GUIDANCE TO SFI 2022 STANDARDS AND RULES

SECTION 7



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GUIDANCE TO SFI 2022 STANDARDS AND RULES

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INTRODUCTION

This guidance document is intended to assist *Certified Organizations* and *certification bodies* in interpreting and implementing new and existing provisions in the *SFI 2022 Standards and Rules.*

This document provides additional information that may help *Certified Organization*s make management decisions to meet *SFI 2022 Standards and Rules* requirements. *SFI Inc.* routinely researches ways to improve the functionality of its work, thus this document may be updated over time. This guidance document is informative in nature and the information contained below should not be taken as normative.

PART 1: GUIDANCE FOR THE SFI 2022 FOREST MANAGEMENT STANDARD

Application of the *SFI 2022 Forest Management Standard and the SFI 2022 Fiber Sourcing Standard*

Scope of the *SFI 2022 Forest Management* and *SFI 2022 Fiber Sourcing Standards*

The *SFI 2022 Forest Management Standard* and *SFI 2022 Fiber Sourcing Standards* apply to the management of and sourcing from natural and plantation forests throughout the United States and Canada, regardless of the forest products derived from such forests. The figure (Figure 1) below illustrates the spectrum of forest management systems. The *SFI 2022 Forest Management Standard* and *SFI 2022 Fiber Sourcing Standard* are intended to apply to forest management systems that are classified as natural forest systems, semi-natural planted forests, and plantation forests. Management systems that are classified as short rotation woody crops or agro-forestry are not within the scope of the *SFI 2022 Standards and Rules.*

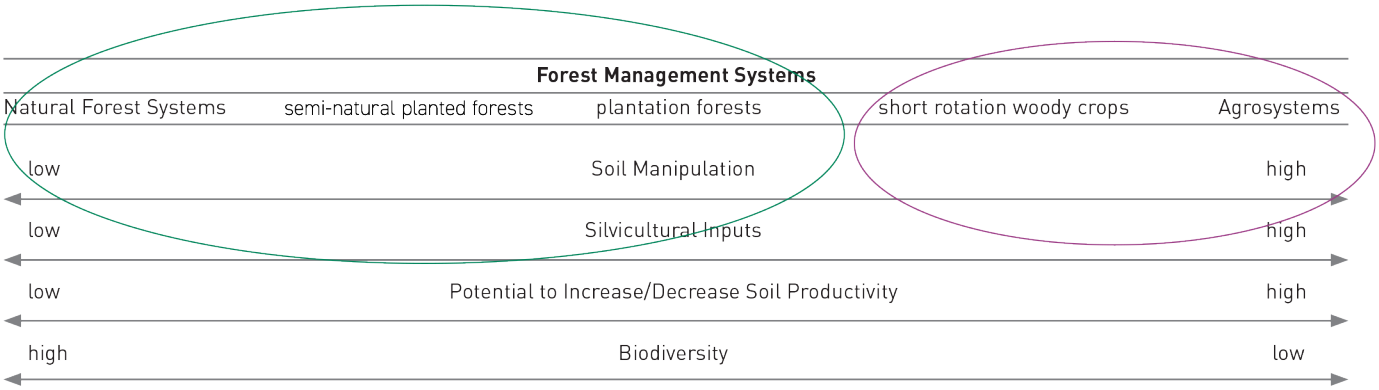


Figure 1. Spectrum of forest management systems (green circle) that qualify for certification to the SFI 2022 Standards (Adapted from Burger, 2002[1]).

Objective 1. Forest Management Planning

LONG-TERM SUSTAINABLE HARVEST LEVELS

Determining the Most Appropriate Geographic Scale

Objective 1 Performance Measure 1.1 requires *long-term* harvest levels that are sustainable and consistent with appropriate *growth and yield models*. Indicator 1.1.1 lists items required in forest management planning "at a level appropriate to the size and scale of the operation," with 1.1.1d requiring that "*biodiversity* at the *stand* and *landscape* scale" be factored into forest management planning decision making. These requirements imply that a *Certified Organization* must base their *long-term* sustainable harvest level planning at a geographic scale that accurately reflects forest *growth and drain* and *conservation* of *biodiversity*. Likewise, the requirement that forest management planning shall ensure *long-term* (one rotation or greater) sustainable harvest levels requires planning to occur on forest types in similar biological, geological, and climatic areas.

Sustainable Harvest Planning and Land Acquisition

A *Certified Organization* with a prolonged, accelerated harvest level in one operational region cannot use land acquisition to offset a *long-term* unsustainable level of harvests. It does not meet the spirit and intent of SFI certification and to allow this practice could result in an imbalance in forest age classes and species composition in certain portions of the *Certified Organization's* lands. This imbalance could have significant negative impacts on the *conservation* of *biological*

[1] Burger, J. A. 2002. Soil and Long-Term Site Productivity Values. In: Richardson, J.; Bjorheden, R.; Hakkila, P.; Lowe, A. T.; and Smith, C. T. Bioenergy from Sustainable Forestry: Guiding Principles and Practice. Dordrecht, The Netherlands: Kluwer Academic Publishers: 165-189.



diversity contrary to Indicator 1.1.1d, which requires that forest management planning consider *biodiversity* at the *stand* and *landscape* scale. Any acquired lands should be integrated into the *Certified Organization's* forest management planning, and the *Certified Organization* should recalculate appropriate *long-term* harvest levels that are sustainable and consistent with accepted *growth and yield models* by operational region.

Temporal Scale

SFI expects that *certification bodies* shall audit sustainable harvest levels based on the criteria specified in Performance Measure 1.1, taking into account the maintenance of *landscape*-level *biodiversity*, and confirming that any increases in planned harvest level(s) are consistent with the *Certified Organization's* forest management plan. Additionally, sustainable harvest levels or government-regulated allowable annual harvest should not be exceeded for extended periods of time unless a substantive ecological rationale is developed to justify the elevation. Substantive rationales could include a response to *forest health* emergencies, such as beetle epidemics, or sanitation logging of forests impacted by catastrophic wildfire, ice storm or wind damage. In instances where harvest levels are exceeded for extended periods, a documented plan must be in place to demonstrate how harvest planning will achieve a return to the *long-term* sustainable harvest levels over one rotation.

Record Retention

Objective 1, Performance Measure 1.1 addresses the need to have a *long-term* resources analysis, *forest inventory, growth-and-yield modeling* capabilities, and recommended sustainable harvest levels for areas available for harvest. Likewise, Indicator 1.1.2 requires that "documented current harvest trends fall within *long-term* sustainable levels identified in the forest management plan," and Indicator 1.1.4 requires "periodic updates of *forest inventory* and recalculation of planned harvests to account for changes in growth due to *productivity* increases or decreases."

Forest management plans by their very nature are adjusted as needed to reflect changes in factors such as inventory, *growth-and-yield modeling* capabilities, growing stock, harvest levels, and the cyclical nature of the forest products market. To ensure effective decision making regarding *long-term* sustainable harvest levels, a *Certified Organization* must have retained the appropriate documentation to be able to assess whether past planning inputs were accurate. It is expected that a *Certified Organization* will be able to look backwards over a sufficiently long timeframe in order to inform its future forest management planning.

Social, Environmental, and Economic Effects of Forest Management Operations

Indicator 1.1.6 requires that a *Certified Organization* consider the local or regional social, environmental, and economic effects of the forest management operations contained in their forest management plans. The "consideration" required in Indicator 1.1.6 does not necessarily require a formal assessment, but *Certified Organizations* should show evidence of having developed an appropriate understanding, relative to the size and scale of the operation, of the potential social, environmental, and economic effects of the implementation of forest management planning.

CONVERSION

Conversion of One *Forest Cover Type* to Another *Forest Cover Type*

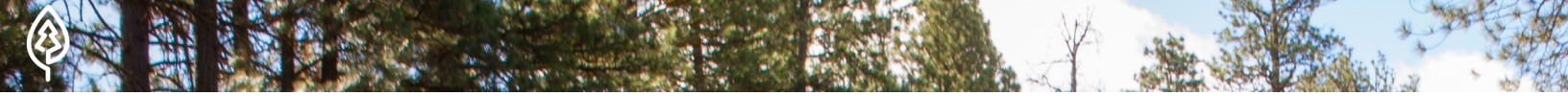
The intent of Performance Measure 1.2 is to outline the limitations on conversion and the due diligence process to be followed when converting to a different *forest cover type*. Limitations exist where the conversion is unlawful, threatens rare and *ecologically important native* forest types, or where *long-term* adverse impacts are expected on species, *habitats* or *special sites* already protected by the *SFI 2022 Forest Management Standard.*

In situations where a *Certified Organization* intends to convert from one *forest cover type* to another *forest cover type*, the *Certified Organization* is expected to demonstrate proficiency in its assessment of the conditions outlined in Indicator 1.2.2.

The formality of the assessment has not been prescribed and therefore, *Certified Organizations* are able to structure the assessment in accordance with the scope and scale of their organization and the scale of the intended conversion.

Certified Organizations are encouraged to consider ways in which to conduct the required assessments in the most efficient ways possible. For example, if a particular scenario of conversion and assessment repeats regularly, a single assessment of that repeating scenario may suffice, and could be applied to that situation when it arises again. Another potential way to achieve efficiency could be to collaborate with other *Certified Organizations*, or within *SFI Implementation Committees* that encounter similar circumstances throughout their areas of operation — in such cases, assessments could be conducted collaboratively and applied by participating *Certified Organizations* under appropriate circumstances. This may be employed as appropriate to obviate the need for a new assessment each time a *Certified Organization* encounters relatively common and similar circumstances.

It is not the intent of Performance Measure 1.2 to limit activities that are of ecological benefit, such as returning a site to a historical *forest cover type*, responding to *forest health* concerns, or mitigating present or future environmental harm (e.g., *climate change*). To be consistent with the intent of Performance Measure 1.2, any proactive conversion of *forest cover types* intended to mitigate the future impacts of *climate change*, or to limit susceptibility to pathogens, insect infestations, etc. must first meet the two-filter test, and further be supported by *best scientific information*. Similarly, Performance Measure 1.2 should not be construed to limit conversion of *forest cover types* in ways that fundamentally reflect (or effectively accelerate) the natural order of succession of native *forest cover types*, or which result in restoration of ecologically significant *forest cover types* or conditions.



In situations where a *Certified Organization* proposes a site for conversion from one *forest cover type* to another *forest cover type*, the *Certified Organization* is expected to demonstrate proficiency in its assessments as outlined in Indicator 1.2.2., and to further demonstrate that these conditions are fully met before further consideration is given to the potential for conversion at the *site level*.

If the conditions noted under Indicator 1.2.1 are met, then the *Certified Organization* must further meet the conditions and justifications noted under Indicator 1.2.2 to move forward with conversion of *forest cover types* — in other words, these requirements are essentially hierarchical in application.

Indicator 1.2.2 requires that conversion objectives include *stand*- and *landscape*-level outcomes that are generally consistent with the natural distribution of *forest cover types* and structural composition at the *landscape* scale. Supporting assessments and spatial analyses are consistent with the requirements under Objective 4.

Indicator 1.2.2d notes the need for "appropriate consultation" with local communities, *Indigenous Peoples*, and other stakeholders who could be affected by such activities, including adjacent ownerships. Landowners must recognize the societal context of managed forests within landscapes, and consider *stakeholder* concerns, if any, when determining the scale and impact of the proposed conversion. "Appropriate consultation" should help to gauge the possible impacts of conversion on local values — recreation, aesthetics, cultural, etc. Consultation becomes increasingly critical according to the scale of the proposed conversion, but there is no specific prescription for a threshold of the size of a conversion that should trigger a consultation. In some circumstances consultation may not be necessary, for example, if the project is sufficiently remote, it may occur beyond the range of impact to any local community or group. Therefore, with sufficient explanation and justification, the *Certified Organization* may determine to forego consultation.

SFI Small Lands Group Certification Module* and *SFI Small Scale Forest Management Module of Indigenous Peoples and Families* (the Modules) and Conversion to Other *Forest Cover Types

Regarding reforestation by *organizations* certified to the Modules, it is recognized that that in most instances the landowner/manager is going to reforest with species that were present on the site prior to harvest. Nonetheless, the landowner/manager may decide to reforest to another appropriate *native forest cover type*. This is an acceptable land management decision given that the reforested species is ecologically appropriate and meets the intent of protecting *Forests of Exceptional Conservation Values* or Forests of Recognized Importance for members of a Small Lands Group Certification Module certificate in the United States.

Conversion of Forest Land to Another Land Use

The intent of Performance Measure 1.3 to ensure that forest land that is being converted to non-forest land uses is appropriately scoped out of *SFI* certificates. The *SFI Small Lands Group Certification Module*, clause 4.1.2 and the *SFI Small Scale Forest Management Module for Indigenous Peoples and Families*, Objective 1 require the landowner to identify risks of conversion of forests to non-forest uses and measures to mitigate this risk. Two basic tenets establish the rationale for these requirements. First, forest land that is being converted to non-forest land uses would not likely meet any of the *SFI 2022 Forest Management Standard* and Module requirements (prompt *reforestation, biodiversity*, etc.) and therefore could not be certified under the *SFI 2022 Forest Management Standard* or the Modules.

Second, fiber (roundwood and/or chips) from forest land being converted to non-forest land uses cannot be counted as *certified forest content* in any product bearing an SFI label (see definition of *conversion sources*).

Scope of Certification

To convert forest land to non-forest land use, a *Certified Organization* must have a clear understanding of which of its lands are eligible to be within the scope of its *SFI 2022 Forest Management Standard* certificate. There is no limit on the percentage of land that can be scoped out of an *SFI 2022 Forest Management Standard* certificate. However, it is important to ensure that forest land within the scope of the *Certified Organization's SFI 2022 Forest Management Standard* certificate continues to be managed as forest land consistent with the *SFI 2022 Forest Management Standard*. In some circumstances, forest land designated for sale may not sell in the short term, nor is there certainty that the forest land will be converted to another land use by its purchaser. As such, the *Certified Organization* should continue to manage this forest land in conformance with the *SFI 2022 Forest Management Standard* until a sales contract has been executed. Once a sales contract is executed, the *Certified Organization* should scope out the lands that have been sold.

Certified Organizations are not restricted in their decision making regarding the purchase of or sale of forest land, or in the movement of forest land (or the quantity) in or out of the scope of an *SFI 2022 Forest Management Standard* certificate. *Certification bodies* must ensure that lands within the scope of an *SFI 2022 Forest Management Standard* audit are being managed in conformance with the *SFI 2022 Forest Management Standard* to protect the integrity of the *SFI 2022 Standards and Rules.* Furthermore, *certification bodies* and *Certified Organizations* must ensure that there is absolute clarity on which forest lands — whether owned, managed or controlled (see Control of Decision Making below) — are included in the scope of the *SFI 2022 Forest Management Standard* certificate.



Control of Decision Making

The level of control of decision making by the *Certified Organization* is the central factor when determining which forest land should be scoped out of an *SFI 2022 Forest Management Standard* certificate. When a *Certified Organization* knowingly intends to convert forest land to a non-forest land use and has control over the process, then the forest lands should be scoped out of the certificate when the decision is made to convert.

When forest land is being sold or purposefully converted to non-forest land use it is relatively straight-forward when it comes to identifying who has control of decision making. However, there are other examples where control of decisions over management practices is less clearly defined, or where control of decisions regarding forest land use shifts to a different party after a fixed period of time. Examples of these more ambiguous circumstances include *long-term* leases and timber deeds.

As in the forest land sale example, the decision whether to scope forest land in or out of an *SFI 2022 Forest Management Standard* certificate still rests with the organization who has control over the decisions related to management of the forest land in conformance with the *SFI 2022 Forest Management Standard.* More specifically, if a C*ertified Organization* has forest management authority over Objective 1 of the *SFI 2022 Forest Management Standard* then such lands can remain within the scope of the *SFI 2022 Forest Management Standard* certificate until such time as control of forest management decisions is relinquished. Likewise, in the case of *long-term* leases or timber deeds, if a *Certified Organization* has a reasonable expectation the lands will remain in a forested condition after its lease or deed expires, then such lands can remain within the scope of the *SFI 2022 Forest Management Standard* certificate until such time as control of forest management decisions is relinquished.

Mining and drilling activities are other examples of where *Certified Organizations* may have control over forest management but may not have control over the ultimate fate of the land use. In this example, if the *Certified Organization* is not the party doing the mining or drilling, and it has not engaged into a contractual relationship with a third party to do so, the lands being managed in accordance with the *SFI 2022 Forest Management Standard* may remain within the scope of an *SFI 2022 Forest Management Standard* certificate until such time as forest management control is relinquished.

Accounting for Non-Certified Forest Content

Despite efforts to scope out forest lands intended to be converted to non-forest land uses, small parcels of land intended for conversion may remain in the scope of an *SFI 2022 Forest Management Standard* certificate (e.g., utility right-of-way, well drilling pad). It may be impracticable to account for the *conversion sources* from such small inclusions within a larger SFI-certified forest. Therefore, to meet the spirit and intent of Performance Measure 1.3, *Certified Organizations* should make reasonable efforts to separate *conversion sources* from *certified forest content* where the volume of *conversion sources* is more than a minimal amount (e.g., 1% of the harvested volume).

DEFORESTATION

Forests are essential to all life on earth, contributing to the maintenance of biodiversity, the sequestration of carbon and regulation of the earth's climate, the production of oxygen worldwide, the purification of fresh water, the production of a wide range of forest products, and the provision of a variety of spiritual, aesthetic, and recreational values. Forests and the benefits they provide to the world are immeasurable.

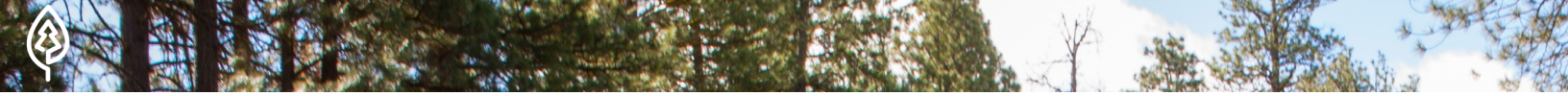
Permanent loss of forest cover is a global concern that society has been struggling to prevent for many years, with government, industries and NGOs working in many countries to detect, prevent, and de-incentivize forest cover loss, and incentivize forest conservation, restoration, and protection. Several market-based initiatives have been developed to reduce deforestation, and foremost among them is forest certification.

In North America, deforestation reduction efforts have largely been effective, with U.S. forestland area stabilized since roughly 1910-1920[2], and deforestation in Canada is reported as being less than ½ of 1% over the last decade[3], averaging 0.1 to 0.14%[4].

Credible forest certification programs like SFI are an important element in achieving no-deforestation. The SFI 2022 Forest Management Performance Measure 1.3 specifies SFI's commitment to no-deforestation, indicating that "Forest lands converted to other land uses shall not be certified to this SFI Standard." These restrictions are intended to apply to the conversion of forest land and recently deforested land that is capable of regenerating to forest but is preventing from doing so.

Note that the definition of deforestation does not apply to activities needed to achieve sustainable forest management which includes forest lands used for forest and wildlife management such as wildlife food plots or infrastructure such as forest roads, log processing areas, trails etc. This is consistent with Performance Measure 1.3, Indicator #1 in the *SFI 2022 Forest Management Standard*.

[2] USDA, USFS 2001, "U.S. Forest Facts and Historical Trends" FS-696-M
[3] NRCan 2022, "The State of Canada's Forests: Annual Report 2022." https://natural-resources.canada.ca/sites/nrcan/files/forest/sof2022/SoF_Annual2022_EN_access_(4).pdf
[4] UN FAO 2010, "State of the World's Forests"



The *SFI 2022 Fiber Sourcing Standard* and the *SFI 2022 Chain of Custody Standard* also require SFI-certified organizations to assess the risk of sourcing forest fiber from controversial sources including from conversion sources originating from regions experiencing forest area decline. If a SFI-certified organization determines they are sourcing from such sources, they will need to mitigate this risk of sourcing this forest fiber.

FOREST DEGRADATION

Recently, discussion points around forests have shifted from deforestation to the less well defined, "forest degradation." Forest degradation is a much more nuanced concept than "forest cover loss" and requires a more detailed review and analysis.

While there are well over 100 published definitions of "forest degradation"[5], the concept can be broadly defined when anthropogenic disturbance impacts a forest landscape to the point where it is unable to recover and deliver its expected range of ecosystem services.

Any list of ecosystem services provided by a forest would be lengthy but suffice it to say it would include the filtering and recharge of freshwater, flood control, carbon sequestration, oxygen production and air filtration, wood fiber production, biodiversity maintenance, provision of non-timber forest products, along with the provision of recreational, aesthetic, and spiritual values.

While metrics do not exist to readily measure all of these, there are indicators for many of them, and one must presume that the more of them that are maintained, the higher the likelihood of the others being maintained.

Further, many of these values are variable in space and time, and several are not coincidental in space; a regenerating fire scar or clear cut may have low aesthetic value for a few years but still have reasonably high carbon sequestration rates, especially after silvicultural treatment, and an old-growth stand may have low carbon sequestration, but high spiritual value. Further, the diversity of a young stand may be similar to an old stand, but have very different species composition, meaning that at a broader scale, both are required to maintain biodiversity. In short, many of these ecosystem values need to be considered over large spatial and temporal scales covering the entire life-cycle of the forested landscape.

Catastrophic large-scale disturbance such as fires, insect outbreaks and windthrow are not considered forest degradation, if the forest is restored, even though some may have root causes in anthropogenic climate change or past forest management decisions. Where these disturbances do occur, silvicultural activities such as salvage logging and regeneration activities can have a positive effect on forest health.

Some forest management activities may be considered to have lasting and direct positive anthropogenic effects. These may include positive impacts on biodiversity through restoration, assisted migration, or fire management, among others. Such activities would not be considered degradation, although they may differ from natural processes.

The SFI 2022 Forest Management Standard prevents forest degradation through five core areas which act to limit lasting and significant direct anthropogenic impacts to the structure, composition, or function of the forest.

Below are those areas and the key requirements of the SFI 2022 Forest Management Standard.

1. **PRODUCTIVITY** (e.g., growing stock, non-timber forest products)
    - Prompt forest regeneration after harvest: Performance Measure (PM) 2.1.
    - Maintenance of forest soils and stocks: PM 2.3.
2. **BIOLOGICAL DIVERSITY** (e.g., ecosystem state, forest fragmentation, species, species functional groups)
    - Protection and maintenance of native biodiversity: PM 4.1.
    - Conservation of species at risk and rare communities: PM 4.2.
    - Identification and protection of ecologically important sites: PM 4.3.
3. **DISTURBANCES** (e.g., alien invasive species, fire, water quantity)
    - Protection of water values: PM 3.2.
    - Avoidance of negative effects of biological agents: PM 2.4.
    - Limitations of forest degradation from wildfire and restore forest post-wildfire: PM 10.1.
4. **CARBON STORAGE**
    - Enhancement of opportunities for carbon capture on forests that are owned or managed: PM 9.2.
5. **PROTECTIVE FUNCTIONS** (e.g., soil erosion, water quality)
    - Maintenance of forest soils and stocks: PM 2.3.
    - Protection of water values: PM 3.2.

[5] Lund 2009, "What is a degraded forest?", White Paper on Forest Degradation Definitions Prepared for FAO.



Furthermore, SFI Performance Measure 1.2 lays out specific constraints on conversion of one forest cover type to another forest cover type, which in turn also prevents forest degradation. In particular, PM 1.2 precludes conversion of one forest cover type to another forest cover type in the absence of objectives for long-term outcomes that support maintaining native forest cover types and ecological function. This includes where conversion puts rare; ecologically important, native forest cover types at risk of becoming rare, or where conversion creates significant adverse impacts on Forests with Exceptional Conservation Value, old growth forests, or forests critical to threatened and endangered species.

Objective 2. Forest Health and Productivity

Prohibited Chemicals – *SFI 2022 Forest Management Standard* and *SFI Small Lands Group Certification Module*
The intent of Performance Measure 2.2 is to *minimize* the chemical use required to achieve management *objectives* while ensuring the *protection* of employees, the public, and the environment, including *wildlife* and *aquatic habitats.* To ensure this is achieved, the use of forest management pesticides must follow federal, state, and *local* laws; be applied according to the label instructions; and be implemented with proper equipment and training. Furthermore, pesticides, such as chlorinated hydrocarbons whose derivates remain biologically active beyond their intended use, as well as pesticides banned by international agreement, are prohibited for use by *Certified Organizations.* This last requirement is addressed by Indicators 2.2.5 and 2.2.6.

Indicator 2.2.5: The World Health Organization (WHO) type 1A and 1B pesticides shall be prohibited, except where no other viable alternative is available.

The *Certified Organization* is responsible for ensuring that chemicals from the WHO type 1A and 1B list of prohibited chemicals are not used in forest management. In the rare exception where a *Certified Organization* believes a variance on the prohibition on the use of a WHO type 1A and 1B chemical is warranted, the *Certified Organization* will submit its rationale to its *certification body* for approval. The *certification body* will then monitor the chemical usage approved under this variance, if this variance is approved. (WHO list of prohibited type 1A and 1B chemicals)

Indicator 2.2.6: Use of pesticides banned under the Stockholm Convention on Persistent Organic Pollutants (2001) shall be prohibited.

It is the responsibility of the *Certified Organization* to ensure that any chemical used in forest management complies with the ban on the use of chemicals under the Stockholm Convention on Persistent Organic Pollutants (2001). There is no option of a variance for the use of chemicals banned under the Stockholm Convention (2001). (List of chemicals banned under the Stockholm Convention on Persistent Organic Pollutants)

Small Lands Group Certification Module
The Module at 4.3.4.1 directs the landowner to evaluate alternatives to chemicals for the control of pests, pathogens and unwanted vegetation. Requirement 4.3.4.2 states that if used, chemicals shall be approved by the Environmental Protection Agency (EPA) in the United States or the Pest Management Regulatory Agency (PMRA) of Health Canada. They shall be applied, stored, and disposed of in accordance with EPA or PMRA approved labels and applied by persons who are trained, licensed (as required by their jurisdiction) and appropriately supervised. The landowner is responsible for ensuring that the planned use of a chemical is in compliance with the EPA / PMRA label requirements. Use of chemicals should be documented by the landowner or designated representative.

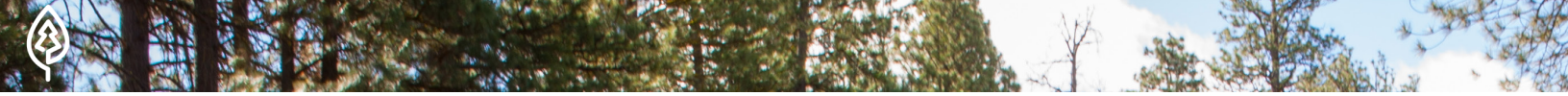
In the exceptional case where a landowner believes that a variance for the use of a WHO 1A and 1B chemical is required they should work with their *group manager* and submit the required rationale to the *certification body* as per the process above.

Soil Health
Performance Measure 2.3 now includes requirements to implement *practices* that *protect* and maintain forest *soil health*, in addition to soil *productivity*. This guidance suggests some potential *practices* that could be considered by *Certified Organizations* to maintain those values.

The way in which forests are managed can improve or degrade the quality or health of forest soils, which represent a complex ecosystem that includes living microorganisms, minerals, and organic matter. Together, this dynamic medium serves to regulate water, air, and nutrients, and thus interplays directly with health of the forest ecosystem. Healthy soils provide many functions that support plant growth, including nutrient cycling, biological control of plant pests, and regulation of water and air supply. These functions are influenced by the interrelated physical, chemical, and biological properties of soil, many of which are sensitive to soil management practices (primary source: PennState Extension—Managing Soil Health: Concepts and Practices).

Soil health is essential to forest *productivity,* and ecosystem function. Managing for *soil health* (improved soil function) is mostly a matter of maintaining suitable *habitat* for the diversity of organisms that depend on it. This can be accomplished by *minimizing* soil disturbance, ensuring plant diversity, maintaining vegetative cover, and avoiding serious alterations to soil chemistry.

Practices that limit soil disturbance, exposure, and/or chemical alteration are key to maintaining *soil health*. In many cases, such *practices* are consistent with *best management practices* for water quality (Performance Measure 3.1), *practices* that maintain water quantity (Performance Measure 3.2), and



practices relative to appropriate use of chemicals and pesticides (Performance Measure 2.2). However, additional *practices* to maintain *soil health* may also be considered by forest managers during potentially impactful activities such as road or *skid trail* construction, harvesting or yarding activities, herbicide or pesticide application, etc. To meet the intent of Performance Measure 2.3, forest managers should be able to offer some evidence of having considered whether additional measures may be appropriate to meet the particular circumstances of *site* conditions and activities, in order to *minimize* adverse impacts to *soil health.* As a practical matter, *Certified Organizations* will have to weigh *soil health* measures in the context of overall forest management objectives, recognizing that such measures need to be balanced with related objectives, ranging from water quality to the productive capacity of the *site* to maintaining a diversity of species on the managed area.

Objective 3. *Protection* and Maintenance of Water Resources

Water Quantity

The intent of Performance Measure 3.2.2 is to have a *program* to address the management and *protection* of water quantity during all phases of management. Protecting and maintaining water quantity benefits a range of water-related *ecosystem services* that are provided by forests, including flood regulation, *aquatic habitat,* water filtration and storage, and ensuring a good supply of healthy drinking water. Water quantity and quality are closely linked and *practices* already in place to *protect* and maintain water quality are important for protecting and maintaining water quantity. Developing, documenting, and implementing a water quantity *program* will help reinforce the important role *Certified Organizations* can play in positively or adversely affecting water quantity.

Water quantity is the timing and total yield of water from a watershed. It is affected by the hydrologic regime (e.g., precipitation amount, intensity, type (rain or snow), watershed characteristics (e.g., geology and soils, aspect and slope, vegetation), climate (e.g., evaporation), *forest health* (e.g., impacts of wildfire, disease, pests), and forest management activities (e.g., road building, harvest and *stand* management, *reforestation*). Water quantity varies naturally within and between years.

Managing for water quantity requires an understanding of the natural and man-made features and activities that may contribute to success. For example, considering other land use activities, as laid out in state or provincial watershed management plans, or recognizing the important role of *riparian areas* and *wetlands* toward protecting water quantity and quality can lead to forest management activities that manage effects to water quantity. This includes activities such as the timing of road/trail construction or harvesting activities, and the design of *wetland* crossings.

Water quantity is included in Objective 3 because watershed features and forest management activities may affect water quantity. Increased awareness and the implementation of *practices* affecting water quantity that are appropriate to the size and scale of the *Certified Organization* will help to maintain a natural range of variation, while avoiding or *minimizing* negative effects.

Forest Management Impacts on Water Quantity

Forest management, including road/trail development, forest harvest, and *reforestation* activities, can influence water quantity. The potential effects of these activities on water quantity are influenced by regional characteristics such as the amount of annual precipitation, slope, soils, and vegetation, and can vary locally depending on factors such as the proportion of a watershed harvested. For example, forest harvest in a watershed that has steep slopes with high annual precipitation has a greater potential for water yield impacts, when compared to a watershed with flat terrain and low annual precipitation.

Road/*skid trail* location and density can alter stream flow characteristics, resulting in higher peak flows from reduced water infiltration, blocked subsurface flow, and faster water delivery to streams via roadside ditches. Additionally, roads with water, *wetland*, and *riparian area* crossings can block surface flow if they are not designed and built to accommodate the natural flow characteristics.

Forest harvests can contribute to increased runoff. In general, runoff and stream flow increase in proportion to the amount of land harvested in a watershed.

Water quantity is also influenced by the position of the harvest within the watershed, the silvicultural system, and harvesting *practices* used. Harvesting operations that maximize the retention of forest floor vegetation and non-merchantable timber within the harvest area and *minimize* soil rutting and compaction help reduce surface runoff and the potential for increased stream flow following harvest. Prompt *reforestation* can *minimize* or mitigate the effects of forest harvest on water quantity.

Certified Organizations can reference state, provincial, or other relevant watershed plans and indicate how their forest management plans and activities may support those plan's objectives at a level appropriate to the size and scale of the *Certified Organization's* operations.

On public lands, *Certified Organizations* can indicate how their forest management plans and activities are consistent with established government agency requirements and guidelines, rate of harvest criteria, and other relevant watershed plans.
Components to be considered in a *program* could include mapping and identifying watershed features that contribute to water quantity (e.g., lakes, streams,



riparian areas, wetlands, vernal pools, beaver ponds), *practices* that maintain natural drainage patterns and *minimize* adverse effects of roads and *skid trails* on water yield, harvesting *practices* that *minimize* ground disturbance and retain non-merchantable timber or other vegetative cover, *practices* that *protect* and maintain soil *productivity* and *soil health*, and prompt *reforestation* where consistent with other *SFI 2022 Forest Management Standard* Objectives. The *program* can also include meeting or exceeding applicable *best management practices* for protecting and maintaining water quality in ways that contribute to protecting and maintaining water quantity.

Objective 4. *Conservation* of *Biological Diversity*

Conservation* of *Biological Diversity

The intent of Performance Measure 4.1 is to ensure that *Certified Organizations* use the *best scientific information* available to inform their action at multiple scales, for the purposes of *biodiversity conservation*. The individual indicators specify how this should be executed.

Several *indicators* suggest the use of *best scientific information.* This is intended to drive the utilization of credible sources to determine *landscape*-level priorities, facilitate assessments, and ultimately maximize the potential of the managed area to contribute to *landscape* level *biodiversity,* within the context of management objectives. Credible sources of science information include (but are not limited to) The Nature Conservancy ecoregional plans, NatureServe *biodiversity* metrics, and others.

Assessments conducted under Performance Measure 4.1, or any assessments consulted to meet the requirements of Performance Measure 4.1, should inform efforts to maintain or advance *biodiversity conservation* at multiple scales, including *landscape* scale. Indicator 4.1.3 references documentation of *biodiversity* at *landscape* and ownership levels, and incorporation of such documentation "to ensure the contribution of the managed area to the diversity of conditions that promote *biodiversity."* Such documentation is increasingly available through remote sensing sources, NatureServe *biodiversity* metrics (a project of SFI), The Nature Conservancy, Forest Inventory and Analysis (U.S.), and/or Canadian Forest Service. It may be possible for a *Certified Organization* to develop its own documentation of diversity at this scale, though credibility is likely enhanced by participating in a broader collaborative process.

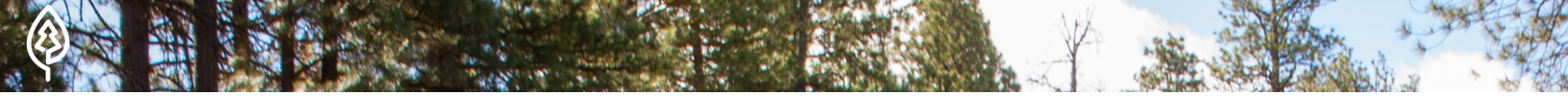
To achieve the intended goal of contributing to *biodiversity conservation* at *landscape* scale, managers will need to evaluate the required "documentation of *biodiversity* at *landscape* and ownership/tenure levels" in the context of their own management strategies and objectives, to determine whether there may be opportunities to fill gaps in their *biodiversity* outcomes, or to provide certain forest composition, age-classes, or conditions that may be lacking on the *landscape.* Indicator 4.1.4 cites "planning and priority-setting efforts" to help managers understand *conservation* priorities that have been independently and scientifically established, and "incorporating results" into their own planning. Indicator 4.1.4 provides a list of credible sources to aid in that process — these sources often intersect or dovetail with the *landscape biodiversity* assessments noted above.

One example of a credible prioritization effort at large scale is the "Forests for the Birds" project, collaboratively developed by SFI, the American Bird Conservancy, and multiple *Certified Organizations.* The results of this project should be considered appropriate to meet the intent of Indicator 4.1.4 by informing management strategies for the *conservation* of wide-ranging bird species.

A credible analysis of the contributions of a given managed area to *biodiversity conservation* may contain certain commonly understood forest metrics, such as stand age and size-class distribution. Certain imperiled species, such as the Red Cockaded Woodpecker (in the U.S. South), may have life cycle requirements related to tree size and distribution — in this case, larger diameter trees. Analysis and planning therefore could include an assessment of the range maps or *habitat* prediction models of species that may be dependent on such conditions. In this way, managers can develop strategies to enhance *habitat* for species with known requirements, and potentially elevate the contribution of their managed area toward *landscape* goals within the context of overall management objectives, using well-established metrics beyond just the *forest cover type.*

An advantage of using credible planning and priority-setting frameworks, such as those noted above, is that multiple elements and scales of *biodiversity* analysis are already inherent to these constructs. For example, the NatureServe *biodiversity* metrics approach (a project in collaboration with SFI and multiple *Certified Organizations*) includes metrics relative to "*landscape* condition" and "species assemblages," effectively addressing "connectivity" and "natural communities" respectively. The metric of "*Landscape* Spatial Pattern" effectively speaks to both "fragmentation" and "connectivity" as inherent attributes of *biodiversity* at multiple scales.

Analyses of *landscape* conditions and opportunities may be conducted collaboratively by multiple *Certified Organizations*, or in partnership with *SFI Implementation Committees* that operate across multiple certified ownerships. Forest managers can use these analyses to implement more efficient strategies for addressing *landscape* scale *conservation* or *biodiversity* assessments, improving outcomes while remaining true to the management objectives of individual *Certified Organizations.*



Forests with Exceptional Conservation Value

Objective 4 of the *SFI 2022 Forest Management Standard* extends the *biodiversity* requirements to *Forests with Exceptional Conservation Value* (FECV).

Indicator 4.2.2 requires that *Certified Organizations* with FECVs have a *program* to locate and *protect* known sites of flora and fauna associated with viable occurrences of *critically imperiled* and *imperiled* species and communities. An imperiled or critically imperiled plant, animal, or community is one that is globally rare or vulnerable to extinction. *Protection* plans may be developed independently by *Certified Organization* management, or in cooperation with other *stakeholders,* and may include the use of easements, *conservation* land sales, exchanges, or other *conservation* strategies.

Definition of *Forests with Exceptional Conservation Value*: *critically imperiled* (G1) and *imperiled* (G2) species and ecological communities.

Critically imperiled: A plant or animal or community, often referred to as G1, that is globally extremely rare or, because of some factor(s), especially vulnerable to extinction. Typically, five or fewer occurrences or populations remain, or very few individuals (<1,000), acres (<2,000 acres or 809 hectares), or linear miles (<10 miles or 16 kilometers) exist.

Imperiled: A plant or animal or community, often referred to as G2, that is globally rare or, because of some factor(s), is very vulnerable to extinction or elimination. Typically, six to 20 occurrences, or few remaining individuals (1,000 to 3,000), or acres (2,000 to 10,000 acres or 809 to 4047 hectares), or linear miles (10 to 50 miles or 16 to 80.5 kilometers) exist.

In the United States and Canada, *Certified Organizations* can use the NatureServe database to identify species and communities for *protection*. Learn more about NatureServe Conservation Status Assessments.

NatureServe Resources for Global and Occurrence Ranks

Identification and *protection* of *critically imperiled* and *imperiled* species and communities is a stepwise process. First, NatureServe determines the global rank, which reflects the rarity/imperilment of the species or community. Then it assesses the estimated viability, or probability of persistence, of particular occurrences of *critically imperiled* and *imperiled* species and communities. A viable species or community is one that is of sufficient quality to likely survive *long-term*. Clearly, little *conservation* benefit is gained unless protected occurrences have a good likelihood of *long-term* survival.

NatureServe inventory and *conservation* activities focus on locating, maintaining records on, and working with partners to conserve viable occurrences of *conservation* elements. NatureServe and its network of natural heritage programs rank the viability of element occurrences (either community or species) using standard methodologies to yield an element occurrence ranking. They develop and maintain a standard set of element occurrence rank specifications for each element, and then apply them against individual occurrences of the element.

The basic element occurrence ranks are:

- A: Excellent estimated viability
- B: Good estimated viability
- C: Fair estimated viability
- D: Poor estimated viability
- E: Verified extant (viability not assessed)
- H: Historical
- F: Failed to find
- X: Extirpated

The *SFI 2022 Forest Management Standard* requires that *Certified Organizations* have a "*program* to address *conservation* of *ecologically important* species and *natural communities*, including those that are locally rare."

Under the *SFI 2022 Forest Management Standard*, occurrences of *critically imperiled* and *imperiled* species and communities ranked as A and B are to be protected. C-ranked occurrences should be reviewed and addressed on a case-by-case basis. If they have greater potential to be viable (C+), they should be protected. If they have less potential for viability (C-), they should be managed at the *Certified Organization's* discretion.

Element occurrences with poor estimated viability (D) would not be protected under the *SFI 2022 Forest Management Standard*. A D rank might result because the acreage of a community or the population of a species is too small, the quality is very low, and/or the ecological processes required to maintain the occurrence are fundamentally altered and un-restorable. E-ranked occurrences (viability not assessed) should be presumed viable and protected until they are assessed, and then protected or not accordingly. Occurrences ranked F are not covered under the *SFI 2022 Forest Management Standard* since only known occurrences are included. Historical (H) and extirpated (X) occurrences are clearly nonviable, and no *protection* activity is warranted.

In determining the viability and potential to *protect* occurrences, *Certified Organizations* are encouraged to seek additional information on occurrence ranking from NatureServe and/or collaborate with qualified *conservation* experts.



Occurrence Quality

The following material provides additional information on the standards and methodologies employed by NatureServe in determining the quality or viability of occurrences.

For an ecological assessment, scientists and managers want to know if each occurrence is of sufficient quality, or feasibly restorable, before including it in management planning. With adequate information, ecologists evaluate and rate the quality of element occurrences using criteria grouped into three categories: size, condition, and *landscape* context. Characterizing these qualities provides the basis for assessing the stresses that occurrences may be experiencing (such as degradation or impairment) at a given site.

To assess the quality of element occurrences, ecologists must identify the key ecological factors (ecological processes, population abundance, disturbance regimes, composition, structure, etc.) that support them. Once these are identified, it is possible to describe their expected ranges of variation and assess whether the on-site factors are within those ranges or require significant effort to be maintained or restored to their desired status.

Key ecological factors vary by element type, but all are grouped into the three categories of size, condition, and *landscape* context. Each category is reviewed and ranked for each occurrence as A (excellent), B (good), C (fair), and D (poor). The break between C and D establishes a minimum quality threshold for occurrences. Occurrences ranked D are typically presumed to be beyond practical consideration for ecological restoration. In subsequent management planning, these ranks and underlying criteria aid in focusing *conservation* activities and measuring progress toward local *conservation* objectives.

The categories are defined as follows:

Size is a measure of the area or abundance of a *conservation* element's occurrence. It may simply be a measure of the occurrence's patch size or geographic coverage, or it may include an estimate of sub-population size or density. One aspect, the minimum dynamic area, is the area needed to ensure the survival or re-establishment of a population or community after a natural disturbance.

Condition is an integrated measure of the composition, structure, and biotic interactions that characterize an occurrence. This includes factors such as reproduction, age structure, biological composition (e.g., presence of *native* versus *invasive species*; presence of characteristic patch types), physical and spatial structure (e.g., canopy, understory, and groundcover; spatial distribution and juxtaposition of patch types or seral stages in an ecological system), and biotic interactions that directly involve the element (e.g., competition and disease).

***Landscape* context** measures two factors: the dominant environmental regimes and processes that establish and maintain the element occurrence, and connectivity. Dominant environmental regimes include hydrologic and water chemistry regimes (surface and groundwater), geomorphic processes, climatic regimes (temperature and precipitation), fire regimes, and natural disturbances. Connectivity includes such factors as species elements having access to *habitats* and resources needed for lifecycle completion, the fragmentation of ecological communities and systems, and the ability of any element occurrence to respond to environmental change through dispersal, migration, or re-colonization. The criteria for ranking ecological communities vary by type. In many instances, criteria are developed for ecological systems, then modified (mostly with size attributes) for application to occurrences of individual rare plant associations that may occur among the more broadly defined ecological system.

Guidance on Incorporation of Ecosystems in the *SFI 2022 Forest Management Standard*

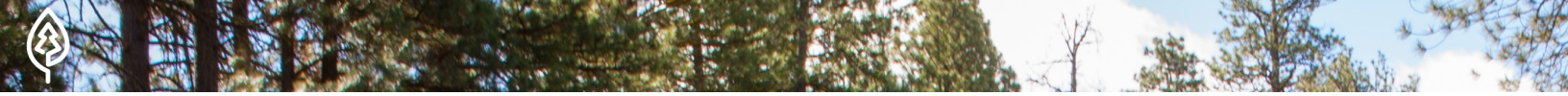
In the *SFI 2022 Forest Management Standard*, the term "ecosystem" or "ecosystems" is referenced in several different *objectives* and *indicators*, yet guidance on how the concept of ecosystems should be integrated into *sustainable forestry* is lacking. Ecosystems represent the integration of biotic (e.g., plants, animals) and abiotic (e.g., soils, water) elements of the environment. In the context of *sustainable forestry*, key components of ecosystems include: 1) forest composition; 2) forest structure; 3) connectivity across *landscapes*; and 4) how ecological processes like competition, nutrient cycling, or herbivory influence the sustainability of forest ecosystems.

Sustainable forestry is based on applying management at multiple scales, with most *Certified Organizations* operating at *stand* to *landscape* scales. The guidance provided is not a template for ecosystem management – it relies on the currently accepted *SFI* definitions and approved requirements of the *SFI 2022 Forest Management Standard* to demonstrate how ecosystems are an integral component of sustainable forest management. However, the guidance is consistent with the four key components of ecosystems listed above.

Integrating the Biotic and Abiotic Elements of the Environment

The foundation for *landscape* scale mapping and planning that incorporates ecosystems into sustainable forest management includes a combination of *forest cover type* and soils maps, supplemented by non-timber information like *non-forested wetlands* and *Forests with Exceptional Conservation Value*. *Certified Organizations* are required to have a *land classification* system (Indicator 1.1.1c), soils inventory and maps, where available (Indicator 1.1.1e, Performance Measure 2.3), up-to-date maps or a *geographic information system* (Indicator 1.1.1g), and information on non-timber resources (Indicator 1.1.1i, Performance Measure 3.2, Indicators 4.1.6, 4.2.2, 4.2.3) as part of their forest planning processes. *Certified Organizations* also are required to integrate biotic and abiotic elements in forest conversion decisions (Indicator 1.2.2), forest regeneration (Performance Measure 2.1), and during implementation of forest *protection* activities (Performance Measure 2.4). Additionally, the *conservation* of *biological diversity* inherently integrates the biotic and abiotic elements of the environment through the accounting of *wildlife habitats* (Indicators 4.1.1, 4.1.2, 4.1.5), ecological community types (Indicators 4.1.1, 4.2.2, Performance Measure 4.3), *biological diversity* (Indicator 4.1.1), and *Forests with Exceptional Conservation Value* (Performance Measures 4.2 and 4.4).

Forest Composition



Forest composition is closely linked to abiotic factors like soil, microclimate, and moisture availability. Forest managers tend to think of composition at three levels: 1) *forest health* and *productivity* (e.g., high growth rates, drought resistant, disease resistance) of planting or regeneration stock (the "genetic" level"); 2) *stand* level considerations, including tree species composition, management of competing vegetation, and structural retention practices (Indicator 4.1.2); and 3) *landscape* scale considerations (across ownerships or across multiple ownerships – Indicators 4.1.3, 4.1.4) in terms of *forest cover types* or other land cover classes.

Forest Structure

Within forest *stands*, structure refers to several different characteristics, including the physical arrangement of trees, snags, and down woody debris. Within a *stand* and depending on the situation, *Certified Organizations* have criteria for the desired forest composition (Performance Measure 2.1), tree stocking (Indicator 2.1.2), size distributions (Indicators 1.1.1a, 1.1.1h), retention of *habitat* elements (Indicator 4.1.2), *protection* of *ecologically important sites* (Indicators 4.1.5, 4.1.6, Performance Measure 4.3), and p*rotection* of *special sites* (Objective 6). At larger scales, such as with multiple forest *stands,* forest structure is often based on differences in size/density or stand age (in even-aged management systems), as portrayed by a *land classification* system (Indicator 4.1.3). This *land classification* system often includes information on *riparian zones* and *wetlands* (Performance Measure 3.2). At even larger scales (e.g., *landscapes*), forest managers tend to portray the diversity of size, density, or age classes in management blocks, across entire ownerships, or in some instances across multiple ownerships (Indicator 4.1.3).

Connectivity

Integration of connectivity into sustainable forest management occurs through *protection* of *wetlands* and *riparian zones* (Performance Measure 3.2), provision of diverse *forest cover types* and structures (Indicators 4.1.2, 4.1.3), and *protection* of other *ecologically important* sites (Indicators 4.1.5, 4.1.6, Performance Measure 4.3). Connectivity can be assessed at multiple scales and can be thought of as "structural" or "functional." Structural connectivity refers to *forest cover types* or *habitats* that are geographically adjacent , facilitating the ability of genes and species to move through a managed forest *landscape.* Functional connectivity refers to *forest cover types* or *habitats* that are not physically adjacent but are arranged in a *landscape* such that genes and species can move. The *SFI 2022 Forest Management Standard* contains *indicators* that both directly and indirectly influence connectivity via requirements for prompt forest *reforestation* (Performance Measure 2.1), limitations on clearcut harvest area sizes (Indicator 5.2.1), limitations on forest conversion (Performance Measures 1.2, 1.3), the *protection* of *wetlands* and *riparian zones* (Performance Measure 3.2), non-forested areas, and other ecological sites (Indicators 4.1.5, 4.1.6, Performance Measure 4.3), and through aesthetic considerations (Objective 5). In certain situations, some *Certified Organizations* may explicitly identify species of *conservation* concern that warrant direct assessments of connectivity (Performance Measure 4.2).

Ecological Processes

Ecological processes help sustain forest composition, structure, and connectivity. The *SFI 2022 Forest Management Standard* explicitly recognizes numerous important ecological processes that are important to *sustainable forestry,* including *reforestation* (Performance Measure 2.1), *forest health* (Performance Measure 2.4), hydrological function (Objective 3), and consideration of the role of natural disturbances (Indicator 4.1.8). In many certified forest *landscapes*, the ecological processes that sustain composition and structure are influenced by active or passive management activities including harvesting, *reforestation*, and maintenance or enhancement of *biological diversity* and *wildlife habitat.*

Wildlife Habitat* Diversity, *Ecologically Important Species*, and *Invasive Species

Objective 4 in the *SFI 2022 Forest Management Standard* includes *performance measures* and *indicators* for *conservation* of *biological diversity*. Additional information is provided here for *wildlife habitat* diversity and *invasive species.*

***Wildlife Habitat* Diversity**

Performance Measure 4.1 in the *SFI 2022 Forest Management Standard* includes *programs* to incorporate *conservation* of *biological diversity* and recognize the value of a diversity of *habitats* to support *aquatic species* and *wildlife*. Early successional forest stages, for example, are particularly lacking in certain regions of the U.S. and Canada, and managing for them can aid in preventing the decline of species dependent on them (e.g., ruffed grouse). Historically, fires and other natural disturbances created forest openings and the types of *habitat* needed by these early succession forest dependent species. As forests across the *landscape* mature, this type of *habitat* declines in abundance. However, it can easily be created by the proper selection of harvesting methods, including clearcutting and the use of prescribed fire.

***Ecologically Important* Species**

Indicator 4.1.5 requires a *program* to address *conservation* of *ecologically important* species and *natural communities.* Such *ecologically important* species or communities could include those that are locally rare in the area of operation, at the discretion of the *Certified Organization.* "Locally rare" is a term intended to give managers flexibility in interpretation, though managers are encouraged to consult objective sources (such as NatureServe G and S rank systems) to achieve consistent application of the concept. Specifically, "locally rare" could include species with a high "S-Rank," indicating relative rarity within that jurisdictional area (e.g., state or province), or it could mean species that are at the fringes of their range, and thus relatively uncommon to that locality.

The intent of Indicator 4.1.5 is for *Certified Organizations* to; (1) evaluate *conservation* opportunities relative to species or communities that are not officially designated for *protection* by state, provincial, or federal law, or ranked G1 or G2 (and thus addressed through *Forests with Exceptional Conservation Value*); (2) identify *ecologically important* species for management attention; and (3) incorporate *conservation* actions for the selected species into management.

The term "*ecologically important* species" replaces the former term "viable occurrences of significant species of concern." *Ecologically important* is a defined



term, which can be applied to either species or *natural communities* (which is also now a defined term).

The intent is for *conservation* to occur on *Certified Organization* lands. Although *Certified Organizations* are not required to do surveys to determine known occurrences, they should refer to available sources to identify the presence of *ecologically important* species or *natural communities. Certified Organizations* should look to the definition of *ecologically important* to help determine which species or *natural communities* should be considered under this indicator, in addition to considering their rarity, regional importance, and sensitivity to, or reliance upon, forest management activities. Resources for determining rarity may include NatureServe G or S ranks, the International Union for Conservation of Nature Red List, and federal, provincial, or state lists. Resources for determining regional importance may include The Nature Conservancy ecoregional plans, State Wildlife Action Plans, or other credible *conservation* plans. Information regarding known occurrences (i.e., presence) can be drawn from NatureServe, state/provincial natural resource agencies, Conservation Data Centers, or other regional mapping efforts or assessments.

It should be noted that *non-forested wetlands*, bogs, fens, marshes, and *vernal pools* (cited for identification and *protection* in Indicator 4.1.6) are characterized by distinct *natural communities* and can thus be identified using the methods and sources noted above.

Ecologically important species or *natural communities* could include species that that are ranked G3 or S1-S3 by NatureServe, at the discretion of the forest manager, and may be based on potential opportunities for the managed area to aid in the recovery or perpetuation of that species (note that G1-G2 species are already afforded *protection* by definition and related requirements under *Forests with Exceptional Conservation Value*). For example, the Gopher tortoise (Goperhus polyphemus), ranked G3, is considered an *ecologically important* species across much of its range. Many forest managers in the Gopher tortoise's range in the U.S. South include specific attention to the needs of that species in management planning.

Lists of "special concern species," "rare species," "species of greatest conservation need," and other similarly described lists have been published by state, provincial, and federal agencies, and others. This indicator is not intended to imply that any particular species on such lists should require management or *protection*, but that such lists should serve as a resource for the identification of *ecologically important* species or *natural communities*.

Ensuring that *programs* are in place for *ecologically important* species and *natural communities* provides forest managers with opportunities to address vulnerable, and locally rare, species in multiple ways. *Certified Organizations* are encouraged to work closely with non-governmental organizations, and state, provincial, and federal agencies, to advance *conservation* efforts collaboratively, and to mitigate the need for formal listing and regulatory protections under the Endangered Species Act (US), or the Species at Risk Act (Canada).

Invasive Species
Indicator 4.1.7 addresses *invasive species.*

Certified Organizations should become knowledgeable about *invasive species* within their area of operation. The expectation is that they will participate in cooperative efforts by others (e.g., government agencies or non-government environmental organizations) and work proactively within their own *programs* (e.g., through erosion control or seed selection for *wildlife* plots) to limit the introduction, impact, and spread of *invasive species.* Indicator 4.1.7 does not require a *Certified Organization* to eliminate *invasive species* on their land. In some places, *invasive species* are well established and eradication by the *Certified Organizations* is unrealistic.

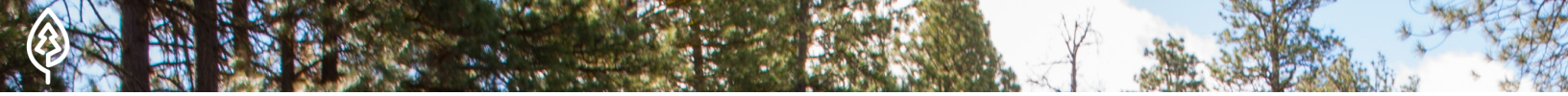
Experts in this area believe the most effective means of addressing *invasive species* include:

- awareness building,
- monitoring,
- preventing new introductions, and
- eliminating new occurrences.

Certified Organizations should emphasize these as priorities in their *programs*. Forest practices that reduce the abundance of *invasive species* are preferred if they can be addressed within the context of the *Certified Organization's* overall management objectives.

Application of Research to Forest Management Decisions
The intent of Performance Measure 4.4 is to ensure that the substantial investment of *Certified Organizations* toward research is resulting in advancements in the application of practices toward *biodiversity conservation. Certified Organizations* can participate in advancing this knowledge in multiple ways. Performance Measure 4.4 suggests the need for acquiring *biodiversity*-related data through inventory processes, mapping, and interaction with natural heritage programs, data centers, or NatureServe. The implication is that *Certified Organizations* can both utilize such data and also participate in the advancement of general understanding, by contributing their own data to be widely shared, where feasible and appropriate. This could include, for example, sharing element occurrence data with NatureServe data centers to augment understanding of species' distribution. Participation could further include direct engagement in collaborative projects with non-governmental organizations, academic partners, and other *Certified Organizations* to increase understanding and advance common practice. Modes of implementation could include (but are not limited to):

- collaborative research participation, and sharing results, through *SFI Implementation Committee* engagement;
- participation in research projects with external partners, through direct engagement, *SFI* Conservation Grant projects, multilateral partnerships, etc.; or



- sharing of proprietary research results, as appropriate, to support the elevation of forest practices across the sector.

Objective 8. Recognize and Respect Indigenous Peoples' Rights

Indigenous Title

SFI 2022 Forest Management Standard Performance Measure 8.1 requires that *Certified Organizations* recognize and respect *Indigenous Peoples'* rights. Additionally, Objective 11 requires *Certified Organizations* to comply with all applicable federal and provincial/state laws and regulations. This includes applicable laws and regulations pertaining to engagement, communication, and/or consultation with *Indigenous Peoples,* as they exist within the *Certified Organization's* province(s) or state(s) of operation and apply to the *Certified Organization's* private forest lands or public tenures.

Further to legal compliance under Objective 11, *Certified Organizations* should take additional measures to demonstrate recognition and respect for *Indigenous Peoples'* rights and traditional forest-related knowledge. Such measures are intended to help build a strong foundation for meaningful relationship-building and collaboration between *Certified Organizations* and *Indigenous Peoples*, whose rights may be affected by the *Certified Organization's* forest management activities.

Demonstrating an understanding and recognition of established frameworks of legal, customary, and traditional rights is one such measure that can further support relationship building processes. Within their Objective 8 *program* (Indicator 8.1.1), *Certified Organizations* should include actions that demonstrate their efforts to understand and recognize established frameworks of legal, customary, and traditional rights as they pertain to their private forest lands or public tenures which may be of importance to *Indigenous Peoples* whose rights may be affected by the *Certified Organization's* forest management activities.

Reference to resources such as (i) the UN Declaration on the Rights of *Indigenous Peoples*, (ii) federal, provincial, and state laws and regulations, and (iii) relevant treaties, agreements, or other constructive arrangements among governments and *Indigenous Peoples* can be used to demonstrate efforts to recognize such frameworks. In all cases, *Certified Organizations* shall respect the processes, laws, and direction received from relevant government agencies derived through the nation-to-nation relationships where the certification takes place.

Certified Organizations are encouraged to investigate opportunities to implement aspects of such frameworks that fall outside of those required under Objective 11 and are identified as being of importance to affected *Indigenous Peoples,* as a means of further supporting meaningful relationship-building processes.

Communications with Indigenous Communities

The *2022 Forest Management Standard* Indicator 8.2.1 d. requires a *Certified Organization* with public forest tenures to communicate with *Indigenous Peoples* whose rights may be affected by forest management *practices* through processes that respect their representative institutions and cultural preferences. At a minimum, *Certified Organizations* with forest management responsibilities on public lands must fulfill their legal requirements arising from relevant federal, state, or provincial regulations. Many jurisdictions have existing legislation or regulations that guide communications with *Indigenous Peoples* in the context of sustainable forest management. Areas of consideration and levels of prescriptiveness vary by jurisdiction but may include:

i. timing of communications;
ii. subject matter of communications;
iii. delivery method(s) of communications;
iv. timelines for responses to communications;
v. necessary recipients of communications; and,
vi. ability to modify prescribed communication procedures to accommodate *local* preferences.

Early, often, and ongoing communication with *Indigenous Peoples* can enhance relationship-building efforts, promote trust and collaboration, and enable all parties to proactively address potentially contentious issues before they become sources of disruptive conflict. As such, *Certified Organizations* are encouraged to implement communications programs that build on regulated requirements and are aimed at supporting open, respectful, and locally relevant communication with affected *Indigenous Peoples.*

Certified Organizations are encouraged to identify communications protocols that have been previously developed and endorsed by affected Indigenous communities and integrate them into their broader communications programs. These protocols can often be obtained by checking a nation, tribe, or community's website; calling the nation, tribe, or community's administrative office; or, contacting relevant federal, provincial, or state authorities who have responsibilities to communicate with *Indigenous Peoples.* Many Indigenous communities will appoint an individual or department to lead external communication, consultation, and engagement activities who can advise *Certified Organizations* on appropriate protocols.

Where community-endorsed communications protocol does not already exist and/or where regulated requirements or existing communications protocols do not contain specific provisions related to *performance measures* or *indicators* contained in Objective 8, *Certified Organizations* are encouraged to co-develop customized communications protocols with affected Indigenous communities. Such protocols should seek to build upon relevant legal or regulatory requirements, while considering the unique interests, needs, preferences, and capacity of each party. In addition to considering items i. through vi. above, customized communications protocols could contain agreed-upon provisions pertaining to:



- adequate communications timelines that permit thorough review of documents and meaningful participation in decision-making processes by all parties;
- opportunities to participate in information sharing events such as company-hosted field tours or third-party audits (interviews and/or field audit);
- the presentation of relevant documents in an accessible, non-technical format that can be easily understood by individuals from a non-forestry background;
- the documentation, storage, application, and dissemination of (a) *Indigenous Peoples' traditional forest-related knowledge*, (b) information pertaining to sites of spiritual, historical, or cultural importance, (c) use of *non-timber forest products* of value, and (d) other forms of *Indigenous Peoples'* intellectual property as deemed important to the affected Indigenous community; and,
- the resolution of disagreements with respect to forest management decision making.

Prior to the establishment of a customized communications protocol that identifies necessary recipients of and delivery methods for communications, *Certified Organizations* should attempt to establish genuine, good faith communications with affected Indigenous communities by employing a variety of delivery methods (e.g., mail, electronic, telephone, in-person), as required, directed to appropriate contact persons or departments identified through the use of available resources and information. *Certified Organizations* are encouraged to document all communications with affected Indigenous communities pertaining to the fulfillment of Objective 8 requirements.

Communications protocols should be periodically reviewed and updated to ensure they remain relevant and meaningful to all parties, considering evolving local circumstances and forest management priorities. Appropriate training should be provided to personnel and contractors so that they are competent to fulfill both their legal responsibilities with respect to communications with *Indigenous Peoples* as well as their responsibilities arising from co-developed communications protocols.

Appropriate Training of *Certified Organization* Personnel and Contractors

Indicator 8.1.1.c directs *Certified Organizations* to provide appropriate training to personnel and contractors so that the *Certified Organization* is competent to fulfill their responsibilities under Objective 8 of the *SFI 2022 Forest Management Standard*.

In designing and delivering their training programs, *Certified Organization* should endeavor to ensure that content is locally or regionally relevant and takes into account the rights, histories, and cultural backgrounds of *Indigenous Peoples* whose rights may be affected by the *Certified Organization's* forest management activities. Such approaches are supported by the United Nations Declaration on the Rights of *Indigenous Peoples* (UNDRIP), which recognizes that, "the situation of *Indigenous Peoples* varies from region to region and from country to country and that the significance of national and regional particularities and various historical and cultural backgrounds should be taken into consideration" within processes that seek to uphold *Indigenous Peoples'* rights and foster positive relationship building.

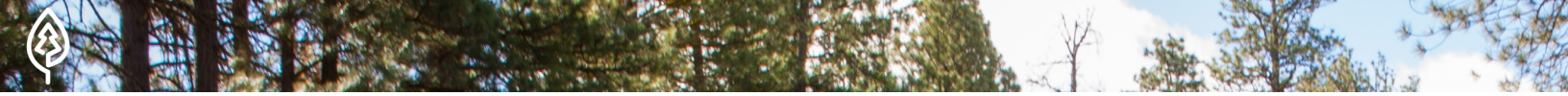
Certified Organizations are therefore encouraged to both engage with established Indigenous training providers who have professional experience in the *Certified Organization's* operating area(s) and co-develop training programs in collaboration with *Indigenous Peoples* whose rights may be affected by the *Certified Organization's* forest management activities, where interest from those Indigenous rights-holders exists, to enable due consideration of the *Certified Organization's* unique operating context(s), including:

- its organizational structure and geographic footprint,
- its workforce and contractor network composition,
- opportunities to integrate or phase Objective 8 training into existing training programs for personnel and contractors,
- the unique histories, rights, and cultures of rights-holding *Indigenous Peoples* within their operating area(s) as they pertain to various *performance measures* and *indicators* associated with Objective 8 of the *SFI 2022 Forest Management Standard*,
- opportunities to develop training programs, or specific components of training programs, on a regional basis, such as through collaborations involving tribal councils, provincial territorial organizations, treaty organizations, and/or *SFI Implementation Committees,*
- the unique ways in which different professional roles or departments within the *Certified Organization* may intersect with the below-listed training topics.

For *Certified Organizations* with forest management responsibilities on public lands, training topics may include, but not be limited to, locally or regionally relevant information pertaining to:

i. Recognizing established frameworks of legal and customary rights, such as those outlined in UNDRIP; federal, provincial, and state laws and regulations; and treaties, agreements or other constructive arrangements among governments and Indigenous Peoples
ii. Understanding and respect for *traditional forest-related knowledge*
iii. Identifying and protecting spiritually, historically, and *culturally important* sites
iv. Addressing the use of *non-timber forest products* of value
v. Communicating through processes that respect *Indigenous Peoples*' representative institutions, using appropriate protocols
vi. Providing opportunities to review forest management plans and forest management practices

For *Certified Organizations* with forest management responsibilities on private lands, training topics may include, but not be limited to, locally or regionally relevant information pertaining to:



i. Recognizing established frameworks of legal and customary rights, such as those outlined in UNDRIP; federal, provincial, and state laws and regulations; and treaties, agreements or other constructive arrangements among governments and *Indigenous Peoples*
ii. Understanding and respect for *traditional forest-related knowledge*

Objective 9. *Climate Smart Forestry*

Atmospheric carbon continues to influence the effects of *climate change* on forest ecosystems and global climate cycles. Carbon sequestered in and released from forests has been identified as having a significant effect on atmospheric carbon levels. As such, understanding the benefits of carbon sequestration and storage in managed forests is an important element of sustainable forest management.

Natural disturbances such as fire and insect outbreaks have occurred throughout history in North American forests. However, recent evidence suggests that these events are becoming more frequent and severe due to *climate change*. Increases in the extent and severity of disturbances have shifted large areas of forests towards significant sources of emissions to atmospheric carbon pools through catastrophic fires and increased mortality, compounding the *climate change* effects of anthropogenic carbon emissions.

Forest management decisions need to take into consideration a suite of objectives that are appropriately responsive to the unprecedented changes to our forests resulting from *climate change*. These include managing for wildfire risk, maintaining landscape diversity for wildlife and recreation, maintaining growing forests that remove carbon from the atmosphere, and providing a sustainable resource for rural communities that rely on forest-based economies. We know that when we actively manage our forested landscapes for wood products, we can maintain forests as a carbon sink.[6,7] Understanding carbon dynamics in managed forests means *Certified Organizations* can make informed decisions to ensure that their objectives, strategies, and practices are both responsive and responsible with respect to *climate change* impacts.

In 2019, the Michigan State University Forest Carbon and Climate Program (FCCP) undertook a preliminary study which included a qualitative analysis of SFI documents, interviews with key experts, and observations of SFI training activities. The analysis found that although the *SFI 2022 Forest Management Standard* did not explicitly require performance relative to carbon or climate *mitigation* to be performed, "climate smart forestry"[8] concepts, management *practices*, and other best *practices* were prevalent throughout the standards, training materials, and *Certified Organization* interviews. Beyond those valued *practices*, which remain as important elements of the *SFI 2022 Forest Management Standard*, the Climate Smart Forestry *objective* is the next logical step in providing the assurance that such *practices* are undertaken, audited, and tracked as a proof point of forest sustainability.

The Climate Smart Forestry *objective* ensures that *Certified Organizations* are aware of the effects of their management on forest carbon dynamics as they relate to climate, and that such considerations are taken into account in business and forest management planning. However, the Climate Smart Forestry *objective* is not a carbon quantification protocol, nor does it require *Certified Organizations* to additionally sequester carbon in managed forests. Further, the Climate Smart Forestry *objective* does not require quantification or verification of carbon pools, as might be required by voluntary carbon markets or offset programs such as Carbonzero, the Verified Carbon Standard (VCS), or Carbonfund.org, but it may be a useful framework for those participating in such programs.

The requirements of the Climate Smart Forestry *objective* and the *programs* and management activities designed to meet its *performance measures* and *indicators* should, as much as possible, be based the *best scientific information.* SFI recognizes that there is uncertainty in all science, and *climate change* is a uniquely challenging phenomenon. Even with the *best scientific information,* the outcomes of *climate change* on forests may not be 100% predictable; nonetheless, we strive to have the best preparation possible, and to help reduce uncertainty, rather than avoid it.

It is important to note that the scope and scale at which *Certified Organizations* address these objectives will depend on their capacity to conduct analysis and their purposes vis-a-vis the needs of their customers. *Organizations* certified to the *SFI 2022 Forest Management Standard* may choose to conduct a more complex and area-specific inventory of greenhouse gas emissions and harvest removals or consult regional averages for greenhouse gas emissions and harvest removal estimates, for the purposes of developing an *adaptation* strategy and *mitigation* plans.

Due to the overarching regionalized effects of *climate change*, it may be useful and feasible for *Certified Organizations* to coordinate efforts at addressing *climate change* risks to forests (Performance Measure 9.1), or to identify and address opportunities to mitigate *climate change* with their state or regional *SFI Implementation Committees.* While not a requirement, such coordinated efforts may be an effective means of assuring consistency for practice and information availability.

The intent of the Climate Smart Forestry *objective* is to require *Certified Organizations* to consider as many managed forests greenhouse gas and carbon sources and sinks as is reasonably practicable, recognizing that some of them may be outside of their influence. SFI also acknowledges *Certified*

[6] Kurz W.A., Smyth, C. and Lemprière, T. (2016) Climate change mitigation through forest sector activities: principles, potential and priorities. Unasylva 246 (67), 61-67.
[7] Smyth, C.E., Stinson, G., Neilson, E., Lempriere, T.C., Rampley, G.J. and Kurz, W.A. (2014). Quantifying the biophysical climate change mitigation potential of Canada's forest sector. Biogeosciences 11, 3515-3529.
[8] See FAO 2019 for more information on Climate smart Forestry



Organizations will continuously improve their forest management activities to address *climate change adaptation* and *mitigation* measures over time as more data and information become available. The following guidance is intended to provide options that *Certified Organizations* may use to meet Objective 9 in the *SFI 2022 Forest Management Standard* and is not normative.

Performance Measure 9.1 — Identifying Climate Change Risks and Vulnerabilities

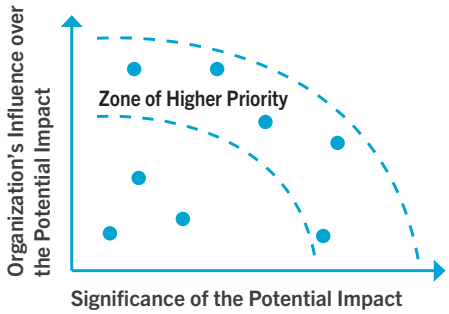
Risks and vulnerabilities that result from *climate change* impacts on managed forests and the values within them will vary from region to region and across forest *stand* types and ages. This variation may include differences in effects on tree mortality, forest infestation, wildfire, and species distributions[9]. Identifying risks and vulnerabilities using the best scientific and economic information available is important to test the relevance or efficacy of a *Certified Organization's* existing risk management strategies under *climate change*, and to help identify whether new or additional strategies may be warranted. Standard risk identification and assessment approaches exist that can be directly used in a forest management context (Edwards et al 2015[10]) or can be adapted from similar approaches (CoastAdapt 2020[11]).

Indicator 9.1.1 — Prioritization of Risks and Vulnerabilities

Risk or vulnerability assessment is the process of assessing the probabilities and consequences of potential risk events. Indicator 9.1.1 requires *Certified Organizations* to conduct an assessment to prioritize identified *climate change* risks. Management efforts can then be better allocated to reduce risks to forests and the values within them, as per Objectives 2 (Forest Health and Productivity), 3 (*Protection* and Maintenance of Water Resources), 4 (Conservation of *Biological Diversity*), 5 (Management of Visual Quality and Recreation Benefits) and 6 (*Protection* of *Special Sites*).

Determining the climate-related material risks to a *Certified Organization* may involve identifying, refining, and assessing numerous potential environmental, social, and economic climate-related risks and vulnerabilities that could affect the *Certified Organization* or its *stakeholders.* These can then be distilled into a short list of topics that inform forest management strategies, targets, operations, and reporting[12]. Determining which risks and vulnerabilities are the highest priority may involve considering the nature of the impacts, including whether they are positive or negative, actual or potential, direct or indirect, short-term or *long-term*, or intended or unintended. A further consideration may be given to the significance of the potential impact on the *Certified Organization*, its operations, and *stakeholders*, and the level to which the impact can be influenced (Figure 1), and the risks over the *long-term* planning horizon for the forest being assessed.

Figure 1: Prioritization of climate-related risks to a *Certified Organization* based on the significance of the potential impact and the *organization's* ability to influence the risks.



Indicators 9.1.2 and 9.1.3 — Identifying *Adaptation* Strategies

Indicator 9.1.2 requires a *Certified Organization* to develop an *adaptation* plan to address priority *climate change* risks, and in so doing help identify and address opportunities to enhance ecosystem resilience for the forests they own or manage (Indicator 9.2.2). Indicator 9.1.3 then addresses how these *adaptation* plans should be reviewed in the context of Regional *Climate Change Adaptation* Strategies (RCCAS), where they exist. RCCAS are useful tools that help governments and organizations conduct operations that are aligned with overall *adaptation* efforts that are sensitive to regionally specific *climate change* risks. RCCAS have been developed for several jurisdictions and municipalities, such as those found in Table 1, and are readily available for downloading.

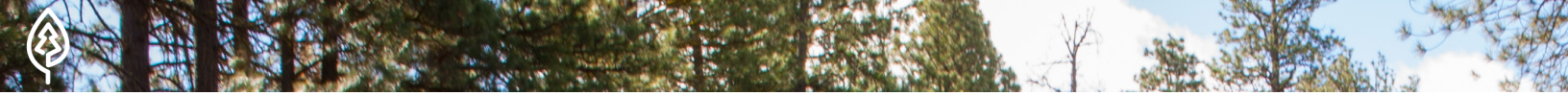
Adaptation strategies may involve considering potential adjustments to account for altered timing of spring thaws and shorter winters, assisted tree migration through selective planting, and consideration of planting the right tree species in the right place, at the right time, to name a few. *Certified Organizations* may further wish to assess the impact of climate risk across the range of programs they develop under the *SFI 2022 Forest Management Standard*, including those

[9] Romero-Lankao et al 2014, Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.

[10] Climate change and sustainable forest management in Canada: a guidebook for assessing vulnerability and mainstreaming adaptation into decision making / J.E. Edwards, C. Pearce, A.E. Ogden, and T.B. Williamson.

[11] Plunket, J., Stanzel, K., Weber, R. and S. Lerberg. 2015. Climate Change Vulnerability Assessment Tool for Coastal Habitats: Guidance Documentation. Available: http://www.ccvatch.com

[12] KPMG 2014, Sustainable Insight: The essentials of materiality assessment.



related to *wildlife* and *biodiversity*, and *special sites,* through monitoring and data collection. For example, *climate change* may result in shifts in *habitat* for *threatened and endangered* species or increase the potential for catastrophic wildfire or insect infestation on *special sites*. It may be useful to identify how these *programs* might need to evolve to address identified climate risks.

Table 1: A non-exhaustive list of Adaptation Tools and Strategies by relevant jurisdiction, with title and source URLs for locating the documents (accessed April 26, 2020).

Adapting forest *practices* to address the potential risks identified in Performance Measure 9.1 includes understanding the range of variability in future climate scenarios and adapting management and silvicultural *practices* to those potentially altered conditions to sustain a thriving forest with all of its inherent values.

Jurisdiction	Title
California	California Adaptation Planning Guide: planning for adaptive communities
New Hampshire	Climate Change Resilience Plan: resilience and preparedness in state government project
U.S. Southeast	UE EPA Region 4 Adaptation Implementation Plan
U.S.	Climate Hubs – U.S. Department of Agriculture
U.S.	USFS Climate Change Resource Center
U.S.	Climate Change and Forestry Handbook (Manomet)
U.S.	Forest Adaptation Resources: Climate Change Tools and Approaches for Land Managers, 2nd edition (USDA)
British Columbia	Strategic Climate Risk Assessment Framework for British Columbia
Ontario	Climate Ready: Ontario's adaptation strategy and action plan
Canada	Adapting Sustainable Forest Management to Climate Change: preparing for the future
Canada	Forestry Adaptation Community of Practice (FACoP)

Larger forest landowners and managers may choose to conduct a more holistic *adaptation* plan and incorporate a broader range of options or may examine a narrower range of feasible options for the purposes of developing an *adaptation* strategy, depending on their capacity or market purposes.

Indicator 9.2.1 — Identifying Options for Addressing Stored Carbon and Greenhouse Gas Emissions

Resulting activities from this *indicator* may range from assessing the impact of the forest management plan on overall carbon balance to assessing the impact of different silvicultural and operational *practices* on live tree carbon to support the maintenance of forest benefits, potentially including target-setting for reduced net emissions or increased sequestration. Some examples may include:

- consideration of equipment age, operability and maintenance (Scope 1 emissions);
- selecting the correct equipment size (most efficient machine for the job);
- finding alternative uses for logging waste to manage for fuel abatement and minimizing open burning; and/or
- modifications to site preparation techniques.

A recent study by Auburn University's College of Forestry, Wildlife and Environment Climate Smart Forestry in the Southern United States shows how traditional practices such as genetic improvement, site preparation, weed control, andfertilization can aid with achieving increased forest carbon storage.

Indicator 9.2.3 — Quantifying GHG Emissions in Forest Management Operations

Understanding the overall impact of forest operations on forest carbon balance can encompass analysis of carbon pools and fluxes, or the identification and management of the most significant fluxes over which *Certified Organizations* have an influence. Forest landowners and managers may choose to conduct a more comprehensive inventory of greenhouse gas emissions, or they may rely on regional averages for estimating emissions and informing their forest management operations, depending on their capacity or market purposes.

Models and tools to quantify local, regional, and national level forest carbon storage, which may assist in addressing carbon storage or emission calculations, are available from a variety of sources. The USDA Forest Service website maintains a list of tools for carbon inventory, management, and reporting here. Some freely available data sources include the USFS Forest Inventory and Analysis (FIA) National Program, as well as resources available from Natural Resource

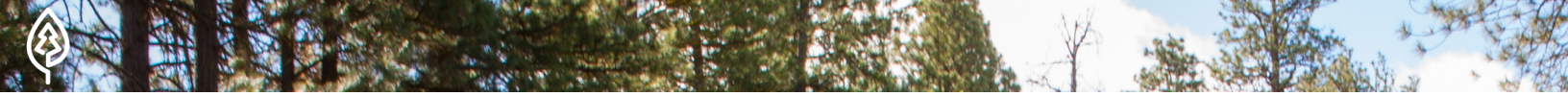


Canada's (NRCan) Carbon Accounting Program, such as the CBM-CFS3 model. Other more regionally specific resources are available from industry-specific vendors (e.g., NCASI, NCX), or through available tools such as FORECAST or FORCARB. Tool and approach selection may consider resolution, accuracy, and scalability. Irrespective of the source, accounting tools should be characterized by sensitivity to forest types and employ the appropriate scale and climate modelling analysis suitable to the forest management area in question.

Resources available to help *Certified Organizations* develop programs (Indicator 9.2.3) are related to the tools and methods used to address carbon and greenhouse gas emissions, combined with approaches that prioritize the most significant emission sources for management. Tools and models developed to quantify emissions are listed in Table 2.

Table 2 — Forest carbon emission and storage estimation models and tools, with references to geographic applicability. Note this is not an exhaustive list of possible tools.

Tool	Country, State/Province	Description	Source
CBM-CFS3	Canada (all)	The operational-scale Carbon Budget Model of the Canadian Forest Sector (CBM-CFS3) is an aspatial, stand- and landscape-level modeling framework that simulates the dynamics of all forest carbon stocks required under the Kyoto Protocol (aboveground biomass, belowground biomass, litter, dead wood, and soil organic carbon). It complies with the carbon estimation methods outlined by the Intergovernmental Panel on Climate Change (IPCC).	https://www.nrcan.gc.ca/climate-change/impacts-adaptations/climate-change-impacts-forests/carbon-accounting/carbon-budget-model/13107
Generic Carbon Budget Model (GCBM)	Canada (all)	The GCBM is the next generation, fully spatial version of the CBM-CFS3 that the federal government is currently using for various internal research and collaborative projects.	stephen.kull@canada.ca
FORECAST model	Canada (BC, AB, SK, S. ON, NS)	FORECAST is an ecosystem-based, stand-level, forest growth simulator. The model was designed to accommodate a wide variety of harvesting and silvicultural systems in order to compare and contrast their effect upon forest productivity, stand dynamics, and various biophysical indicators of non-timber values. Forest carbon is one of the outputs that can be modeled.	
FORCARB model	Canada (ON)	FORCARB is a U.S. developed model that the government of Ontario has modified for provincial use. The Ontario model is referred to as FORCARB-ON. The model can be used to project carbon storage in harvested wood products.	https://www.ontario.ca/page/forest-carbon
i-Tree Harvest Carbon Calculator	U.S.	The i-Tree Harvest Carbon Calculator (originally known as the PRESTO Wood Calculator) allows land managers and landowners to estimate the amount of carbon stored in harvested wood products. Carbon estimates are based on harvest volume, geographic region, and wood type.	https://harvest.itreetools.org
Methods for calculating ecosystem and harvested carbon	U.S.	A publication with guidelines and default tables for estimating forest ecosystem carbon pools in the US and storage of harvested wood products in use and in landfills.	https://www.nrs.fs.fed.us/pubs/8192



Tool	Country, State/Province	Description	Source
FORCARB2	U.S. and Ontario	FORCARB2 produces estimates of carbon stocks and stock changes for forest ecosystems and forest products at 5-year intervals; it includes a new methodology for carbon in harvested wood products, updated initial inventory data, a revised algorithm for dead wood, and now includes public forest land, reserved forest land, and forest land of low productivity.	https://www.nrs.fs.fed.us/pubs/35613
US Forest Carbon Calculation Tool	U.S.	The Carbon Calculation Tool 4.0, *CCTv40.exe*, is a computer application that reads publicly available forest inventory data collected by the U.S. Forest Service's Forest Inventory and Analysis Program (FIA) and generates state-level annualized estimates of carbon stocks on forest land based on FORCARB2 estimators.	https://www.nrs.fs.fed.us/pubs/2394
EVALIDator	U.S.	Generates user-specified reports on forest inventory estimates, including forest carbon stocks and changes in dry biomass over time, using US Forest Inventory and Analysis (FIA) data.	https://apps.fs.usda.gov/Evalidator/evalidator.jsp
Practitioner's Menu of Adaptation Strategies and Approaches for Forest Carbon Management	U.S.	Decision-support tool for incorporating adaptation considerations into current management objectives.	https://forestadaptation.org/learn/resource-finder/forest-carbon-menu-adaptation-and-mitigation-strategies-and-approaches
USFS Climate Change Resource Center	U.S.	CCRC hosts several informational pages on forest carbon management.	https://www.fs.usda.gov/ccrc/topics
USFS Climate Change Resource Center – Library	U.S.	Library of tools related to forest carbon.	https://www.fs.usda.gov/ccrc/tools?field_topic_category_target_id=5191
Forest-Climate Working Group	U.S.	FCWG hosts webinars that address a wide range of topics related to adaptation and mitigation.	https://forestclimateworkinggroup.org

IPCC AR4 WG3 *(2007), Metz, B.; Davidson, O.R.; Bosch, P.R.; Dave, R.; Meyer, L.A. (eds.)*, Climate Change 2007: Mitigation of Climate Change, *Contribution of Working Group III (WG3) to the* Fourth Assessment Report of the *Intergovernmental Panel on Climate Change (IPCC), Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA., 851 pp.*



Objective 10. Fire Resilience and Awareness

The intent of Objective 10 — Fire Resilience and Awareness - is for *Certified Organizations* to limit the susceptibility of forests to undesirable impacts of wildfire and to raise community awareness of wildfire benefits, risks, and minimization measures.

Undesirable impacts of wildfire are those that threaten public safety, human health, property, carbon emissions, water quality and quantity, air quality, and species *habitat,* or have the capacity to destroy forests on a scale that significantly impacts the inherent values of these forests.

The link between wildfires and climate is well-documented. The planet is warming, and higher temperatures lead to drier conditions, with many regions experiencing severe drought, resulting in more dead trees and debris that significantly increase the risk of undesirable impacts of wildfire. Indicator 1.1.4 already requires *Certified Organizations,* where applicable, to model the negative impacts of *climate change* (i.e., prolonged drought, increased incidence of disease or pests) in their *long-term* sustainable harvest levels.

However, sustainable forest management can also reduce the risk of these undesirable impacts of wildfire. Appropriate management must be done within the context of fire ecology and fire regime. Doing so increases overall forest resiliency, including reducing fuel loads and limiting *invasive species,* both of which can decrease the likelihood of damage from catastrophic fire.

The Objective has two Performance Measures. Performance Measure 10.1 has requirements for *practices* on lands *Certified Organizations* own or manage. Performance Measure 10.2 has requirements for raising public awareness of the benefits, risks, and minimization methods regarding fire.

Performance Measure 10.1 requires that on the forests they own or manage, *Certified Organizations* shall limit susceptibility to undesirable impacts of wildfire, promote healthy and resilient forest conditions through management techniques, actions and/or *policies*, and support restoration of forests following wildfire damage. The development of a *program* to evaluate the risk of undesirable impacts of wildfire can occur individually and/or through cooperative efforts involving government agencies, *SFI Implementation Committees*, or other partners. The *program* can also take into consideration the scope and scale of the *Certified Organization's* forests.

Examples of risk assessment resources include:

- Canada — Canadian Wildland Fire Information System
- US — USFS Operational Risk Management Guide
- US South — Southern Wildfire Risk: Wildfire Risk Assessment Portal

When considering management techniques, actions, or *policies*, it is understood that these must be assessed in the context of economic viability and that they will vary according to regions and forest type. The following examples are illustrative and may not be suited to all regions.

Examples of management techniques for limiting the undesirable impacts of wildfire can include prescribed burning for *wildlife* or cultural purposes (e.g., traditional foods), *stand* thinning, or other treatments to reduce levels of hazardous fuels.

Examples of *landscape* level management *practices* for limiting the susceptibility of forests to undesirable impacts of wildfire include prescribed burning, and commercial and non-commercial restorative thinning treatments.

Examples of cooperative efforts at the *landscape* level include:

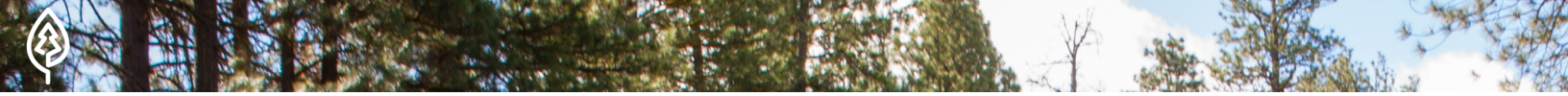
- The multi-partner Manastash Taneum Resilient Landscapes – Restoration Project in Washington state involving *Certified Organizations*, Tribes, state, and federal agencies.
- The Gulf Coastal Plain Ecosystem Partnership, formed to conserve and restore the dwindling longleaf pine ecosystem and the unique aquatic resources of northwest Florida and southern Alabama.

Forest landowners and managers who use prescribed fire as a management tool can access additional resources at the following sites:

- US — The Longleaf Alliance prescribed fire webpage
- US — Coalition of Prescribed Fire Councils

Additional wildfire information for *Certified Organizations* can be found at:

- Southeast US — Wildland Fire in the Southeast
- US West — Wildfire in the West
- US Appalachian Region (Alabama to Pennsylvania) — Consortium of Appalachian Fire Managers and Scientists
- US Northeast — Northeast Region Cohesive Wildland Fire Management Strategy
- US — link to all US fire science consortiums



In some jurisdictions, post-fire forest restoration on public forest lands is the responsibility of government agencies. These state/provincial or federal agencies have mandated wildfire management and restoration *programs* and/or regulations whose purpose is the *mitigation* of the negative impacts of wildfire to water quality and quantity and *soil health*, and to promote restoration and forest resilience. These *programs* ensure forests are promptly restored, preserving the critical values inherent in them. *Certified Organizations* are expected to work individually or cooperatively in support of these government agencies. Additionally, *Certified Organizations* where applicable should operate in accordance with fire management regulations, including the reduction of hazardous fuels from logging slash and preventative measures to control the spread of fire resulting from forestry operations.

Certified Organizations can refer to the following when implementing plans for forest restoration.

- US — Emergency Watershed Protection Program
- US — Burned Area Emergency Response
- US — After the Flames (Coalitions and Collaboratives, Inc.)
- Canada — Wildfire Recovery (British Columbia)

Examples of *practices* for addressing restoration following damaging fire include salvage logging, installation of water or erosion control devices, planting or seeding for erosion control or slope stability, installation of appropriate-sized drainage features on roads or trails, *protection* of *threatened and endangered habitat*, and monitoring for detection and rapid response to *minimize* the spread of *invasive species*.

Performance Measure 10.2 requires that *Certified Organizations* individually or through cooperative efforts involving government agencies, *SFI Implementation Committees*, Project Learning Tree, or other partners, engage in efforts to raise awareness of and take action towards the benefits of fire management and the minimization of undesirable impacts of wildfire.

Indicator 10.2.1 requires participation in, or support of, local, state, Indigenous, provincial, or federal fire management and prevention programs. When developing these programs, *Certified Organizations* can consult the following tools:

- U.S. — Bureau of Indian Affairs Wildfire Prevention Handbooks and Guides
- Canada — Wildland Fire Management Strategy (Ontario)
- Canada — A Roadmap for Implementing the Canadian Wildland Fire Strategy (Canadian Council of Forest Ministers)

Indicator 10.2.2 requires *Certified Organizations* to participate in, or support, programs to promote the benefits of fire management, and raise awareness about the environmental, economic, and social risks of the undesirable impacts of wildfire to values such as carbon emissions, water quality and quantity, air quality, species *habitat*, public safety, and human health.

Examples of national wildfire awareness programs or community awareness programs include: FIREWISE USA, FireSmart™ Canada (FireSmart™ and associated marks are trademarks of Partners in Protection), Smokey Bear and Project Learning Tree's Living with Fire or The Nature of Fire. Examples of state or provincial community wildfire awareness resources include: Alberta's FireSmart Guidebook for Community Protection and the Washington Department of Natural Resources How to Prepare for a Wildfire.

Objective 11. Legal and Regulatory Compliance (and Objective 4 of *SFI Fiber Sourcing Standard SFI Small Lands Group Certification Modules* and *SFI Small Scale Forest Management Module for Indigenous Peoples and Families*)

Legal compliance is one of the SFI Forestry Principles. Specifically, *Certified Organizations* are required to comply with applicable federal, provincial, state, and *local* forestry and related environmental laws, statutes, and regulations. In support of this principle the *SFI 2022 Forest Management Standard* and the *SFI 2022 Fiber Sourcing Standard* have as *objectives*, Legal and Regulatory Compliance. Likewise, the SFI Modules have requirements for legal and regulatory compliance. *Certified Organizations* are assisted with implementing the requirements of these *objectives* by the very robust and comprehensive legal systems in the US and Canada.

The national legal systems have legislation and regulation at the federal, state / provincial, and the county or municipal level. *Certified Organizations* depending on the jurisdictions in which they operate are required to be aware of and comply with applicable legislation as it applies to their forestry operations. This basic threshold level of legal compliance includes payment of applicable harvest royalties and/or severance taxes, control of inorganic waste, and control of fuels and lubricants. It also includes respect for property rights (trespass), and compliance with legislation prohibiting corrupt practices.

Additional requirements in the *SFI 2022 Forest Management Standard* address responsible use of forest chemicals (including fertilizers), *protection* of water quality, *protection* of *biological diversity* and respect for the rights of *Indigenous Peoples*. Objective 11 (and Objective 4) also require compliance with applicable social laws. Social laws are legislation covering civil rights, equal employment opportunities, gender equality, diversity inclusion, anti-discrimination and anti-harassment measures, workers' compensation, *Indigenous Peoples*' rights, workers', and communities' right to know, prevailing wages, workers' right to organize, and occupational health and safety.



Scale of Ownership and Operation and Legal Compliance

Certified Organizations must demonstrate legal compliance with all applicable federal, provincial/state, and *local* forestry and related environmental legislation and regulations. This includes entities certified to the *SFI Small Lands Group Certification Module* and the *SFI Small Scale Forest Management Module for Indigenous Peoples and Families* (the Modules). Nonetheless, it is recognized that applicability of some pieces of higher-level legislation or regulation should be considered in the context of the reduced scale and scope of the forestry management operations of small forest landowners or managers of small public forests. Members of a *SFI Small Lands Group Certification Module* certificate or forest landowners or managers certified to the *SFI Small Scale Forest Management Module for Indigenous Peoples and Families* operate with significantly fewer resources, limited budgets, on forests that are very small in size. Furthermore, it is common for small forest landowners to perform much of the forest management operations themselves. *Organizations* certified to the Module(s) must use their knowledge of potentially applicable legislation for the jurisdictions where they operate to assess which are applicable given the scale and scope of their forest management operations.

Examples of categories of legislation or regulations that could be applicable for *organizations* certified to the Module(s) are payment of harvesting royalties/severance taxes, worker health and safety regulations (if the landowner is using the services of contractors), control of inorganic waste, and control of fuels and lubricants, respect for property rights (trespass), and *Indigenous Peoples'* rights.

Organizations certified to the Module(s) should be able to demonstrate to their *certification body* what is not applicable and why. Examples of higher-level legislation which may be demonstrated to be non-applicable for small forest landowners or are addressed in other pieces of state/provincial legislation, are specific requirements for anti-corruption, protection of human rights, equal opportunities, non-discrimination, non-harassment, gender equality, and ILO Core Conventions.

Illegal Logging

SFI has strong existing measures in the *SFI 2022 Standards and Rules* to avoid sourcing fiber from *illegal logging.* These measures are reinforced by the *SFI Policy on Illegal Logging* (September 2008). These measures address the issue of *illegal logging* from sources within the United States and Canada and offshore.

The United States Lacey Act, as amended May 22, 2008, makes it unlawful to import, export, transport, sell, receive, acquire, or purchase in interstate or foreign commerce any plant, with some limited exceptions, taken, possessed, transported, or sold in violation of the laws of the United States, a State, an Indian tribe, or any foreign law that protects plants from removal or that regulates the removal of plants and products made from illegally removed plants. The European Union Timber Regulation (EUTR), applied since March 3, 2013, prohibits illegally harvested timber, or products derived from such timber, to be brought into the EU and creates due diligence obligations for operators who place timber and timber products on the EU market.

SFI 2022 Forest Management Standard Objective 11 and *SFI 2022 Fiber Sourcing Standard* Objective 4 require legal and regulatory compliance with applicable federal, provincial, state, and *local* laws and regulations.

***SFI 2022 Forest Management Standard* Performance Measure 11.1 and *SFI 2022 Fiber Sourcing Standard* Performance Measure 4.1.**

Certified Organizations shall comply with applicable federal, provincial, state, and *local forestry* and related and environmental laws and regulations and take appropriate steps to avoid *illegal logging.*

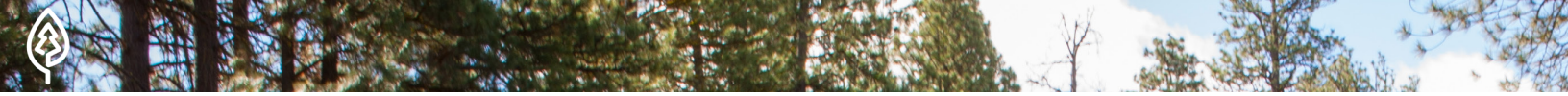
The definition of *illegal logging* is intended to cover intentional violations, such as timber theft from areas that are precluded from logging, falsification of official documents, avoidance of harvest payments and duties, and deliberate removal of trees from the land without the legal right to do so. The definition is not intended to cover isolated occurrences of legal infractions such as unintentional trespass over a property line (for private ownership) or unit boundaries (for public ownership), violation of roadway laws, or minor contract disputes.

International Labour Organization (ILO) Core Conventions

SFI 2022 Forest Management Standard Performance Measure 11.2 and *SFI 2022 Fiber Sourcing Standard* Performance Measure 4.2 addresses differences in U.S. labor law and the ILO core conventions. Additional guidance is provided here for application of 11.2 and 4.2 for independent contractors and for *Certified Organizations.*

Application of *SFI 2022 Forest Management Standard* Performance Measure 11.2 and *SFI 2022 Fiber Sourcing Standard* Performance Measure 4.2 for independent contractors operating on lands owned or controlled by *Certified Organizations:*

- *Certification bodies* at the time of the audit will collect and review information the *Certified Organization* has received from outside *stakeholders* with regards to concerns or conformance pertaining to independent contractor actions related to ILO Core conventions 87, 98 and 111.
- Any information collected by the *certification bodies* during normal auditing times will be promptly submitted without contractor identifying information to the *Certified Organization, SFI Inc.* and the SFI ILO Task Force. Information received will be reviewed every six months by the SFI ILO Task Force which will develop recommendations to the *SFI Inc.* Board of Directors for resolution of any significant problems identified.
- Forest Management Standard Indicator 11.2 and Fiber Sourcing Standard Indicator 4.2 shall only apply to the core conventions not fully covered



by existing U.S. or Canadian law.
  - Right to Organise (No. 87)
  - Right to Organise and Collective Bargaining (No. 98)
  - Discrimination (111)
- In addition, any ILO related issue that is being addressed through a formal grievance process or before any of the agencies established by the U.S. National Labor Relations Act (NLRA), the appropriate Provincial Labour Code or Act, or the courts, until those processes are completed will not be subject to review, consideration or recommendations by the SFI ILO Task Force nor by the *SFI Inc*. Board of Directors.

Application of *SFI 2022 Forest Management Standard* Performance Measure 11.2 for *Certified Organizations* with respect to their employees operating on lands owned or controlled by *Certified Organizations:*

- *Certification bodies* at the time of the audit will collect and review information the *Certified Organization* has received from outside *stakeholders* with regards to concerns or conformance pertaining to their employee relations with regards to ILO Core conventions 87, 98 and 111.
- *Stakeholders* may raise issues regarding conformance to Indicator 11.2.2 through the inconsistent *practices* and procedures outlined in the SFI Public Inquiries and Official Complaints (Section 12) requirements, item 3.
- All information collected though the inconsistent practices process will be reviewed every six months by the SFI ILO Task Force which will develop recommendations to the *SFI Inc.* Board of Directors for resolution of any significant problems identified.
- Indicator 11.2.2 shall only apply to the core conventions not fully covered by existing U.S. or Canadian law.
  - Right to Organise (No. 87)
  - Right to Organise and Collective Bargaining (No. 98)
  - Discrimination (111)
- In addition, any ILO related issue that is being addressed through a formal grievance process or before any of the agencies established by the U.S. National Labor Relations Act (NLRA), the appropriate Provincial Labour Code or Act, or the courts, until those processes are completed will not be subject to review, consideration or recommendations by the SFI ILO Task Force nor by the *SFI Inc.* Board of Directors.

Public forest landowners in states (Alabama, North Carolina and Virginia) that currently have laws prohibiting bargaining with their public employees shall be "legacied in" as meeting the requirements in Indicator 11.2.2 but must still participate in the information gathering process with their *certification bodies* (for independent contractors) and the inconsistent practices process in item 3 of the SFI Public Inquiries and Official Complaints (Section 12) requirements to aid in resolution of any issues that may be identified.

Objective 13. *SFI 2022 Forest Management Standard* (and Objective 6 of *SFI 2022 Fiber Sourcing Standard*)

Use of *Qualified Logging Professionals, Qualified Resources Professionals* and *Certified Logging Companies*

Logger training is a very effective tool in promoting sustainable forest management and has been a key component of SFI's work since its inception. The *SFI 2022 Forest Management Standard* strengthens requirements for logger training with revisions to Indicators 13.1.5, 13.2.1, and 13.2.2 and the *SFI 2022 Fiber Sourcing Standard* does the same with Indicators 3.1.1, 3.2.1, 3.2.2, 6.2.1, and 6.2.2.

SFI 2022 Forest Management Standard Indicator 13.1.5 requires *Certified Organizations* to develop a *program* for the purchase of their raw material from logging professionals who have completed training *programs.* The *SFI 2022 Fiber Sourcing Standard* Performance Measure 3.2 says that *Certified Organizations* through their relationships with *wood producers* and landowners, shall maximize the deliveries of raw materials from *qualified logging professionals,* and shall encourage the use of *qualified resource professionals.*

In working to maximize deliveries, *Certified Organizations* should strive for 100% of their raw material deliveries from *qualified logging professionals* or contract with loggers in the process of completing a logger training *program* approved by an *SFI Implementation Committee*. Allowances may have to be made for small-scale or other *wood suppliers*, for when catastrophic events (e.g., severe storms, wildfire, beetle epidemics) can result in increased deliveries by untrained loggers, or for turnover in the logging workforce. The goal is to demonstrate continual and incremental improvement towards this goal. Where the *Certified Organization* identifies a region where the availability of *qualified logging professionals* is not sufficient to meet the expectations of *SFI 2022 Forest Management Standard* Indicator 13.1.5 and *SFI 2022 Fiber Sourcing Standard* Indicator 3.2.2, the *Certified Organization* will develop a *program*, individually or collaboratively, to address this shortage.

Program is defined in SFI Section 14 - Definitions as an organized system, process, or set of activities to achieve an *objective* or *performance measure.*

Expectations for Onsite Supervision by *Qualified Logging Professional*

The definition of a *qualified logging professional* requires that a logging *crew* is supervised by an individual who "has direct responsibility and is onsite regularly to consistently carry out the roles and responsibilities of the *wood producer.*" It is a best *practice* to have a q*ualified logging professional* onsite, however it is understood that a logging *crew* will not be under the supervision of a *qualified logging professional* at all times, given the additional responsibilities placed on a supervisor, such as dealing with equipment failures, etc. Also, it is understood that the safety, environmental, and/or legal risks inherent with a logging site can vary. When determining whether a logging *site* needs a trained supervisor "onsite regularly," it is the knowledge of such risks that need to be evaluated and considered. For a *site* with high *biodiversity* or water quality values, or a complicated harvest unit boundary, it is reasonable to expect regular onsite



supervision of the *crew.* The principal of the logging company or their representative should be sufficiently knowledgeable about the harvest unit and its harvest plan to do a risk determination. Using this determination, the forester, contractor principal or their representative can determine the level of onsite supervision required to consistently carry out the roles and responsibilities of the *wood producer,* and whether additional trained supervisors are required on the harvest *site*.

Certified Logging Companies
SFI Inc. recognizes the potential and value in promoting the use of *certified logging companies*. *Certified logging companies* are entities that hold an independent, in-the-forest verification of conformance with a logger certification *program.*

Recognizing the value of *certified logging companies, Certified Organizations* may be able to demonstrate conformance to some *indicators* in the SFI 2022 Standards by using *certified logging companies* to deliver raw materials. It is up to the *Certified Organization* to provide evidence to their *certification body* on which *indicators* may be met, and how, via the use of a *certified logging company.*

PART 2: SFI 2022 FIBER SOURCING STANDARD

Objective 1. *Biodiversity* in *Fiber Sourcing*

Performance Measure 1.2 is intended to promote *conservation* of *Forests with Exceptional Conservation Value* or forest areas that harbor or consist of *imperiled* or *critically imperiled species* or *natural communities* through the course of *fiber sourcing* activities. This promotion takes place through three means: 1) an assessment of *Forests with Exceptional Conservation Value* within the *wood and fiber supply area*, that is then made available to *wood producers*; 2) *programs* to address outreach and training; and, 3) incorporation of the results of the assessment toward promoting *Forests with Exceptional Conservation Value conservation* on areas of *purchased stumpage*. Considered together, these elements should effectively promote the intended *conservation* of *Forests with Exceptional Conservation Value.*

The required *Forests with Exceptional Conservation Value* assessment can be conducted at the scale of the *wood and fiber supply area* and may even be conducted collaboratively through one or more *SFI Implementation Committees*, or through multi-lateral engagement of *Certified Organizations* operating within the same affected geography, to achieve efficiencies of cost and scale. Such an assessment could be qualitative (i.e., describing the forest conditions and composition that would define *Forests with Exceptional Conservation Value* in that location) or geographic (i.e., mapping of known *Forests with Exceptional Conservation Value* through some credible method, such as remote sensing, use of USFS Forest Inventory and Analysis (FIA) data to achieve a meaningful scale for this purpose, sampling and ground-truthing, or other means). *Forests with Exceptional Conservation Value* assessments may be conducted most efficiently using the widest array of available information, including NatureServe or heritage database information, remote sensing, *habitat* prediction models and other means.

Performance Measure 1.2 is intended to inform activities at a meaningful level, to help promote *conservation* of *Forests with Exceptional Conservation Value* that could be affected through harvest activities, but it does not necessarily require *stand*-level analysis. The requirements of this *performance measure* should be considered together, meaning that the assessment results generate information that can be transferred to landowners and loggers through outreach and training *programs,* etc., facilitating the use of that information at the level of individual harvest. Using the assessment results at the scale of *purchased stumpage* is the most specific level of application, since *Certified Organizations* are responsible for understanding the details of sourcing at this scale and for ensuring the *conservation* of *Forests with Exceptional Conservation Value* at this scale, too.

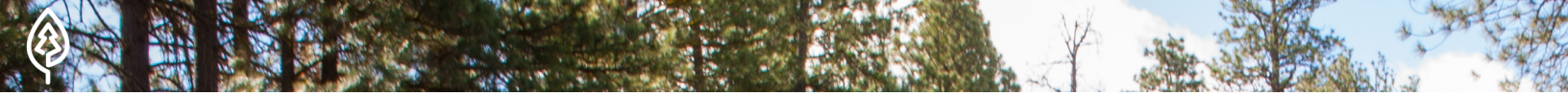
Objective 2. Adherence to *Best Management Practices*

Best Management Practices
Objective 2 of the *SFI 2022 Fiber Sourcing Standard* calls for adherence to *best management practices*: "To monitor the use of *best management practices* to *protect* water quality."

The use of *best management practices* to *protect* water quality is a critical component of sustainable forest management and is emphasized in the *SFI 2022 Fiber Sourcing Standard* with requirements for on-the-ground management, monitoring, training, and research. The *SFI 2022 Fiber Sourcing Standard* strengthened requirements for *best management practices* application with a new indicator:

"2.1.1 Use of written agreements for the purchase of raw material sourced directly from the forest is required and must include provisions requiring the use of *best management practices.*"

While it is not practical to have auditing requirements that go beyond reviewing *Certified Organizations'* contracts for purchasing raw material from their suppliers, to ensure they do require the use of *best management practices*, this indicator will further highlight the importance of *best management practices* and their use by all suppliers throughout the supply stream.



Objective 11. Avoid *Controversial Sources*

Conversion Sources* and the Definition of *Controversial Sources

The SFI 2022 Fiber Sourcing Standard at Objective 11 (and the SFI 2022 Chain of Custody and SFI 2022 Certified Sourcing Standards at Part 7) have requirements for a due diligence system to assess the risk of sourcing fiber from *controversial sources*. The SFI definition of *controversial sources* at paragraph (c) classifies as controversial, fiber from "*conversion sources* originating from regions experiencing forest area decline." SFI defines *conversion sources* as "roundwood and/or chips produced from conversion of forestland to other land uses resulting in regional forest area decline."

To assist *certified organizations* (working individually or collectively as an *SFI Implementation Committee*) when assessing the risk of sourcing fiber from regions experiencing forest decline, a threshold conversion rate of greater than 1% decline in forest area over the most recent 10 years can be adopted. This threshold rate aligns with PEFC's approach for addressing conversion to non-forest.

When conducting an assessment of forest area decline, a *certified organizatio*n (or SIC) can use publicly available data such as the United States Forest Service Forest Inventory and Analysis (FIA) ecoregional data, Statistics Canada, Canadian Forest Service, state, provincial, or federal "State of the Forest" reports.

Furthermore, a *certified organization* (or SIC) can use a statistical approach when calculating the percent of forest area decline over the 10-year period, rather than simply using the directly calculated mean of the sample data. A statistical approach is appropriate because the inherent uncertainty in sample-based data sets such as the FIA is accounted for through the use of calculated confidence intervals. When using the statistical approach, low risk may be concluded as long as the lower limit of the confidence interval does not exceed the 1% threshold. When using the statistical approach, it is appropriate to use a 95% or greater confidence interval. New techniques for area estimation are available that may facilitate this approach.

Finally, SFI recognizes that there are other approaches for assessing rates of decline in forest area such as remote sensing using satellite technology. If a *certified organization* (or SIC) chooses to employ other approaches, these approaches must use *best scientific information*, defined as "available factual information that is generally accepted by the broad scientific community. It includes but is not limited to peer-reviewed scientific information obtainable from any source, including government and non-governmental sources, that have been verified by field testing to the maximum extent feasible."

PART 3: SFI 2022 CHAIN-OF-CUSTODY STANDARD – TRANSITION TO CREDIT METHODOLOGY AND CLAIM TERMINOLOGY

The *SFI 2022 Chain-of-Custody Standard* replaces the terminology 'Average Percentage' and 'Volume Credit' with 'Percentage' and 'Credit' methods. The updated terminology is reflected in content claims used in supplier and delivery level identification in the *SFI 2022 Chain-of-Custody Standard.*

Certified Organizations can update relevant documentation to align with the new standard language on release of the revised SFI 2022 Standards. However, SFI recognizes that changes to processes may require additional work at many levels of operations. *Certified Organizations* may update their relevant documentation with revised claim language according to their own internal procedures and timelines, with the expectation that the transition will be completed within a reasonable time period.

SFI and PEFC Claim Alignment

Primary and *secondary producers* with a valid *SFI 2022 Chain of Custody* certificate can use their SFI chain-of-custody procedures to make PEFC chain of custody claims or apply the PEFC on-product logo provided they comply with the applicable requirements in PEFC ST 2002:2020 - Chain of Custody of Forest and Tree Based Products – Requirements and PEFC ST 2001:2020 - PEFC Trademark Rules. All PEFC trademark use is governed by the PEFC Trademark Standard (PEFC Trademark Rules, PEFC ST 2001:2020). All PEFC Trademark use and logo generator access follows relevant PEFC National Governing Body procedures by country/region.



Guidance on *SFI 2022 Chain of Custody*, Part 3.3 Calculation of the Certified Percentage

INPUT	OUTPUT	
SFI CLAIMS	**PEFC CLAIMS**	**PEFC LABEL USE**
SFI X% Certified Forest Content	X% PEFC Certified	Yes
SFI Credit or 100% as calculated under the credit method		
SFI at Least X% Certified Forest Content		
SFI 100% Certified Forest Content-Raw material from a forest certified to an acceptable forest management standard constitutes a claim of 100% certified forest content		
SFI X% SFI Recycled Content		
SFI X% Pre-Consumer Recycled		
SFI X% Post-Consumer Recycled		
SFI 100% from a Certified Forest	100% PEFC Origin	Yes
SFI X% Certified Sourcing or SFI Certified Sourcing	PEFC Controlled Sources	No

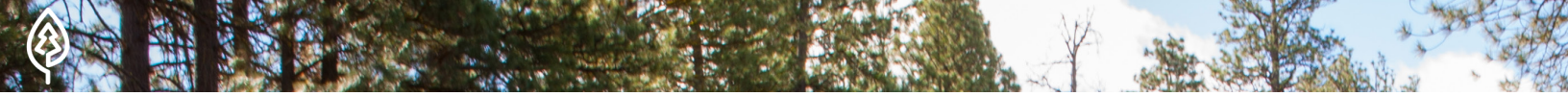
The following guidance supports *SFI 2022 Chain of Custody Standard.* Requirement 3.3 Calculation of the Certified Percentage: 3.3.1 The SFI-certified organization shall calculate the certification percentage separately for each claim period according to the following formula.

Mixed inputs: Percentage Method **Pc=Vc/(Vc+Vo)×100**	*Pc Certification percentage* *Vc Certified content* *Vo Other raw material* *Vn Neutral material*[12]

A *Certified Organization* may use the calculation of the certified percentage to determine percentage output claims for *recycled* and *certified forest content* portions. Otherwise said, the formula is applied to each content claim separately to calculate the Pc (certification percentage).

[12] Neutral sources: Raw material that is not counted towards or against the calculation of the *certified content* percentages in chain-of-custody tracking or *certified sourcing* tracking in SFI Sections 4 and 5. Below are the acceptable neutral sources.

- Agricultural products (e.g., cotton or other non-wood fibers and biomass from wood fiber legally classified as agricultural by state, provincial or local government) and agricultural residues.
- *Post-consumer recycled content* and *pre-consumer recycled conten*t may be tracked as a neutral source when not making post-consumer or pre-consumer claims about the product.



OFFICIAL SFI CLAIMS USING PERCENTAGE METHOD	APPLICATION OF THE CALCULATION FORMULA[13]		
	Vc	**Vn**	**Vo**
SFI X% Certified Forest Content SFI at Least X% Certified Forest Content *(note: to be used when a company does not include recycled content in the claim calculation)*	Certified Forest Content	Recycled (both pre- and post-consumer) Non-forest material	Other than Vc and Vn
SFI X% Certified Forest Content SFI at Least X% Certified Forest Content *(note: to be used when a company includes recycled content in the claim calculation)*	Certified Forest Content	Non-forest material	Other than Vc and Vn
SFI X% Recycled Content	Recycled content		Other than Vc and Vn
SFI X% Pre-Consumer Recycled[14]	Pre-consumer recycled content		Other than Vc
SFI X% Post-Consumer Recycled[15]	Post-consumer recycled content		Other than Vc
SFI X% Certified Sourcing	SFI certified sourcing		Other than Vc
PEFC CLAIMS USING PERCENTAGE METHOD			
X% PEFC Certified	X% PEFC Certified	Recycled (both pre- and post-consumer)	Other than Vc

Calculation Example A: Without Neutral Materials

Certified Organization has 30 tons of raw material. 5 tons qualify for *recycled content* (following post and pre recycled definitions in Section 14 of the SFI 2022 Standards), 10 tons are SFI *Certified Forest Content* and the remaining 15 tons qualify as SFI *Certified Sourcing* content.

SFI CERTIFIED FOREST CONTENT RAW MATERIAL SFI Certified Forest Content % = 10 tonnes/(10 tonnes + 20 tonnes) x 100	33% Certified Forest Content
RECYCLED CONTENT RAW MATERIAL Recycled Content% = 5 tonnes/(5 tonnes + 25 tonnes) x 100	17% Recycled Content
SFI CERTIFIED SOURCING CONTENT RAW MATERIAL SFI Certified Sourcing % = 15 tonnes/(15 tonnes + 15 tonnes) x 100	50% Certified Sourcing

Calculation Example B: With Neutral Materials

Certified Organization has 30 tons of raw material. 5 tons qualify for *certified sourcing content*, 10 tons are SFI *Certified Forest Content* and the remaining 15 tons are *neutral sources*[16].

SFI CERTIFIED FOREST CONTENT RAW MATERIAL SFI Certified Forest Content % = 10 tonnes/(10 tonnes + 20 tonnes) x 100	67% Certified Forest Content
SFI CERTIFIED SOURCING CONTENT RAW MATERIAL SFI Certified Sourcing % = 15 tonnes/(15 tonnes + 15 tonnes) x 100	33% Certified Sourcing
NEUTRAL SOURCES Neutral sources 15 tonnes are not counted towards or against the calculation of the certified content percentages	N/A

[13] The calculation formula used in the SFI 2022 Chain of Custody Standard is consistent with international standard *recycled content* calculations where the *recycled content* is calculated from the total mass of the product (input material).

[14] Note: When making claims about *pre-* and *post-consumer recycled content,* both can count as *certified content* and the amount must be disclosed to the customer. For *organizations* choosing not to count *pre-* and *post-consumer recycled content*, the *post-consumer recycled content* is neutral and shall not be included in the calculation of the *certified content* percentages in Chain-of-Custody tracking.

[15] *Recycled content* includes both *pre-consumer recycled content* and *post-consumer recycled content*. *Certified organization* may use this formula specific to pre- or *post-consumer recycled content* for specific *pre- and/or post-consumer recycled content,* claims.

[16] Neutral sources: Raw material that is not counted towards or against the calculation of the *certified content* percentages in chain-of-custody tracking or *certified sourcing* tracking in SFI 2022 Sections 4 and 5. Below are the acceptable neutral sources.

- Agricultural products (e.g., cotton or other non-wood fibers and biomass from wood fiber legally classified as agricultural by state, provincial or *local* government) and agricultural residues.
- *Post-consumer recycled content,* and *pre-consumer recycled content* may be tracked as a neutral source when not making post-consumer or pre-consumer claims about the product.



PART 4: SFI 2022 FIBER SOURCING STANDARD, SFI 2022 CHAIN-OF-CUSTODY STANDARD AND SFI 2022 CERTIFIED SOURCING STANDARD — SFI DUE DILIGENCE SYSTEM FOR ASSESSMENT RISK OF SOURCING FROM CONTROVERSIAL SOURCES

The SFI due diligence system provides the framework for assessing the risk of sourcing from *controversial sources,* whether in the United States, Canada or offshore. Below are resources a *Certified Organization* can use to assist in addressing the elements of the *controversial sources* definition.

a. Forest activities that are not in compliance with applicable state, provincial, federal, or international laws
   - The United States and Canada have a strong legal framework which *Certified Organizations* must abide by. Furthermore, SFI has strong existing measures in the *SFI 2022 Forest Management Standard*, the *SFI 2022 Fiber Sourcing Standard*, the *SFI 2022 Chain-of-Custody Standard*, the *SFI 2022 Certified Sourcing Standard*, the *SFI Small Lands Group Certification Module*, and the *SFI Small Scale Forest Management Module for Indigenous Peoples and Families* to avoid illegal sources of supply.
   - When sourcing from countries outside the U.S. and Canada, *Certified Organizations* can refer to the latest Transparency International (TI) Corruption Perception Index (CPI). A score higher than 50 is considered low risk.
   - *Certified Organizations* shall also refer to SFI's *policy* on *illegal logging* in SFI Section 8. This *policy* is specific to *organizations* that may harvest or trade wood fiber in violation of applicable laws and regulations in the country of harvest.

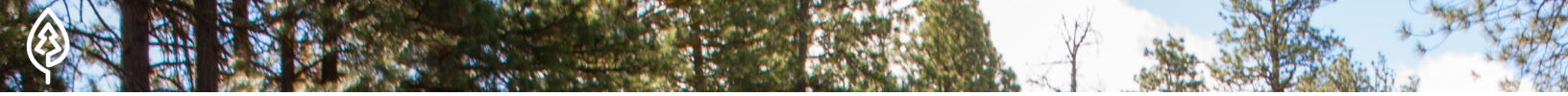
b. Forest activities that are contributing to regional declines in *habitat conservation* and species *protection* (including *biodiversity* and *special sites*, *threatened and endangered species*)
   - SFI has strong existing measures in the *SFI 2022 Forest Management Standard* and the *SFI 2022 Fiber Sourcing Standard* regarding *conservation of biodiversity*. The United States and Canada also have strong legal frameworks which *Certified Organizations* must abide by. *Certified Organizations* can refer to the latest Environmental Performance Index (EPI) Score of Biodiversity and Habitat, Protected Area Effectiveness, and Forest Landscape Integrity of the country. A score above 50 for Biodiversity and Habitat is considered low risk. Similarly, scores above 50 for both Protected Area Effectiveness and Forest Landscape Integrity are also considered low risk.

c. *Conversion sources* originating from regions experiencing forest area decline
   - Regions with a net loss of forest area <1% over the most recent 10 years of available data are considered low risk. *Certified Organizations* can refer to public data such as FAO, FIA ecoregional data, and Statistics Canada, Canadian Forest Service, state, provincial, or federal "State of the Forest" reports.

d. Forest activities where the spirit of the ILO Declaration on Fundamental Principles and Rights at work (1998) are not met
   - The U.S. and Canada are both members of ILO; by virtue of that membership, they commit to promote and realize the principles set forth in the ILO Declaration on Fundamental Principles and Rights at work (1998) through laws and regulations that include support of the basic principles of freedom of association and the right to collective bargaining; elimination of child labor and forced labor; and elimination of discrimination.

e. Forest activities where the spirit of the United Nations Declaration on the Rights of *Indigenous Peoples* (2007) are not met
   - United Nations Declaration on the Rights of *Indigenous Peoples* (UNDRIP) seeks to enhance harmonious and cooperative relations between the States and *Indigenous Peoples* in the spirit of partnership and mutual respect. The U.S. can refer to this study by Cornell Law School, and Canada can refer to the Canadian Constitution Act. Fiber from countries without the following regulatory frameworks will require a risk assessment:
     i. Domestic legal regimes that consider regional particularities pertaining to *Indigenous Peoples'* rights, including (a) historical and cultural backgrounds of *Indigenous Peoples* and, (b) treaties, agreements, and other constructive arrangements between *Indigenous Peoples* and the State;
     ii. Political or legal mechanisms for *Indigenous Peoples* to pursue their unique interests and seek just and fair redress based on the principles of justice, democracy, respect for human rights, non-discrimination, and good faith; and
     iii. Right or ability of *Indigenous Peoples* to organize and advocate through self-determined representative institutions.

f. *Fiber sourced from areas without effective social laws*
   - The United States and Canada have strong legal frameworks. Fiber from countries without effective laws addressing the following will need a risk assessment. *Certified Organizations* can refer to the latest Transparency International (TI) Corruption Perception Index (CPI). A score higher than 50 is considered low risk.
     i. workers' health and safety;
     ii. fair labor practices;
     iii. Indigenous Peoples' rights;
     iv. anti-discrimination and anti-harassment measures;
     v. prevailing wages and
     vi. workers' right to organize.



g. *Illegal Logging* including trade in CITES (The Convention on International Trade in Endangered Species of Wild Fauna and Flora) listed species

- Harvesting and trading of wood fiber in violation of applicable laws and regulations in the country of harvest. The United States and Canada have strong legal frameworks. *Certified Organizations* can refer to the latest Transparency International (TI) Corruption Perception Index (CPI). A score higher than 50 is considered low risk. Refer to SFI's *Policy* on *Illegal Logging* in SFI Section 8 Policies for more information.

h. Conflict Timber

- The country/region has a been identified as having high intensity violent conflicts according to the Heidelberg Conflict Barometer or the Fragile States List.

i. Genetically modified trees via *forest tree biotechnology*

- SFI has strong existing measures in the *SFI Policy on Forest Tree Biotechnology* located in SFI Section 8 *Policies*. *SFI's Policy on Forest Tree Biotechnology* states,

> "Because genetically modified forest trees are not approved for commercial plantings in the United States and Canada, and the SFI Forest Management Standard is endorsed by the Program for the Endorsement of Forest Certification, which has restrictions on the use of genetically modified trees, the use of fiber from genetically modified trees via *forest tree biotechnology* is not approved for use in SFI-labeled products.
>
> SFI realizes that much research is still being conducted to study the ecological cost benefits of genetically modified trees and regulations concerning *forest tree biotechnology* continue to evolve. As such research and regulations develop, SFI Inc. will review to understand the impacts of genetically modified trees from an ecological perspective and SFI will proactively review and update this policy as necessary."

Additional Guidance

- *SFI 2022 Chain of Custody Standard certified organizations* outside the United States and Canada receiving fiber from *primary producers* must ensure all materials have been assessed as per the requirements of PEFC ST 2002:2020, Part 7 – Due Diligence System – requirements.
- *SFI 2022 Chain of Custody Standard primary producers* that receives fiber direct from a forest within the scope of a valid PEFC forest management standard certificate outside the United States and Canada can accept this fiber as 100% PEFC Origin. The PEFC database will be consulted to verify the validity of the PEFC certificate and its scope.
- When addressing the requirements for a due diligence system in clause 7.2.2, b., c. or d., in the *SFI 2022 Chain of Custody Standard* or the S*FI 2022 Certified Sourcing Standard*, the *certified organization* may do so using the SFI or PEFC due diligence systems requirements. The same applies for Indicator 11.1.2 b., c., or d., in the *SFI 2022 Fiber Sourcing Standard*.



PART 5: SFI AUDIT PROCEDURES

Certifying Multiple Forest Management Units or Fiber Procurement Operations

SFI recognizes that a *Certified Organization* might manage multiple forest management units/tenures and operate multiple manufacturing facilities. As such, a *Certified Organization* can choose which forest management units/tenures obtain *SFI 2022 Forest Management* certification. Isolated small forest management units for which the primary purpose is to buffer a manufacturing facility are not required to be certified to the *SFI 2022 Forest Management Standard.* These forest management buffer areas may include wood production as an additional goal, but not the primary goal, and activities in these buffer areas should reflect the commitment to SFI and be in compliance with the requirements of the *SFI 2022 Fiber Sourcing Standard*. Furthermore, only those manufacturing facilities that are sourcing from the *wood and fiber supply area* of the land units/tenures that are certified to the *SFI 2022 Forest Management Standard* are required to obtain *SFI 2022 Fiber Sourcing Standard* certification. *Certified Organizations* with multiple forest management units/tenures and multiple manufacturing facilities have two years to ensure certification to the respective *SFI 2022 Standards*.

***Primary Producers* with SFI Chain-of-Custody and SFI Fiber Sourcing Certification**

1.2 Additional Requirements in the *SFI 2022 Chain-of-Custody Standard*, requires *primary producers* to conform to the *SFI 2022 Fiber Sourcing Standard* if they choose to get certified to the *SFI 2022 Chain-of-Custody Standard.*

However, we understand the work requirements needed to obtain a certification to the *SFI 2022 Fiber Sourcing Standard*, and given this work requirement, *primary producers* have two years to ensure certification to the *SFI 2022 Fiber Sourcing Standard.* This two-year time frame will allow the *primary producer* to meet immediate market demands, while working towards *fiber sourcing* certification.

Exemption from Chain-of-Custody and Certified Sourcing Surveillance Audits

An SFI chain-of-custody or certified sourcing *Certified Organization* can, upon receiving approval from their *certification body*, waive a surveillance audit if they have not sold any certified material since their last audit. The chain-of-custody or certified sourcing *Certified Organization* must sign a declaration for their *certification body* stating that no material has been sold as SFI-certified since the last audit. The declaration must also include a commitment by the chain-of-custody or certified sourcing *Certified Organization* to contact the *certification body* as soon as they wish to sell SFI-certified material. *Certification bodies* shall not waive more than two consecutive audits.

Scoping Suppliers into a Chain of Custody

A *Certified Organization* that sources from *primary producers* can include these organizations in the scope of their *SFI 2022 Chain-of-Custody Standard* certificate. The *Certified Organization* will be responsible for all chain of custody requirements of the organizations they scope into their own chain-of-custody procedures. The scoped-in *organizations* are subject to sample audits. *Certification bodies* shall follow the guidelines in Section 10 of the SFI 2022 Audit Procedures and Auditor Qualifications and Accreditation — Appendix 1 for Multi-site Organizations. If the *Certified Organization* scopes in *primary producers*, the *Certified Organization* is also responsible for all *SFI Implementation Committee*-related activity for that company.

PART 6: SFI IMPLEMENTATION COMMITTEES

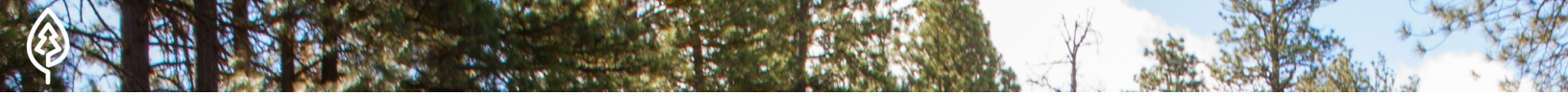
Certified Organizations established *SFI Implementation Committees* in 1995. *SFI Implementation Committees* are an integral part of SFI Inc. and play a vital role in maintaining the integrity of SFI, promoting training, education, and landowner outreach, and supporting and promoting responsible *forestry* at *local* levels. State, provincial, and regional *SFI Implementation Committees* are financially-autonomous committees reflecting significant geographic and organizational diversity. They involve a wide range of *local* community *stakeholders*.

The definition of *SFI Implementation Committee* in Section 14 of the *SFI 2022: Standard and Rules* is "A state, provincial, or regional committee organized by *Certified Organizations* to facilitate or manage the programs and alliances that support the growth of SFI, including sustainable forest management."

All *Certified Organizations* owning and/or operating forest product facilities, owning and/or managing forestland, or procuring fiber within the state or province are expected to participate in the *SFI Implementation Committees. Certified Organizations* are required to participate in the committee where significant operations exist (i.e., majority of forestland owned and/or fiber procured). The expectation is that *Certified Organizations* with facilities within the scope of an *SFI 2022 Fiber Sourcing Standard* certificate will support all the *SFI Implementation Committees* in the regions, states, or provinces where they procure fiber. However, there may be regions, states, or provinces where a *Certified Organization* sources a de minimis amount of fiber for a given facility. In these situations, it is possible for a *Certified Organization* to meet the requirements of Performance Measure 6.2 of the *SFI 2022 Fiber Sourcing Standard* in the regions where the majority of the Certified Organization's procurement occurs.

SFI Implementation Committees must submit the Annual Progress Report to *SFI Inc.* every year.

SFI Implementation Committees are governed by a governance document that was reviewed and updated for current relevance to *SFI Inc*. and to ensure consistency with the *SFI 2022 Standard and Rules.* The *SFI Implementation Committee* governance document will be updated in conjunction with future SFI standard revisions and may also be reviewed between scheduled revisions if there are significant changes to SFI's work.



PART 7: GUIDANCE FOR OBJECTIVE 12 – AVOID EUDR NON-COMPLIANT SOURCES

SFI Fiber Sourcing Module to Support EUDR Due Diligence Requirements - Approved March 20, 2024, updated August 30, 2024

1. Official EUDR Documents

The complete EUDR regulation, including the complete list of definitions and requirements is located on their website:
https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023R1115

The EU Commission published a website for additional implementation support tools. This includes information on the EU Observatory as well as Frequently Asked Questions - https://green-business.ec.europa.eu/deforestation-regulation-implementation_en

2. Defining Audit Scope and Non-Compliances

The *Certified Organization* applying the optional Objective 12 can define the scope for which they are seeking to demonstrate support of EUDR due diligence requirements. This may or may not be the same as the scope of their program to comply with the SFI 2022 Fiber Sourcing Standard. Non-conformances to the optional Objective 12 will not affect the certification status of their SFI 2022 Fiber Sourcing Standard certification.

3. Role of a SFI *Certified Organization* Under the EUDR

Objective 12 is written to capture the requirements of an operator under the EUDR. In many cases, the *certified organization* will not be the organization that places commodities or relevant products on the EU market and is therefore not an operator for EUDR purposes. In such cases, the operator may be a direct customer of the *certified organization* or may be further down the supply chain. Despite the degree of separation between the *certified organization* and the operator, in order for the products originating from the *certified organization* to be placed on the EU market the operator will require specific sourcing information and may require specific risk assessment and due diligence information depending on their degree of familiarity with the region from which the fiber used in the relevant product was sourced. As a result, *certified organizations* that are not operators but that supply fiber and/or relevant products that ultimately enters the EU market should expect that the operator:

- will require specific information from the *certified organization* in order to meet geolocation-specific information requirements of the EUDR (as described in Performance Measure 12.1 – particularly Indicator 1, and Indicator 2 a-e, g and h); and,
- may require information from the *certified organization* in order to complete its risk assessment (as described in Performance Measure 12.2 particularly Indicator 5a, indicator 6 a-j, m and n and Indicator 10): and,
- may require information from the *certified organization* in order to communicate substantiated concerns (as described in Performance Measure 12.3, Indicator 1): and,
- may require information from the *certified organization* in order to mitigate non-negligible risk (as described in Performance Measure 12.4, Indicator 1, 2, 3 and 5): and,
- may require information from the *certified organization* in order to maintain its due diligence system (as described in Performance Measure 12.5, Indicator 2, 3 and 4).
- may require information to fulfill requirements to supply EU competent authority(ies) with "verifiable evidence of deforestation-free and legal" for all commodities or relevant products placed on the EU market to meet the Due Diligence statement requirements and/or future enforcement checks (as described in Performance Measure 12.6, Indicator 1).

As a result of the scope and scale of information expectations on *certified organizations* that are not operators, such *certified organizations* may wish to include specific elements of the supplemental EUDR compliance requirements within their certification audit, even though they do not have responsibilities in relation to all of the supplemental indicators. Reporting against a sub-set of the supplemental indicators is appropriate in such cases.

Before implementing an audit against a sub-set of the supplemental indicators, the *certified organization* shall clearly establish the scope of their responsibilities with their certification body and ensure that these are clearly described in the related certification report.

4. Performance Measure 12.1 *Certified Organizations* shall collect and retain location-specific information for all relevant products.

Collection of adequately conclusive and verifiable information

The intent of Indicator 12.1.2.g is to collect adequately conclusive and verifiable information that the relevant products are deforestation-free. There are multiple potential approaches to collection of adequately conclusive and verifiable information of compliance with relevant legislation, which may rely on a combination of national, regional, site specific and/or supplier specific information. The extent of evidence gathering required would be expected to be influenced by the risk of non-compliance identified through the risk assessment developed under Performance Measure 12.2

An approach to demonstrating this may include collecting specific information, maintaining a dataset, and/or utilizing a system that can track and demonstrate, for every plot of land harvested after December 31, 2020.

- The pre-logging forest condition (*primary forest, naturally regenerating forest, planted forest, plantation forest or other wooded land*).
- The post-logging reforestation intention (conversion to agriculture, conversion to other land uses, *naturally regenerating forest, planted forest or plantation forest*).



Similarly, the intent of Indicator 12.1.2.h is to collect adequately conclusive and verifiable information that the relevant commodities have been produced in accordance with the relevant legislation of the country of production.
The scope of relevant legislation for EUDR purposes includes:

i. land use rights (as per 4.1.1);
ii. environmental protection (as per 4.1.1);
iii. forest-related rules, including forest management and biodiversity conservation, where directly related to wood harvesting (as per 4.1.1);
iv. third parties' rights (as per 4.1.1);
v. labour rights (as per 4.2.1);
vi. human rights protected under international law (as per 4.2.1);
vii. the principle of free, prior and informed consent (FPIC), including as set out in the UN Declaration on the Rights of Indigenous Peoples (as per 4.2.1);
viii. tax, anti-corruption, trade and customs regulation (an expansion of 4.1.1);

5. Performance Measure 12.2. The *Certified Organization* shall conduct a risk assessment process to evaluate the risk of EUDR non-compliance by relevant products.

Treatment of fiber certified under the SFI Forest Management Standard
The intent of the risk assessment process is to identify supply sources with an elevated risk of non-compliance with the EUDR. To the extent that suppliers carry forest management certification, this may be considered to reduce the risk of non-compliance. As there is not full alignment between the EUDR and certification requirements, full reliance on forest certification may not be possible in all cases. However, the SFI Forest Management Standard has long included restrictions on conversion, including limitations on passing along SFI certification claims on wood harvested as part of a "liquidation/conversion" harvest. The SFI Forest Management Standard in conjunction with the SFI Chain-of-Custody Standard and related annual certification audits act together to ensure that SFI certified fiber sourced from land managed under the SFI Forest Management Standard is not contributing to / causing deforestation. Therefore, the *certified organization* should consider gathering additional information where they identify elevated risk on a case-by-case basis based on information known about the specific supplier and/or plot(s) of land and the risk of mixing with sources not certified to the SFI Forest Management Standard. Where there is elevated risk identified, even though the land is SFI Forest Management certified, the *certified organizations* may want to consider obtaining a written declaration of compliance from the relevant supplier(s).

Alignment between risks determined under Performance Measure 11.2 and risks determined under Performance Measure 12.2
There are multiple sources of overlap between the risk assessment required under Performance Measure 11.2 of the SFI Fiber Sourcing Standard that is required to be completed by all *certified organizations* and the risk assessment required under Performance Measure 12.2 for *certified organizations* addressing the additional EUDR module requirements in support of EUDR compliance.

For the purpose of alignment between the two risk assessments, it is expected that high risk categories identified under Performance Measure 11.2.2. would be considered as having higher than negligible risk of EUDR compliance in most cases, unless the risk is specific to conversion for non-agricultural purposes. Low risk categories identified under Performance Measure 11.2.2 would be expected to be negligible risk in most cases but would not preclude the need to reassess the risk based on EUDR criteria.

6. Performance Measure 12.4 The *Certified Organization* shall have a process to mitigate the risk that relevant products are non-compliant with the EUDR.

Use of SFI fiber sourcing monitoring processes as part of the mitigating controls required for managing EUDR compliance risk.
The intent of Performance Measure 12.4 is to capture the EUDR's requirements for developing mitigating controls where the risk of non-compliance with the EUDR is more than negligible.

In developing mitigating controls, *certified organizations* may leverage and/or expand on multiple controls already implemented and audited during SFI Fiber Sourcing audits which address compliance with the SFI Fiber sourcing standard, including:

- implement a verifiable monitoring system (Performance Measure 2.1),
- implement a system to achieve compliance (Performance Measure 4.1)
- implement a process to mitigate the risk of sourcing controversial fiber from high-risk areas (Performance Measure 11.4)
- work individually and/or with *SFI Implementation Committees*, logging or forestry associations, or appropriate agencies or others in the forestry community to foster improvement in the professionalism of wood producers specific to qualified logging professionals (Performance Measure 6.2)
- support and promote efforts by consulting foresters, state, provincial and federal agencies, state or local groups, professional societies, conservation organizations, Indigenous Peoples and governments, community groups, sporting organizations, labor, universities, extension agencies, the *American Tree Farm System*® and/or other landowner cooperative *programs* to apply *principles* of sustainable forest management (Performance measure 7.1)
- individually and/or through cooperative efforts involving *SFI Implementation Committees* establish, at the state, provincial, or other appropriate levels, procedures to address concerns raised by loggers, consulting foresters, employees, unions, *stakeholders*, the public or other *certified organizations* regarding practices that appear inconsistent with the SFI standards principles and objectives (Performance Measure 7.3)