy, section 7, under "Activities likely to result in the destruction of critical habitat".*

6. Regionally appropriate Best Management Practices (BMPs) are implemented in Specified Risk sourcing areas for identified species (per Table 1).

Regionally appropriate BMPs:

- a) Are developed with the participation of forest managers, interested and affected stakeholders, Indigenous Peoples, species at risk *experts**, provincial/federal representatives and Certificate Holders involved in the sourcing area; **AND**

Verifier 1: Meaningful invitation of interested and affected stakeholders, Indigenous People.

Verifier 2: Broad representation of interest groups (social, indigenous and environmental) involved in discussions.

Verifier 3: Evidence of agreement on BMPs.

- b) Describe how the identified risk will be mitigated; **AND**

Verifier 1: Description of risk mitigation includes details of the process for monitoring the implementation of BMPs.

c) Identify the sourcing areas to which the BMPs apply; **AND**

Verifier 1: Forest managers of the applicable sourcing areas actively participate in discussion/meetings.

- d) Are summarized in a publicly available report, which includes:
- i. identification of applicable sourcing area; **AND**
 - ii. summary of meetings held, including participants attending; **AND**
 - iii. description of the BMPs; **AND**
 - iv. description of the process to evaluate implementation; **AND**
 - v. a complaint mechanism procedure.

For woodland caribou:

7. Evidence demonstrates that the forests in the sourcing area have a management plan for woodland caribou *critical habitat**, and that the plan is implemented as described in Indicator 6.4.5 of the *FSC Canada National Forest Management Standard*.

Guidance:

- For boreal caribou: Indicator 6.4.5a, 6.4.5b or 6.4.5c are applicable
- For southern mountain caribou: Indicator 6.4.5c is applicable

8. Evidence demonstrates that forests in the sourcing area have a *management plan*¹ that contributes to the recovery of woodland caribou *critical habitat**, as identified in the Federal Recovery Strategy.

The management plan identifies and implements:

- a) Best Management Practices (BMPs) that reduce disturbance to and restore *critical habitat** including, but not limited to:
- access management (e.g. road decommissioning, integrated access plans, restoration of linear features); **OR**
 - aggregate harvesting (i.e. harvest scheduling to minimize disturbance footprint).
- OR**
- b) Harvest deferrals, set asides, and/or *protection areas*² within areas of *critical habitat**, where forest operations are not permitted.

Rationale is provided as to how such actions will contribute to reducing the level of disturbance over time in *critical habitat**, in support of meeting the threshold³ requirements in the Federal Recovery Strategy.

Guidance:

¹ The term 'management plan' should be understood in its broadest sense to allow Organizations to take voluntary actions and provide evidence to auditors without necessarily having such content embedded in a legally approved Forest Management Plan for a forest

management unit. In this context, management plans are defined as “The collection of documents, reports, records and maps that describe, justify, and regulate the activities carried out by any manager, staff or organization within or in relation to the sourcing area, including statements of objectives and policies.”

² Refer to the FSC glossary (FSC-STD-01-002) for a definition of ‘protection areas’.

³ The requirements related to disturbance management thresholds should only apply where such threshold has been identified in the Federal Recovery Strategy (e.g., a disturbance management threshold of 65% of the area as undisturbed habitat is identified in the woodland caribou boreal population recovery strategy (Environment Canada, 2012)).

9. The Organization implements a strategy to reduce sourcing over the next 5 years from areas of woodland caribou *critical habitat** where management plans do not meet the Federal Recovery Strategy.

Guidance: Management plans that ‘meet the Federal Recovery Strategy’ would apply in areas where Control Measure #3, 7 or 10 are met.

AND

The Organization acts within their sphere of influence to publicly advocate to the relevant decision makers at the government level and other relevant forest industry partners about the need to finalize and implement legal requirements that meet the Federal Recovery Strategy.

For woodland caribou boreal population:

10. Evidence demonstrates that *critical habitat** in the sourcing area is part of an ‘experimental adaptive range’ (as defined in the *Federal Recovery Strategy for Woodland Caribou Action Plan*¹, section 2 "Three Pillars of the Action Plan"), that is:

- recognized by provincial and federal governments; **AND**
- directly addresses the impacts of forest management activities on *critical habitat**; **AND**
- consistent with the Federal Recovery Strategy.

¹ Environment and Climate Change Canada. 2018. Action Plan for the Woodland Caribou (*Rangifer tarandus caribou*), Boreal Population, in Canada – Federal Actions. Species at Risk Act Action Plan Series. Environment and Climate Change Canada, Ottawa. vii + 28 pp.
http://sararegistry.gc.ca/default.asp?lang=En&n=2FEAAC82-1#_doc

NOTE 1: *Critical habitat** is defined by SARA (section 2(1)) as: the habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species’ critical habitat in the recovery strategy or in an action plan for the species. For some species, additional direction defining critical habitat exists within the specific recovery plan.

NOTE 2: *Experts** are defined as those who meet requirements provided in FSC-STD-40-005 V3-1 Annex C part 1.3.

3.2 HCV 2

For all Specified Risk IFLs (per *Table 5*) one or more of the following control measures shall be demonstrated, as applicable.

1. Forest operations do not occur within IFLs.
2. Forest operations do not reduce an IFL below 50,000 ha, **AND** all meet applicable options below:
 - a) For an IFL between 50,000 and 62,500 ha, cumulative impacts forest operations do not affect more than 10% of the IFL.
 - b) For an IFL between 62,501 and 75,000 ha, cumulative impacts forest operations do not affect more than 20% of the IFL.
 - c) For an IFL between 75,001 and 200,000 ha, cumulative impacts forest operations do not affect more than 30% of the IFL.
 - d) For an IFL between 200,001 and 500,000 ha, cumulative impacts forest operations do not affect more than 35% of the IFL.
 - e) For an IFL larger than 500,001 ha, cumulative impacts forest operations do not affect more than 45% of the IFL.
3. An Indigenous-led or co-developed land use plan is in place within the supply area and addresses threats to landscape-level ecosystems and mosaics.

Guidance: A land use plan in the context of this control measure is considered 'Indigenous-led' or 'co-developed' if the following criteria are in place. Either :

- one or more Indigenous communities have entered into a government-to-government agreement with a province regarding the creation and implementation of a land use plan ("Agreement"), **OR**
- the affected Indigenous community has consented to the process and plan outcome, as evidenced by a public declaration and resolution of the Indigenous governing body ("Consent").

If there is an Agreement, it must:

- address forest management activities, **AND**
establish a mutually agreed mechanism to monitor the implementation of the land use plan, **AND**
identify measures, strategies or management objectives to be included in the land use plan that address threats to landscape-level ecosystems and mosaics.

If there is Consent but not an Agreement, the land use plan must:

- address forest management activities, **AND**
- identify measures, strategies or management objectives to be included in the land use plan that address threats to landscape-level ecosystems and mosaics.

4. The forest manager has approached national/regional stakeholders representing environmental and social interests, as well as and local/regional Indigenous People to develop an approach for HCV2 protection at the supply unit level.

AND

The approach has *significant support** from participating stakeholders and Indigenous People.

AND

There is no *substantial objection** from national/regional stakeholders or Indigenous People.

Guidance:

**Significant support*: support needs to be demonstrated by an affirmative and positive response from the stakeholders (per INT-STD-40-005-22 *Interpretations of the Normative Framework, Controlled Wood*).

For support to be considered 'significant', it should reflect affirmation from a representation of participating interest groups (e.g. Indigenous People, environmental and social interests) involved in the development of the approach.

**Substantial objection*: an objection that specifies a 'threat' caused by forest management activities to the HCV(s). Verifiable evidence or reference to such shall be provided in the objection (per INT-STD-40-005-26 *Interpretations of the Normative Framework, Controlled Wood*). The probability and severity of the impact(s) of management activities should be considered in terms of the 'substantiveness' of the objection.

5. Evidence demonstrates that a minimum of 80% of the IFL is *not threatened*¹ by forest management operations in the *long-term*².

AND

The cumulative impacts of forest harvesting will not reduce the IFL to below 50,000 ha.

Guidance:

¹*Not threatened* by forest management operations could include areas that:

- lie outside of the timber harvesting land base;
- are considered protected according to IUCN Protected Area Categories 1-6;
- are permanently set aside from harvesting as per approved government land use plans.

² *Long-term* does not include temporary deferrals. Refer to the FSC National Forest Stewardship Standard of Canada (FSC-STD-CAN-01-2018 V1-0) definition for long-term:

Long-term: For *Indicators** that refer to long-term or longer-term as a basis for defining when modelled quantitative *objectives** or targets of *Indicators** should be achieved, the term means the longest modelling horizon of the existing forest *management plan**.....

6. Regionally appropriate Best Management Practices (BMPs) are implemented in Specified Risk sourcing areas.

Regionally appropriate BMPs:

- a) Are developed with the participation of forest managers, interested and affected stakeholders, Indigenous Peoples, landscape conservation/ ecosystem-based management experts*, provincial/federal representatives and Certificate Holders involved in the sourcing area; **AND**

Verifier 1: Meaningful invitation of interested and affected stakeholders, Indigenous People.

Verifier 2: Broad representation of interest groups (social, Indigenous and environmental) involved in discussions.

Verifier 3: Evidence of agreement on BMPs.

	<p>b) Describe how the identified risk will be mitigated; AND</p> <p>Verifier 1: Description of risk mitigation includes details of the process for monitoring the implementation of BMPs.</p> <p>Guidance: Risk mitigation measures may consider broader aspects of HCV2. Refer to FSC HCV Common Guidance document.</p> <p>c) Identify the sourcing areas to which the BMPs apply; AND</p> <p>Verifier 1: Forest managers of the applicable sourcing areas actively participate in discussion/meetings.</p> <p>d) Are summarized in a publicly available report, which includes:</p> <ol style="list-style-type: none"> i. identification of applicable sourcing area; ii. summary of meetings held, including participants attending; iii. description of the BMPs; iv. description of the process to evaluate implementation; v. a complaint mechanism procedure. <p>Guidance: This control measure is not considered to be achieved until Steps a)-d) have been completed and the agreed-upon BMPs have been implemented by applicable parties.</p> <p>For non-primary producers (applicable for sources of material not originating directly from the forest of origin):</p> <p>7. The Organization implements a strategy to continually and progressively reduce sourcing over the next 5 years from IFLs. AND The Organization acts within their sphere of influence to publicly advocate for the management and enhancement of HCV2 values to relevant decision makers at the government level and other relevant forest industry partners.</p>
3.3 HCV 3	N/A
3.4 HCV 4	<p>For the Yukon & Northwest Territories, <u>one or more</u> of the following control measures shall be demonstrated.</p> <p>Protection for Erosion: Landslides</p> <ol style="list-style-type: none"> 1. Evidence demonstrates that terrain assessment studies have been conducted where landslide susceptibility risk (C4) is at or above scale 5. 2. Areas where landslide susceptibility risk (C4) is at or above scale 5 are avoided. 3. Where landslide susceptibility risk (C4) is at or above scale 5, only partial harvesting occurs and no road or skid trail construction.
3.5 HCV 5	N/A
3.6 HCV 6	N/A

References & Information Sources

Experts Contacted

	Name	Organization	Area of expertise (category/sub-category)
1	Drinking Water & Wastewater Section, Dam Safety Program	Newfoundland & Labrador Department of Environment and Conservation, Water Resources Management Division	Watershed management (HCV5)
2	Protected Areas Planner, Protected Areas and Ecosystems Branch	Nova Scotia Department of Environment	General, HCV1
3	Regional Biologist	Nova Scotia Department of Natural Resources	HCV1
4	Will Martin	Rising Forest Management Consulting Medway Community Forest Cooperative Co-Founder, WoodsCamp	HCV1, HCV6 (Nova Scotia)
5	Manager, Species at Risk and Protected Natural Areas	New Brunswick Department of Energy and Resource Development	HCV1
6	Canada NRA-WG	FSC Canada	Working Group includes members from all four chambers – environmental, social, economic and Aboriginal – and includes expertise in HCV5 & HCV6.
7	Confidential	Biologist, Agence régionale de mise en valeur des forêts privées du Bas-Saint-Laurent	HCV1
8	Confidential	Biologist, Canadian Wildlife Service	HCV1 (Québec)
9	Confidential	Operations Coordinator, Ministère des Forêts, de la Faune et des Parcs	Québec forest legislation related to HCV6
10	Justina Ray	Wildlife Conservation Society Canada	Caribou (HCV1) (Ontario)
11	Richard Post	Environment and Climate Change Canada	Ecosystem Classification (HCV1, HCV3) (Ontario & Manitoba)
12	Julee Boan	Ontario Nature	Species at Risk (HCV1), Intact Forest Landscapes (HCV2)
13	Meagan Curtis	FSC Canada	Community Effects (HCV4)
14	Shawn Wasel	Forest Products Association of Canada	Intact Forest Landscapes (HCV2) (Ontario)

15	Ryan Cheng	Global Forest Watch Canada	Intact Forest Landscapes (HCV2)
16	Mike Brienesse	Ontario Ministry of Natural Resources and Forestry	Intact Forest Landscapes (HCV2)
17	Chris Friesen	Manitoba Conservation Data Center	HCV 1 (Species at Risk)
18	Phil Keenan	Manitoba Conservation and Water Stewardship	HCV 1 (Species at Risk)
19	Ryan Cheng	Global Forest Watch Canada	Intact Forest Landscapes (HCV2) (Manitoba)
20	Jane Epp	Manitoba Conservation and Water Stewardship	HCV 6
21	Forest Practices Coordinator	Saskatchewan Ministry of Environment, Forest Service Branch	Water-related laws & regulations (HCV4 & HCV5) (Saskatchewan)
22	Jeffrey Shatford	BC Ministry of Forests, Lands and Natural Resource Operations	Rare and endangered species HCV 1
23	Sean Muise	BC Ministry of Forests, Lands and Natural Resource Operations	Administrative units and Natural Resource Districts
24	David Wilford	BC Ministry of Forests, Lands and Natural Resource Operations	Landslides and water quality, HCV 4 and 5
25	Andy Wains	BC Ministry of Forests, Lands and Natural Resource Operations	Hardwood plantations
26	Greg Utzig	Independent consultant	HCV assessment and classification in BC
27	Phil O'Conner	Managed Forest Council	Private land in BC
28	Craig Wickland	BC Ministry of Forests, Lands and Natural Resource Operations	Use of exotic species in BC
29	Endemic Species Specialist	Yukon Conservation Data Centre	Species at Risk and Endemic Species (HCV1)
30	Sylvain Jutras	Assistant Professor, Department of Wood Science and Forestry, Université Laval.	Forest hydrology (HCV4 & HCV5) (Québec)
31	Kevin Gillis	R.P.F., Certification Coordinator, Mistik Management Ltd.	Water-related laws & regulations (HCV4 & HCV5) (Saskatchewan)

National Level Data Sources Common to All Provinces and Territories

No.	Source of Information	Relevant HCV Category
C1	<p>Government of Canada. Species at Risk Public Registry. https://www.registrelep-sararegistry.gc.ca/sar/index/default_e.cfm</p> <p>Critical Habitat: Locations of Critical Habitat were identified by information provided in the Federal Recovery Strategy for each relevant species, or by searching for spatial data provided by the Open Government Portal : https://open.canada.ca/data/en/dataset</p> <ul style="list-style-type: none"> • Search for Critical Habitat by species; OR • Several species' Critical Habitat across Canada can be found using the following dataset: https://open.canada.ca/data/en/dataset/47caa405-be2b-4e9e-8f53-c478ade2ca74 ; OR • Critical Habitat for species in British Columbia is available here: https://open.canada.ca/data/en/dataset/6a6f314b-5272-4e7a-ac4e-8d372990f22f <p>In some cases, the exact location of critical habitat is not publicly available due sensitivity of some species to illegal harvesting or collection. More detailed information on the location of critical habitat to support conservation of the species and its habitat may be requested by contacting Environment Canada as identified in the Federal Recovery Strategy.</p>	HCV1
C2	<p>IFL Mapping Team. Intact Forest Landscapes: Global IFL Map. Files from 'IFL for year 2016' http://www.intactforests.org/data.ifl.html</p>	HCV2
C3	<p>WWF. Terrestrial Ecoregions of the World. https://www.worldwildlife.org/publications/terrestrial-ecoregions-of-the-world</p> <p>Original Citation: Olson, D. M., Dinerstein, E., Wikramanayake, E. D., Burgess, N. D., Powell, G. V. N., Underwood, E. C., D'Amico, J. A., Itoua, I., Strand, H. E., Morrison, J. C., Loucks, C. J., Allnutt, T. F., Ricketts, T. H., Kura, Y., Lamoreux, J. F., Wettengel, W. W., Hedao, P., Kassem, K. R. 2001. Terrestrial ecoregions of the world: a new map of life on Earth. Bioscience 51(11): 933-938.</p> <p>An interactive map of the terrestrial ecoregions in Canada can be found using the DataBasin mapping tool: https://databasin.org/maps/new - datasets=68635d7c77f1475f9b6c1d1dbe0a4c4c</p>	HCV1, HCV2
C4	<p>A map of areas vulnerable to landslides and locations of landslides that have caused fatalities was sourced from http://www.nrcan.gc.ca/earth-sciences/geography/atlas-canada/selected-thematic-maps/16876</p> <p>Landslide susceptibility map of Canada : Bobrowsky, P.T. and M.J. Dominiguez. 2012. Landslide susceptibility map of Canada. Geological Survey of Canada, Open File 7228</p>	HCV4

	https://geoscan.nrcan.gc.ca/starweb/geoscan/servlet.starweb?path=geoscan/fulle.web&search1=R=291902&format=FLFULL	
C5	Protected Areas Protection in Canada: For Canada (excluding Québec): CARTS Database: December 31, 2017. Canadian Council on Ecological Areas (CCEA) http://www.ccea.org/carts-download/ Québec: Québec Protected Areas Registry, March 31, 2017 Ministère du Développement durable, de l'Environnement et de la Lutte aux changements climatiques (MDDELCC) See also: http://www.cec.org/sites/default/atlas/map/	HCV1, HCV2
C6	Government of Canada, Fisheries and Oceans Canada. December 2018. Apply for a project near water authorization. http://www.dfo-mpo.gc.ca/pnw-ppe/reviews-revues/authorization-autorisation-eng.html	HCV4
C7	A map of annual precipitation in Canada was sourced from https://www.canada.ca/en/services/environment/weather/index.html	HCV4
C8	Maps of irrigation volumes by province and watershed were sourced from http://www.statcan.gc.ca/pub/16-402-x/2011001/part-partie1-eng.htm	HCV4
C9	Data on number of farms by irrigation source from http://www.statcan.gc.ca/pub/16-402-x/2011001/t024-eng.htm	HCV5
C10	Parks Canada. 2016. Part I – Policy Overview and Guiding Principles - Policy Context. http://www.pc.gc.ca/eng/docs/pc/poli/princip/sec1/part1c.aspx	HCV6
C11	Government of Canada 1985. <i>Fisheries Act</i> . Last amended April 5, 2016. 62 p.	HCV5
C12	Government of Canada 1999. <i>Environmental Protection Act</i> . Last amended June 17, 2016. 262 p.	HCV5
C13	Statistics Canada. 2010. Human activity and the environment – Freshwater supply and demand in Canada. Publication 16-201-X.	HCV5
C14	Bell, C and Napoleon, V. 2009. First Nations Cultural Heritage and Law: Case Studies, Voices, and Perspectives. 2009. UBC Press: Vancouver, BC.	HCV6
C15	Ball, D. Jan 4, 2018. After Site C, NDP 'batting zero' on reconciliation: Order of Canada inductee. Metro Vancouver. http://www.metronews.ca/news/vancouver/2018/01/04/after-site-c-ndp-batting-zero-on-reconciliation-order-of-canada-inductee.html	HCV6
C16	Nicholas, G. Dec 19, 2017. Threats to Bears Ears and other Indigenous sacred sites are a violation of human rights. National Post. http://nationalpost.com/pmn/news-pmn/threats-to-bears-ears-and-other-indigenous-sacred-sites-are-a-violation-of-human-rights	HCV6
C17	<i>Navigation Protection Act</i> . http://laws-lois.justice.gc.ca/eng/acts/N-22/	HCV5
C18	<i>A Guide to Aboriginal Harvesting Rights</i> . 2017. Legal Services Society. https://aboriginal.legalaid.bc.ca/resources/pdfs/pubs/A-Guide-to-Aboriginal-Harvesting-Rights-eng.pdf	HCV5
C19	P. Smith, with edits by H. Bombay and J.P. Gladu. 2000. <i>Aboriginal Participation in Forest Management: Not Just Another Stakeholder</i> .	HCV5

	National Aboriginal Forestry Association Position Paper. http://www.nafaforestry.org/pdf/stakeholder.pdf	
C20	Government of Canada. <i>Species at Risk Public Registry: Protection of Critical Habitat</i> http://sararegistry.gc.ca/sar/recovery/reports_e.cfm	HCV1
C21	biodivcanada.ca. Ecosystem Status & Trends 2010. Technical Thematic Report No. 11 – Woodland caribou, boreal caribou population, trends in Canada. http://www.biodivcanada.ca/default.asp?lang=En&n=484BD0BC-1&offset=3&toc=hide	HCV1
C22	Environment Canada. 2012. Recovery Strategy for the Woodland Caribou (Rangier tarandus caribou), Boreal population, in Canada. <i>Species at Risk Act Recovery Strategy Series</i> . Environment Canada, Ottawa. xi + 138pp. https://www.registrelep-sararegistry.gc.ca/default.asp?lang=En&n=33FF100B-1#_Toc337193654 Québec Ministry of Natural Resources and Wildlife. 2006. <i>Gaspésie Woodland Caribou Recovery Plan (2002-2012) (Rangifer tarandus caribou)</i> . https://www.registrelep-sararegistry.gc.ca/virtual_sara/files/plans/rs%5Fgaspesie%5Fwoodland%5Fcaribou%5Ffinal%5F1007%5Fe%2Epdf Environment Canada. 2014. Recovery Strategy for the Woodland Caribou, Southern Mountain population (Rangier tarandus caribou) in Canada. <i>Species at Risk Act Recovery Strategy Series</i> . Environment Canada, Ottawa. viii + 103pp. http://sararegistry.gc.ca/default.asp?lang=En&n=5837FBB5-1	HCV1
C23	Government of Canada. April 2018. Progress report on unprotected critical habitat for the Woodland Caribou (Rangifer tarandus caribou), Boreal population, in Canada https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/critical-habitat-reports/woodland-caribou-boreal-population-2018.html	HCV1
C24	Wildlands League. October 2017. Progress report on the state of boreal caribou critical habitat protection in Canada. http://wildlandsleague.org/media/Wildlands-Progress-Report-Final-Oct4.pdf	HCV1
C25	EcoJustice. November 2017. Alberta Caribou Backgrounder: Boreal Caribou https://www.ecojustice.ca/wp-content/uploads/2017/11/2017-11-14-Alberta-Caribou-Backgrounder-1.pdf	HCV1
C26	Government of Canada. May 2017. Canada-British Columbia Southern Mountain Caribou (Central Group) Protection Study. https://www.registrelep-sararegistry.gc.ca/default.asp?lang=En&n=5BBA433D-1&offset=1&toc=show	HCV1
C27	Government of Canada. 2018. Imminent threat assessment for southern mountain caribou https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/related-information/southern-mountain-caribou-imminent-threat-assessment.html#toc4	HCV1
C28	Global Forest Watch. Managed Forest Concessions. Accessed August, 2018 http://data.globalforestwatch.org/datasets/8a405466bff2441794628fc5b845fadd_3	HCV2
C29	FSC-ADV-20-007-018 V1-0. Advice Note for the interpretation of the default clause of Motion 65. https://ca.fsc.org/preview.advice-note-on-the-development-of-indicators-for-the-protection-of-ifls-icls.a-1361.pdf	HCV2
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C31	FSC-Certified Forest Management Units in Canada (as of August 2018). https://info.fsc.org/certificate.php	HCV2
C32	Freemark, K., H.Moore, D.M. Forsyth, A.R.E. Sinclair, D.White, T.Barrett and R.L. Pressey. 1999. Identifying minimum sets of conservation sites for representing biodiversity in Canada: A complementarity approach. Technical Report No. xxx, Canadian Wildlife Service, Headquarters, Environment Canada, Ottawa. https://mspace.lib.umanitoba.ca/bitstream/handle/1993/30262/canada_report.pdf?sequence=1&isAllowed=y	HCV1
C33	R. Bains and K. Ishkanian. 2016. <i>The Duty to Consult with Aboriginal Peoples: A Patchwork of Canadian Policies</i> . The Fraser Institute. https://www.fraserinstitute.org/sites/default/files/duty-to-consult-with-aboriginal-peoples-a-patchwork-of-canadian-policies.pdf	HCV5, HCV6
C34	Environment and Climate Change Canada. 2018. Progress Report on Steps Taken to Protect Critical Habitat for the Woodland Caribou (<i>Rangifer tarandus caribou</i>), Boreal Population, in Canada. <i>Species at Risk Act Critical Habitat Report Series</i> . Environment and Climate Change Canada, Ottawa. 29 pp. https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/critical-habitat-statements/progress-protect-critical-habitat-boreal-woodland-caribou.html	HCV1
C35	Nature Conservancy of Canada. Factsheet: Conservation 101 – Alvars. Last accessed March 2019. http://www.natureconservancy.ca/assets/documents/on/Alvars_101_Factsheet_FINAL.pdf	HCV3
C36	Transparency International. Corruption Perceptions Index, Canada. 2018. https://www.transparency.org/country/CAN	HCV4, HCV5

Provincial Information Sources

Newfoundland & Labrador

No.	Source of Information	Relevant HCV Category
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NL2	Newfoundland & Labrador Department of Environment and Conservation, Water Resources Management Division. 2013. Management of Protected Water Supply Areas. http://www.env.gov.nl.ca/env/waterres/quality/drinkingwater/pdf/Designation_Process_Booklet_Mar_2013.pdf	HCV5
NL3	Newfoundland & Labrador Department of Environment and Conservation. 2014. Protected Public Water Supplies Newfoundland and Labrador. http://www.env.gov.nl.ca/env/waterres/quality/drinkingwater/pdf/PPWSAs.pdf	HCV5
NL4	Newfoundland & Labrador Department of Environment and Conservation. 2016. Water Resources Portal. https://maps.gov.nl.ca/water/mapbrowser/Default.aspx	HCV5
NL5	Newfoundland & Labrador Department of Environment and Conservation. 2016. Frequently Asked Questions - Environmental Permits. http://www.env.gov.nl.ca/env/faq/environmental_permits.html	HCV4

Nova Scotia

No.	Source of Information	Relevant HCV Category
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NS2	Nova Scotia Department of Environment. 2015. Protected Water Area Regulations Enforcement – Fact Sheet for Municipal Water Utilities. http://www.novascotia.ca/nse/water/docs/PWA-Enforcement-Fact-Sheet.pdf	HCV5
NS3	Nova Scotia Department of Justice. 2016. List of Regulations by Act: Protected Water Area. http://novascotia.ca/just/regulations/rxaa-l.htm#env	HCV5
NS4	Nova Scotia Department of Environment. 2015. Nova Scotia Watercourse and Alterations Standard. https://www.novascotia.ca/nse/watercourse-alteration/docs/Watercourse-Alterations-Standard.pdf	HCV4
NS5	Nova Scotia Department of Environment. 2015. Guide to Altering Watercourses. https://www.novascotia.ca/nse/watercourse-alteration/docs/NSE-Watercourse-Alteration-Program-May29.pdf	HCV4
NS6	Government of Nova Scotia. 2002. <i>Wildlife Habitat and Watercourses Protection Regulations</i> . http://www.novascotia.ca/Just/Regulations/regs/fowhwp.htm	HCV4

NS7	Government of Nova Scotia. 2016. You Asked About Pesticides information sheet. https://www.novascotia.ca/nse/pests/docs/YouAskedAboutPesticides.pdf	HCV4
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No.	Sources of Information	Relevant HCV Category
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NB2	Government of New Brunswick - Department of Environment. 2012. Watercourse and Wetland Alteration Technical Guidelines. http://www2.gnb.ca/content/dam/gnb/Departments/env/pdf/Water-Eau/WatercourseWetlandAlterationTechnicalGuidelines.pdf	HCV4
NB3	Government of New Brunswick. 2016. Watershed Protection website information: http://www2.gnb.ca/content/gnb/en/departments/elg/environment/content/land_waste/content/reference_manual/watershed_protection.html	HCV5
NB4	Government of New Brunswick – Department of Environment and Local Government. (No date) Understanding the Law: A Guide to New Brunswick’s Watershed Protected Area Designation Order. http://www2.gnb.ca/content/dam/gnb/Departments/env/pdf/Water-Eau/WatershedProtectedAreaDesignationOrder.pdf	HCV5
NB5	Government of New Brunswick. 2004. Guidelines for Roads and Watercourse Crossings http://www2.gnb.ca/content/dam/gnb/Departments/nr-rn/pdf/en/Publications/Roads-WatercourseCrossings.pdf	HCV4

Prince Edward Island

No.	Source of Information	Relevant HCV Category
PE1	Government of Prince Edward Island. 1988. <i>Environmental Protection Act</i> – Watercourse and Wetland Protection Regulations. https://www.princeedwardisland.ca/sites/default/files/legislation/e09-16.pdf	HCV4, HCV5
PE2	Prince Edward Island Watershed Alliance. 2012. Technical Manual for Watershed Management on Prince Edward Island. http://peiwatershedalliance.org/TechManual/Technical_Manual.pdf	HCV4, HCV5
PE3	Prince Edward Island PEI Department of Environment, Labour and Justice. Date unknown. Prince Edward Island Watercourse, Wetland and Buffer Zone Activity Guidelines. http://www.gov.pe.ca/photos/original/elj_webpkg.pdf	HCV4, HCV5
PE4	Government of Prince Edward Island. 1988. <i>Pesticide Control Act</i> Regulations. http://www.gov.pe.ca/law/regulations/pdf/P&04G.pdf	HCV4
PE5	Prince Edward Island Department of Communities, Land and Environment, Forests, Fish and Wildlife Division. 2016. Watershed Management. http://www.gov.pe.ca/forestry/index.php3?number=1054869&lang=E	HCV5

Québec

No.	Source of Information	Relevant HCV Category
Q1	Government of Québec. Soil and Water Conservation. http://forestierenchef.gouv.qc.ca/wp-content/uploads/2015/11/c3.pdf	HCV4, HCV5
Q2	Government of Québec. <i>Act Respecting Land Use Planning and Development</i> . http://legisquebec.gouv.qc.ca/en/ShowDoc/cs/A-19.1	HCV4, HCV5
Q3	Government of Québec. Protection Policy for Lakeshores, Riverbanks, Littoral Zones and Floodplains. <i>Environment Quality Act</i> . http://legisquebec.gouv.qc.ca/en/ShowDoc/cr/Q-2,%20r.%2035 http://www.mamrot.gouv.qc.ca/amenagement-du-territoire/guide-la-prise-de-decision-en-urbanisme/protection-de-lenvironnement/protection-des-rives-du-littoral-et-des-plaines-inondables/	HCV4, HCV5
Q4	Québec Watershed Associations. https://robvq.qc.ca/obv	HCV5
Q5	Conservation Biology Institute Global Landslide Hazard Distribution https://databasin.org/datasets/b5c842f4b248464593a7673f5ad7f10f Source citation: Global Landslide Hazard Distribution and Frequency. 2005. Center for Hazards and Risks Research (CHRR), Columbia University; Center for International Earth Science Information Network (CIESIN), Columbia University; International Research Institute for Climate and Society (IRI), Columbia University. Palisades, NY: CHRR, Columbia University	HCV4
Q6	Government of Québec. The <i>Environment Quality Act</i> . http://legisquebec.gouv.qc.ca/en/ShowDoc/cr/Q-2,%20r.%2035	HCV4
Q7	Government of Québec. <i>Act Respecting the Conservation of Wetlands and Bodies of Water</i> . https://beta.canlii.org/en/qc/laws/astat/sq-2017-c-14/latest/sq-2017-c-14.html	HCV4
Q8	Government of Québec. Directory of municipal drinking water facilities. http://www.mddelcc.gouv.qc.ca/EAU/potable/distribution/index.asp	HCV5
Q9	Government of Québec. Regulation respecting sustainable forest management in the domain of the State Sustainable Forest Management Act (chapter A-18.1, a. 38, 39 et 44). http://legisquebec.gouv.qc.ca/fr/ShowDoc/cr/A-18.1,%20r.%200.01/	HCV4, HCV5

Ontario

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O1	Ontario Ministry of Natural Resources 2010. Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales. Toronto: Queen's Printer for Ontario. 211 pp. https://www.ontario.ca/document/forest-management-conserving-biodiversity-stand-and-site-scales	HCV4

O2	Ontario Ministry of Natural Resources 2010. Forest Management Guide for Great Lakes-St. Lawrence Landscapes. Toronto: Queen's Printer for Ontario. 57 pp. https://www.ontario.ca/document/forest-management-great-lakes-and-st-lawrence-landscapes	HCV4
O3	Ontario Ministry of Natural Resources 2014. Forest Management Guide for Boreal Landscapes. Toronto: Queen's Printer for Ontario. 104 pp. https://www.ontario.ca/document/forest-management-boreal-landscapes	HCV4
O4	Ontario Ministry of Natural Resources and Forestry (OMNRF). March 2017. <i>Forest Management Planning Manual</i> , Toronto. Queen's Printer for Ontario. 462 pp. https://files.ontario.ca/forest-management-planning-manual.pdf	HCV5, HCV6

Manitoba

No.	Source of Information	Relevant HCV category
M1	Manitoba Conservation and Water Stewardship 2008. Forest Management Guidelines for Riparian Management Areas. Winnipeg, MB. 47 pp. https://digitalcollection.gov.mb.ca/awweb/pdfopener?smd=1&did=20867&md=1	HCV4
M2	Manitoba Conservation and Water Stewardship 2010. Forest Practices Guidebook. Protection of Softwood Understorey. Winnipeg, MB. 13 pp. https://digitalcollection.gov.mb.ca/awweb/pdfopener?smd=1&did=17134&md=1	HCV4
M3	Manitoba Conservation and Water Stewardship 2010. Forest Management Guidelines for Terrestrial Buffers. Winnipeg, MB. 14 pp. https://www.gov.mb.ca/sd/forestry/pdf/practices/terrestrial_final_jan2017.pdf	HCV4
M4	Manitoba Sustainable Development. 2016. Reduce Rutted or Puddled Soil by Operating Practices. Forestry and Peatlands Management Branch, Winnipeg, MB. 14 p. https://www.gov.mb.ca/sd/forestry/pdf/practices/2016_nov_reduce_rutted.pdf	HCV4
M5	Government of Manitoba. <i>The Water Protection Act</i> C.C.S.M. c. W65. enacted 2005. https://web2.gov.mb.ca/laws/statutes/ccsm/w065e.php?ccsm=w65	HCV4, HCV5

Saskatchewan

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S2	Environmental Management and Protection (General) Regulations, 2010. Chapter E-10.22 Reg 1 (effective June 1, 2015) as amended by Saskatchewan Regulations 29/2017.	HCV4, HCV5

	http://www.publications.gov.sk.ca/freelaw/documents/English/Regulations/Regulations/E10-22R1.pdf	
S3	Saskatchewan Water Security Agency. Aquatic Habitat Protection. https://www.wsask.ca/Water-Programs/Aquatic-Habitat-Protection/	HCV4, HCV5
S4	Forest Management Planning Standard, Saskatchewan Environmental Code. http://publications.gov.sk.ca/documents/66/86843-Forest%20Management%20Planning%20Standard.pdf	HCV4, HCV5
S5	Government of Saskatchewan. About the Environmental Code https://www.saskatchewan.ca/business/environmental-protection-and-sustainability/environmental-code	HCV4, HCV5
S6	Forest Operating Plan Standard. Saskatchewan Environmental Code. http://publications.gov.sk.ca/documents/66/86844-Forest%20Operating%20Plan%20Standard.pdf	HCV4, HCV5
S7	Mistik Management Ltd. 2016 Annual Report. https://www.mistik.ca/wp-content/uploads/2018/11/2016-Mistik-Annual-Report-Sept-11.pdf	HCV4, HCV5
S8	Mistik Management Ltd. Forest Management Agreement Area Standards and Guidelines. April 2010. http://nwfma.ca/documents/2011-04_Mistik_FMA_Standards_and_Guidelines.pdf	HCV4, HCV5

Alberta

No.	Source of Information	Relevant HCV Category
A1	Factors affecting distribution of landslide along rivers in southern Alberta. Thomson, S. and N.R. Morgenstern. Can. Geotech. J. 14. 508. 1977.	HCV4
A2	Alberta Pacific Forest Industries Inc. Forest Management Agreement Area. https://alpac.ca/forest-sustainability/forest-management-agreement-area	HCV4
A3	<i>Alberta Timber Harvest Planning and Operating Ground Rules Framework for Renewal</i> . Alberta Environment and Sustainable Resource Development, Forestry Division, Forest Management Branch. June 2012. https://www1.agric.gov.ab.ca/\$department/deptdocs.nsf/all/formain15749/\$FILE/TimberHarvestPlanning-OperatingGroundRulesFramework-Dec2016.pdf	HCV4, HCV5
A4	Government of Alberta. Environment and Parks. Watershed Management Planning. http://aep.alberta.ca/water/programs-and-services/water-for-life/partnerships/watershed-planning-and-advisory-councils/watershed-management-planning.aspx	HCV4, HCV5
A5	Guide to Watershed Management Planning in Alberta. Government of Alberta. January 2015 https://open.alberta.ca/publications/9781460118535	HCV4, HCV5

A6	State of the Watershed Reports can be found at: http://esrd.alberta.ca/water/programs-and-services/water-for-life/partnerships/watershed-planning-and-advisory-councils/watershed-evaluation-and-reporting.aspx	HCV4, HCV5
A7	Bow Basin Watershed Management Plan. 2012, Bow River Basin Council. https://brbc.ab.ca/our-activities/bow-basin-watershed-management-plan	HCV4, HCV5
A8	<i>Public Lands Operational Handbook</i> . December 2004. Alberta Sustainable Resource Development, Public Lands and Forests Division. https://open.alberta.ca/dataset/32f0dfb7-3491-4c96-a417-2f12337824cd/resource/ec2c779f-d385-4472-b3fb-230d039add8e/download/2004-publiclandsoverationalhandbook-2004.pdf	HCV4, HCV5
A9	Province of Alberta. <i>Water Act</i> (Chapter W-3). 2017. http://www.gp.alberta.ca/documents/Acts/w03.pdf	HCV4, HCV5
A10	Province of Alberta. <i>Water (Ministerial) Regulation</i> . AB Regulation 205/1998. https://albertawater.com/docs-work/toolkit/legislation/27-water-ministerial-regulation/file	HCV4, HCV5
A11	Government of Alberta. Alberta Sustainable Resource Development. <i>Code of Practice for Watercourse Crossings</i> . 2013 http://www.gp.alberta.ca/documents/codes/CROSSING.PDF	HCV4, HCV5
A12	Government of Alberta. Environment and Parks. <i>Compliance & Enforcement – Forest Management</i> . http://aep.alberta.ca/about-us/compliance-assurance-program/compliance-enforcement/default.aspx http://www.agric.gov.ab.ca/app21/forestrypage?cat1=Forest%20Management&cat2=Compliance%20%26%20Enforcement	HCV5

British Columbia

No.	Source of Information	Relevant HCV Category
BC1	Forest Planning and Practices Regulation. http://www.bclaws.ca/Recon/document/ID/freeside/14_2004	HCV4, HCV5
BC2	<i>Forest and Range Practices Act</i> http://www.bclaws.ca/Recon/document/ID/freeside/00_02069_01	HCV4, HCV5

BC3	<p><u>Terrain Stability References:</u></p> <p>Province of British Columbia, 2012. Review of Landslide Management in British Columbia. http://www.env.gov.bc.ca/wsd/public_safety/flood/pdfs_word/Review_of_Landslide_Management_in_BC-2013.pdf</p> <p>Association of Professional Engineers and Geoscientists, and Association of BC Forest Professionals, 2008. Guidelines for Management of Terrain Stability in the Forest Sector. https://www.apeg.bc.ca/getmedia/b3f36705-fd6f-46ac-b45c-2fd5d363b9f/APEGBC-Guidelines-for-Management-of-Terrain-Stability-in-the-Forest-Sector.pdf.aspx</p> <p>Association of Professional Engineers and Geoscientists of British Columbia. 2010. Guidelines for Professional Services in the Forest Sector - Terrain Stability Assessments. https://www.apeg.bc.ca/getmedia/684901d7-779e-41dc-8225-05b024beae4f/APEGBC-Guidelines-for-Terrain-Stability-Assessments.pdf.aspx</p> <p>Government of BC, 1999. Mapping and Assessing Terrain Stability Guidebook. https://www.for.gov.bc.ca/TASB/LEGSREGS/FPC/FPCGUIDE/terrain/zipped/terrain.pdf.</p> <p>Chatwin, S.C., D.E. Howes, J.W. Schwab, and D.N. Swanston, 1994. A Guide for Management of Landslide-Prone Terrain in the Pacific Northwest. Ministry of Forests, Land Management Handbook 18. https://www.for.gov.bc.ca/hfd/pubs/docs/lmh/Lmh18.pdf</p> <p>Horel, G and S. Higman, 2006. Terrain Management Code of Practice. Streamline Watershed Management Bulletin Vol. 9/No. http://www.forrex.org/sites/default/files/publications/articles/streamline_vol9_no2_art2.pdf</p>	HCV4
BC4	<p><u>Water Quality and Quantity References:</u></p> <p>Pike, R. et al. 2010 Compendium of Forest Hydrology and Geomorphology in British Columbia, Volumes 1 and 2. Ministry of Forests and Range. Land Management Handbook #66. https://www.for.gov.bc.ca/hfd/pubs/docs/lmh/Lmh66/LMH66_volume1of2.pdf</p> <p>Wilford, DJ 1987. Watershed Workbook, Forest Hydrology Sensitivity Analysis for Coastal British Columbia Watersheds, Interim Edition. BC Ministry of Forests.</p> <p>Anonymous 1995. Interior Watershed Assessment Procedure Guidebook (Level 1 Analysis), BC Ministry of Forests and BC Environment, September 1995, 82 pp. https://www.for.gov.bc.ca/tasb/legsregs/fpc/fpcguide/wap/wapqdbk-web.pdf</p>	HCV4, HCV5
BC5	<p>Ministry of Forests, 2004. <i>Community Forests Guidebook</i> https://www.for.gov.bc.ca/tasb/legsregs/fpc/fpcguide/watshed/watertoc.htm</p>	HCV4, HCV5

BC6	Government of British Columbia. <i>Timber Support Review & Annual Allowable Cut : Wildlife Analysis</i> . Accessed August 2018. https://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/timber-supply-review-and-allowable-annual-cut/wildlife-analysis?keyword=first&keyword=nations&keyword=consultation	HCV5
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Yukon

No.	Source of Information	Relevant HCV Category
Y1	Whitehorse Water and Waste Services. http://www.whitehorse.ca/departments/water-and-waste-services/water-system	HCV5
Y2	Yukon Forestry Handbook. 2015 Yukon Government, Energy, Mines, and Resources, Forest Management branch. Second Printing 2017. http://www.emr.gov.yk.ca/forestry/pdf/yukon-forestry-handbook-2017.pdf	HCV4

Northwest Territories

No.	Source of information	Relevant HCV category
NW1	Commercial Timber Harvest Planning and Operations Standard Operating Procedures Manual. NWT Environment and Natural Resources. First edition. November 2005. https://www.enr.gov.nt.ca/sites/enr/files/reports/commercial_timber_procedures_manual.pdf	HCV4
NW2	<i>Forest Management Act</i> and Regulations. https://www.justice.gov.nt.ca/en/legislation/#gn-filebrowse-0:f/forest-management/ Associated Regulations can be accessed using the same link.	HCV4, HCV5
NW3	Managing Drinking Water Quality in the NWT – A preventative framework and strategy. May 2005. https://www.cleartech.ca/ckfinder/userfiles/files/WaterFramework.pdf	HCV5
NW4	Environment and Natural Resources, 2016. NWT State of the Conservation Network Report 2016. Department of Natural Resources, Government of the Northwest Territories, Yellowknife, NT. 36pp. https://www.enr.gov.nt.ca/sites/enr/files/resources/state_of_conservation_network_report_web.pdf	HCV5

Appendix I: Map of Canada's Terrestrial Ecoregions



- WWF Biomes and Terrestrial Ecoregions**
- 4. Temperate Broadleaf and Mixed Forest**
 - 5. Eastern forest-boreal transition
 - 6. Eastern Great Lakes lowland forests
 - 7. Gulf of St. Lawrence lowland forests
 - 8. New England-Acadian forests
 - 9. Northeastern coastal forests
 - 10. Upper Midwest forest-savanna transition
 - 11. Western Great Lakes forests
 - 12. Willamette Valley forests
 - 5. Temperate Coniferous Forests**
 - 13. Alberta Mountain forests
 - 14. Alberta-British Columbia foothills forests
 - 15. Blue Mountains forests
 - 16. British Columbia mainland coastal forests
 - 17. Cascade Mountains leeward forests
 - 18. Central and Southern Cascades forests
 - 19. Central British Columbia Mountain forests
 - 20. Central Pacific coastal forests
 - 21. Eastern Cascades forests
 - 22. Fraser Plateau and Basin complex
 - 23. Klamath-Siskiyou forests
 - 24. Northern Central Rockies forests
 - 25. Central British Columbia Mountain forests
 - 26. Central Pacific coastal forests
 - 27. Eastern Cascades forests
 - 28. Fraser Plateau and Basin complex
 - 29. Klamath-Siskiyou forests
 - 30. Northern Central Rockies forests
 - 31. Queen Charlotte Islands
 - 32. Southern Hudson Bay taiga
 - 33. Northern Central Rockies forests
 - 34. Central British Columbia Mountain forests
 - 35. Central Pacific coastal forests
 - 36. Eastern Cascades forests
 - 37. Fraser Plateau and Basin complex
 - 38. Klamath-Siskiyou forests
 - 39. Queen Charlotte Islands
 - 40. Northern Central Rockies forests
 - 41. Southern Hudson Bay taiga
 - 6. Boreal Forests / Taiga**
 - 42. Central Canadian Shield forests
 - 43. Copper Plateau taiga
 - 44. Eastern Canadian forests
 - 45. Eastern Canadian Shield taiga
 - 46. Interior Alaska-Yukon lowland taiga
 - 47. Mid-Central Canadian forests
 - 48. Midwestern Canadian Shield forests
 - 49. Northwest Territories taiga
 - 50. South Avalon-Burn oceanic barrens
 - 51. Southern Hudson Bay taiga
 - 52. Northern Canadian Shield taiga
 - 53. Yukon Interior dry forests
 - 54. Northern Cordillera forests
 - 55. Northwest Territories taiga
 - 56. South Avalon-Burn oceanic barrens
 - 57. Southern Hudson Bay taiga
 - 58. Yukon Interior dry forests
 - 8. Temperate Grasslands, Savannas, Shrublands**
 - 59. Canadian Aspen forests and parklands
 - 60. Montana Valley and Foothill grasslands
 - 61. Northern mixed grasslands
 - 62. Palouse grasslands
 - 63. Northern short grasslands
 - 64. Northern tall grasslands
 - 65. Palouse grasslands
 - 66. Torngat Mountain tundra
 - 67. Yukon-Alaska alpine tundra
 - 68. Northern short grasslands
 - 69. Northern tall grasslands
 - 70. Palouse grasslands
 - 71. Interior Yukon-Alaska alpine tundra
 - 72. Alaska-St. Elias Range tundra
 - 73. Arctic coastal tundra
 - 74. Baffin coastal tundra
 - 75. Brooks-British Range tundra
 - 76. Davis Highlands tundra
 - 77. High Arctic tundra
 - 78. Interior Yukon-Alaska alpine tundra
 - 79. Kalaallit Nunaat low arctic tundra
 - 80. Low Arctic tundra
 - 81. Middle Arctic tundra
 - 82. Ogilvie-MacKenzie alpine tundra
 - 83. Pacific Coastal Mountain icefields and tundra
 - 84. Torngat Mountain tundra
 - 11. Tundra**
 - 85. Kalaallit Nunaat low arctic tundra
 - 86. Low Arctic tundra
 - 87. Middle Arctic tundra
 - 88. Ogilvie-MacKenzie alpine tundra
 - 89. Pacific Coastal Mountain icefields and tundra
 - 90. Torngat Mountain tundra
 - 13. Deserts and Xeric Shrublands**
 - 91. Snake-Columbia shrub steppe
 - 92. Rock and Ice
 - 93. Snake-Columbia shrub steppe
 - 94. Rock and Ice

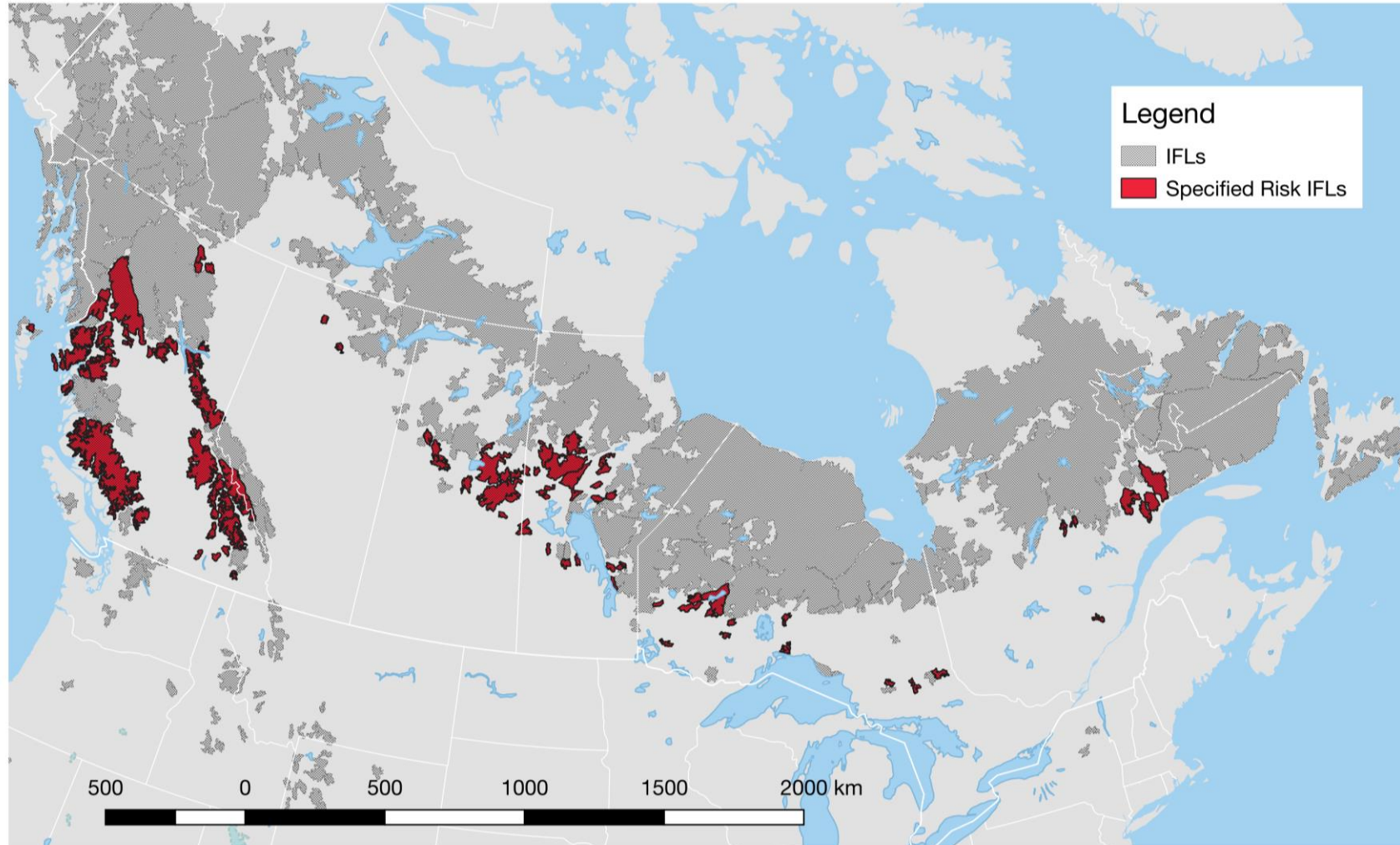


Appendix II: Forested Ecoregions in Canada - Scientific Codes

Ecoregion	Scientific Code
Eastern forest-boreal transition	NA0406
Eastern Great Lake Lowland forests	NA0407
Gulf of St. Lawrence lowland forests	NA0408
New England-Acadian forests	NA0410
Southern Great Lakes forests	NA0414
Western Great Lakes forests	NA0416
Alberta Mountain forests	NA0501
Alberta-British Columbia foothills forest	NA0502
British Columbia mainland coastal forests	NA0506
Cascade Mountains leeward forests	NA0507
Central British Columbia Mountain forests	NA0509
Fraser Plateau and Basin complex	NA0514
North Central Rockies forests	NA0518
Central Pacific Coastal forests	NA0520
Northern transitional alpine forests	NA0521
Okanagan dry forests	NA0522
Puget lowland forests	NA0524
Queen Charlotte Islands	NA0525
Central Canadian Shield forests	NA0602
Eastern Canadian forests	NA0605
Eastern Canadian Shield taiga	NA0606
Interior Alaska-Yukon lowland taiga	NA0607
Mid-Continental Canadian forests	NA0608
Midwestern Canadian Shield forests	NA0609
Muskwa-Slave Lake forests	NA0610
Newfoundland Highland forests	NA0611
Northern Canadian Shield taiga	NA0612
Northern Cordillera forests	NA0613
Northwest Territories taiga	NA0614
South Avalon-Burin oceanic barrens	NA0615
Southern Hudson Bay taiga	NA0616
Yukon Interior dry forests	NA0617
Canadian Aspen forests and parklands	NA0802

Appendix III: Map of Specified Risk IFLs

National Risk Assessment for Canada: HCV2



Controlled Wood Category 4: Wood from forests being converted to plantations or non-forest use

Overview

This assessment is specific to the conversion of natural forests to plantations or non-forest uses that has occurred over the past 5 years. Forests converted to plantations or non-forest uses beyond 5 years ago are not considered in the scope of this assessment.

The first part of this assessment focuses on the conversion of natural forests to plantations, while the second part focuses on the conversion of natural forests to non-forest uses (deforestation). The most recent data provided by the National Deforestation Monitoring System (NDMS) (13) was used as the basis of the assessment of conversion of natural forests to non-forest uses.

Risk Assessment

Indicator	Source of information	Scale of Assessment	Risk designation and determination
4.1	<ol style="list-style-type: none"> 1. Discussions with Forest Management Certification Bodies in Canada, January 4-5, 2018 2. FSC Public Certificate Search on Jan 5, 2018: https://info.fsc.org/certificate.php#result 3. Canadian Forest Service - Sault Ste. Marie Technical Note No. 112. Frequently Asked Questions (FAQs) On the Use of Herbicides in Canadian Forestry. D.G. Thompson, D.G. Pitt, http://www.cfs.nrcan.gc.ca/pubwarehouse/pdfs/32344.pdf 4. Boothroyd-Roberts, K., Gagnon, D. and B. Truax. Hybrid poplar plantations are suitable habitat for reintroduced forest herbs with conservation status. <i>Springer</i>. 2013. 2(507). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3797915/ 5. Poplar and Willow Council of Canada. 2018. Poplar and willow statistics. http://www.poplar.ca/article/poplar-and-willow-statistics-130.asp 6. Arseneau, C. and M. Chiu. 2003. Canada – A Land of Plantations? <i>UNFF Intersessional Experts Meeting on the Role of Planted Forests in Sustainable Forest Management</i>. March 2003. 	<p>1) Conversion to plantations is assessed at the national level.</p> <p>2) Conversion to non-forest is assessed at the NDMS Reconciliation Unit level.</p>	<p>1) Conversion of Natural Forests to Plantations</p> <p>The FSC definition of a plantation is “A forest area established by planting or sowing with (sic) using either alien* or native species*, often with one or few species, regular spacing and even ages, and which lacks most of the principal characteristics and key elements of natural forests.” (FSC-STD-01-001 V5-2).</p> <p>On crown forest land in Canada, forest management plans establish strategies for regenerating forests to achieve the principal characteristics and key elements of native ecosystems of that site, using both natural and artificial regeneration (3). Depending on the site characteristics, herbicides are used to assist the regeneration of particular conifer species. This type of regeneration is not by itself considered as conversion to plantations (FSC-STD-01-002). In some provinces such as Québec and Saskatchewan, it is illegal to use chemical herbicides on public forestlands (3). Thus, use of herbicides (or lack thereof) on crown forests in Canada does not align with the approach of growing timber as an agricultural crop.</p> <p>The few plantations in Canada that meet FSC’s plantation criteria are hybrid poplar plantations, most of which were established through afforestation of agricultural lands, rather than through deforestation within the past 5 years (1,4). A review of FSC-certified forest management certificates across Canada further validates the existence of a select few hybrid poplar plantations established through afforestation (2).</p> <p>As of 2011, 27,559 ha of hybrid poplar plantation have been reported to Agriculture & Agri-Food Canada, representing 0.0079% of Canada’s forested land (5). While research and experimental trials continue to be a popular area for exploration related to increased sustainable yields (6), the overwhelming majority of Canada’s forests are still managed with minimal</p>

	<p>http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.175.931&rep=rep1&type=pdf</p> <p>7. Park, A. and E.R. Wilson. Beautiful Plantations: can intensive silviculture help Canada to fulfill ecological and timber production objectives? <i>The Forestry Chronicle</i>, Nov/Dec 2007 83(6). http://pubs.cif-ifc.org/doi/pdf/10.5558/tfc83825-6</p> <p>8. Dyk, A., Leckie, D. et al. 2015. Canada's National Deforestation Monitoring System: System description. Victoria, BC: Natural Resources Canada – Canadian Forest Service. http://cfs.nrcan.gc.ca/publications?id=36042</p> <p>9. Canada's 2015 Greenhouse Gas Inventory Status Report http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/8812.php</p> <p>10. United Nations Framework Convention on Climate Change. 2002. Conference of the Parties–Report of the Conference of the Parties on its seventh session, 29 October to 10 November 2001. United Nations Office, Geneva, Switzerland. http://unfccc.int/resource/docs/cop7/13.pdf</p> <p>11. Environment Canada. 2006. National Inventory Report, 1990–2004: Greenhouse gas sources and sinks in Canada. Government of Canada Submission to the UN Framework Convention on Climate Change.</p>		<p>silvicultural intervention, using extensive and basic forest management, relying on natural regeneration and little intervention between stand initiation and final harvest (7).</p> <p>Based on this assessment, Canada is considered Low Risk for conversion from natural forest to plantations. Threshold #1 is considered met.</p> <p>2) Conversion of Natural Forests to Non-Forest Use</p> <p>More relevant in the Canadian context is the evaluation of conversion of natural forests to non-forest use, or 'deforestation'.</p> <p>Canada has developed the National Deforestation Monitoring System (NDMS) in order to provide data for Canada's national greenhouse gas inventory and the annual GHG emissions reports that are submitted to the UN Framework Convention on Climate Change (UNFCCC) (8, 9).</p> <p>Forest is defined for the purposes of national monitoring in Canada as "A minimum area of land of 1 ha with tree crown cover of more than 25%, and with trees having the potential to reach a minimum height of 5 m at maturity in situ. Young natural stands and all plantations that have yet to reach a crown density of 25% or tree height of 5 m are included, as are areas that normally form part of the forest area which are temporarily unstocked as a result of human intervention such as harvesting or natural causes but that are expected to revert to forest" (10,11).</p> <p>Deforestation is defined by the NDMS as "The direct human-induced conversion of forested land to non-forested land use" (8). This encompasses permanent conversion of natural forest to non-forest as a result of any anthropogenic-caused change in land use.</p> <p>The NDMS also identifies the specific drivers of deforestation. The specific sectors responsible of deforestation vary across the country, and the NDMS provides information on annual deforestation by Reporting Zone</p>
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http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/3734.php

12. Forest Practices Board, Access Management and Resource Roads: 2015 Update.

<https://www.bcfpb.ca/wp-content/uploads/2017/05/SR49-Access-Management.pdf>

13. Discussions and data provided Natural Resources Canada, Canadian Forest Service in 2016, 2018 and most recently, September 2019.

(RZ), Reconciliation Unit (RU) and by sector (13). Reconciliation Units (RU) are defined by NDMS as the intersection of the provincial boundaries and Reporting Zones (RZs). RZs are similar to ecozones with some east-west divisions (13).

The following table provides the most recent available information about the average annual deforestation and the percentage of deforestation within each Reconciliation Unit between 2012-2016 (13). The “RU Land Area” column refers to the total area of the RU excluding oceans and Great Lakes. An average annual rate of deforestation for the five year period of 2012-2016 was used determine the rate of deforestation.

The data presented Table 1 is the best currently available data within Canada.

Table 1: Deforestation rates by Reconciliation Unit across Canada for 2012-2016.

<i>RU</i>	<i>P/T</i>	<i>Reporting Zone</i>	<i>RU Land Area (ha)*</i>	<i>Deforestation (ha/yr)*</i>	<i>Deforestation (% of land)</i>
1	NL	Boreal Shield East	10,474,000	1,475	0.014%
3	NL	Taiga Shield East	20,507,300	488	0.002%
4	NL	Boreal Shield East	4,496,400	349	0.008%
5	NS	Atlantic Maritime	5,324,700	596	0.011%
6	PE	Atlantic Maritime	565,400	91	0.016%
7	NB	Atlantic Maritime	7,138,900	962	0.013%
11	QC	Atlantic Maritime	6,707,700	600	0.009%
12	QC	Mixedwood Plains	2,770,700	1,290	0.047%
13	QC	Hudson Plains	3,517,200	2	0.000%
14	QC	Taiga Shield East	45,161,300	0	0.000%
15	QC	Boreal Shield East	60,049,100	4,784	0.008%
16	ON	Boreal Shield West	33,515,100	695	0.002%
17	ON	Mixedwood Plains	8,243,900	1,403	0.017%
19	ON	Boreal Shield East	24,109,700	935	0.004%
21	MB	Taiga Shield West	11,340,000	7	0.000%
22	MB	Boreal Shield West	22,052,400	692	0.003%
23	MB	Boreal Plains	8,572,200	999	0.012%
24	MB	Subhumid Prairies	6,407,900	808	0.013%
25	MB	Hudson Plains	6,801,700	165	0.002%
27	SK	Boreal Shield West	15,100,600	0	0.000%

28	SK	Boreal Plains	16,446,400	1,176	0.007%
29	SK	Subhumid Prairies	8,070,600	399	0.005%
30	SK	Semiarid Prairies	15,436,100	16	0.000%
31	AB	Taiga Plains	6,516,900	183	0.003%
34	AB	Boreal Plains	36,753,900	14,692	0.040%
35	AB	Subhumid Prairies	7,120,300	404	0.006%
36	AB	Montane Cordillera	4,330,900	126	0.003%
38	BC	Taiga Plains	6,631,400	785	0.012%
39	BC	Boreal Plains	3,902,500	1,983	0.051%
40	BC	Boreal Cordillera	18,791,800	186	0.001%
41	BC	Pacific Maritime	20,071,600	1,271	0.006%
42	BC	Montane Cordillera	42,895,500	2,465	0.006%
46	YT	Boreal Cordillera	26,591,600	33	0.000%
51	NT	Taiga Shield West	27,704,300	11	0.000%

* Source of data provided by Natural Resources Canada.

On account of the risk thresholds identified for Indicator 4.1 (0.02% or 5,000 ha), three Reconciliation Units exceed one or both of these thresholds: RU 12, 34 and 39. The causes of deforestation of these Reconciliation Units are as follows:

Table 2: Deforestation drivers by sector for RUs exceeding the Specified Risk thresholds (2012-2016), provided by Natural Resources Canada

<i>RU</i>	<i>Sector Responsible for Deforestation</i>				
	<i>Agriculture</i>	<i>Built-Up</i>	<i>Hydroelectric</i>	<i>Mining, Oil & Gas</i>	<i>Forestry</i>
12 QC Mixedwood Plains	34.2%	55.9%	0.4%	9.5%	0.0%
34 AB Boreal Plains	31.3%	8.0%	0.5%	59.3%	0.8%
39 BC Boreal Plains	51.8%	7.4%	0.3%	40.6%	0.0%

In all cases, forestry activities (which includes road building and log landings) have little to no overall impact on the amount of conversion of forests to non-forest. Agriculture, urbanization (built-up), mining, oil and gas development are responsible for conversion.

		<p>There is also little to no evidence that suggests deforestation is a result of illegal activities. Most of the deforestation occurs on public land, which requires permits and government approval prior to resource development and the construction of infrastructure projects.</p> <p>Overall, the majority of the Reconciliation Units have annual rates of deforestation below 0.02% or 5000 ha. These Reconciliation Units meet low risk threshold #1 and are therefore considered Low Risk for this indicator.</p> <p>Despite the lack of forestry's role in deforestation, and the legality of land use change leading to conversion, three Reconciliation Units exceeded the 0.02% or 5,000 ha deforestation threshold:</p> <ul style="list-style-type: none"> • RU 12: Quebec Mixedwood Plains • RU 34: Alberta Boreal Plains • RU 39: British Columbia Boreal Plains <p>Therefore, Specified Risk threshold #4 is met for these Reconciliation Units: <i>There is more than 5000 ha net average annual loss or there is more than 0.02% net average annual loss of natural forest in the assessment area in the past 5 years.</i></p> <p>See <i>Figure 1</i> for a map of Low and Specified Risk Reconciliation Units.</p>
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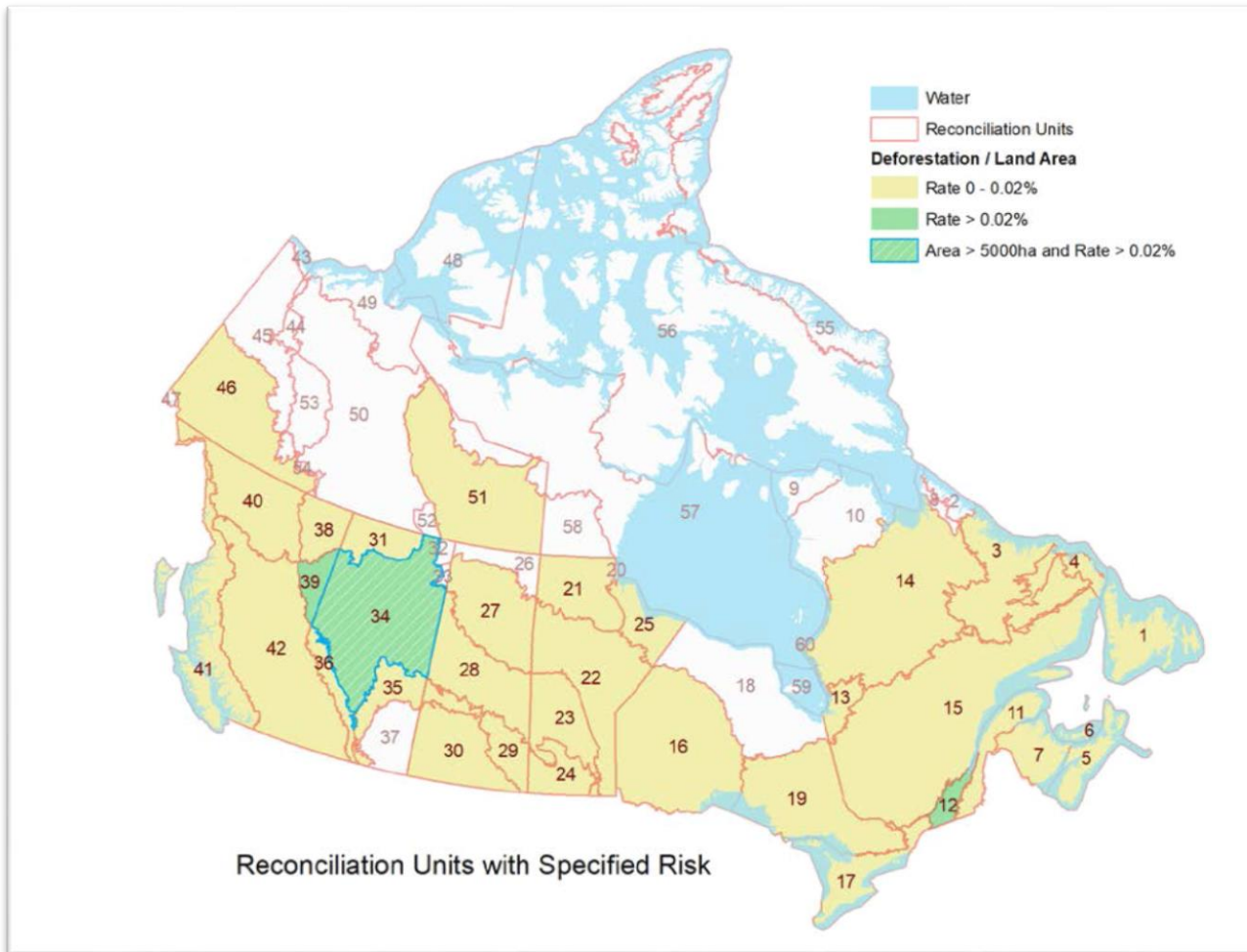


Figure 1: Reconciliation Units meeting Indicator 4.1 Specified Risk thresholds. Courtesy of the Canadian Forestry Service, Natural Resources Canada, 2019.

Control Measures

Indicator	Mandatory Control Measures
4.1	<p>For each Reconciliation Unit that has been identified as Specified Risk, <u>one or more</u> of the following control measures shall be demonstrated:</p> <ol style="list-style-type: none"> 1. Evidence demonstrates that supplied material does not originate from areas converted to non-forest. <ul style="list-style-type: none"> Verifier: A valid Forest Management Plan is in place and covers Specified Risk areas. This does not apply to areas excised from a FMP. 2. Evidence demonstrates that supplied material originates from acceptable sources of conversion, including: <ul style="list-style-type: none"> • Conversion that results in conservation benefits (e.g. ecological restoration, species at risk protection) • Publicly approved changes in zoning within urban areas <ul style="list-style-type: none"> Verifier: Evidence demonstrates that changes in zoning designation from forest to non-forest land use has been approved by the appropriate authority. 3. The Organization demonstrates support for existing integrated land management processes designed to reduce the cumulative impact of changes to non-forest landscapes. <ul style="list-style-type: none"> Verifiers: <ul style="list-style-type: none"> • Documented support promoting integrated land management processes that aim to reduce the cumulative impact of conversion of forests to non-forest uses; • Participation in integrated land management discussions; • Working within their sphere of influence to enact mitigation strategies designed to reduce the impact of conversion to non-forest uses.
	<p style="text-align: center;">Recommended Control Measures</p> <ol style="list-style-type: none"> 1. The Organization raises the profile of deforestation in the region and advocates for options to reduce conversion rates (e.g. afforestation policies, incentives for conservation and no net deforestation policies).

Experts Contacted

	Name	Organization	Area of expertise
1.	Andrew Dyk Sally Tinis	Canadian Forest Service, Natural Resources Canada	Deforestation Monitoring Coordinator Deforestation Specialist
2.	Dr. Thomas Beckley	University of New Brunswick	Knowledgeable regarding forestry in New Brunswick which was one potential location of deforestation to create timber plantations.
3	Andy Wains	British Columbia Ministry of Forests, Lands, and Natural Resource Operations	Hardwood plantations in BC
4	Phil O'Conner	British Columbia Managed Forest Council	Private land in BC
5	Craig Wickland	British Columbia Managed Forest Council	Use of exotic species in BC
6.	Chris Norfolk	New Brunswick Dept of Energy and Resource Development	Manages the Forest Management Planning, Forest Habitats and Forest Pest Management sections.

Controlled Wood Category 5: Wood from forests in which genetically modified trees are planted

Overview

Category 5 has been evaluated at the national level except in instances where provincial (regional) legal and regulatory frameworks specifically address aspects of the use of genetically modified organisms (GMOs).

The sources analysed for this category are presented below, and are accompanied by a summary of the relevance of the information in relation to the use and risk of GMOs in Canada. The resulting risk conclusion of the indicator is then based on the collective assessment of all the sources analysed and evidence found.

“Low risk” is defined as:

A conclusion, following a risk assessment, that there is negligible risk that material from unacceptable sources can be sourced from a specific geographic area.

NOTE: ‘Low risk’ as determined by FSC is synonymous with ‘negligible risk’ as defined by Regulation (EU) No 995/2010 of the European Parliament and of the Council of 20 October 2010 laying down the obligations of operators who place timber and timber products on the market (known as the ‘EU Timber Regulation’).

“Specified risk” is defined as:

A conclusion, following a risk assessment, that there is a certain risk that material from unacceptable sources may be sourced or enter the supply chain from a specific geographic area. (FSC-PRO-60-002a)

Risk Assessment

Indicator	Sources of information	Scale of Assessment	Risk designation and determination
5.1	<p>The Canadian Food Inspection Agency. Division 28 (Novel Foods) section of the Food and Drug Regulations C.R.C., c. 870. Available at: http://laws-lois.justice.gc.ca/eng/regulations/C.R.C.,_c._870/FulIText.html</p> <p>Library of Congress. 2015. Restrictions on Genetically Modified Organisms: Canada https://www.loc.gov/law/help/restrictions-on-gmos/canada.php</p>	Country and Province	<p>Genetically modified (GM) or genetically engineered (GE) plants are primarily regulated by the <i>Food and Drugs Act</i> and its associated regulations.</p> <p>The Canadian Food Inspection Agency (CFIA) “is responsible for regulating the environmental release of a plant with a novel trait (PNTs).” This mandate is authorized through the following laws and regulations: the <i>Plant Protection Act</i>, Plant Protection Regulations, the <i>Seeds Act</i> and Seed Regulations (Part V).</p> <p>The development and planting of PNTs for research purposes is overseen by the CFIA’s Plant Biosafety Office (PBO).</p> <p>No international agreements on GMO use have been discovered in this Assessment.</p>
5.1	<p>National Resource Canada. Project: Genomics of tree adaptation https://cfs.nrcan.gc.ca/projects/87</p> <p>Team members: Armand Séguin</p>	Country	<p>The Treenomix team uses genomic tools to identify the genetic blueprints in spruce that determine features such as resistance against forest insect pests and adaptation to climate change. For both projects, the approach is complementary to a gene mapping-based strategy seeking to identify genomic regions (and eventually genes) associated with the targeted traits.</p> <p>The general objectives of the project are the following:</p> <ul style="list-style-type: none"> • A better understanding of the gene regulatory processes will speed-up associations between DNA markers. • Validating (functionally) these markers will make them more reliable. <p>Improving technology transfer to clients (e.g. Irving, Québec Department Of Forests, Wildlife And Parks, BC Ministry of Forests, Lands and Natural Resource Operations).</p>
5.1	<p>World Rainforest Movement http://www.wrm.org.uy/subjects/GMTrees/Information_sheets.html</p>	Country	Nothing specific to Canada found.
5.1	UNFAO	Country	From Table 2.2.16: <i>Field trials of GM forest trees and GM ornamental/fruit trees</i>

	www.fao.org Christian Walter and Sean Killerby New Zealand Forest Research Institute Ltd, Rotorua, New Zealand. 2004. A global study on the state of forest tree genetic modification. http://www.fao.org/docrep/008/ae574e/AE574E07.htm		<i>recorded in publicly available databases, by country.</i> Canada: Number of trials with forest trees cited: 7 Number of trials with ornamentals/fruit trees cited: 0 <ul style="list-style-type: none"> “The Gene Revolution on-going in agriculture is fundamentally distinct from the Green Revolution of the 1960s and 1970s in the sense that it is mainly driven by the private multinational sector, focuses on a very small number of crops and traits, and is protecting intellectual property in plant innovations (FAO 2004). Four countries (Argentina, Canada, China and the United States) and two traits (insect resistance and herbicide resistance) accounted for 99 percent of the global area planted with GM crops in 2003.”
5.1	Canadian Biotechnology Action Network (CBAN). 2015. Report 2: Are GM crops better for the environment? http://gmo inquiry.ca/wp-content/uploads/2015/05/Are-GM-crops-better-for-the-environment -E-web.pdf	Country	On March 20, 2015, Canadian regulators approved the first GM tree, and first GM fruit, for growing in Canada. The apple is genetically engineered so that the apple flesh does not brown after being cut, for 15-18 days. These GM apple trees can now be legally planted in Canada (and the US), with apple blossoms flowering in Canada as early as 2016. The Canadian government has allowed field tests of GM trees beginning in 1997, and has invested in on-going GM tree research through the Canadian Forest Service of Natural Resources Canada. GM forest tree research is or has taken place in Ontario, Québec, and Alberta.
5.1	GM Tree Watch http://gmtreewatch.org/	Country Province: British Columbia Province: Québec Province:	Trial : Poplar (GMTree-2124) (no province; listed as Canada) Provincial Trial : Herbicide tolerant cherry with modified fruit quality (GMTree-2119) (British Columbia) Provincial Trial : Poplar for genetic research with ARMG (GMTree-2115) (Ontario and Québec) (ARMG = antibiotic resistance marker genes) Multiple Trials in Québec with White Spruce and Black Spruce – see http://gmtreewatch.org/node/2088 Provincial Trial : Herbicide tolerant poplar (GMTree-2126) (Alberta)

5.1	<p>Poplar and Willow Cultivation and Utilization in Canada 2008-2011: Canadian Country Progress Report. 2012. Canadian Report to the 24th IPC Session, Dehradun, India – International Poplar Commission for the Period 2008-2011 http://www.prsi.ca/docs/IPCCan2012.pdf</p> <p>Chief Forester's Standards for Seed Use: http://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/tree-seed/legislation-standards/chief-forester-s-standards-for-seed-use</p> <p>Government of British Columbia: Ministry of Forests, Lands and Natural Resource Operations. No date. Tree Improvement Branch https://www.for.gov.bc.ca/hti/publications/misc/legs&standards.htm</p>	<p>Alberta</p> <p>Province: British Columbia</p>	<p>British Columbia has regulations and standards that govern the deployment of (hybrid) clonal material and/or genetically improved material on Crown lands.</p> <p>Chief Forester's Standards for Seed Use In November 2004, the province's chief forester established the Chief Forester's Standards for Seed Use in accordance with "<i>Forest and Range Practices Act</i>" and its regulations. These standards came into effect on April 1, 2005.</p> <p>These standards require that seed used to establish a free growing stand on blocks subject to <i>Forest and Range Practices Act</i> (FRPA) must be registered and stored with the Ministry's Tree Improvement Branch. Seed must meet specific collection, genetic diversity and physical quality requirements to be eligible for registration. Seed that has been genetically modified cannot be registered, and therefore cannot be used.</p>
5.1	<p>Poplar and Willow Cultivation and Utilization in Canada 2008-2011: Canadian Country Progress Report. 2012. Canadian Report to the 24th IPC Session, Dehradun, India – International Poplar Commission for the Period 2008-2011 http://www.prsi.ca/docs/IPCCan2012.pdf</p> <p>Alberta Forest Genetic Resources Council http://abtreegene.com/afgrc/council-position-papers/</p>	<p>Province: Alberta</p>	<p>Alberta has regulations and standards that govern the deployment of (hybrid) clonal material and/or genetically improved material on Crown lands.</p> <p>Current Practice:</p> <ul style="list-style-type: none"> • No GMO trees have been planted in operational forest plantations on Crown lands in Alberta. • Council recognizes the theoretical potential of GMO trees in reforestation; • Council recognizes that performance of GMOs and their impact on forest ecosystems are poorly understood; • Therefore, in view of the potential risks currently associated with reforestation with GMO trees, the Council does not recommend use of GMOs for reforestation at this time; • Council recognizes that research is on-going and will improve our understanding of the performance and impact of GMOs. <p>Council will review its recommendation periodically.</p>

5.1	Genome Canada. 2015. Fast tests for rating and amelioration of conifers (FastTRAC). Université Laval, FPInnovations/Canadian Wood Fibre Centre https://www.genomecanada.ca/en/fast-tests-rating-and-amelioration-conifers-fasttrac-0	Province: Québec, New Brunswick	<p>Research partnership that involves new genomic profiling and selection tools applied to white and Norway spruce planting stocks of three major forest sector users—the Québec Ministry of Forests, Wildlife and Parks, J.D. Irving Ltd and the New Brunswick Tree Improvement Council.</p> <p>Commercial intentions are made clear in this source: “Spruces are Canada’s most reforested species with 400 million seedlings planted annually, some 60 per cent of total plantings. Conventional tree improvement breeding can take in excess of 30 years to deliver better plantation stocks. Using genomics to select the best stock could eliminate much of that time. By linking trees’ genomic profiles with their attributes, one can rapidly assess a tree’s value at the seedling stage, thus reducing the need for expensive field testing over long periods of time. As a result, improved trees could be planted much faster and spruce stock value could increase by up to 20 per cent over time, or \$300 million per year.</p> <p>This project aims to harness the knowledge derived from previous Genome Canada-funded research to fast track the applications of genomic selection tests called FastTRAC, and tailor Canadian forests to meet new market needs and environmental challenges.”</p>
5.1	Risk Determination	Country	<p>Low Risk Low risk thresholds (2) and (3) are met:</p> <p><i>(2) There is no commercial use of GMO (tree) species in the area under assessment, GM tree trials are taking place within Canada in Québec and Ontario, New Brunswick, British Columbia, and Alberta. The planting of GM trees is currently done for research purposes. Some of this research does appear to have commercial intentions. Therefore, while there may be no current commercialization of GM trees in Canada, there is a potential for it to occur in the future.</i></p> <p>AND</p> <p><i>(3) Other available evidence does not challenge ‘low risk’ designation.</i></p> <p>Other evidence does not challenge a ‘low risk designation’.</p>

GMO Context Question		Answer	Sources of Information (list sources if different types of information, such as reports, laws, regulations, articles, web pages news articles etc.).
1	Is there any legislation covering GMO (trees)?	Yes	The Canadian Food Inspection Agency is responsible for GMOs. Division 28 (Novel Foods) section of the Food and Drug Regulations C.R.C., c. 870. Available at: http://laws-lois.justice.gc.ca/eng/regulations/C.R.C.,_c._870/FullText.html
2	Does applicable legislation for the area under assessment include a ban for commercial use of GMO (trees)?	No	However there is a very strict scientific protocol that needs to be conducted before a permit for commercialization can be given by the food inspection agency. If someone wants to commercialize a GM tree, they would have to conduct a confined field trial to demonstrate safety before a permit can be issued in order to commercialize it. There is no commercial use of GM forest trees at this time.
3	Is there evidence of unauthorized use of GM trees?	No	
4	Is there any commercial use of GM trees in the country or region?	No	
5	Are there any trials of GM trees in the country or region?	Yes	There are only 2 permits for confined field trials for scientific studies. These trials are researching environmental impacts of GM trees. One permit is held by Mr. Séguin of the CFS, and the second one by a colleague from a university in Ontario. Other trials are identified in the Risk Assessment above, under the source "GM Tree Watch". GM tree trials are taking place within Canada in Québec and Ontario, New Brunswick, British Columbia, and Alberta.
6	Are licenses required for commercial use of GM trees?	Yes	A license would come from the Canadian Food Inspection Agency. There are no permits for commercial use at this point.
7	Are there any licenses issued for GM trees relevant for the area under assessment? (If so, in what regions, for what species and to which entities?)	No	No licenses currently exist for commercialization in Canada.
8	What GM 'species' are used?	-	White Spruce, Black Spruce, Norway Spruce, Poplar, and Cherry.
9	Can it be clearly determined in which MUs the GM trees are used?	Yes	These trials are regulated so their location is known. Refer to Risk Assessment, under source "GM Tree Watch".

Control Measures

N/A – No Specified Risk areas identified.

Update and Revision History

1. Updates

The table below presents the history of corrections and minor edits to the risk assessment. These changes result in second-level version number changes. This table is cleared whenever a new first-level version number is issued (see table 2 below).

Date	Version	Section/indicator	Change

2. Revisions

The table below presents the history of major changes and revisions to the risk assessment. These changes result in first-level version number changes. This table is persistent throughout the lifetime of the risk assessment.

Date	From version...	To version...	Section/indicator	Change
05/11/2019	1-0	2-0	Introduction	"Charlene Strelaef, Zellstoff Celgar LP (Environmental Chamber)" changed to "Charlene Strelaef, Zellstoff Celgar LP (Economic Chamber)" (pg. 7). Reference to Update and Revision History section added (pg. 9).
			Indicator 4.1	Risk description and risk designations changed from reporting zones to Reconciliation Units. New map added (pg. 150-154).
			Indicator 4.1 CMs	"Reporting zones" changed to "Reconciliation Units" (pg. 155).
			Indicator 4.1 experts consulted	Additional expert added (pg. 156).
			Update and Revision History	Section added.