Forestry Innovation Investment asked Finnish research company Indufor Oy to study jurisdictions with a significant amount of certified forest. There were two objectives:

- to examine how forest legislation and third-party forest certification address the key elements of sustainable forest management, both individually and in combination, and
- to evaluate legislation and certification requirements and report objectively on how effectively each jurisdiction manages key elements of sustainable forest management.

Indufor (www.indufor.fi) specializes in sustainable forest solutions and third-party forest certification. It has conducted studies in more than 100 countries around the world including an evaluation of the efficiency of forest certification to contribute to sustainable forest management in the Nordic countries and a number of conformity assessments of the requirements of both the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC) schemes.

"Canada (British Columbia and Ontario) and Australia (New South Wales) are the countries with the most demanding legislation on the studied elements."
“According to the summary results, the strength of the legislation contributes to the strictness of the standard more than does the type of the standard (FSC or PEFC).”

OVERVIEW OF FINDINGS

The resulting report, **Comparison of Selected Forest Certification Standards**, found that, in general, all of the studied certification standards and processes make a positive contribution to sustainable forest management, even where legislation is comprehensive and demanding such as in Canada and Australia. In cases where standards do not exceed legislative requirements, there is continual improvement through regular on-the-ground monitoring and auditing that help to improve practices.

The report indicates that a straight comparison of certification standards without looking at a jurisdiction’s related forest legislation is highly unreliable, and in most cases leads to erroneous conclusions since legislation generally sets a baseline for sustainable forest management. The report concludes that the strictness of a forest certification standard is related to the strength of a jurisdiction’s legislation as opposed to whether it is a Forest Stewardship Council (FSC) or Programme for the Endorsement of Forest Certification schemes (PEFC) standard.

Socio-economic frameworks also need to be considered because sometimes laws exist but are not enforced. The study found that in some jurisdictions discretionary legislation meets the stated goals while in others non-discretionary laws fall short. The study found that British Columbia continues to be recognized as having very demanding legislation and enforcement related to elements of sustainable forest management, including requirements for wildlife habitat, water quality and public and First Nations involvement.

The research team also reported challenges related to classifying requirements as discretionary or non-discretionary, especially with the certification standards. Sometimes allowing flexibility leads to better on-the-ground results because practices can be adapted to local conditions. For example, certification standards in Europe tend to be tailored more to local conditions and legislation, and may contribute more to sustainability than those in more diverse regions.

“In general, all of the studied standards and the certification process make a positive contribution to sustainable forest management, even in cases where legislation is comprehensive and demanding (e.g. Australia and Canada).”
HOW THE STUDY WAS CONDUCTED

Comparison of Selected Forest Certification Standards reviewed the following jurisdictions and national/regional certification standards. Standards were selected for FSC and PEFC by choosing those standards within each system to which the largest area is certified. The exception was the FSC Regional Forest Management Certification Standard for British Columbia, which was included due to its relevance to the province of British Columbia.

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<tr>
<th>COUNTRY</th>
<th>FSC Standard</th>
<th>PEFC Standards</th>
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<tr>
<td></td>
<td>CSA CSA Z809:08 Sustainable Forest Management: Draft standard (2008)</td>
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<tr>
<td>BRAZIL</td>
<td>FSC Brazilian Standard for Forest Management Certification on ‘Terra Firme’ in the Brazilian Amazon (2002)</td>
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<td>GERMANY BAVARIA</td>
<td>PEFC PEFC in Germany: Criteria, Guidelines and Indicators for SFM on a regional level, adopted by the German Forest Certification Council (2005)</td>
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<td>PEFC PEFC Standards for Germany: Guideline for SFM for the Incorporation of Forests Owners into the Regional Framework, adopted by the German Forest Certification Council (2005)</td>
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<td>POLAND</td>
<td>PEFC SmartWood Interim Standard for Poland (2005)</td>
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<tr>
<td>UNITED STATES ALABAMA</td>
<td>SFI PEFC Sustainable Forest Initiative Standard 2005–2009</td>
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<td>UNITED STATES OREGON</td>
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Researchers began by analyzing legal frameworks regulating 16 commonly used elements of sustainable forest management such as harvesting, forest conversion, habitat management and water quality management, taking into account updates through December 31, 2008. They did not include non-binding rules such as best management practices and administrative rules. They then examined specific provisions of the selected certification standards applied in practical certifications to assess whether these met or exceeded legislative requirements.

1 CSA Z809 SFM Standard (2002) was in effect at the time of the study, and a revised draft was completed in March 2009. The study looked at both versions of the CSA standard.

2 The baseline for the legislative analysis was a 2004 report Global Environmental Forest Policies: Canada as a Constant Case Comparison of Select Forest Practice Regulations www.naturallywood.com/uploadedFiles/General/Sustainable Forests/Jurisdictional_Comparison.pdf

WHAT IS FOREST CERTIFICATION?

Third-party forest certification is a voluntary process where independent, accredited audit teams measure the planning, procedures, systems and performance of on-the-ground forest operations against a predetermined standard. A certificate is issued if forest management is found to be in conformance with the standard.

The Programme for the Endorsement of Forest Certification (PEFC) schemes and the Forest Stewardship Council (FSC) are independent non-profit global programs. PEFC endorses national standards that meet its detailed requirements, and FSC accredits national and regional standards developed to its principles and criteria for forest management.

Canada is a world leader in third-party forest certification, with a total of 149 million hectares (368 million acres) certified to one or more of six certification standards:

- two endorsed by PEFC – the Canadian Standards Association (CSA) and the Sustainable Forestry Initiative (SFI), and
- four regional FSC standards – National Boreal, Maritimes, BC and Great Lakes-St. Lawrence, Laurentian (in development).
Comparison of Selected Forest Certification Standards

All countries regulate harvest levels with an upper limit to maintain forest resources. In jurisdictions where much of the forestland is publicly owned, such as British Columbia, Ontario, Russia, New South Wales and Brazil, government authorities set prescriptive harvesting levels following a detailed analysis of timber supply. Those with a large number of small-scale private land holdings, such as Finland, Sweden, Bavaria and Alabama, determine harvest levels by maturity criteria at the stand level.

Certification standards generally do not exceed legislative requirements regarding harvest levels. In most cases, they impose additional requirements only when legal requirements are discretionary, such as for private forests in the United States and Germany. FSC requirements state that harvest levels must not exceed the long term sustainable level.

**British Columbia**

About 95 per cent of forestlands are publicly owned, and the province’s chief forester independently determines the allowable annual cut for these lands through a transparent process. Certification standards rely mainly on legislative requirements.

**1. Harvest Level**

British Columbia is one of the world’s largest exporters of wood fibre. About two-thirds of its land base, or 60 million hectares (148 million acres) is forested, and 95 per cent of this forest land is publicly owned.

**British Columbia** has a total of 62.4 million hectares (154 million acres) certified to the CSA Standard, two regional FSC standards (British Columbia and National Boreal) Standard and the SFI Standard.

British Columbia has a total of 62.4 million hectares (154 million acres) certified to the CSA Standard, two regional FSC standards (British Columbia and National Boreal) Standard and the SFI Standard.
2. REFORESTATION

In general, rules around reforestation are quite strict in both legislation and certification. European countries require regeneration within a specific period of time, and this is also the case in British Columbia, Ontario, Oregon and Brazil where reforestation is mandatory. Forest users are responsible for regeneration in Russia, and there are no regulations regarding reforestation for private lands in Alabama. Most certification standards are in line with legislation, and only add to it in Alabama, Finland and Bavaria.

British Columbia

Legislation sets defined timelines to regenerate harvested areas with ecologically suited native species, and all certification standards rely on the legislation.

3. CLEARCUTTING

All the jurisdictions studied recognize clearcutting as a legitimate silvicultural practice although some, such as Bavaria, do not address it because other harvesting techniques are predominantly used. There are size restrictions on clearcuts in some jurisdictions, including British Columbia, Russia, Sweden, Germany and Brazil. All certification standards allow for clearcutting, and generally rely on the legislation. Certification standards in Poland and Sweden are more demanding than the legislation.

British Columbia

Legislation limits cutblock size to 40 hectares in coastal regions and 60 hectares in interior regions, except under special circumstances. Regulations manage the visual impact of the harvest if it is in a scenic area. All of the certification standards allow clearcutting.

4. FOREST CONVERSION

Most jurisdictions use land use and municipal planning procedures to regulate the permanent conversion of forests to other uses such as agriculture or urban development. Forestry legislation on conversion is often quite discretionary in countries with abundant forest resources, little deforestation, and primarily privately owned forestland. Certification standards tend to add to the legislation. For example, in Brazil, where legislation is quite liberal, the FSC standard includes provisions such as protection for high conservation value forests.

British Columbia

In British Columbia, government can convert land to other uses where it is deemed to be in the best social, economic and environmental interest and forest management rules regulate conversion in a forest area. British Columbia has roughly the same amount of forested area as it did before European settlement – only two per cent of its land has been permanently converted to other uses such as farming, ranching and urban development.
5. PLANTATIONS

There is a wide variation in both legislation and certification standards related to plantations because of different environmental conditions and practices. Some jurisdictions, including British Columbia and Ontario, have few or no plantations. In others, such as New South Wales, Alabama and Brazil, plantations play a significant role in the forest sector. There is financial support for afforestation of former agricultural lands in the United States, Poland and Australia. Certification rules on planted forests are stricter than legislation in Poland and Russia, and standards in Finland, Sweden and Poland limit use of exotic species.

British Columbia

British Columbia does not have any significant area that meets the Food and Agriculture Organization definition of plantation\(^3\) so this is not addressed in forest legislation.

6. FOREST RISKS AND PRODUCTIVITY

Forest health is of great concern in all jurisdictions, and legal regulations set basic provisions depending on expected natural disturbances such as wildfire, pests and disease. Canada, Australia, Germany, Russia and the United States have federal and provincial/state laws to prevent/mitigate forest damage. In general, certification standards do not exceed legal requirements except in Finland where foresters must act to prevent root rot in a harvested area and in Brazil where there are several provisions related to fire management.

British Columbia

Legislation sets strict provisions for ecosystem health management, with preventative measures to reduce the risk of wildfire. The standards do not set additional requirements.

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\(^3\) The Food and Agriculture Organization defines plantations as either introduced species (all planted stands), or intensely managed stands of indigenous species used primarily for production of specific goods or services, which meet all the following criteria: one or two species at planting, even-age class, regular spacing.
7. ILLEGAL LOGGING AVOIDANCE

Illegal logging is not a concern in jurisdictions such as British Columbia, Ontario, Finland, Sweden, Bavaria, Alabama and Oregon where there are strict land title regulations and enforcement. It remains an issue in countries like Russia and Brazil, even though it is addressed in legislation. All certification standards complement legislation and require legal compliance, and the regular monitoring and audits reduce the risk of illegal logging of certified lands.

British Columbia

Trained officials monitor forest activities to prevent illegal logging, and wood must be conspicuously marked before it is removed from the harvest site. The certification standards require and monitor legal compliance.

FACTS ABOUT CANADA AND DEFORESTATION

Deforestation is the permanent removal of forest cover from an area, and the conversion of this previously forested land to other uses. Sustainable harvesting is not deforestation because the area is replanted or allowed to regenerate naturally, renewing the forest cover. Canada’s deforestation rate is virtually zero.¹


CHAIN-OF-CUSTODY CERTIFICATION

Forest certification is often complemented with a chain-of-custody certification, which assures that the organization can control the origin of timber and timber products entering into its custodianship. Chain of custody is a mechanism used to track wood from various origins and to trace the supply of certified timber throughout the harvesting, transportation, processing and distribution chain. All PEFC and FSC endorsed chain of custody standards covering also CSA, FSC and SFI have procurement requirements to avoid fibre from illegal or controversial sources.
Legislation related to wildlife includes habitat protection, species management and hunting regulations, with emphasis on protecting endangered or threatened species. Forest management plans in Ontario and Poland must include wildlife habitat management, and in British Columbia and Oregon plans must address certain endangered species. About half of the certification standards studied exceed legal requirements.

**British Columbia**

Comprehensive legislation establishes and protects wildlife areas and conserves biodiversity, including species at risk. Both the legislation and certification standards provide for the management of critical habitat for at-risk species and a coarse filter approach for other species through stand-level habitat management.

**9. SPECIES MANAGEMENT (ENDANGERED)**

All of the jurisdictions studied have national or provincial lists of endangered species, and set strict requirements to protect them. The certification standards add precautionary measures to identify and protect endangered species, and preserve their habitats and enhance their populations.

**British Columbia**

British Columbia law requires conservation of habitat for all species at risk listed in Canadian law as well as other species of regional importance, and there are laws related to invasive plant species. The certification standards imply that management plans must consider and protect endangered species, and go slightly beyond the legislation by requiring a systematic, up-to-date inventory and monitoring.
10. WATER QUALITY MANAGEMENT

All the jurisdictions have legal requirements to maintain water quality and quantity, and prohibit actions that might have adverse impacts on water resources. Some jurisdictions, including British Columbia, Ontario, Sweden and Finland, have legislation that protects water ecosystems. In most cases, certification does not go beyond these requirements although some have specific measures to protect water resources. The Finnish standard calls for water protection plans for road construction and drainage, and buffer zones to protect small water bodies and conserve water ecosystems.

British Columbia

Provincial legislation conserves water quality, fish habitat, wildlife habitat and biodiversity associated with riparian areas; federal legislation addresses fish habitat protection; and local authorities may regulate water quality. Certification standards accept legal requirements as a baseline, with additional measures to protect soil and water resources.

11. OLD-GROWTH MANAGEMENT AND SPECIAL SITES

While old growth is rarely addressed in legislation, it is governed by regulations related to protected areas and biodiversity. Ontario, British Columbia and Poland require special management of old-growth forests and forests with special values. Most of the jurisdictions identify special sites for protection, and these may include old-growth ecosystems. The Swedish standard requires set-aside areas and active restoration of forest ecosystems, which often includes old-growth characteristics. In Alabama, the certification standard goes beyond legislation by requiring recognition and protection of special sites.

British Columbia

More than 40 per cent of the province’s forests are considered old growth. Legislation requires the identification of old-growth management areas in a forest stewardship plan. SFI and CSA include management of old-growth as sites of special biological significance. FSC’s B.C. standard requires old growth areas be maintained in consideration of natural levels.

BRITISH COLUMBIA’S OLD-GROWTH FORESTS

Old-growth forests tend to have more large trees and standing dead trees, multi-layered canopies with gaps resulting from the deaths of individual trees, and coarse woody debris on the forest floor. Along British Columbia’s Pacific Coast, scientists consider a stand old growth when most of the larger trees are more than 250 years old. In the province’s Interior, where trees typically have a shorter life span and wildfires are more common, old growth is considered to be more than 120 to 140 years old.
12. RESTRICTIONS ON THE USE OF GENETICALLY MODIFIED ORGANISMS

In European Union countries, commercial release of genetically modified organisms (GMOs) is strictly controlled, experimental use is restricted, and forestry applications are prohibited. Australia allows GMOs that are licensed and registered, and Brazil has several laws regulating their management. Forestry legislation in Canada does not address GMOs but prohibits their use through regeneration regulations. In the United States, environmental legislation has provisions for GMOs, but this does not have a major impact on forest management as long as commercial and tested species are used. FSC standards prohibit the use of GMOs while PEFC-endorsed standards restrict GMO use to research purposes.

British Columbia

The British Columbia Ministry of Forests and Range registers all tree seeds used for reforestation in the province, and the registration and use of genetically modified seed is prohibited. The FSC and CSA standards forbid the use of GMOs.

13. MANAGEMENT OF CHEMICAL USE

Only chemicals approved by the EU and national agencies can be used in forestry in the European Union. Most are non-toxic and biodegradable; and chemical use is restricted in ground water areas and on valuable sites. Most jurisdictions require that chemicals are used according to label instructions and must not harm the environment or human health, and some, such as Canada, the United States and European Union countries, only allow registered chemicals. Certification often exceeds legislative requirements though none of the standards prohibit use of chemicals.

British Columbia

Federal legislation regulates the approval of pesticides for sale in Canada, and provincial law regulates the use in British Columbia. Laws require using an integrated approach to managing pests including the use of chemicals only where necessary. Certification standards rely mainly on legislation in British Columbia; the SFI and FSC programs require minimization of chemical use.
14. CLIMATE CHANGE/ CARBON MANAGEMENT

Climate change is a new subject so most jurisdictions do not have specific forestry legislation related to the issue and, with the exception of the CSA 2008 standard in Canada, none of the standards address it extensively. Australia has a national mandatory climate scheme that covers forest activities.

British Columbia

British Columbia has a Climate Action Plan that specifically addresses the forest sector. The CSA standard requires rough monitoring to estimate the impact of forest management on the carbon sequestration potential of a forest. None of the standards set specific targets for carbon uptake apart from the general requirement to maintain a productive forest cover.

15. PUBLIC PARTICIPATION AND COMMUNITY INVOLVEMENT/ INDIGENOUS PEOPLES INPUT

Some jurisdictions require public involvement for state and other public forests but not for private lands. Indigenous rights are protected under legislation in Canada, Australia, Finland and Sweden, and also partly in Brazil. Many of the certification standards emphasize the importance of public participation, and tend to go beyond legislation related to private forests.

British Columbia

Legislation requires that harvesting plans for public land be advertised for public review and comment. Canadian law requires that Aboriginal title and rights be respected and accommodated. All three standards require local community and First Nation involvement and consultation.

16. TRAINING AND OUTREACH

Legislation tends to emphasize either building competence or disseminating information — in some jurisdictions this is not covered by legislation but is provided through practice requirements, often under the leadership of private or government-run advisory bodies. In Canada, legislation requires adequate competence for professionals providing services in the forest. The CSA and Australian standards monitor training inputs but do not have specific requirements. The SFI standard includes detailed requirement concerning training and outreach on both certified and uncertified lands; the CSA and FSC programs also have requirements for training.

British Columbia

Forestry is a recognized profession under law, and guided by a code of ethics requiring professional competence and expertise. The certification standards require an awareness of practice requirements, and SFI extends this to cover timber producers and contractors.
The Indufor Oy study reaffirms the fact that Canada continues to be a world leader in practising sustainable forest management – and the study shows certification makes a positive contribution to sustainable forest management, even in jurisdictions like Canada with tough laws.

Despite the fact that less than 10 per cent of the world’s forests are certified, there has been a rapid increase in chain-of-custody certification, which shows that businesses and buyers recognize the benefits of third-party certification – especially when in several areas of the world thousands of hectares of forests are illegally harvested every year and deforestation is a major contributor to climate change.

A recent United Nations report says illegal logging, climate change and green building represent opportunities for certification as buyers look for products from reliable sources. It found that the pace of growth in forest certification has slowed while the number of chain-of-custody certificates has grown rapidly in some regions, including North America. 1

With more third-party certified lands than any other country and three credible certification schemes, Canada is well positioned to meet this growing demand. Canada’s forest ministers issued a statement in 2008 saying governments in Canada accept that CSA, FSC and SFI “demonstrate, and promote the sustainability of forest management practices in Canada”.6 Also in 2008, the Competition Bureau of Canada issued a guide about environmental claims and advertising that says the preferred approach for forest products is to identify them as coming from a forest certified to a standard such as CSA, FSC and SFI.7

British Columbia’s inclusive approach to forest certification, combined with tough and ever-evolving forest regulations, makes British Columbia a preferred supplier of forest products from sustainably managed forests. The recent research from Indufor provides added assurance to customers that the products they purchase from British Columbia – regardless of the type of forest certification they carry - come from some of the best managed forests in the world.

4 Canadian Council of Forest Ministers Statement on Forest Certification Standards in Canada www.sfmcana.org/CMFiles/PublicationLibrary/CCFM_Statement_Forest_Certification_EN1KWA-24122008-5150.pdf