Draft 1.0-V2-2020
Principles 1–10 and Annexes

[Excluding Family Forest Indicators, Plantation Indicators, and USFS Supplementary Requirements]

— WITH TRACKED CHANGES —

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INTRODUCTION

The Forest Stewardship Council® (FSC®) is an international non-profit organization founded in 1993 to support environmentally appropriate, socially beneficial, and economically viable management of the world’s forests*. FSC does this by setting standards for responsible forest management, which are then used by accredited Certification Bodies* to assess the performance of participating organizations. Forest operations that meet these standards are permitted to use the FSC label on their products in the marketplace, thereby enabling consumers to choose and purchase products that come from forests* managed according to FSC standards.

This FSC US National Forest Stewardship Standard represents the United States adaptation of FSC’s global Principles and Criteria (FSC-STD-01-001 V5-2) and International Generic Indicators (i.e., IGIs; FSC-STD-60-004 V2-0). The national adaptation of this international framework ensures that the specific standard requirements are locally relevant, applicable, and workable, as well as guarantees its integrity across the broader FSC system.
Development of the FSC US Standard

In 2010, the FSC US Forest Management Standard Version 1 was approved and published. Version 1, which was applicable to the conterminous United States, replaced nine individual regional FSC Forest Management standards and was aligned with the FSC Principles and Criteria Version 4.

In April 2016, the FSC US Board of Directors agreed to be the Standard Development Group for a revision process that would align the national standard with FSC Principles and Criteria Version 5, and the International Generic Indicators. As the Standard Development Group, they appointed a technical working group to develop recommendations for the revision. The technical working group members included both FSC members and non-members with the expertise and experience to represent the three FSC chambers, US regions, and key stakeholder groups. From 2017 through 2020, the technical working group met regularly, both in person and virtually, to develop their recommendations for the Standard Development Group.

The drafting of individual Indicators* was guided by two FSC International documents:
- FSC-STD-60-004 V1-0 EN International Generic Indicators; and
- FSC-PRO-60-006 V1-0 EN Development and Transfer of NFSS to FSC P&C V5

These documents outlined how the SDG was to use the International Generic Indicators (IGIs) as a baseline for drafting the new Standard. Also known as the “transfer process,” the SDG had four options for interpreting each IGI.

1. **Adopt**: The SDG copies an International Generic Indicator into the new FSC National Forest Stewardship Standard.
2. **Adapt**: The SDG reviews and revises an International Generic Indicator in order to address terminology, scope, or effectiveness in measuring conformance to a Criterion*.
3. **Drop**: The SDG omits an International Generic Indicator where it is determined to be inapplicable or otherwise non-contributing in measuring conformance to a Criterion*.
4. **Add**: The SDG suggests additional Indicators* in order to better establish conformance to a Criterion* as appropriate in a US context.

Following receipt and consideration of the technical working group’s recommendations in 2020, this draft FSC US National Forest Stewardship Standard (Version 2, Draft 1) was approved for consultation by the Standards Development Group through a consensus decision. This draft maintains consistency with the previous version, and:
- Aligns the US standard with the new FSC Principles and Criteria (V5-2) and International Generic Indicators (IGI)
- Addresses a small number of high-priority issues identified by stakeholders
- Incorporates guidance that has been in use, but not formally adopted
- Addresses needed editorial and grammatical clarifications.

This draft includes the “base indicators” for Principle 1 through Principle 10, and associated annexes, that will be applicable to almost all certified Organizations, but does not include the Scale, Intensity, and Risk Indicators (i.e., SIR Indicators: family forest indicators and plantation indicators), nor the supplementary requirements for US Forest Service lands. These additional materials will be consulted through a separate first public consultation, and then all materials will be combined for the second public consultation in 2021.
Structure of the Standard

This Draft 1 FSC US National Forest Stewardship Standard maintains the internationally established hierarchical structure where:

- **Principles** are at the highest organizational level. These are the essential rules or elements of forest stewardship. FSC US’s Standard includes 10 Principles as prescribed by FSC International. Each Principle contains a series of Criteria, which subdivide the Principle.

- **Criteria** provide the means of judging if a Principle has been fulfilled. Each Criterion contains one or more Indicators.

- **Indicators** are the components of the Standard that are directly applicable to The Organizations. Indicators contain the performance direction that The Organizations must meet or to which they must adhere.

Together, the Principles and Criteria are the foundation of FSC certification, and are not subject to revision at the national or regional levels. Indicators have been specifically customized and drafted for application in the United States context. All Principles, Criteria and Indicators share equal status, validity and authority, and apply at the level of the Management Unit. Corrective Action Requests (CARs) are issued by The Organization’s Certification Body when there is a finding of nonconformance with an Indicator and/or Criterion.

All Principles, Criteria, and Indicators, as well as the Glossary contained in this document, are considered normative requirements. Terms for which a definition is provided in the Glossary are italicized and are marked with an asterisk (*). There are some terms that are defined differently in this Standard than in other FSC normative documents. These are: Certification body, Child labor, Complaint, Conservation zone, Customary law, Discrimination, Dispute, Dispute of substantial magnitude, Endangered species, Forest, Gender equality, Genetically modified organisms, Habitat, Invasive species, Landscape, Local communities, Long-term, Natural conditions, Natural forest, Non-timber forest products, Plantation, Protected area, Rare species, Refugia, Representative Sample Area, Restore/restoration, Rights holder, Threatened Species, Timber harvesting level, and Wetland.

Annexes (with the exception of Annex A, the Glossary) do not represent normative requirements, but instead provide guidance. When an annex is referenced in an Indicator, The Organization is expected to consider the guidance provided in the annex as they work to conform with the Indicator, but The Organization is not required to conform to all aspects of the annex.

Applicability notes are included in boxes associated with some Indicators and are intended to clarify the Indicator by defining its scope of application—for example, an Indicator may only apply to management of publicly owned lands, or to management operations of a certain scale or intensity.

Intent notes associated with some Indicators expand on the goals or purpose of a requirement and define terms. Intent statements are used to facilitate consistent application and audit of the Indicators.

Guidance statements and guidance in annexes are intended to help The Organization and the Certification Body to understand how the Principles, Criteria, and Indicators should be applied in practice. Certification Bodies are expected to use the guidance language associated with each Indicator when seeking and weighing evidence and assessing conformance with the
Indicator*. Individual elements within the guidance when considered separately are not requirements of this Standard. However, it may be possible for lack of performance relative to an individual guidance element to be interpreted to mean noncompliance if, when considering the sum of the evidence, the Certification Body* finds that there is clear evidence that the Indicator* has not been met. In some cases, other information or management activity* not specified in the guidance may be provided by The Organization* to demonstrate conformance with the Indicator*.

The compulsory nature of instructions found in the Principles*, Criteria*, Indicators*, and guidance is defined as follows:

- “Shall” indicates instructions that are to be strictly followed.
- “Should” indicates that among several possibilities, one is recommended as particularly suitable, without mentioning or excluding others.
- “May” indicates a course of action permissible within the limits of the Standard.
- “Can” is used for statements of possibility and capability, whether material, physical, or causal.
- “Includes” implies that all elements in the list must be addressed, but does not imply that the list is comprehensive.

While the thresholds or requirements for conformance are outlined within each Indicator*, the specific collection of documentation and other evidence to demonstrate conformance is up to The Organization*.

Scope of the Standard

This draft National Forest Stewardship Standard (Version 2, Draft 1) pertains to FSC-certified Management Units* in the conterminous United States, which excludes Alaska, Hawaii, and the US territories.

Application of the Standard

FSC forest* management certification is designed to provide a credible guarantee that all Management Units* included in the scope of the certificate conform with the requirements of the Forest Stewardship Standard specified on the certificate. FSC certification therefore applies to the Management Unit* and all activities related to forest management that occur within its boundaries.

The Organization* is the entity holding or applying for certification that has control and authority over the management of the Management Unit*. FSC certification does not apply solely to The Organization’s* activities, but to all activities within the Management Unit*. The Organization* may be the forest owner, forest manager, or both. It is the responsibility of The Organization* to demonstrate that the Standard’s requirements have been met within the Management Unit*. In several instances, The Organization* may rely on the efforts of other parties who play a role in meeting certain requirements (e.g., government entities, Indigenous Peoples*, and stakeholders*). However, where gaps in performance exist, it is the responsibility of The Organization* to address these gaps, within their sphere of influence.
In cases where discrete portions of the forest* are beyond the management control of The Organization*, The Organization* may excise these areas from the scope of the certificate. Refer to FSC policies and procedures regarding excision (FSC-POL-20-003).

Regional variation has been retained from the FSC US Forest Management Standard, Version 1 (i.e., Version 1 of this draft Standard) in a small number of Principle 6 and Principle 10 Indicators*. Numerous guidance statements throughout this Standard also provide regional specificity. A regional map depicting the FSC US regional delineations may be found in Annex B of this Standard. Contact FSC US for a more detailed description of the regions.

This document represents one component of the requirements for FSC certification. There are multiple other policies, developed at an international level, with which The Organization* must comply. These policies may not be referenced in this Standard and are available at the FSC International website (https://www.fsc.org).

Requirements on non-timber forest products* (i.e., NTFP), in all parts of this Standard, are intended only for those that are commercially harvested or that are recognized as customary and/or subsistence-use rights. Information used to support non-timber forest product* management, including sustained yield harvest rates* and methods for managing non-timber forest products*, is commensurate with the scale*, intensity*, and risk* of harvest operations, as well as the resources available to quantitatively assess impact and management. In all cases, The Organization* must at a minimum assure that non-timber forest products* are not being depleted and that there are no negative external effects on other resources. If The Organization* wants to make on-product or off-product FSC-certification claims, then the Certification Body* must evaluate the management system used for the specific non-timber forest product*. The Certification Body* shall use FSC-approved standards prepared for that non-timber forest product* or it shall prepare its own non-timber forest product* standard using a process that follows FSC Standard FSC-STD-20-003.

Multiple sections in this Standard call for designations of special management—among these are High Conservation Value Areas*; Representative Sample Areas*; conservation zones* for rare, threatened, and endangered species*; and Riparian Management Zones*. These designations, although designed to capture differing values, are by no means mutually exclusive and in many cases, one would expect to see a high level of overlap. For example, an unentered old-growth stand within a Management Unit* would most likely be designated as a High Conservation Value* due to its ecological values and would likely also serve as a Representative Sample Area*. The Organization* is encouraged to consider the overlap of goals when designing configurations of special management areas in order to maximize the environmental, social, and economic values of the forest*.
PRINCIPLE 1: COMPLIANCE WITH LAWS

*The Organization* shall comply with all applicable laws*, regulations, and nationally ratified* international treaties, conventions, and agreements. (P1 P&C V4)

C1.1 *The Organization* shall be a legally defined entity with clear, documented, and unchallenged legal registration*, with written authorization from the legally competent* authority for specific activities. (new)

**Indicator 1.1.1 (Adapted from IGI 1.1.1) Legal registration* to carry out all activities within the scope of the certificate is documented.**

C1.2 *The Organization* shall demonstrate that the legal* status of the Management Unit*, including tenure* and use rights*, and its boundaries, are clearly defined. (C2.1 P&C V4)

**Indicator 1.2.1 (Existing US Indicator 2.1.a) The forest owner or manager* has evidence of long-term* rights* to use and manage the FMU Management Unit* for the purposes described in the management plan*.**

Guidance: “Evidence of long-term* rights*” may include but is not limited to: deeds; long-term* lease agreements; evidence of fee ownership; or a contractual agreement to manage the forest*.

Documents do not have to be made publicly available*.

**Indicator 1.2.2 (Existing US Indicator 2.1.c) Boundaries of land ownership and use rights* are clearly identified on the ground and on maps prior to commencing management activities* in the vicinity of the boundaries.**

Intent: This Indicator* is not intended to evaluate measures taken to prevent trespass (e.g., marking property boundaries), which are addressed in Criterion 1.4 1.5.

Guidance: Boundary designations do not necessarily have to be comprehensive, but must be adequate to assure that management activities* are implemented where intended. If the boundary cannot be established, then the manager shall postpone management until the boundaries are established and marked either by legal* survey or by mutual agreement with the adjacent property owner (see also Criterion 1.4 1.5).

Use rights* held by other parties may include: deed restrictions; long-term* leases; timber rights*; mineral rights*; rights* to harvest; conservation easements rights-of-way; non-timber forest products (NTFP)* rights*; hunting and fishing rights*; and recreational uses.
C1.3 *The Organization* shall have *legal* rights to operate in the *Management Unit*, which fit the *legal* status of *The Organization* and of the *Management Unit*, and shall comply with the associated *legal* obligations in applicable national and *local laws* and regulations and administrative requirements. The *legal* rights shall provide for harvest of products and/or supply of *ecosystem services* from within the *Management Unit*. *The Organization* shall pay the legally prescribed charges associated with such *rights* and obligations. (C1.1, 1.2, 1.3 P&C V4)

**Indicator 1.3.1 (Existing US Indicator 1.1.a)** Forest management plans and operations. *The management plan* and *management activities* demonstrate compliance with all *applicable laws*, including *national laws* and *local laws*. *Federal*, *state*, *county*, *municipal*, and *tribal laws*, and *administrative requirements* (e.g., *regulations*). *Violations, outstanding complaints or investigations are provided to the Certifying Body (CB) during the annual audit.*

Guidance: *CBs should request and consider the number, severity and temporal pattern of legal/regulatory violations, outstanding complaints or investigations associated with the Forest Management Unit (FMU) for the 5 years prior to the certification assessment.*

The *management plan* or other documents provided to the CB should include a list of the key laws and administrative requirements that typically apply to management operations and a list of contact information for agencies that are responsible for local enforcement.

**Indicator 1.3.2 (Existing US Indicator 1.4.a)** Situations in which compliance with *applicable laws* or regulations conflicts with compliance with FSC *Principles*, *Criteria*, or *Indicators* are documented and referred to the *Certification Body*.

**Indicator 1.3.3 (Existing US Indicator 1.2.a)** *The forest owner or manager The Organization* provides written has evidence that all applicable and legally prescribed fees, royalties, taxes, and other charges are being paid in a timely manner. If payment is beyond the control of *the landowner or manager The Organization*, then there is evidence that every attempt at payment was made.

**Intent:** Taxes and fees at minimum include, as applicable: *local* and/or county property taxes; severance taxes.

Guidance: Compliance may be verified through: a document that includes a list of taxes, fees, and other charges that typically apply; an annual summary of payments; a signed statement from *the forest owner/manager The Organization* that all payments are paid on a timely basis.
(Existing US Indicator 1.1.b) To facilitate legal compliance, the forest owner or manager ensures that employees and contractors, commensurate with their responsibilities, are duly informed about applicable laws and regulations.

C1.4 The Organization* shall develop and implement measures, and/or shall engage with regulatory agencies, to systematically protect the Management Unit* from unauthorized or illegal resource use, settlement, and other illegal activities. (C1.5 P&C V4)

Intent: “Unauthorized activities resource use” may include: hunting; fishing; collecting; theft; dumping; and prohibited recreational use, including motorized vehicle use on closed roads, closed trails, and closed off-trail areas.

Indicator 1.4.1 (Existing US Indicator 1.5.a) The forest owner or manager The Organization* implements measures strategies intended to prevent illegal and unauthorized activities on the Management Unit* Forest Management Unit (FMU).

Applicability: The forest owner or manager The Organization* is not expected to play a law enforcement role, but is expected to not ignore illegal activities on the FMU Management Unit*.

Guidance: Measures Strategies to prevent illegal and unauthorized activities may include, but are not limited to: clear marking of boundaries; appropriate signage and gates; communications with forest* users, local community* members, and other stakeholders*; and reporting suspected illegal or unauthorized activities to the proper authorities.

Monitoring and preventative actions should be proportionate to and guided by the nature of the property and risk of specific types of activities.

Indicator 1.4.2 (Existing US Indicator 1.5.b) If illegal or unauthorized activities occur, the forest owner or manager The Organization* implements actions strategies designed to curtail such activities and correct the situation to the extent possible for meeting all land management objectives* with consideration of available resources.

Guidance: Efforts to stop illegal or unauthorized activities may include but are not limited to: cooperating with the appropriate authorities; notifying perpetrators and stakeholders; posting boundary notices; using gates; making periodic inspections; and reporting suspected illegal or unauthorized activities to the proper authorities.

Where protection is the responsibility of regulatory bodies, The Organization* cooperates with the applicable entity to identify, report, control, and discourage unauthorized or illegal
activities. No legal* action may be appropriate if the proper authorities have been notified and the landowner or manager. The Organization* demonstrates that legal* action may have negative consequences that outweigh its benefit, or if legal* action is not possible.

C1.5 The Organization* shall comply with the applicable national laws*, local laws*, ratified* international conventions, and obligatory codes of practice*, relating to the transportation and trade of forest products within and from the Management Unit*, and/or up to the point of first sale. (C1.3 P&C V4)

Applicability: Additional international agreements (such as the UN Framework) are also applicable.

Indicator 1.5.1 (Existing US Indicator 1.3.a) Forest management plans and operations. The management plan* and management activities* comply with relevant provisions of all applicable national laws* and international laws and binding international agreements relating to the transportation and trade of forest* products (e.g., Lacey Act, Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), other international conventions). Violations, outstanding complaints or investigations are provided to the CB during the annual audit.

Guidance: The Organization* may demonstrate compliance by maintaining a list of applicable binding international agreements and completing an assessment to confirm compliance. A document containing a list of relevant laws, treaties, and agreements can be found in Annex C is available from FSC-US. An international agreement is considered “binding” when the US has formally signed the agreement.

C1.6 The Organization* shall identify, prevent and resolve disputes* over issues of statutory or customary law*, which can be settled out of court in a timely manner, through engagement* with affected stakeholders*. (C2.3 P&C V4)

Intent: The Indicators* of Criterion 1.6 provide the common Indicators* used for managing and addressing disputes* throughout this Standard. Parenthetical Criterion* references identify where language is only applicable to a specific Criterion*. Annex D provides the framework of the dispute* management system employed in this Standard, describes FSC’s approach to dispute* management more generally, and provides additional expectations for the dispute* resolution process—the core component of this dispute* management system.

Complaints*, more generally, are not specifically addressed in either the Indicators* of
Criterion 1.6 or Annex D. In this Standard, however, complaints* may naturally evolve to a dispute* when initial attempts to resolve a complaint* have been unsuccessful.

This framework is intended to provide parties with an avenue to manage dispute* resolution in good faith* and outside of court. However, if good faith* is exhausted and the parties have not agreed on a resolution, The Organization’s* responsibility ends. The party bringing the dispute* may: 1) discontinue their pursuit of the dispute*; 2) address the dispute* to The Organization’s* Certification Body* (if the dispute* pertains to conformance with FSC Standards); 3) address the dispute* to FSC International per FSC-PRO-01-008, Processing Complaints in the FSC Certification Scheme (if the dispute* pertains to the FSC system); or 4) seek resolution through the court system (if the dispute* pertains to a legal* issue).

Indicator 1.6.1 (Adapted from IGI 1.6.1) A system is in place to receive disputes* related to:
   a. applicable laws* (Criterion 1.6);
   b. disputes* from workers* (Criterion 2.6); and
   c. impact of management activities* on affected local communities*, other affected stakeholders*, and Native American groups* (Criterion 4.6 and Criterion 3.2)

Indicator 1.6.2 (Adapted from IGI 1.6.2) A publicly available* dispute* resolution process that can be adapted through culturally appropriate* engagement* is in place, and this process is used to resolve disputes* that can be settled out of court in a timely manner. This process also identifies mechanisms to address disputes of substantial magnitude*, including provisions for ceasing operations. (Criterion 1.6, Criterion 3.2, and Criterion 4.6)

Consultation Questions:

The Standard Development Group is requesting assistance in establishing a threshold for use of the term, ‘significant’ in the definition of ‘disputes of substantial magnitude.’ The definition indicates that these are disputes that involve one or more of certain actions (listed in the definition), including, “Significant destruction of property.”

1) What kinds of property destruction should not lead to classification as a ‘dispute of substantial magnitude’?

2) What kinds of property destruction should lead to classification as a ‘dispute of substantial magnitude’?

The ‘dispute of substantial magnitude’ definition also indicates that a ‘dispute’ could become of substantial magnitude if it is, “of substantial duration, implies a significant number of interests and has a significant negative impact to the forest resource/value.”

3) How many interests would need to be involved for a ‘dispute’ to become a ‘dispute of substantial magnitude’?
4) What kinds of impacts to forest resources/values should not result in a ‘dispute’ becoming a ‘dispute of substantial magnitude’?

5) What kinds of impacts to forest resources/values should result in a ‘dispute’ becoming a ‘dispute of substantial magnitude’?

Indicator 1.6.3 (Adapted from IGI 1.6.3) An up-to-date record of disputes* is maintained and includes:
   a. steps taken to resolve disputes*;
   b. outcomes of dispute* resolution processes, including, where applicable,
      i. fair compensation* to workers* for loss or damage to property, occupational diseases*, or occupational injuries* sustained while working for The Organization* (Criterion 2.6) and
      ii. fair compensation* to local communities*, individuals, and Native American* groups (Criterion 4.6 and Criterion 3.2); and
   c. unresolved disputes* and the reason(s) they are not resolved.

Indicator 1.6.4 (Adapted from IGI 1.6.4) The Organization* prevents or identifies and resolves disputes* in a manner consistent with the dispute* management framework outlined in Annex D.

(Existing indicator 2.3.a) If disputes arise regarding tenure claims or use rights then the forest owner or manager initially attempts to resolve them through open communication, negotiation, and/or mediation. If these good-faith efforts fail, then federal, state, and/or local laws are employed to resolve such disputes.

(Existing Indicator 2.3.b) The forest owner or manager documents any significant disputes over tenure and use rights.

C1.7 The Organization* shall publicize a commitment not to offer or receive bribes in money or any other form of corruption, and shall comply with anti-corruption legislation where this exists. In the absence of anti-corruption legislation, The Organization* shall implement other anti-corruption measures proportionate to the scale* and intensity* of management activities and the risk* of corruption. (new)

Applicability: The additional requirements of this Criterion* are addressed through Indicator 1.3.1.

Indicator 1.7.1 (Adapted from IGI 1.7.1) The Organization* has and adheres to a publicly available* policy that meets or exceeds applicable laws* regarding bribery and anti-corruption.
C1.8 *The Organization* shall demonstrate a *long-term* commitment to adhere to the FSC *Principles* and *Criteria* in the *Management Unit*, and to related FSC Policies and Standards. A statement of this commitment shall be contained in a *publicly available* document made freely available. (C1.6 P&C V4)

**Indicator 1.8.1 (Existing US Indicator 1.6.a)** *The forest owner or manager The Organization* demonstrates a *long-term* commitment to adhere to the FSC *Principles* and *Criteria* and FSC and FSC US policies, including the FSC-US Land Sales Policy, and has a *publicly available* statement of commitment to manage the FMU *Management Unit* in conformance with FSC standards and policies.

**Indicator 1.8.2 (Existing US Indicator 1.6.b)** If *The Organization* the certificate holder does not certify their entire holdings, then they document, in brief, the reasons for seeking partial certification, referencing FSC-POL-20-002 (or subsequent policy revisions), the location of other managed *forest* units, the natural resources found on the holdings being excluded from certification, and the *management activities* planned for the holdings being excluded from certification.

**Applicability:** All landowners are encouraged to certify all their holdings their entire operation. Certificate holders who are not members of FSC are encouraged to certify all their holdings, however they are not required to do so.

Certificate holders who are members of FSC are eligible for partial certification on condition that they have formally applied for certification assessments for the entire operation, and have also formally committed to make a strong effort to achieve certification for the entire operation within a reasonable time frame. The time frame will not normally exceed two years. The commitment applies to the entire forestry or forest management operation owned or fully controlled by the member or applicant for membership.

See FSC-POL-20-003, FSC-POL-20-002, and other FSC policy documents for additional guidelines for partial certification.

**Indicator 1.8.3 (Existing US Indicator 1.6.c)** *The Organization* *The forest owner or manager* notifies the *Certification Body* of significant changes in ownership and/or significant changes in management planning within 90 days of such change.

**Intent:** The purpose of the *Indicator* is to ensure that changes to the land area that are included in the certificate are communicated to the *Certification Body*. This includes changes in group membership as well as additions or excisions within individual ownerships.

**Guidance:** The determination of what is a significant change is to be verified by the *Certification Body*.
Consultation Questions:

The Standard Development Group is requesting assistance in establishing a threshold for use of the term, ‘significant’ in Indicator 1.8.3.

1) What kinds of changes in ownership and/or changes in management planning should not require notification of the Certification Body?

2) What kinds of changes in ownership and/or changes in management planning should require notification of the Certification Body?

PRINCIPLE 2: WORKERS’ RIGHTS AND EMPLOYMENT CONDITIONS

The Organization shall maintain or enhance the social and economic wellbeing of workers. (new)

Intent: Indicators in Principle 2 are applicable to all workers unless specifically indicated otherwise (i.e., use of “employee”). If the term worker or employee is not used in Indicator language, intent is provided following the Criterion or Indicator in question.

“Workers” are defined as “All employed persons, including public employees as well as ‘self-employed’ persons. This includes part-time and seasonal employees of all ranks and categories, including laborers, administrators, supervisors, executives, contractor employees, as well as self-employed contractors and subcontractors.”

Consultation Note:

The Standard Development Group identified a number of concerns linked to certain Criteria and Indicators of Principle 2 that are not completely resolved in this Draft 1 standard. To address these concerns, the Standard Development Group has asked FSC US staff to coordinate a Forest Workers Forum during the ongoing public consultation period. The objectives of this forum are provided below.

Individuals who would like to be considered for participation in this forum should send an email to FM.revision@us.fsc.org with the subject, “FSC US Forest Workers Forum” and with a brief description of their interest and the experience and knowledge that they would bring to the forum. Participation in the forum will be limited to increase effective engagement.
Problem Statement: The United States has adequate laws and regulations to protect forest workers, and this legislative framework is effective when it comes to workers directly employed by a forest management enterprise. However, the legislative framework is not always effectively enforced for workers who are employed by contractors responsible for implementing management activities on behalf of the forest management organization. Through Principles and Criteria Version 5, FSC expects that the basic rights of all workers implementing management activities within a certified management unit are respected, regardless of by whom the workers are employed. As compliance by a certified organization itself with legislative requirements does not provide comprehensive evidence of conformance with this expectation (i.e., for workers employed by contractors), certified organizations will have to find other ways to provide this evidence under the revised National Forest Stewardship Standard (NFSS).

Forum Objectives:

1. Clarify how the above problem statement intersects with Criteria 2.3, 2.4, 2.5 and 2.6.
2. Confirm that the Draft 1 indicators for Criteria 2.3, 2.4, 2.5 and 2.6 are adequate for ensuring conformance with each of these Criteria in a US context, considering the concerns expressed regarding employees of contractors.
3. Identify potential verifiers for the above confirmed indicators that would help to clarify what evidence could be used for conformance.
4. For any indicator identified as not adequate (per #1 above), develop potential alternative indicators that will ensure conformance with the Criterion, but reflect the US context.
5. Determine if any alignment is needed between the above Principle 2 Criteria and Criteria 4.3 and 5.4 (i.e., economic investment in local communities), particularly associated with the use of contracted work forces.

The outputs from the forum (i.e., potential verifiers and/or potential alternative indicators) will be considered by the Standard Development Group, along with any additional comments received during the public consultation, in its development and approval of a Draft 2 revised standard.

C2.1 The Organization* shall uphold* the principles and rights at work as defined in the ILO Declaration on Fundamental Principles and Rights at Work* (1998) based on the eight ILO Core Labour Conventions. (C4.3 P&C4)

Intent: The Indicators* of Criterion 2.1 apply to all workers*.

Indicator 2.1.1 (IGI 2.1.1) The Organization* does not use child labor*.

Intent:
- The Organization* does not employ workers* below the age of 15, or below the minimum age* as stated under national laws* or local laws* or regulations, whichever
age is higher, except as specified in the following bullets.

- In countries where the *national law* or regulations permit the employment of persons between the ages of 13 and 15 years in *light work*, such employment should not interfere with schooling nor be harmful to their health or development. Notably, where children are subject to compulsory education laws, they work only outside of school hours during normal daytime working hours.
- No person under the age of 18 is employed in *hazardous* or *heavy work* except for the purpose of training within approved *national laws* and regulation.
- *The Organization* prohibits the worst forms of *child labor*.

**Consultation Question:**

Will Indicator 2.1.1, as currently drafted, together with the definition of ‘child labor’ and the indicator’s intent language, allow the children of business owners to begin training in the family business as a minor, including in dangerous jobs?

**Indicator 2.1.2 (IGI 2.1.2)** *The Organization* eliminates all forms of *forced or compulsory labor*.

**Intent:**

- Employment relationships are voluntary and based on mutual consent, without threat of a penalty.
- There is no evidence of any practices indicative of *forced or compulsory labor*, including but not limited to the following:
  - physical and sexual violence
  - bonded labor
  - withholding of wages, including payment of employment fees and/or payment of deposit to commence employment
  - restriction of mobility/movement
  - retention of passport and identity documents
  - threats of denunciation to the authorities

**Indicator 2.1.3 (IGI 2.1.3)** *The Organization* ensures that there is no *discrimination* in *employment and occupation*.

**Intent:** *Employment and occupation* practices are non-discriminatory.

**Guidance:** Per the definition of the term, “*discrimination***” includes:

a. any distinction, exclusion, or preference made on the basis of race, color, sex, religion, political opinion, national extraction, social origin, sexual orientation, or gender identity,
which has the effect of nullifying or impairing equality of opportunity or treatment in employment or occupation; and

b. such other distinction, exclusion, or preference that has the effect of nullifying or impairing equality of opportunity or treatment in employment or occupation as may be determined by the individual concerned after consultation with representative employers’ and workers’ organizations* where such exist, and with other appropriate bodies.

**Indicator 2.1.4 (IGI 2.1.4)** The Organization* respects freedom of association and the right to collective bargaining*.

**Intent:**
- **Workers** are able to establish or join **worker organizations** of their own choosing.
- The Organization* respects the rights of workers* to engage in lawful activities related to forming, joining, or assisting a workers’ organization*, or to refrain from doing the same, and does not discriminate or punish workers* for exercising these rights.
- The Organization* negotiates with lawfully established workers’ organizations* and/or duly selected representatives in good faith* and with the best efforts to reach a collective bargaining* agreement.
- Collective bargaining* agreements are implemented where they exist.

(Existing US Indicator 4.1.d) Hiring practices and conditions of employment are nondiscriminatory and follow applicable federal, state and local regulations.

(Existing US Indicator 4.3.a) Forest workers are free to associate with other workers for the purpose of advocating for their own employment interests.

**C2.2 The Organization** shall promote gender equality* in employment practices, training opportunities, awarding of contracts, processes of engagement*, and management activities. (new)

**Intent:** The indicators of Criterion 2.2 apply to the employees of The Organization*.

**Indicator 2.2.1 (Based on IGI 2.2.1 and IGI 2.2.3)** Systems are implemented that promote gender equality* and prevent gender discrimination* in training opportunities, awarding of contracts, processes of engagement*, and management activities*.

**Guidance:** Promotion of gender equality* includes ensuring that training opportunities, contracts, processes of engagement*, and management activities* are equally available to
people of all gender identities, and encouraging people of less represented gender identities to participate and take advantage of the programs available.

Indicator 2.2.2 *(Based on IGI 2.2.6 and IGI 2.2.7) Parental leave practices follow applicable national laws* and local laws* and/or regulations.

Indicator 2.2.3 *(Based on IGI 2.2.2 and IGI 2.2.8) Systems are implemented that encourage and support active participation of people of all gender identities in all levels of employment and decision-making.

Indicator 2.2.4 *(IGI 2.2.9) Confidential and effective mechanisms exist for reporting and eliminating cases of sexual harassment and discrimination* based on gender, gender identity, marital status, parenthood, or sexual orientation.

Indicator 2.2.5 *(Adapted from IGI 2.2.4) People of all gender identities of the same qualifications, skills, and experience are paid the same wage when they do the same work.

C2.3 *The Organization* shall implement health and safety practices to protect workers* from occupational safety and health hazards. These practices shall, proportionate to scale, intensity, and risk* of management activities*, meet or exceed the recommendations of the ILO Code of Practice on Safety and Health in Forestry Work. *(C4.2 P&C V4)*

Indicator 2.3.1 *(Existing US Indicator 4.2.a) The Organization* the forest owner or manager meets or exceeds all applicable laws national laws* and local laws* and/or regulations covering health and safety of workers* employees and their families (also see Criterion 1.1) *(per Annex C)*.

Consultation Question:

Are the applicable laws and/or regulations covering health and safety of workers provided in Annex C and referenced in Indicator 2.3.1 adequately enforced? Please indicate if your response is opinion, or identify the evidence/data you are using as a basis for your response.

Indicator 2.3.2 *(Based on IGI 2.3.2) The Organization* develops, maintains, and implements an effective safety program, as demonstrated by safe worker* habits.

Guidance: Evaluation of conformance to this Indicator* may be through interviews and observations and may be demonstrated by the following: operations have consistently low
accident rates; training sessions are offered/attended; safety procedures and documentation are posted in the workplace; inexperienced field workers are given adequate instructions and supervision; workers utilize personal protective equipment; landowners, managers, or operators maintain safety-training records; machinery and equipment are well maintained and in safe working order.

Indicator 2.3.3 (Existing US Indicator 4.2.b) The forest owner or manager and their employees and contractors demonstrate a safe work environment. Contracts and other written agreements include safety requirements for workers.

(Existing US Indicator 4.2.c) The forest owner or manager hires well-qualified service providers to safely implement the management plan.

C2.4 The Organization shall pay wages that meet or exceed minimum forest industry standards or other recognized forest industry wage agreements or living wages, where these are higher than the legal minimum wages. When none of these exist, The Organization shall, through engagement with workers, develop mechanisms for determining living wages. (new)

Indicator 2.4.1 (Existing US Indicator 4.1.a) Employee compensation and hiring practices meet or exceed the prevailing local norms within the forestry industry.

Guidance: “Compensation” includes salary or wages, and benefits.

Indicator 2.4.2 (Based on IGI 2.2.5 and IGI 2.4.4) Employee wages, employee salaries, and contracts are paid on time.

(Existing US Indicator 4.1.c) Forest workers are provided with fair wages.

C2.5 The Organization shall demonstrate that workers have job-specific training and supervision to safely and effectively implement the management plan and all management activities. (C7.3 P&C V4)

Indicator 2.5.1 (Existing US Indicator 7.3.a) Workers are qualified to properly implement the management plan; all forest workers are provided with sufficient guidance, training (consistent with Annex E), adequate resources, and supervision to adequately implement their respective components of the plan.

Guidance: Adequate training and supervision measures may include but are not limited to:
• employers actively train employees in the goals and requirements of this and other
applicable FSC Standards;

- loggers and other operators participate in informal and formal training, such as Forest Industry Safety Training Alliance, Game of Logging, and similar programs;
- professional foresters and resource managers meet continuing education standards, such as Society of American Foresters “Certified Forester” program;
- foresters, loggers, and other relevant employees are trained to understand SMZ*, RMZ* riparian management zone*, rare species, rare, threatened, and endangered species*, and High Conservation Value* HCVF forest protection requirements for the forest*, as well as safeguards relating to chemical pesticide* applications;
- field personnel are provided with written harvest plans and/or maps that clearly guide actions required to implement the management plan*; and
- meetings occur as needed to review operations and make any necessary adjustments.

Regardless of the training and supervision measures taken, The Organization* maintains up-to-date training records for all relevant workers*.

C2.6 The Organization*, through engagement* with workers*, shall have mechanisms for resolving grievances and for providing fair compensation* to workers* for loss or damage to property, occupational diseases*, or occupational injuries* sustained while working for The Organization*. (new)

Intent: Annex D provides background on the framework of the dispute* management system employed in this Standard and provides guidance for Organizations*. The Organization* addresses the indicators of Criterion 1.6 to ensure that disputes* from workers* are received and addressed.

While this Criterion* applies to worker* disputes* while working on the Management Unit*, it is recognized that The Organization* has limited capacity in managing and implementing dispute* resolution processes where The Organization* is not directly involved in the dispute* (e.g., a dispute* between a contractor and subcontractor operating on the Management Unit*).

In some cases, disputes* may exist between a worker* and their employer where the employer is not The Organization*. In these cases, the requirements of the Criterion* are still applicable, but the approach for demonstrating conformance may be different.

Indicator 2.6.1 (Based on IGI 2.6.1, 2.6.2, and 2.6.3) Workers* are covered by worker’s* compensation, in accordance with national laws* and local laws* and regulations. In states where worker’s* compensation programs are not compulsory, this coverage is voluntarily provided by the employer of the workers*. Where applicable laws* exempt forest* workers* from coverage, The Organization* has other mechanisms for providing fair compensation* to workers* for losses or injuries sustained on the job.
Intent: Not all states require *The Organization* to maintain *worker’s* compensation insurance and some states have exemptions that may exclude *forest* workers from coverage. This *Indicator* is intended to address both states that do require coverage for *forest* workers and those that do not.

Consultation Questions:

The Standard Development Group recognizes that these may be sensitive issues, and will be further exploring them through the Forest Workers’ Forum, described at the beginning of this Principle.

1) As drafted, the Standard Development Group has identified that Indicator 2.6.1 leaves a potential gap into which contractors who are sole-proprietors will fall, as they do not have employees and therefore do not maintain worker’s compensation insurance. These individuals are workers (as defined by FSC) and therefore the Criterion requires that there be mechanisms by which provision of fair compensation* for loss or damage to property, occupational diseases*, or occupational injuries* sustained while working for *The Organization* will be accomplished. **Is there a mechanism that could be used to address provision of fair compensation in the context of sole-proprietor contractors?**

2) The Standard Development Group understands that requiring organizations to carry worker’s compensation in states where it is not already required could be a significant financial burden. **Would requiring *The Organization* to set up other mechanisms for providing fair compensation to workers for losses or injuries sustained on the job be sufficient in these contexts?**

*(Existing US Indicator 4.3.b)* The forest owner or manager has effective and culturally sensitive mechanisms to resolve disputes between workers and management.

**PRINCIPLE 3: INDIGENOUS PEOPLES’* RIGHTS**

*The Organization* shall identify and *uphold* *Indigenous Peoples’* legal* and customary rights* of ownership, use, and management of land, territories*, and resources affected by management activities*. (P3 P&C V4)

C3.1 *The Organization* shall identify the *Indigenous Peoples* that exist within the *Management Unit* or those that are affected by *management activities*. *The Organization* shall then, through *engagement* with these *Indigenous Peoples*, identify their *rights* of *tenure*, their *rights* of access to and use of *forest* resources and *ecosystem services*, their *customary rights*, and *legal* rights and obligations that apply
within the Management Unit*. The Organization* shall also identify areas where these rights* are contested. (new)

Indicator 3.1.1 (Adapted from IGI 3.1.1) The Organization* identifies Native American* groups that may be affected by management activities* on the Management Unit*. This assessment should be revisited as part of the review of management plans*.

Guidance: The identification of Native American* groups should include tribes previously removed from the area. Lands ceded to the US Government may be identified using the US Forest Service’s Tribal Connections Viewer: https://usfs.maps.arcgis.com/apps/webappviewer/index.html?id=fe311f69cb1d43558227d34f3a32

Indicator 3.1.2 (Existing US Indicator 2.1.b) Per Annex F, the forest owner or manager. The Organization* identifies and documents legally established use and access rights legal* and/or customary rights*, including contested rights*, associated with applicable to the FMU Management Unit* that are held by other parties the Native American* groups identified per Indicator 3.1.1 and confirms them through culturally appropriate* engagement* with these Native American* groups.

Guidance: Legal* rights include treaty rights. For a right* to be considered “contested,” the complainant should have already taken some formal steps to have their rights* recognized, such as filing legal* documents in court.

C3.2 The Organization* shall recognize and uphold* the legal* and customary rights* of Indigenous Peoples* to maintain control over management activities* within or related to the Management Unit* to the extent necessary to protect their rights*, resources, and lands and territories*. Delegation by Indigenous Peoples* of control over management activities* to third parties requires Free, Prior, and Informed Consent*. (C3.1 and 3.2 P&C V4)

Indicator 3.2.1 (Based on IGI 3.2.1) Native American* groups identified per Indicator 3.1.1 are engaged* during management plan* development and revision to promote protection of their rights*, and to provide input into management activities* that may affect resources and lands and territories* in which they have an interest, but for which they do not hold rights*.

Intent: The purpose of the Indicator* is to ensure proactive engagement with Native American* groups as management activities* are being planned. The reference to Indicator 3.1.1 reflects that this indicator* is intended to apply to all Native American* groups that may be affected by management activities* and is not limited to only those groups with legal* or customary rights*. 
Indicator 3.2.2 *(Based on IGI 3.2.2)* Per Annex F, when management activities* may affect rights* identified per Indicator 3.1.2, The Organization* engages* through culturally appropriate* means in a Free, Prior, and Informed Consent* process with the Native American* groups and does not implement the management activities* until consent has been received from the rightsholder*. If the rightsholder* does not wish to engage* in a Free, Prior, and Informed Consent* process, The Organization* ensures that the rights* in question are not violated.

Indicator 3.2.3 *(Adapted from IGI 3.2.3)* Where evidence exists that rights* of Native American* groups have been violated through implementation of management activities* by The Organization*, the situation is corrected through engagement* and, if necessary, through addressing the Indicators* of Criterion 1.6.

Indicator 3.2.4 *(Based on IGI 3.2.4)* Where consent has not yet been received from the rightsholder*, The Organization* and the rightsholder* are engaged* in a mutually agreed-upon Free, Prior, and Informed Consent* process that is advancing in good faith* and with which the rightsholder* is satisfied.

Indicator 3.2.5 *(Existing US Indicator 3.1.a)* Tribal* forest* management planning* and implementation are carried out by an authorized tribal* representative in accordance with tribal* laws and customs and relevant federal laws.

Applicability: This indicator applies to tribal* lands that are FSC certified.

*(Existing Indicator 3.1.b)* The manager of a tribal forest secures, in writing, informed consent regarding forest management activities from the tribe or individual forest owner prior to commencement of these activities.

*(Existing Indicator 3.2.a)* During management planning, the forest owner or manager consults with American Indian groups that have legal rights or other binding agreements to the FMU to avoid harming their resources or rights.

*(Existing Indicator 3.2.b)* Demonstrable actions are taken so that forest management does not adversely affect tribal resources. When applicable, evidence of, and measures for, protecting tribal resources are incorporated in the management plan.

C.3.3 In the event of delegation of control over management activities*, a binding agreement* between The Organization* and the Indigenous Peoples* shall be concluded through Free, Prior, and Informed Consent*. The agreement shall define its duration, provisions for renegotiation, renewal, termination, economic conditions, and other terms and conditions. The agreement shall make provision for monitoring by Indigenous Peoples* of The Organization**’s compliance with its terms and conditions. (new)
Indicator 3.3.1 *(Based on IGI 3.3.1 and IGI 3.3.2)* When Free, Prior, and Informed Consent* is granted by a *Native American* group, it is documented in writing.

Indicator 3.3.2 *(Adapted from IGI 3.3.3)* When Free, Prior, and Informed Consent* is granted by a *Native American* group, the group is provided with an opportunity to monitor The Organization's* compliance.

**Guidance:** What monitoring will be implemented and how the *rightsholder* will be engaged in the monitoring should be addressed as part of the engagement* that occurs during the Free, Prior, and Informed Consent* process.


The elements of the Criterion* are addressed through all of the other Indicators* of this Principle* and through all of the Indicators* of Principle 9 as they pertain to certain High Conservation Values* *(i.e., HCV 5* and HCV 6)*. Therefore, no Indicators* are included here.

**Consultation Question:**

A consultant hired by FSC US concluded that the indicators in the current FSC US Forest Management Standard (Version 1) are respectful of the provisions of both UNDRIP and Convention 169 that can be met within the context of forest certification, and that alignment with the revised FSC Principles and Criteria in a revised national standard (Version 2) would only further expand these protections. Therefore, the Standard Development Group concluded that including additional indicators in Criterion 3.4 is not necessary. **Do you agree that the draft indicators of Principle 3 and the other Principles fully address the elements of Criterion 3.4, or are there gaps that were not identified by the FSC US consultant?**

C3.5 *The Organization*, through engagement* with *Indigenous Peoples*, shall identify sites which are of special cultural, ecological, economic, religious, or spiritual significance and for which these *Indigenous Peoples* hold legal* or customary rights*. These sites shall be recognized by *The Organization* and their management, and/or protection* shall be agreed through engagement* with these *Indigenous Peoples*. *(C3.3 P&C V4)*
Intent: The intent of the Indicators in this Criterion is to (per Indicator 3.5.1) proactively identify sites of special significance for which Native American groups hold rights and (per Indicator 3.5.2) implement protective measures for those sites, even if there are not any plans for management activities that could have an impact on the sites. However, if/when management activities are planned that may affect these sites, per Indicator 3.2.2, the Organization must engage in a Free, Prior, and Informed Consent process with the Native American group that holds the rights and may not implement the management activities until consent has been received from that group.

Applicability: These Indicators only apply to sites for which Native American groups hold legal and/or customary rights. Engagement with Native American groups regarding protection of significant sites for which they do not hold legal or customary rights is addressed through Indicator 3.1.1, Indicator 3.2.1, and Principle 9 (i.e., HCV 6).

Indicator 3.5.1 (Existing Family Forest Indicator 3.3.a) The Organization, the forest owner or manager through invites engagement with the Native American groups identified in Indicator 3.1.1 and use of other sources of Best Available Information, identifies maintains a list of sites of current or traditional special cultural, archeological, ecological, economic, religious, or spiritual significance and for which these Native American groups hold legal and/or customary rights that have been identified by state conservation agencies and tribal governments on the FMU or that could be impacted by management activities.

Applicability: In regions where there are no established tribal representatives, this Criterion may be inapplicable and the landowner or manager should provide documentation to this effect.

Guidance: Examples of “sites of current or traditional cultural, archeological, special cultural, ecological, economic, or religious, or spiritual significance” may include but are not limited to: ceremonial, burial, or village sites; areas used for hunting, fishing, or trapping; current areas for gathering culturally important materials (e.g., ingredients for baskets, medicinal plants, or plant materials used in dances or other ceremonies); and current areas for gathering subsistence materials (e.g., mushrooms, berries, acorns, etc.) and/or culturally and/or economically important materials.

Direct, culturally appropriate consultation with tribal representatives is the first preferred method of consultation. If this is not possible then regional databases or references that contain relevant data may be used to compile this information.

Indicator 3.5.2 (Existing US Indicator 3.3.b) In consultation, through engagement with tribal representatives the rightsholders, the Organization forest owner or manager develops, documents, and implements measures to protect or enhance sites areas of special significance identified per Indicator 3.5.1 (see also Principle 9 regarding HCV 6). For newly observed or
discovered areas of special significance, management activities* cease until this engagement* has occurred.

Applicability: This Indicator* is only applicable if areas of special significance have been identified and rights* have been established. Areas of special significance include special cultural, ecological, economic, religious, and/or spiritual sites.

Guidance: Compliance with cultural resource Best Management Practices* that have been developed at a state or regional scale with tribal* consultation may be adequate to meet this Indicator* when identified Native American* groups do not wish to engage*. in most instances.

The confidentiality of sensitive tribal* knowledge is maintained in keeping with applicable laws* or and at the behest of tribal* representatives. If necessary, public summaries of forest management plans* may omit detailed location and identification data pertaining to sensitive resources.

C3.6 The Organization* shall uphold* the right of Indigenous Peoples* to protect* and utilize their traditional knowledge* and shall compensate local communities* for the utilization of such knowledge and their intellectual property*. A binding agreement* as per Criterion 3.3 shall be concluded between The Organization* and the Indigenous Peoples* for such utilization through Free, Prior, and Informed Consent* before utilization takes place, and shall be consistent with the protection* of intellectual property* rights. (C3.4 P&C V4)

Indicator 3.6.1 (Existing US Indicator 3.4.c) The Organization* forest owner or manager respects the confidentiality of and protects* tribal* traditional knowledge* and intellectual property* and assists in the protection of uses such knowledge only with consent obtained through a Free, Prior, and Informed Consent* process (per Annex F).

Guidance: Annex F explicitly addresses situations where consent is needed for management activities* that may affect rights* held by Native American* groups. A similar Free, Prior, and Informed Consent* process with culturally appropriate* engagement* that advances in good faith* with the intent of reaching an agreement is also required for situations where consent is needed for use of traditional knowledge* or intellectual property*.

Indicator 3.6.2 (Existing US Indicator 3.4.b) When traditional knowledge* or intellectual property* is used, written protocols are jointly developed prior to such use and signed by local tribes-tribal* representatives or tribal* members to protect and fairly compensate* them for such use.
(Existing Indicator 3.4.a) The forest owner or manager identifies whether traditional knowledge in forest management is being used.

PRINCIPLE 4: COMMUNITY RELATIONS

The Organization* shall contribute to maintaining or enhancing the social and economic well-being of local communities*. (P4 P&C V4)

Guidance: Due to the well-established legal* structure in the United States for property rights, the rights* of non-tribal* traditional peoples* or local communities* are established within the legal* system, including any customary rights*; therefore, for these non-tribal* groups, customary rights* do not need to be considered separately. Additionally, while The Organization* must assess the existence of rights* held by non-tribal* traditional peoples* or local communities*, there is very limited occurrence in the US of these kinds of rights* and most Organizations* will not need to address them. Further, a Free, Prior, and Informed Consent* process is only required for these non-tribal* rightsholders* if they are traditional peoples* or forest-dependent* local communities*.

Rights* held by individuals are addressed through the Indicators* of Criterion 1.2, Criterion 1.6, and Criterion 7.6. Rights* held by Native American* groups are addressed through the Criteria* and Indicators* of Principle 3. Rights* held by non-tribal* communities as a whole are addressed by Criterion 4.1 and Criterion 4.2 but, as noted above, these kinds of rights* are very rare in the US.

If no rights* are identified per Indicator 4.1.1, conformance with Indicator 4.2.1 is not required.

C4.1 The Organization* shall identify the local communities* that exist within the Management Unit* and those that are affected by management activities. The Organization* shall then, through engagement* with these local communities*, identify their rights* of tenure*, their rights* of access to and use of forest* resources and ecosystem services*, their customary rights*, and legal* rights and obligations that apply within the Management Unit*. (new)

Indicator 4.1.1 (Based on IGI 4.1.1 and 4.1.2) The Organization* identifies local communities* that exist in the Management Unit* and that may be affected by management activities*, and, through engagement* per Annex F, identifies and documents legal* rights applicable to the Management Unit* that are held by these communities.

Guidance: Engagement* with local communities* should focus on communication with representatives who have delegated authority from the community, such as a mayor, commissioner, or other elected representative. If this is not possible, other individuals who
can represent the community as a whole are preferred, such as community elders or other civic leaders. Further guidance on *culturally appropriate* communications with *local communities* is provided in Annex F.

C4.2 *The Organization* shall recognize and *uphold* the *legal* and *customary rights* of *local communities* to maintain control over management activities within or related to the *Management Unit* to the extent necessary to protect their *rights*, *resources*, *lands*, and *territories*. Delegation by *local communities* of control over management activities to third parties requires *Free, Prior, and Informed Consent*. (C2.2 P&C V4)

**Indicator 4.2.1** *(Based on IGI 4.2.1—IGI 4.2.5)* *The Organization* allows the exercise of *rights* applicable to the *Management Unit* identified per Indicator 4.1.1, and when *management activities* may affect these *rights*, *The Organization* engages with the *rightsholder* to ensure that the *rights* in question are not violated. If the *rightsholder* is a non-tribal *traditional people* or forest-dependent *local community*, this engagement is through a *Free, Prior, and Informed Consent* process (per Annex F) with the *rightsholder* to secure consent prior to implementing the *management activities*. If the *rightsholder* does not wish to engage in a *Free, Prior, and Informed Consent* process, *The Organization* ensures that the *rights* in question are not violated.

C4.3 *The Organization* shall provide *reasonable* opportunities for employment, training, and other services to *local communities*, contractors, and suppliers proportionate to *scale* and *intensity* of its management activities. (C4.1 P&C V4)

**Indicator 4.3.1** *(Existing indicator 4.1.e)* *The Organization*, *The forest owner or manager* provides work opportunities to qualified *local* applicants and seeks opportunities for purchasing *local* goods and services of equal price and quality.

Intent: *The Organization Companies* should make consistent efforts to source goods and services from *local communities* to the extent that they are available and reasonably cost competitive.

Guidance: Efforts to source *locally* may include, among others: *local* residents and businesses are included on a list, maintained by *the forest owner or manager*, *The Organization*, of potential contractors and service providers (e.g., foresters, loggers); work opportunities are advertised in area newspapers.

**Indicator 4.3.2** *(Existing Indicator 4.1.f)* Commensurate with the size and scale of operation, *The Organization*, *forest owner or manager* provides and/or supports *vocational* learning opportunities associated with to improve public understanding of forests and *forest* management.
(Existing indicator 4.1.b) Forest work is offered in ways that create high quality job opportunities for employees.

C4.4 The Organization* shall implement additional activities, through engagement* with local communities*, that contribute to their social and economic development, proportionate to the scale*, intensity*, and socioeconomic impact of its management activities. (C4.4 P&C V4)

Indicator 4.4.1 (Existing Indicator 4.1.g) The Organization* The forest owner or manager participates in local* economic development and/or civic activities, based on scale* of operation and where such opportunities are available.

C4.5 The Organization*, through engagement* with local communities*, shall take action to identify, avoid, and mitigate significant negative social, environmental, and economic impacts of its management activities on affected communities. The action taken shall be proportionate to the scale, intensity, and risk* of those activities and negative impacts. (C4.4 P&C V4)

Guidance: Indicators* of Criterion 4.5 are intended to be applicable to potential community-level impacts and not applicable to impacts related to individuals. Examples of potential impacts at the community level include: excessive job losses such that it impacts the local tax base or home values, road use/maintenance that impacts an entire community versus individual residents, and impacts to a viewscape that is a regional attraction.

Indicator 4.5.1 (Adapted from existing US Indicator 4.4.a) Through culturally appropriate* engagement* with local communities*, measures are implemented to identify, avoid, and mitigate significant negative social and environmental impacts of management activities*. Items to be addressed include:

a. archeological sites and sites of cultural, historical, and local community* significance (on and off the Management Unit*);

b. environmental resources, including air, water, and food (hunting, fishing, collecting); and

c. aesthetics,

Intent: Environmental impacts evaluated are not intended to be redundant to other parts of the Standard such as the Principle 6 Indicators*. Rather, evaluation is intended to address the direct impact on communities. Examples include the impact on air quality within a community when an Organization* conducts controlled burns or alters viewsheds important to a community. The focus is on human/community impacts as compared to the ecological impacts, which are addressed in other parts of the Standard.
Consultation Questions:

The Standard Development Group is requesting assistance in establishing a threshold for use of the term, ‘significant’ in Indicator 4.5.1.

1) What kinds of negative social and environmental impacts of management activities should not require avoidance and mitigation measures?

2) What kinds of negative social and environmental impacts of management activities should require avoidance and mitigation measures?

Indicator 4.5.2 *(Adapted from existing US Indicator 4.4.a)* Through culturally appropriate* engagement* with local communities*, measures are implemented to identify, avoid, and mitigate significant negative economic impacts of management activities*. Items to be addressed include:

a. community goals for forest* and natural resource use and protection such as employment, education, subsistence, recreation, and health; and
b. community economic opportunities

Consultation Questions:

The Standard Development Group is requesting assistance in establishing a threshold for use of the term, ‘significant’ in Indicator 4.5.2.

1) What kinds of negative economic impacts of management activities should not require avoidance and mitigation measures?

2) What kinds of negative economic impacts of management activities should require avoidance and mitigation measures?

*(Existing indicator 4.4.a)* The forest owner or manager understands the likely social impacts of management activities, and incorporates this understanding into management planning and operations. Social impacts include effects on:

- Archeological sites and sites of cultural, historical and community significance (on and off the FMU);
- Public resources, including air, water and food (hunting, fishing, collecting);
- Aesthetics;
- Community goals for forest and natural resource use and protection such as employment, subsistence, recreation and health;
- Community economic opportunities;
- Other people who may be affected by management operations.
(Existing indicator 4.5.a) The forest owner or manager does not engage in negligent activities that cause damage to other people.

C4.6 The Organization*, through engagement* with local communities*, shall have mechanisms for resolving grievances and providing fair compensation* to local communities* and individuals with regard to the impacts of management activities of The Organization*. (C4.5 P&CV4)

Intent: Annex D provides background on the framework of the dispute* management system employed in this Standard and provides guidance for Organizations*. If a dispute* is identified regarding the impacts of management activities on affected local communities* and other affected stakeholders*, the Indicators* of Criterion 1.6 are addressed for the identified dispute*.

(Existing indicator 4.5.b) The forest owner or manager provides a known and accessible means for interested stakeholders to voice grievances and have them resolved. If significant disputes arise related to resolving grievances and/or providing fair compensation, the forest owner or manager follows appropriate dispute resolution procedures. At a minimum, the forest owner or manager maintains open communications, responds to grievances in a timely manner, demonstrates ongoing good faith efforts to resolve the grievances, and maintains records of legal suites and claims.

(Existing indicator 4.5.c) Fair compensation or reasonable mitigation is provided to local people, communities or adjacent landowners for substantiated damage or loss of income caused by the landowner or manager.

C4.7 The Organization*, through engagement* with local communities*, shall identify sites which are of special cultural, ecological, economic, religious, or spiritual significance, and for which these local communities* hold legal* or customary rights*. These sites shall be recognized by The Organization*, and their management and/or protection* shall be agreed through engagement* with these local communities*. (new)

The elements of the Criterion* are addressed through the Indicators* of Criteria 4.1, 4.2, and 4.5, and, as such, no Indicators* are included here. Any nonconformances shall be assessed to the Indicators* of these other Criteria*.

Consultation Question:

The Standard Development Group concluded that the elements of Criterion 4.7 are
adequately addressed through the other Indicators of Principle 4 and, therefore, including additional indicators in Criterion 4.7 is not necessary. **Do you agree that the draft indicators of Principle 4 fully address the elements of Criterion 4.7, or are there gaps that were not identified by the Standard Development Group?**

C4.8 The *Organization* shall *uphold* the right of *local communities* to protect* and utilize their *traditional knowledge* and shall compensate *local communities* for the utilization of such knowledge and their *intellectual property*. A *binding agreement* as per *Criterion* 3.3 shall be concluded between *The Organization* and the *local communities* for such utilization through *Free, Prior, and Informed Consent* before utilization takes place, and shall be consistent with the *protection* of *intellectual property* rights. (new)

*This Criterion is believed to be not applicable in a US context. There is no traditional knowledge* specific to non-tribal* *local communities* in the *forest* domain that could be considered intellectual property*. Traditional knowledge* specific to Indigenous Peoples* is addressed in *Criterion* 3.6.

*However, if found to be applicable in a specific situation, assessment of conformance should be completed with the *Criterion 4.8 FSC International Generic Indicators (FSC-STD-60-004).*

**Consultation Question:**

Do you agree that the rationale provided for not including any Indicators with Criterion 4.8 is valid in a US context, or can you provide examples or specific situations that will help to inform development of Indicators?

**PRINCIPLE 5: BENEFITS FROM THE FOREST**

*The Organization* shall efficiently manage the range of multiple products and services of the *Management Unit* to maintain or enhance *long-term* economic viability* and the range of social and environmental benefits. (P5 P&C V4)

5.1 *The Organization* shall identify, produce, or enable the production of, diversified benefits and/or products, based on the range of resources and *ecosystem services* existing in the *Management Unit* in order to strengthen and diversify the local economy proportionate to the *scale* and *intensity* of management activities. (C5.2 and 5.4 P&C V4).
**Indicator 5.1.1 (Existing US Indicator 5.4.a)** The Organization* forest owner or manager demonstrates knowledge of their operation’s current and potential effect impact on the local* economy as it relates to existing and potential markets for ecosystem a wide variety of timber and non-timber forest products and services* applicable to the Management Unit* (e.g., timber, non-timber forest products*, water, carbon sequestration, recreation).

**Indicator 5.1.2 (Existing US Indicator 5.4.b)** Consistent with management objectives*, The Organization* forest owner or manager strives to diversify the economic use of the forest* according to Indicator 5.1.1 5.4.a.

**Applicability:** For public lands*, diversification of the economic use of the forest* is a requirement.

**Intent:** Economic diversification shall is expected to be evaluated in terms of its ecological impacts and shall not impede maintaining forest* composition, structure, function, and other requirements present in this Standard. Developing new markets shall should also be consistent with management objectives*.

**Guidance:** Diversification of economic uses may include but is not limited to: recreation; ecotourism; hunting; fishing; specialty products and lesser-used species* of trees, grades of logs, and lumber; non-timber forest products*; and emerging markets in new commodities such as water in its value to provide in-stream water flows.

**Indicator 5.1.3 (Adapted from IGI 5.1.3)** The Organization* complies with FSC-PRO-30-006 when making FSC promotional claims regarding ecosystem services*.

**5.2 The Organization* shall normally harvest products and services from the Management Unit* at or below a level which can be permanently sustained. (C5.6 P&C V4)**

**Indicator 5.2.1 (Existing US Indicator 5.6.a)** In FMU-Management Units* where products are being harvested, The Organization* landowner or manager calculates the sustained yield harvest level* for each sustained yield planning unit*, and provides clear rationale for determining the size and layout of the planning unit*. The sustained yield harvest level* calculation is documented in the management plan*.

The sustained yield harvest level* calculation for each planning unit* is based on Best Available Information*, including:

a. documented growth rates applicable for particular sites, and/or acreage of forest* types, age-classes*, and species* distributions;

b. mortality, and decay, and other factors such as large-scale disturbance events that affect net growth;
c. areas reserved from harvest or subject to harvest restrictions to meet other management goals;

d. *silvicultural* practices that will be employed on the **FMU-Management Unit**; and

e. management objectives and desired future conditions.

The calculation is made by considering the effects of repeated prescribed harvests on the product/species* and its ecosystem*, as well as planned management treatments and projections of subsequent regrowth beyond single rotation and multiple re-entries.

**Intent:** The term “sustained yield harvest level” refers to harvest levels and rates that do not exceed growth over successive harvests, that contribute directly to achieving desired future conditions*, and that do not diminish the long-term* ecological integrity and productivity of the site.

The method used to calculate the sustained yield harvest level* for timber products is commensurate with the size-scale* and intensity* of the forest* management operation.

For **FMU Management Units** in which harvesting occurs infrequently, harvest levels and/or re-entry frequencies are set consistent with achieving and/or maintaining desired future conditions*.

**Consultation Note:**

The Standard Development Group is working to confirm that Indicator 5.2.1 is not in conflict with established regulations, rules and/or formal policies for calculations of sustained yield harvest levels on US Forest Service lands. If any conflicts are identified, the indicator and/or guidance will be adapted for Draft 2.

**Indicator 5.2.2 (Existing US Indicator 5.6.b)** Average annual harvest levels, over rolling periods of no more than 10 years equal to the duration of the management planning period (per Indicator 7.4.1), are recorded and do not exceed the calculated sustained yield harvest level*.

**Guidance:** If the intent is to change the species* balance in a stand or planning unit*, or to achieve a desired age class* structure, or to manage a catastrophic or natural event such as fire or pest outbreak, a particular species* might be harvested at a higher-than-sustainable rate until its optimal stand occupancy could be achieved (e.g., by restocking via planting, etc).

**Consultation Question:**
The Standard Development Group believes that Indicator 5.2.2 provides flexibility for certificate holders to address situations where overstocked forests may be more vulnerable to climate change impacts, and where there are other restoration needs. Are there scenarios or other rationale that would justify averaging annual harvest levels over rolling periods that are longer than the 10-year time period established by draft Indicator 7.4.1?

**Indicator 5.2.3 (Existing US Indicator 5.6.c)** Rates and methods of timber harvest lead to achieving desired conditions, and improve or maintain health and quality across the FMU Management Unit*. Overstocked stands and stands that have been depleted or rendered to be below productive potential due to natural events, past management, or lack of management are returned to desired stocking levels and composition at the earliest practicable time as justified in management objectives*.

**Indicator 5.2.4 (Adapted from IGI 5.2.4)** For commercial harvest of non-timber forest products* (i.e., NTFP), The Organization* calculates and does not exceed a sustained yield harvest level*. This harvest level is based on Best Available Information*.

*(Existing Indicator 5.6.d)* For NTFPs, calculation of quantitative sustained yield harvest levels is required only in cases where products are harvested in significant commercial operations or where traditional or customary use rights may be impacted by such harvests. In other situations, the forest owner or manager utilizes available information, and new information that can be reasonably gathered, to set harvesting levels that will not result in a depletion of the non-timber growing stocks or other adverse effects to the forest ecosystem.

**5.3 The Organization* shall demonstrate that the positive and negative externalities* of operations are included in the management plan*. (C5.1 P&C V4)**

**Indicator 5.3.1 (Based on IGI 5.3.1 and IGI 5.3.2)** Using Best Available Information*, benefits and costs related to social, economic, and environmental impacts of management activities* (i.e., externalities*), including the costs of preventing and mitigating negative impacts, are estimated.

**Intent:** The Organization* should estimate externalities*, to the best of their ability, to help them understand the impacts (both positive and negative) of their management activities*, and incorporate this information into the management plan* per Indicator 7.2.19.

**Guidance:** Externalities* are a side effect or consequence of an industrial or commercial activity that affects other parties without this being reflected in the cost of the goods or services involved. A positive example is improved deer habitat and deer hunting opportunities that result from management activities*. A negative example is introduction, via equipment used for management activities*, of an invasive species* into an area not previously colonized.
5.4 *The Organization* shall use *local* processing, *local* services, and *local* value adding to meet the requirements of *The Organization* where these are available, proportionate to *scale, intensity and risk*. If these are not locally available, *The Organization* shall make *reasonable* attempts to help establish these services. (C5.2 P&C V4)

**Indicator 5.4.1 (Existing US Indicator 5.2.a)** Where forest* products are harvested or sold, opportunities for forest* product sales and services are given to local* harvesters, value-added processing and manufacturing facilities, and other operations that are able to offer services at competitive rates and levels of service.

**Indicator 5.4.2 (Adapted from IGI 5.4.2)** Reasonable* attempts are made to encourage and/or support capacity where local* goods, services, processing, and value-added facilities are not adequate or available.

**Indicator 5.4.3 (Existing US Indicator 5.2.c)** On public lands* where forest* products are harvested and sold, some sales of forest* products or contracts are scaled or structured to allow small business businesses to bid competitively.

Applicability: This *Indicator* is only applicable to public lands*.

Intent: This *Indicator* focuses on the ability of small businesses to bid competitively, and does not assume that the bid will be awarded. Factors such as price, equivalent skills, experience, and abilities to perform the required tasks must be taken into account in awarding sales and contracts.

5.5 *The Organization* shall demonstrate through its planning and expenditures proportionate to *scale, intensity and risk*, its commitment to *long-term* economic viability*. (C5.1 P&C V4)

**Indicator 5.5.1 (Existing Indicator 5.1.a)** The *Organization* forest owner or manager is financially able to implement core management activities*, including:

- a. all environmental, social, and operating costs, required to meet this Standard; and
- b. investment and reinvestment in forest* management.

**Indicator 5.5.2 (Existing US Indicator 5.1.b)** Responses to short-term financial factors are limited to levels that are consistent with fulfillment of this Standard.
Intent: Short-term financial factors may include but are not limited to: fluctuations in the market, requirements for cash flow, and the need for sawmill equipment and log supplies.

Guidance: “Responses to short-term financial factors” may include but are not limited to: increases in harvests or debt load, deferred maintenance of roads, and staff reductions.

PRINCIPLE 6: ENVIRONMENTAL VALUES* AND IMPACTS

The Organization* shall maintain, conserve*, and/or restore* ecosystem services* and environmental values* of the Management Unit*, and shall avoid, repair, or mitigate negative environmental impacts. (P6 P&C V4)

Intent: Principle 6 focuses on maximizing positive environmental impacts and minimizing adverse environmental impacts from forest management activities* operations: assessment of impacts, protection of species and communities, maintenance of ecological functions, the use of pesticides and forest conversion.

Within the scope of Principle 6 are issues and concepts about which there remains considerable uncertainty; in cases of uncertainty, the use of a precautionary approach* is present both implicitly and explicitly in several aspects of the Principle* because mitigation, repair and restoration* is often difficult, more costly, and sometimes impossible.

See Glossary for definition of biological diversity*.

Consultation Note:

The Standard Development Group has not completely removed the regional requirements from the standard. In Draft 1, there remain regional supplementary requirements associated with Indicators 6.6.3, 6.6.5, 6.7.5 and 10.1.2. Additional Indicators have regional guidance.

The Standard Development Group’s approach to addressing the regional requirements:

1. Transition the regional requirements out of annexes and into the main body of the standard as regional supplementary requirements (i.e., where conformance with both the base indicator and the regional supplementary requirement is required).
2. Remove any element of the regional requirements that was duplicative of some other part of the Standard, and relocate any element of the regional requirements that was not applicable to the topic (i.e., indicator) with which it was originally associated.
3. Streamline and increase the consistency between regions for remaining supplementary requirements.
4. Increase the feasibility for certificate holders developing rationale for exceptions to the regional supplementary requirements, per Indicator 6.6.6 or Indicator 6.7.6, when
ecologically justified.

5. Before the next revision of the Standard, complete a comprehensive assessment of the most recent research regarding topics addressed through regional supplementary requirements to confirm the need for, and adjust as appropriate, the regional supplementary requirements.

Consultation Questions:

As noted above, the current FSC US Forest Management Standard (Version 1) includes regionally specific requirements that focus on unique forest types found across nine regions including the Pacific Coast Region and Rocky Mountain Region. The Standard Development Group understands the need for requirements that support the unique needs of diverse forest types. The Standard Development Group is interested in better understanding situations where requirements designed for the Pacific Coast Region may be too restrictive for dry forest ecosystems.

1) Would your organization or others you know of be interested in getting or supporting FSC certification within dry forest zones if the standard were more tailored to these forest ecosystems?

2) Do you see a need to adapt the standards for the Pacific Northwest dry zone? If so, how would you suggest the standard change to be more tailored to dry forest zone ecology?

Consultation Question:

The Standard Development Group has maintained all of the existing FSC US regions for Draft 1, with one boundary change: adjusting the northern boundary of the Appalachian region to align with an ecological boundary, instead of a state boundary. However, the Standards Development Group is requesting input regarding the Ozark-Ouachita Region.

The Ozark-Ouachita Region was originally established to identify an area that was perceived to be ecologically and topographically different from surrounding areas. However, some input suggests that the two subregions included within the region (the northern Ozark subregion and the southern Ouachita subregion) are ecologically and topographically different from each other and may be more similar to other regions than to each other.

Which of the following options is the best approach for the Ozark-Ouachita Region?

a. Remain as it is with two subregions that have different requirements
b. Merge the two subregions
c. Merge the Ouachita subregion with the Southeast Region but maintain the Ozark subregion as a separate FSC US Region
d. Merge the northern portion with the Appalachian Region and the southern portion with the Southeast Region (following Cleland et al. 2007)
e. Merge the northern portion with the Great Lakes Region and the southern portion with the Southeast Region (following Bailey 1994).
C6.1 The Organization* shall assess environmental values* in the Management Unit* and those values outside the Management Unit* potentially affected by management activities*. This assessment shall be undertaken with a level of detail, scale, and frequency that is proportionate to the scale*, intensity*, and risk* of management activities*, and is sufficient for the purpose of deciding the necessary conservation* measures, and for detecting and monitoring possible negative impacts of those activities. (new)

Intent: The primary intent of Criteria 6.1 through 6.3 is to avoid creating significant negative environmental impact by conducting baseline assessments of resource attributes, assessing the potential environmental impact of proposed management activities*, and then incorporating the results of these assessments into management planning. Assessments, per Criterion 6.1, are undertaken with an adequate level of detail and frequency sufficient for the purpose of establishing management prescriptions and monitoring protocols designed to achieve conformance per Criteria 6.2 and 6.3.

Guidance: Criteria 6.1 through 6.3 Indicators 6.1.a through 6.1.c follow a logical sequence in which an assessment of current conditions is completed and compared to historic conditions in order to understand the effects of the short-term and long-term* impacts of management and to determine where restoration* may be warranted, and then management approaches are developed and implemented that minimize and mitigate for these impacts.

Environmental values within the landscape* of the Management Unit* (both within and outside the Management Unit*) that may be affected by management activities* occurring within the Management Unit* are to be included in the assessment process. Examples of situations with management activities* occurring within the Management Unit* affecting environmental values outside of the Management Unit* include impacts on downstream water quality, and rare, threatened, and endangered species* and/or rare ecological communities* that extend from the Management Unit* onto adjacent lands.

Assessments include consideration of all aspects of site-disturbing operations for which The Organization* landowner/manager has direct control, such as: activities associated with timber management, recreational uses, transportation, on-site wood processing facilities, grazing, mineral extraction, transmission line siting, and other activities conducted in the Management Unit*.

Best Available Information* for Criteria 6.1 through 6.3 may include, as appropriate:
- Representative Sample Areas* showing environmental values in their natural condition*
- field surveys
- databases relevant to the environmental values
- consultation with local and regional experts*
● **culturally appropriate** engagement with Indigenous Peoples*, local communities*, and affected stakeholders* and interested stakeholders*

● climate change vulnerability assessments

**Indicator 6.1.1** (Existing US Indicators 6.1.a and 5.5.a) Using the results of credible scientific analysis*, Best Available Information* (including relevant databases), and local* knowledge and experience, an assessment of conditions is completed that identifies environmental values that may be affected by management activities* implemented on the Management Unit* FMU, considering environmental values that occur both inside and outside the Management Unit* FMU. The assessment and includes:

a. forest* community types and development, size class, and/or successional* stages, and associated natural disturbance regimes*;

b. rare, threatened, and endangered species* and rare ecological communities* (including plant communities);

c. other habitats*, ecosystems*, and species* of management concern;

d. water resources and associated riparian areas* habitats and hydrologic functions;

e. soil* resources; and

f. forest* ecosystem services* and resources that support human well-being (e.g., community drinking water, commercial and recreational fisheries, carbon storage, carbon sequestration, recreation, and tourism);

g. historic conditions* on the Management Unit* FMU related to forest community types and development, size class, and/or successional* stages; and

h. a broad comparison of historic conditions* and current conditions; and

i. potential future impacts of climate change and catastrophic natural disturbances*.

**Intent:** Indicator 6.1.1 establishes historic conditions*, current conditions and historic and potential future conditions for assessing environmental impacts. The purpose of establishing historic conditions* is to facilitate creating a baseline for assessing environmental impacts of operations, to facilitate establishing desired future conditions*, and to determine when restoration* may be needed. When historic conditions* are not available, best estimates from available sources may be used. Historic conditions* should be used as guidelines for estimating ecological components of naturally occurring conditions. The expectation is not that The Organization* will attempt to exactly re-create the conditions of a particular point in time, but that it will use the historic condition* information to better understand ecological complexity, changes over time and potential within the Management Unit* to inform desired future conditions* and management objectives*. However, the potential future impacts of climate change may limit the value of historical condition* information in some situations.

The assessment for rare, threatened, and endangered species* and rare ecological communities* includes G1–G3, S1–S2, and some S3 species. These “G” and “S” ranks are conservation status ranks used by NatureServe and Natural Heritage Programs to provide an assessment of imperilment (1 [critically imperiled] through 5 [secure]) at global (“G”) and state
The assessment includes an assessment evaluation to determine which S3-ranked species and communities warrant recognition as rare, threatened, and endangered species and which communities warrant recognition as rare ecological communities and should be based on the following: S3 species/communities that are candidates for federal or state listing shall be considered rare, threatened, and endangered species/rare ecological communities. S3 species/communities that have been proposed for federal or state listing are should also be given priority in the assessment. The assessment shall should be designed to identify and recognize as rare, threatened, and endangered species/rare ecological communities those S3 species/communities that are more imperiled across their natural ranges, and that are more sensitive and vulnerable to impact from the types of management activities that will occur on the Management Unit FMU.

Item (f) is intended to address forest ecosystem services and resources that are associated with public values and not duplicate those addressed in Principles 4 and 9. Forest ecosystem services and resources may vary with ownership type (e.g., public vs. private), size, and region, and may include, but are not limited to, watersheds, fisheries, and other non-timber forest values and services such as recreation, and carbon storage and sequestration.

The reference to carbon storage and sequestration is to have forest managers recognize carbon storage as an important ecosystem service and public value. It is not intended to preclude harvest that is consistent with other parts of this Standard, nor is The Organization required to quantify carbon storage and sequestration. The Organization should consider the values associated with carbon and integrate it into management decisions as is done with watersheds, fisheries, and recreation.

Guidance: The forest community and successional development stage classification system may be based on regional norms or a landowner-specific system (e.g., the FMO’s stand classification system). At minimum, the classification must include sufficient specificity and differentiation to account for forest sites’ natural diversity and tree species, habitat types, stand structures, and their distribution (or lack thereof), including all successional development stages from regeneration through old growth characteristic of regional forest dynamics (see also Indicator 6.3.b 6.6.1).

The above element of the assessment process will also generate information that is relevant to the assessments required for Representative Sample Areas (Criterion 6.54) and High Conservation Values Forests (HCVF, Principle 9).

Primary sources of information include state Natural Heritage Programs, NatureServe, LANDFIRE, state wildlife agencies, US Fish and Wildlife Service, and the National Marine Fisheries Service. Depending on the scale and intensity of operations and potential for risk as indicated by consultation with conservation agencies, on-site searches for rare, threatened, and endangered species may be applicable.
In states where S1, S2, S3, or G3 species* and communities are not mapped by the Natural Heritage Program, or where rare, threatened, and endangered species* information is incomplete, the Best Available Information* for S1–S3 and G3 species* and communities’ occurrences and finest resolution of classification commonly available in that state should be used.

Resources for helping to determine potential future impacts of climate change are included in the Climate Change Toolkit in Annex L.

“Other habitats* and species* of management concern” may include a) Species of Greatest Conservation Need and Priority Habitats identified in state “Wildlife Action Plans” and priorities identified by state and federal conservation agencies; b) areas identified in science-based conservation* plans developed by other conservation* organizations (e.g., The Nature Conservancy or NatureServe); and c) habitats* for other species* potentially at risk* due to management; and d) climate change refugia. See also Indicators 6.7.1 6.3.c and 10.2.1 6.3.e.

C6.2 Prior to the start of site-disturbing activities, The Organization* shall identify and assess the scale, intensity, and risk* of potential impacts of management activities on the identified environmental values*. (C6.1 P&C V4)

Indicator 6.2.1 (Existing US Indicator 6.1.b) Prior to commencing site-disturbing activities, The Organization* the forest owner or manager assesses and documents the potential short-term and long-term* impacts of planned management activities* on environmental values identified elements 1-6 listed per in Indicator 6.1.1. The assessment must incorporate incorporates the Best Available Information*, drawing from scientific literature and experts*. The impact assessment will at a minimum include identifying resources that may be impacted by management activities* (e.g., streams, habitats* of management concern, soil* nutrients). Additional detail (i.e., detailed description or quantification of impacts) will vary depending on the uniqueness of the resource, potential risks, and steps that will be taken to avoid and minimize risks.

Intent: This Indicator* focuses on assessing potential impacts to environmental values forest resources identified per in Indicator 6.1.1a, considering scales of impacts from the stand level to the landscape level.

“Short-term impacts” are those that can be measured during or within a short period of the management activity* (e.g., within one year). “Long-term* impacts” are those that persist for longer periods and include cumulative impacts* (e.g., cumulative habitat* changes or cumulative impacts* to soils* from whole-tree removal). Cumulative impacts* may occur over time at one site (e.g., depletion of soil* nutrients) or at the landscape* or ownership scale (e.g., the cumulative impact* of many harvests on wildlife habitat*).
“Assessments of environmental impacts” do not require a formal “Environmental Impact Assessment” as defined under federal and state laws and regulations.

Guidance: Additional detail (i.e., detailed description or quantification of impacts) will vary depending on the uniqueness of the resource, potential risks*, and steps that will be taken to avoid and minimize risks*.

Potential impacts to site-specific features (e.g., unique habitats*, water bodies*, identification of sensitive soils*) are typically addressed in operations plans and/or prescriptions. Long-term* and cumulative impacts* are addressed in the management plan*, while short-term impacts may be addressed in harvest plans or in separate management guidelines that describe potential risks*. While not all impacts can be easily distinguished as “long-term*” or “short-term,” it is important that they are included in either the management plan* or the harvest plan.

Consultation Question:
The Standard Development Group recognizes the importance of major disturbance (e.g., wildfire, hurricane) planning and management to ensure forest resilience and a balanced forest management response post-event, which may include salvage harvesting. Based on your real-world experience and thoughts, does the existing standard language provide adequate flexibility and safeguards for major disturbance planning and post-event management response?

C6.3 The Organization* shall identify and implement effective actions to prevent negative impacts of management activities* on the environmental values*, and to mitigate and repair those that occur, proportionate to the scale*, intensity*, and risk* of these impacts. (C6.1 P&C V4)

Indicator 6.3.1 (Existing US Indicator 6.1.c) Using the findings of the impact assessment (per Indicator 6.2.1-6.4.b), effective management approaches and field prescriptions are developed and implemented that: 1) prevent avoid or minimize negative short-term and long-term* impacts; and 2) maintain and/or enhance the environmental values identified per Indicator 6.1.1. long-term ecological viability of the forest

Intent: This Indicator* focuses on developing/implementing management measures to avoid or minimize impacts identified in Indicator 6.2.1 6.4.b. Emphasis should be placed first on avoidance and then on minimizing and mitigating negative impacts.
Guidance: Management approaches to address potential long-term* impacts, including cumulative impacts*, will typically be addressed in the management plan*. They should also be addressed in operational plans.

Management approaches and field prescriptions to address short-term impacts from management activities* that recur throughout the implementation of the plan may be addressed in the management plan* or in separate management guidelines that are designed to avoid potential risks*—for example, these may be the guidelines required for Criteria 6.3, 6.5, 6.6, 6.8, and 6.9).

Prescriptions to site-specific features (e.g., unique habitats*, water bodies*, identification of sensitive soils*) are typically addressed in operations plans and/or prescriptions.

**Indicator 6.3.2** *(New)* Unless it is being used to achieve ecological management objectives*, whole-tree removal:

a. does not occur on nutrient-poor soils* or soils* sensitive to compaction or other disturbance;

b. does not occur in wetlands*, rare ecosystems*, or other ecologically sensitive areas;

c. if it does occur, is not planned to occur again in the subsequent rotation unless research indicates soil* productivity and belowground carbon sequestration will not be compromised; and

d. if it does occur, leaves roots and stumps on-site.

**Applicability:** This indicator is applicable to harvesting operations that remove the aboveground portions of the trees, including stems, branches, twigs, and leaves, from the harvest unit* and all of these materials are either left on the landing or are transported off-site. A key element is that material is removed from the forest* and is utilized off the site.

This indicator is not applicable to harvesting operations that remove whole trees to the landing, process them by removing tops and limbs, and then distribute a significant portion of those tops and limbs back into the woods or on skid trails (in conformance with Indicators 6.6.3 and 10.11.4).

**Consultation Questions:**

1) Does Indicator 6.3.2 add value to the standard, or is it duplicative of other indicators within the standard?

2) Are there edits that would help increase clarity regarding for which harvesting operations this indicator does and does not apply?

**Indicator 6.3.3** *(Adapted from IGI 6.3.3)* Where negative impacts to environmental values identified per Indicator 6.1.1 occur as a result of management activities* implemented by The
Organization*, measures are adopted to prevent further damage, and negative impacts are mitigated and/or repaired.

Intent: In this context, the intent of “repair” is to repair the damage done to environmental values that resulted from management activities*. It is not intended to require the formation of more natural conditions* in sites that have been heavily degraded or converted to other land uses.

Indicator 6.3.4 (Existing US Indicator 6.1.d) On public lands*, assessments developed per in Indicator 6.1.1 and management approaches developed per in Indicator 6.3.1 are made available to the public in draft form for review and comment prior to finalization. Final assessments are also made available.

Applicability: This Indicator* is only applicable for public lands*.

Guidance: Information that the manager and Certification Body* deem necessary to keep confidential (e.g., location of rare, threatened, and endangered species*) may be kept confidential.

C6.4 The Organization* shall protect rare species* and threatened species* and their habitats* in the Management Unit* through conservation zones*, protection areas*, connectivity*, and/or (where necessary) other direct measures for their survival and viability. These measures shall be proportionate to the scale*, intensity*, and risk* of management activities* and to the conservation* status and ecological requirements of the rare and threatened species*. The Organization* shall take into account the geographic range and ecological requirements of rare and threatened species* beyond the boundary of the Management Unit*. (C6.2 P&C V4)

Intent: This Criterion establishes safeguards for rare, threatened, and endangered species* that were identified in per Criterion 6.1. Safeguards for rare ecological communities* RTE communities* identified in per Criterion 6.1 are addressed in Criterion 6.6 6.3.

The Organization* The landowner has the discretion to keep the specific location of rare populations confidential.

Indicators 6.4.1 6.2.a through 6.4.3 6.2.c follow a logical sequence in which applicants are required to develop a list of RTE species rare, threatened, and endangered species* present in the forest, modify management plans* accordingly, and implement management activities* to maintain or enhance habitats* for the species*. Where adequate plans or information do not exist and the likely presence of RTE species rare, threatened, and endangered species* is
indicated, The Organization* the forest owner or manager is required to follow a precautionary management approach* and manage as though they are present.

**Indicator 6.4.1 (Existing US Indicator 6.2.a)** If there is a likely presence of RTE species—rare, threatened, and endangered species* as identified per in Indicator 6.1.1 6.1.a then either a field survey to verify the species* presence or absence is conducted prior to site-disturbing management activities*, or management activities* occur with the assumption that potential RTE species—rare, threatened, and endangered species* are present.

Surveys are conducted by individuals biologists with the appropriate expertise in the species* of interest and with appropriate qualifications to conduct the surveys. If a species* is determined to be present, its location is should be reported to the manager of the appropriate database.

**Intent:** “Likely” is a judgment decision by The Organization* the landowner/manager in consultation with experts* (and verification by the Certification Body*), and is determined by occurrences in the area (e.g., county) of harvest and/or the similarity of habitat* as indicated by input from appropriate natural resource agencies such as state wildlife agencies, the Natural Heritage programs, NatureServe, the National Marine Fisheries Service, and knowledge of historic conditions*.

**Guidance:** Depending on the type of FMU Management Unit* (e.g., scale, scope, degree of risks*) The Organization* the landowner/manager may be required to have surveys conducted by independent experts* representing no conflict of interest. It may also include a secondary review.

**Indicator 6.4.2 (Existing US Indicator 6.2.b)** When RTE species—rare, threatened, and endangered species* are present, or assumed to be present, modifications in management activities* are made in order to maintain, restore*, and/or enhance the extent, quality, and viability of the species* and their habitats*. Conservation zones* and/or protected areas* are established for RTE species—rare, threatened, and endangered species*, including those S3 species* that are considered rare, where they are necessary to maintain or improve the short-term and long-term* viability of the species*. Conservation strategies measures are based on Best Available Information* relevant science, guidelines and/or consultation with relevant, independent experts as necessary to achieve the conservation goal of the Indicator.

**Intent:** The goal of this Indicator* is to be aware of RTE species—rare, threatened, and endangered species* and to manage appropriately in situations where they are present. This may require establishing conservation zones* or protected areas* where warranted. Conservation zones* are not considered “set asides” and active management within these areas is allowed where appropriate.
Guidance: In states where S1, S2, S3, or G3 species* are not mapped by the local Natural Heritage Program or where rare, threatened, and endangered species* information is incomplete, the best available data should be used.

For the purposes of this indicator, Best Available Information* includes relevant science, guidelines, and/or consultation with relevant, independent experts* as necessary to achieve the conservation* goal of the Indicator*.

When possible, provide for connectivity* to allow for genetic mixing of rare, threatened, and endangered species*, and also consider connectivity* of potential habitats* at different ecological gradients, which may assist species'* adaptation to climate change (e.g., to potential habitats* at various elevations or latitudes).

**Indicator 6.4.3 (Existing US Indicator 6.2.c)** For medium* and large* public management units* forests (e.g. state forests), forest-management plans* and management activities* operations are designed to support meet species'* recovery goals as well as landscape*-level biodiversity* conservation goals.

Applicability note: This Indicator is only applicable for public lands*.

**Indicator 6.4.4 (Existing US Indicator 6.2.d)** Within the capacity of The Organization* the forest owner or manager, hunting, fishing, trapping, collecting, and other activities are controlled to avoid the risk of impacts to rare, threatened, and endangered species* vulnerable species and communities and rare ecological communities* (see also Criterion 1.4 See Criterion 1.5).

On tribal* lands and where Native American* groups have retained use rights* on lands that were ceded to the US government, implementation of the activities mentioned above for ceremonial purposes, in recognition of Native Americans'* sovereignty and unique ownership, avoids risk to populations of rare, threatened, and endangered species* or rare ecological communities* and conforms with applicable national laws* and local laws* or with an agreement between a Native American* group and the US Fish and Wildlife Service.

**Intent:** The intent of this Indicator* is to apply This indicator focuses on application of the precautionary approach* in order to avoid irreversible negative consequences to RTE species rare, threatened, and endangered species* and their habitats* from extractive and recreational activities.

**C6.5** The Organization* shall identify and protect Representative Sample Areas* of native ecosystems* and/or restore* them to more natural conditions*. Where Representative Sample Areas* do not exist or are insufficient, The Organization* shall restore* a proportion of the Management Unit* to more natural conditions*. The size of the areas...
and the measures taken for their protection* or restoration*, including within plantations*, shall be proportionate to the conservation* status and value of the ecosystems* at the landscape* level, and the scale*, intensity*, and risk* of management activities*. (C6.4 and 10.5 P&C V4 and Motion 7:2014)

Intent: The goal of this Criterion* is to manage or restore* sites to favor or form viable* examples of native ecosystems* that are typical of the locality, and that would naturally occur in the Management Unit*. Representative Sample Areas* should reflect the full diversity of native ecosystems*, not just those that are forested*. However, they should not disproportionately represent non-forested* ecosystems*.

Representative Sample Areas* are portions of the Management Unit* delineated for the purpose of conserving* or restoring* viable* examples of an ecosystem* that would naturally occur in that ecological region. Representative Sample Areas* may also:

a. serve to conserve* or restore* an underrepresented ecological condition (i.e., forest* successional* phases, ecological communities); and/or
b. serve as a set of protected areas* or refugia* for species*, communities, and/or community types not addressed in other Criteria* of this Standard.

Representative Sample Areas* will generally be fixed in location, unless representative of ecosystems* within a shifting mosaic of ecosystems*, such as those resulting from frequent natural (or mimicked) disturbance.

RSAs serving purposes 1 and 3 will generally be fixed in location. RSAs serving purpose 2 may move across the landscape as under-represented conditions change or may be fixed in area and manipulated to maintain the desired conditions.

For the purposes of this Criterion, ecosystem (or ecological system) refers to mid-level classification level (i.e., a group of plant communities) or an approximately equivalent level of classification (i.e., forest type).

Protection* of High Conservation Values* HCVF; rare, threatened, and endangered species*; communities; and ecosystems* with special ecological values are also addressed and protected* in other parts of this Standard (see Criteria 6.4 and 6.6, and Principle 9). One of the primary provisions in Criterion 6.5 is to ensure that examples of ecosystem* types that are not protected* elsewhere in this Standard are protected* in their natural state within the landscape.

The ecosystems that are not sufficiently represented and protected off-property will be protected within the FMU in a system of RSAs.

Guidance: Management activities* within Representative Sample Areas* are not prohibited, but per Indicator 6.5.4 are limited to activities that do not detract from the Representative
Sample Area* objectives for ecosystem* conservation* or restoration*. Representative Sample Areas* representing underrepresented conditions may be manipulated to maintain the desired conditions.

There is no set appropriate acreage for an RSA; the size can range from a few acres to hundreds of acres depending on the ecosystem type and purpose. Generally the size should be representative of the range typical for that ecosystem type and large enough to be viable.

Additional guidance is included in Annex G.

Indicator 6.5.1  (Existing US Indicator 6.4.a) Per Annex G and using Best Available Information*, The Organization* the forest owner or manager assesses and documents: a) the native ecosystems* that would naturally occur exist on the FMU-Management Unit*, including those that do not currently occur on the Management Unit*; and b) assesses the adequacy of their representation, status, and protection* in the landscape*(see Criterion 7.1).

The assessment for medium* and large* MU Management Units* forests include some or all of the following: a) GAP analyses*; b) collaboration with state Natural Heritage Programs; c) and other public agencies; de) regional, landscape, and watershed planning efforts; and ed) collaboration with universities and/or local conservation* groups.

For an area that is not located on the FMU to qualify as a Representative Sample Area (RSA), it should be under permanent protection in its natural state.

Intent: “Permanent protection” refers to protection levels that are equivalent to GAP Status 1 and GAP Status 2. In cases where off-FMU GAP Status 3 lands are under management goals and activities that support the RSA purposes, these lands may be considered. For GAP Status 3, the landowner/manager must demonstrate how the off-FMU land is being protected to meet its specified RSA purpose at present and in the long-term, must demonstrate how the off-FMU RSA meets the other Indicators in this Criterion, and must provide an annual summary to the CB of the status of the RSA.

Guidance: Assessments for adequacy of representation should generally be in writing. The Organization* The landowner should describe the rationale for how determinations of representativeness, status, and uniqueness and level of existing protection* have been made.

Guidance on scaling for assessments of Representative Sample Areas* presence: The Organization* The forest owner/manager of for small* and medium* FMU Management Units* may comply with this Indicator* through more informal consultation. However, on all FMUs, outstanding examples of common community types (e.g., common types with Natural Heritage viability rankings of A and B) should be protected or managed to maintain their conservation value.
Guidance on adequacy of representation and protection of RSAs in the landscape: As a general guideline, if at least five (5) multiple samples of a specific ecosystem type are protected in a landscape (e.g., ecological section) then no additional samples for that RSA purpose need to be protected on the FMU. Five is not to be considered an absolute number; fewer or more might be appropriate in some cases.

**Indicator 6.5.2** *(Based on IGI 6.5.2 and IGI 6.5.3)* Based upon the assessment completed per Indicator 6.5.1, *Representative Sample Areas* are established per Annex G to conserve identified *ecosystems* that have *viable* occurrences on the *Management Unit* and restore identified *ecosystems* that do not have *viable* occurrences on the *Management Unit*.

**Intent:** *Representative Sample Areas* are to be established within the *Management Unit*, except in a limited number of situations that are described in Annex G.

**Guidance:** Overall, within *The Organization’s* established *Representative Sample Areas*, the expectation is for a greater emphasis on *ecosystems* and ecological conditions that are in greater need of *conservation* assistance. Annex G provides further considerations for which *ecosystems* to emphasize, including when *Representative Sample Area* establishment is not essential for a particular *ecosystem*.

*(Existing US Indicator 6.4.b)* Where existing areas within the landscape, but external to the FMU, are not of adequate protection, size, and configuration to serve as representative samples of existing ecosystems, forest owners or managers, whose properties are conducive to the establishment of such areas, designate ecologically viable RSAs to serve these purposes.

Large FMUs are generally expected to establish RSAs of purpose 2 and 3 within the FMU.

**Indicator 6.5.3** *(Adapted from IGI 6.5.4)* Per Annex G, the extent of *Representative Sample Areas* established is proportionate to the level of protection of native *ecosystems* within the landscape*, the size of the Management Unit*, and the intensity* of forest* management.

**Indicator 6.5.4** *(Existing US Indicator 6.4.c)* *Management activities* within *Representative Sample Areas* are limited to low impact activities that support or do not detract from compatible with the protected *RSA Representative Sample Area* objectives for *ecosystem conservation* or *restoration*, except under the following circumstances:

a) harvesting activities only where they are necessary to restore or create conditions to meet the objectives of the protected RSA, or to mitigate conditions that interfere with achieving the RSA objectives; or

b) road-building only where it is documented that it will contribute to minimizing the overall environmental impacts within the FMU and will not jeopardize the purpose for which the RSA was designated.
Guidance: The primary purpose of a Representative Sample Area* is to conserve* (i.e., maintain or enhance) or restore* a particular native ecosystem* as an ecological reference area. Management to achieve this purpose may range from a more “hands-off” approach through to much more intensive management. Other management activities* may occur within a Representative Sample Area* as long as they support, or do not detract from, the primary purpose. In rare occurrences, when an activity is essential for achieving overall management objectives*, and any alternative would result in extensive damage to environmental or social values outside of the Representative Sample Area*, but could be accomplished within the Representative Sample Area* with limited negative impacts to the Representative Sample Area*, the activity may be implemented, as long as it is still possible to achieve the primary purpose of the Representative Sample Area*.

When forest* management activities* (including timber harvest) create and maintain conditions that emulate an intact, mature forest* or other successional* phases that may be underrepresented in the landscape*, the management system that created those conditions may be used to maintain them, and the area may be considered as a representative sample for the purposes of meeting this Criterion*. Representative Sample Areas* serving as ecological reference areas will generally not be managed for timber harvest, unless it is a part of the conservation* strategy to maintain or enhance the ecosystem*. Threats such as wildfire, natural pests, or pathogens may warrant management measures-activities* as a means to conserve* the ecosystem*.

Indicator 6.5.5 (Existing US Indicator 6.4.d) The Representative Sample Area* RSA assessment (per Indicator 6.5.1 6.4.a) is periodically reviewed as part of the review of the management plan* and, if necessary, updated (at a minimum every 10 years) to determine if the need for RSAs has changed; the designation of Representative Sample Areas* (per Indicator 6.5.2) is revised accordingly.

Guidance: When different components of the management plan* are reviewed at different times, The Organization* should review the Representative Sample Area* assessment in coordination with review of the applicable portion(s) of the management plan*. If a re-evaluation reveals that off-FMU examples of an ecosystem have been reduced in extent or viability, are experiencing increased threat, or their management has significantly changed or is likely to significantly change, then the landowner or manager is expected to make appropriate and compensatory adjustments to on-FMU RSA designations. Conversely, changes in off-FMU protection of RSAs may also include an increase in the number of protected ecosystems and hence a reduced need for protection on the FMU.

Indicator 6.5.6 (Adapted from IGI 6.5.5) Representative Sample Areas*, in combination with other components of the conservation areas network*, comprise a minimum 10% area of the Management Unit*.
Intent: The conservation areas network* is established within the Management Unit*, except in a limited number of situations that are described in Annex H.

Guidance: Annex H provides additional guidance regarding identification of areas that may be identified as part of the conservation areas network*.

Indicator 6.5.7 (Existing US Indicator 6.4.e) Managers of Large*, contiguous public land* Management Units* forests establish and maintain a network of conservation zones* and/or protected areas* representative protected areas sufficient in size to maintain species* dependent on interior core habitats*.

Applicability: this Indicator* only pertains to large*, contiguous public lands* forests.

Guidance: In order to survive, some species* need forest* habitat* that is away from the influence of forest* edges and open habitats*. The amount of interior core forest* needed to be sufficient will depend on which species* may be present and the shape of the forest* block. A forest* that is closer to a circle in shape provides much more interior core habitat* than a forest* block with the same number of acres but that is linear in shape (i.e., longer and thinner).

C6.6 The Organization* shall effectively maintain the continued existence of naturally occurring native species* and genotypes*, and prevent losses of biological diversity*, especially through habitat* management in the Management Unit*. The Organization* shall demonstrate that effective measures are in place to manage and control hunting, fishing, trapping, and collecting. (C6.2 and C6.3 P&C V4)

Indicator 6.6.1 (Existing US Indicator 6.3.b) To the extent feasible, within given the size of the ownership, particularly on larger ownerships, management maintains, enhances, or restores* habitat* conditions suitable for well-distributed populations of animal species* that are characteristic of forest* ecosystems* within the landscape*.

Applicability: This Indicator* addresses habitats* required by species* that are not explicitly covered by Criterion 6.4, Criterion 6.8, 6.2 and Indicator 6.6.7 6.3.a, with particular consideration of animal species* or species* guilds whose populations are influenced by forest* management at the multi-stand scale.

Intent: This Indicator* is intended to cover habitat* diversity of species* not specifically associated with riparian or aquatic habitats*, which are addressed in Indicator 6.3.c and Criterion 6.7 6.5.

This Indicator* addresses management for elements of habitat* diversity across the FMU.
Management Unit* and includes consideration of diversity at the landscape* scale. Habitat* connectivity* at the multi-stand scale is also considered and is based on the habitat* needs of species* that are vulnerable to habitat* fragmentation*.

Guidance: Species* that are characteristic of forests* within the landscape* may include: forest* interior specialists; early successional* forest* specialists; mature forest* specialists; forest* understory species*; species* with large territories or home ranges whose populations may be dependent on specific habitat* conditions; species* at risk from habitat* fragmentation*; and species* with very restricted ranges limited by specific habitat* conditions.

It is not expected that all species* be identified and considered individually. Rather, management may be based on broad habitat* conditions used by a wide range of species* (e.g., early successional* deciduous forests* or large patches of relatively mature coniferous forests*) as indicated by the forest* types and other ecosystems* found on the forest*.

Consideration of individual species* may be warranted in the case of listed species* or other species* of management concern, and for unique population occurrences, concentrations, remnants or use areas. Examples include habitat* for declining neotropical migrant warblers, nesting areas, refugia*, and deer wintering areas.

The level of detail in management and quantification of habitat* conditions may vary with the scale* and intensity* of management, and, as appropriate to ownership size, landscape* context, forest* community type, and natural disturbance regimes* across the FMU Management Unit*. Greater consideration of the area, location, and type of habitat* is expected when species* or species* guilds associated with particular habitat* conditions (e.g., large blocks of mature forests*, or forest* understory species*) are adversely affected by management activities*. At minimum, The Organization* The forest owner/manager is expected to be able to use cover type maps as a habitat* assessment tool. The plant community type and development-successional stage or age class* data generated in Indicators 6.1.1 6.1.a and 6.4.2 6.2.b (e.g. for example, a community/development successional stage matrix table) may be used as a basic measurement for this Indicator*.

“Well-distributed” means that the population is viable. As feasible considering the forest* size, sites, and ecosystems* found on the forest*, management provides conditions for the population to occur in multiple locations across the FMU Management Unit* to enhance its viability, rather than limiting the occurrence to one or very few locations.

Ownership size considerations: The range of species* and habitat* conditions that can be accommodated at any one time will vary by ownership size. On smaller ownerships (generally, tens to thousands of acres), management should meet the requirements of this Indicator* by managing for habitat* diversity for the entire forest* and consider the role of the ownership within the surrounding landscape*. However, ownership size will limit the type and amount of diversity that can be provided. See Intent/Guidance for Indicator 6.3.a regarding the expectation of providing development stage diversity on smaller ownerships.
Very large ownerships should address this Indicator on appropriately scaled landscape planning units. These units may be based on forest boundaries or landscape features and will generally be scaled to accommodate all but extreme large-scale natural disturbances and the habitat requirements of animals with large home ranges (or seasonal habitats in the case of migratory animals). Depending on the ecosystem and regions, a landscape planning unit might be thousands or tens of thousands of acres in size.

**Indicator 6.6.2 (Existing US Indicator 6.3.d)** At a stand or site scale, management practices maintain or enhance plant species composition, distribution, and frequency of occurrence similar to those that would naturally occur on the site.

**Intent:** This Indicator addresses species diversity broadly, not simply commercial species. The assumption is that maintaining species diversity in conformance with this Indicator will conserve genetic diversity as well, which is a requirement of Criterion 6.3.

**Guidance:** While some site-specific treatments that simplify diversity may be necessary for specific management objectives (e.g., planting and control of competing vegetation), in general, management should strive to maintain a diversity of native species within stands.

Management practices that address maintenance of natural species diversity include, but are not limited to: use of natural regeneration methods; intermediate treatments that retain and encourage a diversity of species; use of site preparation; control of competing vegetation; type and number of species selected for tree planting; conservation of species at the edge of their ranges; conservation of representative disease-resistant pockets in areas where plant species are being impacted by disease; diversified planting schemes; and creating conditions for understory plants and other biota. In fire-dependent ecosystems, prescribed fire may be a beneficial management practice.

The plant species to be maintained or enhanced include tree species and understory vegetation, based on the composition of the forest ecosystem native to the site.

**Indicator 6.6.3 (Existing US Indicator 6.3.f)** At a stand or site scale, management maintains, enhances, or restores habitat components and associated stand structures, in abundance and distribution that could be expected from naturally occurring processes. These components include:

a. include large live trees, live trees with decay or declining health, snags, and well-distributed coarse down and dead woody debris material. Legacy trees where present are not harvested; and
b. provide vertical and horizontal complexity;

c. Trees selected for retention are generally representative of the dominant species naturally found on the site; and

d. are maintained over successive harvests and are buffered by green trees and other
vegetation where needed and available to maintain microclimate and reduce windthrow.

**Specific to the Southwest Region**

**Regional Supplement1** *(Existing US Indicator 6.3.g.1.e)* Forest* management maintains and/or restores* an average of at least three *snags* per acre dispersed across the *landscape*. *Snags* are representative of the larger sizes of dominant *species* and “hard” and “soft” decay classes.

**Intent for All Regions:** The intent of this *Indicator* is to ensure that *The Organization* forest owner/manager provides adequate *habitat* for *species* associated with large and/or decaying trees and dead wood. This Indicator applies to all *stands*, *silvicultural* systems, and harvest objectives, including normal operations, salvage harvests, intermediate and final harvests, and *stands* regenerated by natural means or by planting.

**Guidance for All Regions:** Some *stands* may take some time to develop these structural elements. Evidence of conformance may include measurable goals (e.g., numbers and sizes of trees), and application of *silvicultural* systems and harvesting practices that develop and maintain these structures over time. *Long-term* passive approaches may be used to develop *snags* and coarse down and dead *woody debris* material by allowing *retention* trees (e.g., large live decay trees) to die naturally, rather than girdling and/or felling trees specifically for that purpose.

Trees with decay or declining health include but are not limited to cavity trees.

While *species* selected for retention should be generally representative of the *species* found on the site, flexibility in the proportions of *species* retained may be based on ecological and financial objectives.

**Specific for the Ozark-Ouachita Region:** *The Organization* should take into account maintenance of high-quality seed trees in the *stand*, and presence of advanced regeneration (hardwoods) before harvest.

**Specific for the Pacific Coast Region:** In some dry regions, retaining approximately 10 tons of *woody debris* per acre may be sufficient. In wetter regions, retaining 20 tons of *woody debris* per acre may be sufficient. *Woody debris* should be well distributed spatially and by size and decay class, with a goal of at least four large pieces (approximately 20” diameter x 15’ length) per acre. Three to 10 *snags* per acre (averaged over 10 acres) should be maintained or recruited. *Snags* should be well represented by size, *species*, and decay class.

**Indicator 6.6.4** *(Existing US Indicator 6.3.h)* *The Organization* assesses the risk of, prioritizes, and, as warranted, develops and implements a written strategy to prevent or control *invasive species*. It includes:

a. an assessment of *method to determine the presence and extent of invasive species*
and the degree of threat to native species* and ecosystems*;
b. implementation of management activities* practices that minimize the risk of invasive species* establishment, growth, and spread;
c. eradication or control of established invasive species* populations when feasible; and
d. monitoring of control measures and management practices to assess their effectiveness in preventing or controlling invasive species*.

Applicability: This Indicator is only applicable where invasive species are present.

Intent: The intent of this Indicator is to minimize This Indicator* minimizes the risk of invasive species* to native ecosystems* on the FMU Management Unit*.

Guidance: A combination of assessment methods may be appropriate, such as including invasive species* in periodic forest* inventories, mapping their location and extent, screening sites during harvest planning, and informal observations by forest* managers in the field.

Practices that minimize the risk of establishment and growth of invasive species* include: washing equipment prior to moving on-site; avoiding seed mixes that contain potential invasive species*; using weed-free mulch during erosion*-control operations; seeding landings and other disturbed areas with native species*; altering silvicultural* treatments; and effective forest* monitoring and early detection.

In prioritizing invasive species* control, The Organization* the forest-owner/manager should consider the relative risk of invasive species* infestations relative to other threats to the forest* (e.g., fire, insects, disease, etc.). Control measures should match the scale of the infestation and the potential risks and/or actual impacts to native species* and ecosystems*.

Feasibility and consistency with Criterion 6.1 may be considered when developing the invasive species* strategy control plan.

State listings of invasive species* are recommended as sources of information.

Indicator 6.6.5 (Existing US Indicator 6.3.g.1) In the Southeast, Appalachia, Ozark-Ouachita, Mississippi Alluvial Valley, and Pacific Coast Regions, when even-aged systems are employed, and during salvage harvests, live trees and other native vegetation are retained within the harvest unit as described in Appendix C for the applicable region.

In the Lake States Northeast, Rocky Mountain and Southwest Regions, When even-aged* silvicultural* systems are employed and during salvage harvests, the opening sizes and proportion and configuration of live trees and other native vegetation retained within the harvest unit* are consistent with the characteristic natural disturbance regime(s)*, unless retention* at a lower level is necessary for the purposes of restoration* or rehabilitation. The regional supplementary requirements that follow also apply for portions of Management Units* within the
specified FSC-US Regions (per the FSC-US Regional Map in Annex B). See Appendix C below for additional regional requirements and guidance.

**Intent:** This Indicator is intended to apply to the regeneration phase of even-aged silvicultural systems in both natural regeneration and planted stands. This Indicator is not meant to preclude even-aged management in forest types that are typically characterized by gap disturbances. Rather, it is meant to ensure that biological legacies are retained at the time when even-aged management is used. These legacies provide plant species diversity, refugia for understory, soil, and leaf-litter species, retention of wildlife habitat structural elements (e.g., snags, downed logs, etc.), and vertical and horizontal complexity in developing stands.

**Guidance for All Regions:** The method of retention*, especially patch size and location, should generally reflect the type of live vegetation that would be found given natural disturbance regimes* and should be sufficient to provide a variety of “lifeboat” conditions for sensitive understory plant species*, fungi, and lichens and habitat* elements for animals. When feasible, retained vegetation should be located to protect snags*, down woody debris*, and other retention* components from windthrow, and to maintain their microclimate and desired function.

Retention* objectives and requirements will vary with harvest unit* size, the condition of surrounding stands* and silvicultural* systems applied to those stands*, and relative rarity of the plant ecological community*. For example, no retention* may be needed if the harvest unit* is small and the adjacent stand* will be managed with an uneven-aged system. The levels of green-tree retention* depend on such factors as: opening size, legacy trees*, adjacent riparian zones*, riparian areas*, slope stability, upslope management, presence of critical refugia*, and scale* and intensity* of harvesting across the Management Unit*. Where stands* have been degraded, less retention* can be used to improve both merchantable and non-merchantable attributes. However, it is generally expected that the level of retention* will exceed that the minimum requirements of this Indicator* and will include trees of all sizes as well as understory plants.

Retention* should be distributed as clumps and dispersed individuals, appropriate to site conditions. “Clump” retention* may include riparian management zones*, wildlife corridors and other special zones. “Dispersed” retention* may include desirable overstory and understory species* while allowing for regeneration of shade-intolerant and intermediate species* consistent with overall management principles. Retained trees should comprise a diversity of species* and size classes, which includes large and old trees.

**Specific to the Appalachian Region**

**Regional Supplement1** *(Existing US indicator 6.3.g.1.a)* When even-aged silviculture* (e.g., clearcut, seed tree, regular or irregular shelterwood, deferment cuts) or deferment cutting* is employed, live trees and native vegetation are retained and opening sizes

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created within the harvest unit* are in a proportion and configuration consistent with the characteristic natural disturbance regime* in each community type as evidenced by Best Available Information* and documented in the management plan*, unless retention* at a lower level is necessary for restoration* or rehabilitation purposes. Harvest openings with no retention are limited to 10 acres.

Guidance: Even-aged silviculture* should be used only where naturally occurring species* are maintained or enhanced. Retention* within harvest units* can include riparian area* buffers* and other special zones. In addition, desirable overstory and understory species may be retained outside of buffers or special zones while allowing for regeneration of shade-intolerant and intermediate species consistent with overall management principles. Where stands* have been degraded, or where harvest practices implemented by previous management created conditions that limit silvicultural* options (e.g., shelterwood establishment), less retention* may be used with the intent of improving future stand* conditions or releasing advanced regeneration, to improve both merchantable and non-merchantable attributes. When considering maximum opening size with no retention*, The Organization* should consider potential aesthetic* impacts, age class* diversity on the landscape*, regeneration goals, and natural disturbance patterns*. Generally, individual harvest openings with no retention* should average less than 10 acres across the Management Unit* in a given year, and no single opening without retention* should exceed 25 acres.

Specific to the Ozark-Ouachita Region

Regional Supplement2 Even-aged silviculture* is employed on no more than 10% of the timber-producing area within the Management Unit* per decade.

Regional Supplement3 When even-aged silviculture* is employed, diameter-limit cuts are not implemented, and natural regeneration is required, except when necessary for restoring specific habitats*, stand* types, or species*. Additionally:

In the Ozark subregion, harvest openings are limited to 2 acres with no retention*, and 20 acres with retention* of at least 20%–30% of the canopy.

In the Ouachita subregion, harvest openings are limited to 20 acres.

Specific to the Pacific Coast Region

Regional Supplement4 (Existing US Indicator 6.3.g.1.a) Within harvest openings larger than 6 acres, 10%–30% of pre-harvest basal area is retained. The levels of green-tree retention depend on such factors as: opening size, legacy trees*, adjacent riparian areas*, riparian zones*, slope stability, upslope management, presence of critical refugia*, and extent and intensity of harvesting across the FMU-Management Unit*. Retention* is
distributed as clumps and dispersed individuals, appropriate to site conditions. Retained trees comprise a diversity of species and size classes, which includes large and old trees. Regeneration harvest blocks in even-aged stands average less than 40 acres or less. No individual block is larger than 60 acres.

**Regional Supplement5** *(Existing US Indicator 6.3.g.1.b)* Even-aged silviculture may be employed where:

a. native species require openings for regeneration or vigorous young-stand development; or
b. it restores the native species composition; or
c. it is needed to restore structural diversity in a landscape lacking openings while maintaining connectivity of older intact forests.

**Regional Supplement6** *(based on existing US Indicator 6.3.g.1.e)* For even-aged regeneration harvests, if the rotation length does not allow a stand to achieve 80% of culmination of mean annual increment compared to natural stands of the same forest type and site class, retention is at the upper end (i.e., >20%) of the range required (in Regional Supplement4). Where rotation lengths meet or exceed culmination of mean annual increment, retention may be within the lower end (i.e. 10%–20%) of the range required.

**Guidance:** If the Management Unit does not have growth and inventory data for similar natural stands on the Management Unit needed to establish culmination of mean annual increment, growth and inventory data from similar forest types and site classes of natural forests off the Management Unit should be used to establish culmination of mean annual increment. Historical data from public lands such as National Forests may be the best source of information for calculating culmination of mean annual increment.

**Regional Supplement7** *(Existing US Indicator 6.3.g.1.f)* No logical logging unit adjacent to a logged even-aged regeneration unit may be harvested using an even-aged regeneration method unless/until the prior even-aged regeneration unit is adequately stocked by a stand of trees in which the dominant and co-dominant trees average at least five feet tall and three years of age from the time of establishment on the site, either by planting or by natural regeneration. If the requirement to achieve adequate stocking is to be met with trees that were present at the time of harvest, there shall be a period not less than five years following the completion of operations before an adjacent even-aged regeneration harvest may occur.

**Specific to the Mississippi Alluvial Valley Region**

**Regional Supplement8** *(Based on existing US Indicators 6.3.g.1.a, 6.3.g.1.b, and 6.3.g.1.c)* When even-aged silviculture is employed, the average size of the harvest
unit* within the Management Unit* is no larger than 40 acres; retention* is established in harvest units* adjacent or nearly adjacent to another logged even-aged regeneration unit; and harvest openings with no retention* are limited to 20 acres. For most stand* types, retention* is 20%–30%, but less retention* is appropriate for stands* dominated by shade-intolerant species*.

Specific to the Rocky Mountain Region

Regional Supplement9 (Existing US Indicator 6.3.g.1.a) Even-aged silviculture* is employed used as a silvicultural method only where it is ecologically appropriate to the forest* type (e.g., in lodgepole or aspen types), or when human activity (e.g., high grading, fire exclusion, introduction of non-native species* exotics) has created an imbalance in the natural disturbance regime* that can be remedied only by this method.

Specific to the Southwest Region

Regional Supplement10 (Existing US Indicator 6.3.g.1.h) Uneven-aged management is appropriate for predominately multi-aged forest types, such as ponderosa pine. Even-aged silviculture* is employed only in appropriate for predominately even-aged forest* types, such as aspen.

Regional Supplement11 (Existing US Indicator 6.3.g.1.d) When even-aged silviculture* is employed, the size of harvest openings is based on (1) the natural regeneration requirements of the species* on the site, (2) the need to provide horizontal heterogeneity to restore the landscape or forest mosaic, and (3) requirements to protect the site (e.g., soil*, hydrology).

Specific to the Southeast Region

Guidance: Even-aged silviculture* should not be used in semi-natural forest* stands* where the majority of trees are greater than 100 years old, or natural forests*. Even-aged silviculture* may be used in semi-natural forest*, even-aged stands* of hardwood, and cypress, but the size of openings should be conservative. It also may be used in even-aged stands* of pine and pine/hardwood, but the size of openings should not be higher than the limit for plantations* and should be justified by natural regeneration requirements.

Exceptions to the above may be made in order to meet ecological objectives. Even-aged silviculture* may be used in natural forest* stands* as a tool for maintaining ecosystems* that are dependent on large, contiguous openings, when supported by
Indicator 6.6.6 (Existing US Indicator 6.3.g.2) Under very limited situations, For purposes of restoration*, The Organization* has the option to develop a qualified plan to allow for minor departures from the opening size limits associated with Indicator 6.3.g.4 6.6.5. A qualified plan is:

a. Is developed by qualified experts* in ecological and/or related fields (e.g., wildlife biology, hydrology, landscape ecology, forestry/silviculture*);

b. Is based on the totality of the Best Available Information*, including peer-reviewed science regarding natural disturbance regimes* for the EMU Management Unit*;

c. Is spatially and temporally explicit and includes maps of proposed openings or areas;

d. Demonstrates able to demonstrate that the variations will result in equal or greater benefit to wildlife, water quality, ecosystem* processes, and other values compared to the normal opening size limits Indicator 6.6.5 (without any supplementary regional requirements), including for sensitive and rare species*rare, threatened, and endangered species*; and

e. Is developed in collaboration with reviewed by independent experts in wildlife biology, hydrology, and landscape ecology, to confirm the preceding findings and with developed following consultations with affected rights holders*, affected stakeholders*, and interested stakeholders*.

Applicability: This Indicator* is applicable only under limited situations where The Organization* has landowners have opted to conduct site-specific assessments to develop rationale for opening sizes that depart from explicit regional limits set forth in the regional supplementary requirements of Indicator 6.6.5 6.3.g.1.

Indicator 6.6.7 (Existing US Indicator 6.3.a.2) When a rare ecological community* is present, The Organization* modifications are made in both the management plan and its implementation in order to maintain, restore or enhance maintains, restores*, or enhances community the viability of the community. Based on the vulnerability of the existing community, conservation zones* and/or protected areas* are established where warranted.

Applicability: This Indicator* applies to occurrences of rare communities known to state Natural Heritage Programs and occurrences identified in planning or implementing forest* operations.

In states where S1, S2, or S3 communities are not mapped by the Natural Heritage Program, the best available data for S1–S3 communities’ occurrences and finest resolution of classification commonly available in that state should be used. See Guidance and Intent in Criterion 6.1 for information on S1–S3 classifications, as well as the Glossary listing for rare, threatened, and endangered species*.
Rare communities include some S3 communities. Indicator 6.1.1 6.1.a outlines the process for identifying which S3 communities must be protected* and managed as a rare community.

Guidance: Conservation* measures shall should be based on relevant science, guidelines and/or consultation with relevant experts* as necessary to achieve the conservation* goal of the Indicator*.

Field foresters should have an understanding of rare forest* communities that may be encountered during forest* operations. At minimum, this generally includes classification at the Alliance or Natural Community levels, although a more coarse classification may be appropriate in cases where community types are highly diverse and difficult to classify.

Indicator 6.6.8 (Based on IGI 6.6.4) The Organization* demonstrates that effective strategies are in place to manage and control hunting, fishing, trapping and collecting of native species*.

C6.7 The Organization* shall protect* or restore* natural watercourses, water bodies*, riparian zones*, and their connectivity*. The Organization* shall avoid negative impacts on water quality and quantity and mitigate and remedy those that occur. (C6.5 and 10.2 P&C V4)

Intent: This Standard differentiates between “riparian area***” and “riparian management zone****” (i.e., RMZ), but recognizes that this is an artificial construct, as there are few situations in the United States where the purposes of these two types of areas are not overlapping and/or intermixed—the intent of management is the differentiator between the two terms. Riparian areas* are delineated and managed to conserve the plant and wildlife habitat* characteristics of the area and to protect adjacent aquatic habitats* and ecosystems*. Riparian management zones* are designed to protect* water quality* and aquatic habitat*. Riparian areas* vary in width according to biotic and abiotic characteristics and may be wider than a riparian management zone*. Both riparian areas* and riparian management zones* encompass the interface between upland communities, which include complex ecosystems* that provide food, habitat*, and movement corridors for both aquatic and land communities. In practice, on FSC-certified Management Units*, most riparian management zones* function as riparian areas*.

Regionally, various terms are used in place of riparian management zone*, including streamside management zones (SMZs), special management zones, buffers, and/or buffer zones (when specifically in reference to water quality* and aquatic habitats*).

Indicator 6.7.1 (Existing US Indicator 6.3.c) Management maintains, enhances, and/or restores* the plant and wildlife habitat* of riparian areas* Riparian Management Zones (RMZs) to provide:

a. habitat* for aquatic species* that breed in surrounding uplands;

b. habitat* for predominantly terrestrial species* that breed in adjacent aquatic habitats*;
c. *habitat* for species* that use *riparian areas* for feeding, cover, and travel;
d. *habitat* for plant species* associated with *riparian areas*; and
e. stream shading and inputs of wood and leaf litter into the adjacent aquatic ecosystem*.

Intent: This Indicator is intended to cover the *habitat* and functions of *riparian areas* *riparian zones* around rivers, *perennial streams*, *intermittent streams*, ponds, lakes, *wetlands*, *vernal pools* and tidal waters. In this context, the intent of “restore” is the formation of more *natural conditions* in sites that have been heavily degraded or converted to other land uses.

Guidance: Depending on the *ecosystem* and region, *riparian areas* *riparian zones* frequently extend beyond, and may have different management guidelines than, those required by Indicator 6.7.6 Criterion 6.5. *Management activities* in *riparian areas* the RMZ are acceptable as long as ecological objectives are met.

Aquatic species* that breed in surrounding uplands include turtles and cavity-nesting ducks; terrestrial species* that breed in *aquatic habitats* include some amphibians; species* that use *riparian areas* for feeding, cover, and travel include some birds, mammals, reptiles, amphibians, and insects.

In general, it is expected that *areas zones* for *habitat* management will vary in width with ecological importance and with the *intensity* of timber harvest adjacent to the *areas zones*. *The Organization* the forest owner/manager may use ecologically appropriate guidelines, such as those that are available in some states or regions, or other approaches (e.g., focal species) to determine *areas zones* width and characteristics. Flexibility rather than uniform *areas zones* widths is appropriate if based on scientifically based outcomes that maintain or *restore* ecological function.

**Indicator 6.7.2 (Existing US Indicator 6.5.b)** *Management activities* Forest operations meet or exceed *best management practices* (i.e., BMPs) for the protection of water quality and quantity that address components of the Criterion where the operation takes place.

Intent: *Best management practices* for water quality*, erosion* control, protection* of forest* resources during harvesting, road construction, and all other mechanical disturbances provide a foundational minimum for compliance with this *Criterion*.

*Best management practices* include both voluntary and mandatory state and regional *best management practices*, as well as analogous terms used in certain states (e.g., Site Level Guidelines).

Isolated and minor situations of noncompliance with *best management practices* may or may not result in a finding of nonconformance with the *Indicator*.

**Indicator 6.7.3 (Existing US Indicator 6.5.d)** The *transportation system*, including design and
placement of permanent and temporary haul roads, skid trails, recreational trails, water crossings and landings, is designed, constructed, and maintained, and/or reconstructed to reduce and minimize short-term and long-term* environmental impacts, habitat fragmentation, soil and water disturbance and adverse cumulative adverse effects*. Access and off-road travel is controlled, while allowing for customary uses and use rights*. Effort is made to identify and prioritize roads for closure and rehabilitation. Environmental impacts could be caused by, but are not limited to, the following—This includes but are not limited to:

a. access to all roads and trails (temporary and permanent), including recreational trails, and off-road travel, is controlled, as possible, to minimize ecological impacts;

b. soil* and water disturbance, including erosion* is minimized; and sediment discharge to streams is minimized;

c. there is free upstream and downstream passage for aquatic organisms;

d. fragmentation of impacts of transportation systems on wildlife habitat* and migration corridors are minimized; and

e. area converted to roads, landings, and skid trails is minimized.

f. unneeded fragmentation is minimized;

Guidance: Control measures that reduce environmental impacts may include, but are not limited to:

- controlling access to and closing roads;
- limiting use of roads without a weather-resistant surface are used only during to periods of weather when conditions are favorable to minimize road damage, surface erosion*, and sediment transport;
- restricting if necessary to minimize ecological impacts, access is restricted on roads that are not immediately necessary for management purposes;
- posting Posted or monitoring monitored enforcement;
- Examples for evaluating adequacy of the transportation system may include but are not limited to: roads constructed constructing roads on slopes in excess of 60% are made with full bench cuts or minimal side cast;
- removing for decommissioned roads, bridges, and culverts are removed, and installing and water bars are installed when roads are decommissioned;
- slopes are recontoured or revegetated recontouring or revegetating slopes, and establishing ecologically functional drainage patterns are established;
- locating landings are located on ecologically suitable sites, and minimizing and the size is minimized and the number of landings is optimized to minimize overall disturbance to the site;
- landings are seeded, mulched, or covered seeding, mulching, or covering landings with slash after use;
- minimizing riparian area* Management Zone crossings are kept to a minimum;
- installing stream crossings are installed at an angle that causes least ecological disturbance;
• using water diversion structures are used according to locally applicable guidelines; and
• reducing road density and/or mitigating its impact in habitats* for salmonids and other threatened and endangered aquatic species*.

As part of watershed assessments, habitats for salmonids and other threatened and endangered aquatic species are identified. If shown to be necessary, road density is reduced in such habitats and/or mitigated within the watershed.

Cooperative transportation planning with agencies, such as watershed management councils, is encouraged used to minimize negative cumulative impacts* across the landscape*.

The Organization* The forest owner or manager should design culverts and take other steps to ensure fish passage in order to maintain or enhance the biodiversity* of the stream, although it is understood that there may be some situations where free upstream and downstream passage is not possible.

**Indicator 6.7.4 (Existing US Indicator 6.5.f) Stream and wetland* crossings are avoided when possible. Unavoidable crossings are located and constructed to minimize impacts on water quality*, hydrology, and fragmentation of aquatic habitat*. Crossings do not impede the movement of aquatic species*. Temporary crossings are restored* to original hydrological conditions when operations are finished.

Guidance: Crossing structures should be designed to match the natural stream width, depth, velocities, and substrate through the crossing structure.

Specific for the Pacific Coast Region: For the Pacific Coast (PC) region, stream crossings should be designed to accommodate a 100-year peak flood event or to limit the consequences of an unavoidable failure.

**Indicator 6.7.5 (Existing US Indicator 6.5.e.1) Using Best Available Information*, in consultation with appropriate expertise, The Organization* the forest owner or manager documents and implements written Streamside Management Zone riparian management zone* (i.e., SMZ RMZ) buffer* management guidelines that are adequate for preventing environmental impact, and include protecting* and restoring* water quality*, and hydrologic conditions in all water bodies* and hydrologically sensitive areas (e.g., rivers and stream corridors, wetlands*, vernal pools*, seeps and springs, lake and pond shorelines, karst and other hydrologically sensitive areas). The guidelines include vegetative buffer* widths and protection* measures that are acceptable within those buffers*. The regional supplementary requirements that follow also apply for portions of Management Units* within the specified FSC US Regions (per the FSC-US Regional Map in Annex B).

In the Appalachia, Ozark-Ouachita, Southeast, Mississippi Alluvial Valley, Southwest, Rocky
Mountain, and Pacific Coast regions, there are requirements for minimum SMZ widths and explicit limitations on the activities that can occur within those SMZs. These are outlined as requirements in Appendix E.

**Applicability for All Regions:** Among regions, riparian management zones* may be referred to as streamside management zones (SMZs), special management zones, buffers, and/or buffer zones (when referencing water quality* and aquatic habitats*). Additionally, while riparian management zones* represent complex ecosystems* that provide food, habitat*, and movement corridors for both aquatic and land communities, they differ from riparian areas* in that their primary focus is on protecting* water quality*. Riparian management zones* also commonly have strictly defined width and operational requirements that vary according to region.

**Intent for All Regions:** The focus of this Indicator* is on stream and water quality* protection*, and also involves riparian management zones* and stream management zones. See Indicator 6.7.1 6.3.d for requirements addressing plant and wildlife habitat* values adjacent to water bodies*.

**Guidance for All Regions:** Guidelines should meet or exceed regional recommendations (e.g., water quality best management practices*) as necessary to meet the objective of water quality protection* and restoration* measures. Measures for all stream segments include, but are not limited to:

- developing buffer* widths sufficient to protect* and restore* water quality*, considering: temperature, sedimentation, chemical runoff, recruitment of woody debris* and stream structure, and the timing of water flows sufficient to meet water quality standards for both humans and aquatic species*, including invertebrates, fish, and amphibians;
- providing filter strips that vary with slope and soils* that are sufficient to trap sediment from upslope sites;
- minimizing soil* disturbance;
- providing adequate shade to protect water temperature;
- minimizing or precluding harvest within core portions of buffer* strips;
- protecting stream banks;
- maintaining tree cover and minimizing disturbance of floodplain areas to ensure that proper aquatic function will be provided when channels shift;
- ensuring recruitment of coarse woody debris* where needed for aquatic habitats*; and
- regulating harvest and road construction on upslope areas to ensure proper hydrological function, including the timing, intensity, and location of water delivery.

**Specific to the Appalachian Region**

**Applicability:** The SMZ-riparian management zone* is designed to allow harvesting and provide flexibility for silvicultural-forest* management.
Regional Supplement1 (Existing US Indicator 6.5.3.1.a) All perennial streams* have buffers (streamside management zones, SMZs) riparian management zones* (i.e., RMZs or buffers) that include an inner SMZ-riparian management zone* and an outer SMZ-riparian management zone*. SMZ-Riparian management zone* sizes are minimum widths that are likely to provide adequate riparian habitat* and prevent siltation. If functional riparian habitat* and minimal siltation are not achieved by SMZs-riparian management zones* of these dimensions, wider SMZs-riparian management zones* are needed.

Regional Supplement2 (Existing US Indicator 6.5.e.1.b) The inner riparian management zone* SMZ for “non-high-quality waters” (see state or local listings describing the highest-quality waters in the state or region) extends 25 feet from the high-water mark. Single-tree selection or small group selection (two to five trees) is allowed in the inner riparian management zone* SMZ, provided that the integrity of the stream bank is maintained and canopy reduction does not exceed 10% (90% canopy maintenance). Trees are directionally felled away from streams. Note: The inner riparian management zone* SMZ is designed as a virtual no-harvest zone, while allowing the removal of selected high-value trees.

Regional Supplement3 (Existing US Indicator 6.5.e.1.c) Along perennial streams* that are designated as “high-quality waters” (see state or local listings describing the highest-quality waters in the state or region), no harvesting is allowed in the inner riparian management zone* SMZ (25 feet from the high-water mark), except for the removal of windthrown trees. Stream restoration is allowed if a written restoration plan provides a rational justification and if the plan follows local and regional restoration plans.

Regional Supplement4 (Existing US Indicator 6.5.e.1.d) Outer riparian management zones* SMZs, outside and in addition to inner riparian management zones* SMZ, are established for all intermittent streams* and perennial streams*, as well as other waters. When the necessary information is available, the width of a riparian management zone* stream management zone is based on the landform, erodibility of the soil*, stability of the

<table>
<thead>
<tr>
<th>Stream Riparian zone type</th>
<th>SLOPE CATEGORY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1%–10%</td>
</tr>
<tr>
<td>Inner Zone (perennial)</td>
<td>25</td>
</tr>
<tr>
<td>Outer Zone (perennial)</td>
<td>55</td>
</tr>
<tr>
<td>Total for perennial</td>
<td>80</td>
</tr>
<tr>
<td>Zone for Intermittent</td>
<td>40</td>
</tr>
</tbody>
</table>

*All distances are in feet -slope distance and are measured from the high-water mark.

Table 1. 6.5.f (APP only) Widths of inner and outer riparian management zones*. Widths of outer SMZs-riparian management zones* are applicable where data do not support narrower widths.
slope, and stability of the stream channel as necessary to protect water quality* and repair habitat*. When such specific information is not available, the width of the riparian management zone* streamside management zone is calculated according to Table 1 6.5.f.

**Regional Supplement5 (Existing US Indicator 6.5.e.1.e)** Harvesting in outer riparian management zones* SMZs is limited to single-tree and group selection, while maintaining at least 50% of the overstory. Roads, skid trails, landings, and other similar silviculturally disturbed areas are constructed outside of the outer SMZ, except for designated stream crossings or when placement of disturbance-prone activities outside of the SMZ would result in more environmental disturbance than placing such activities within the SMZ. Exceptions may be made for stream restoration.

**Regional Supplement6 (New)** Roads, skid trails, landings, and other similar silviculturally* disturbed areas are constructed outside of the riparian management zone*, except for designated stream crossings or when placement of disturbance-prone activities outside of the riparian management zone* would result in more environmental disturbance than placing such activities within the riparian management zone*.

**Regional Supplement7 (Existing US Indicator 6.5.e.1.f)** The entire riparian management zone* SMZ of intermittent streams* is managed as an outer riparian management zone* buffer zone.

**Regional Supplement8 (Existing US Indicator 6.5.e.1.g)** The management activities* activities of forest management do not result in observable siltation of intermittent streams.

**Specific to the Ozark-Ouachita Region**

**Regional Supplement9 (Existing US Indicator 6.5.e.1.a)** Table 2 6.5.e.1.a provides riparian management zone* (i.e., streamside management zone) widths. Streamside management zone widths are horizontal measure (per side) from the mean high water mark:

<table>
<thead>
<tr>
<th>Soil erosion susceptibility</th>
<th>Slope Category (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0%</td>
</tr>
<tr>
<td>Slight</td>
<td>75</td>
</tr>
<tr>
<td>Moderate</td>
<td>75</td>
</tr>
<tr>
<td>Severe</td>
<td>75</td>
</tr>
</tbody>
</table>

1 No-cut zone rules are covered in the text of Regional Supplement9.

2 Widths are horizontal measures (per side) in feet from the mean high-water mark.
Regional Supplement10 *(Existing US Indicator 6.5.e.1.b)* Riparian management zones* (SMZs) are established for all perennial streams* and intermittent streams* watercourses. Single-tree harvest may be carried out in riparian management zones* (SMZs), except in no-cut zones. A minimum of 80% crown cover is maintained throughout the riparian management zone* (SMZ). A 10-foot no-cut zone (from each bank) is established to maintain streambank stability for perennial streams* and intermittent streams* perennial and intermittent watercourses.

Regional Supplement11 *(Existing US Indicator 6.5.e.1.c)* Use of chemicals is prohibited in riparian management zones* (SMZs), unless necessary to control invasive species* that would otherwise threaten the viability of the ecosystem*.

Regional Supplement12 *(Existing US Indicator 6.5.e.1.d)* Skid trails and operation of heavy equipment are prohibited in riparian management zones* (SMZs), except at designated crossings.

**Specific to the Southeast Region**

Regional Supplement13 *(Existing US Indicator 6.5.e.1)* Streamside or special-Riparian management zones* (i.e., streamside or special management zones) are specifically described and/or referenced in the management plan*, included in a map of the forest* management area, and designed to protect* and/or restore* water quality* and aquatic and riparian populations and their habitats*. Including river and stream corridors, steep slopes, fragile soils, wetlands, vernal pools, seeps and springs, lake and pond shorelines, and other hydrologically sensitive areas).

At a minimum, management of riparian management zones* (SMZs) has the following characteristics:

a. **Riparian management zone** design and management is based on Management meets or exceeds state best management practices*.

b. **Riparian management zone** SMZ width reflects changes in forest* condition, stream width, slope, erodibility of soil*, and potential hazard from windthrow along the length of the watercourse.

c. **Riparian management zones** SMZ provide sufficient vegetation and canopy cover to filter sediment, limit nutrient inputs and chemical pollution, moderate fluctuations in water temperature, stabilize stream banks, and provide habitat* for riparian and aquatic flora and fauna.

d. Characteristic diameter-class distributions, species* composition, and structures are adequately maintained within the riparian management zone* (SMZ).

**Specific to the Mississippi Alluvial Valley Region**

Regional Supplement15 *(Existing US Indicator 6.5.e.1.a)* Streamside-Riparian management zones* (SMZs) are created and maintained in accordance with Table 3 6.5.
Table 3.6.5.f (MAV only): Riparian Management Zone* Widths¹
Streamside Management Zone Widths²

<table>
<thead>
<tr>
<th>Stream Class</th>
<th>Soil erosion susceptibility²</th>
<th>0%</th>
<th>10%</th>
<th>20%</th>
<th>30%</th>
<th>40%</th>
<th>50%</th>
<th>Total RMZ SMZ width (ft) per side³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perennial</td>
<td>Slight</td>
<td>75</td>
<td>75</td>
<td>80</td>
<td>105</td>
<td>130</td>
<td>155</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>75</td>
<td>75</td>
<td>100</td>
<td>140</td>
<td>170</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Severe</td>
<td>75</td>
<td>90</td>
<td>130</td>
<td>170</td>
<td>210</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>Intermittent</td>
<td>All erosion categories</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>

¹ Table 3.6.7.6.a was modeled after the Forestry Best Management Practices of the State of Mississippi, publication #107.
² Soil erosion susceptibility is defined at the series level by USDA-NRCS State Soil Surveys.
³ Distances are horizontal measures per side of stream, and are measured from the mean high-water mark as evidenced by lack of terrestrial vegetation.

Regional Supplement 16 *(Existing US Indicator 6.5.e.1.b)* For perennial streams*, the inner zone of the riparian management zone* SMZ is defined as the area within 30 feet of the mean high-water mark. Within that zone, timber harvest is limited to single-tree selection, and canopy cover is sufficient to maintain shade adequate to moderate water temperature. Harvesting in this zone maintains the composition, structural complexity, and functions of the riparian management zone* SMZ.

Regional Supplement 17 *(Existing US Indicator 6.5.e.1.c)* For perennial streams*, timber harvest in the outer zone of the riparian management zone* SMZ is limited to either single-tree selection or small group selection. Canopy cover and vegetation are maintained to provide filtration of runoff into a stream.

Regional Supplement 18 *(Existing US Indicator 6.5.e.1.d)* Within intermittent riparian management zones* SMZs, regeneration harvest* may be conducted provided other vegetation and/or ground cover remains to protect the forest* floor and the stream bank in a manner that will maintain water quality*.

Regional Supplement 19 *(Existing US Indicator 6.5.e.1.e)* Prescribed burning is allowed in riparian management zones* SMZs when water quality* and the structures and composition of the forest* within the riparian management zones* SMZs can be maintained.

**Specific to the Southwest Region**

Regional Supplement 20 *(Existing US Indicator 6.5.e.1.a)* Riparian management zones* (i.e., buffer zones) are established for all natural streams and watercourses with definable banks, and for ponds, lakes, and wetlands*. Riparian management zones* Buffer zones are measured horizontally (in such a way that ground slope does not reduce the distance) from the following:

a. the upland edge of the riparian vegetation (if present);

b. each bank of a stream or water course (in the absence of riparian vegetation); or
c. the edge of the wetland* or water body*. (Note: Where wetlands* abut watercourses, the edge of the riparian management zone* buffer zone is measured from the edge of the wetland*.) Buffer-zone width is determined as follows

Regional Supplement21 (Existing US Indicator 6.5.e.1.a) Riparian management zone* width is determined as follows:

a. where riparian vegetation is present, at least 30 feet beyond the edge of the riparian vegetation or 100 feet from the stream edge, whichever is greater;

b. where riparian vegetation is not present, at least 50 feet on either side of all perennial streams*, or intermittent streams* that flow two to three or more months of the year, or along the edge of water bodies*; such riparian management zone* buffer zones extend wider on steep or erosive slopes;

c. where sideslopes exceed 35%, the width is at least 100 feet;

d. as necessary along ephemeral drainage patterns that exhibit a definable bank to protect* the functions of the riparian management zone* listed in the applicability note above; and

e. width is increased in areas of riparian management zone* buffer zones sensitivity (e.g., unstable slopes), which is ultimately determined by the potential for resource damage or degradation of the functions of the riparian management zone* listed in the applicability note above. 6.5.e.1.b (SW only).

Regional Supplement22 (Existing US Indicator 6.5.e.1.b) Management in the riparian management zone* buffer zone maintains, enhances, or restores* the condition of the riparian area* or streamside zone. For example:

a. Thinning from below and planting trees may be carried out for purposes of controlling erosion* restoration*.

b. Ecological, aquatic, and riparian functions (e.g., the maintenance or restoration of riparian microclimates) are demonstrably the priority silvicultural* objective of any commercial harvesting. 6.5.e.1.c (SW only)

Regional Supplement23 (Existing US Indicator 6.5.e.1.c) Transportation systems* and mechanical operations (including any form of significant ground-disturbing activity) in riparian management zones* buffer zones do not compromise the filtration, shading, nutrient, and habitat functions of the riparian management zone* SMZ. For example:

a. Permanent roads are maintained or installed only as necessary to cross streams at a perpendicular or other angle that causes the least ecological disturbance. Temporary roads or designated skid trails across a riparian management zone* buffer zone may be permitted in rare instances after preparation of a pre-operation plan that protects riparian values.

b. Operation of wheeled or tracked equipment is restricted to roads and designated crossings.

c. Temporary or permanent culverts, bridges, or other mechanisms are installed at all watercourse crossings to avoid disturbance to, and to support the designated use(s) of the affected watercourses.

d. Streams, vernal pools, and wetlands are undisturbed by skidding activities.

e. Stream crossings are located and constructed to minimize fragmentation of aquatic habitat and maintain water quality.
f. Maintenance of existing roads and ditches uses appropriate techniques to protect water quality from adverse impacts.

c. Storage, handling, or use of hazardous materials is prohibited in riparian management zones* buffer-zones.

Note: Full-suspension yarding is also an option so long as it does not compromise the riparian management zone* buffer-zone.

(Existing US Indicator 6.5.e.1.d) Where the scale and intensity of forest management activities have the potential to substantially affect the intensity and timing of water flow, such activities are designed to maintain or enhance aquatic and riparian habitat and/or downstream uses. For example, extensive removal of timber in harvests on south-facing slopes is done in a way that does not substantially increase the speed with which snow melts.

Specific to the Rocky Mountain Region

RM Applicability Note: Some discretion may be applied to stream segments that support no fish, and rarely contribute surface flow to other streams or other bodies of water water bodies*, and normally have surface flow less than six months of the year. In such instances riparian management zone* SMZ widths are should follow those designated, but management restrictions are should be more flexible, as long as riparian concerns continue to receive highest priority. The Organization* The forest owner or manager should identify and provide adequate protection* for all streams, lakes, wetlands*, and associated riparian areas*, including through establishment of riparian management zones*, and restore them to their properly functioning condition, when feasible. When riparian management zones* are established, the extent and protection that they provide should be adequate to serve all the functions and objectives of such zones in forests* under natural conditions*. These functions include, but are not limited to: 1) control of erosion* of soil* and organic debris; 2) control of stream sedimentation; 3) stabilization of surface water and groundwater flow fluctuations; 4) stabilization of water temperatures; 5) provision of organic debris (including large-diameter wood) for the aquatic habitat*; and 6) provision of habitat* (shelter, water, food, travel corridors, etc.) for many species* of plants and animals.

Regional Supplement24 (Existing US Indicator 6.5.e.1.a) Riparian management zone* (i.e., SMZ) width is at least 50 feet on either side of the ordinary high-water mark, extending wider on steep or erosive slopes. Where slopes of riparian management zones* SMZs exceed 35%, the riparian management zone* SMZ boundary is at least 100 feet. If wetlands touch the riparian management zone*, then the riparian management zone* SMZ boundary is extended to include the wetland*. Riparian management zone* SMZ width is extended wherever necessary to protect riparian functions.

Regional Supplement25 (Existing US Indicator 6.5.e.1.b) Management in the riparian management zones* SMZ takes a conservative approach that puts aquatic and riparian
concerns above timber consideration. Roads are prohibited in *riparian management zones*-SMZs, except for permanent roads necessary to cross the stream at a perpendicular or other angle that causes the least ecological disturbance. Operation of wheeled or tracked equipment is prohibited in the *riparian management zone*-SMZ, except on permanent roads. Temporary roads or designated skid trails across the *riparian management zone*-SMZ may be permitted in rare instances after preparation of a pre-operation plan that protects* riparian values. Logging operations retain at least half of the merchantable trees, representative of the pre-harvest stand, with heavier *retention* of bank-edge and leaning trees, shrubs, and sub-merchantable trees. Appropriate techniques are used to maintain existing roads and ditches to prevent adverse impacts to *water quality*.* Storage, handling, or use of hazardous materials is prohibited in *riparian management zones*-SMZs.

The forest owner or manager identifies and provides adequate protection for all streams, lakes, wetlands, and associated riparian areas. Streams, lakes, and wetlands are maintained in or restored to their properly functioning condition. Streamside management zones (RSMZs) are established and maintained adjacent to all bodies of water and watercourses. The extent and protection of these buffer zones is adequate to serve all the functions and objectives of such zones in natural forests. These functions include, but are not limited to: 1) control of erosion of soil and organic debris, 2) control of *FSC-US* stream sedimentation, 3) stabilization of surface and ground water flow fluctuations, 4) stabilization of water temperatures, 5) provision of organic debris (including large diameter wood) for the aquatic habitat, 6) provision of habitat (shelter, water, food, travel corridors, etc.) for many species of plants and animals.

**Specific to the Pacific Coast Region**

**PC Applicability note:** The following water quality requirements of this Standard are superceded when and where state or federal laws, regulations, or other contractual requirements are more stringent.

**PC Guidance:** This section uses the following definitions.

- **Category A stream:** A stream that supports or can support populations of native fish and/or provides a domestic water supply.
- **Category B stream:** *Perennial streams* that do not support native fish and are not used as a domestic water supply.
- **Category C stream:** An *intermittent stream* that nevertheless has sufficient water to host populations of non-fish aquatic species.
- **Category D stream:** A stream that flows only after rainstorms or melting snow and does not support populations of aquatic species.

**Regional Supplement26** *(Existing US Indicator 6.5.e.1.a)* For Category A streams, and for lakes and wetlands larger than 1 acre, an inner *riparian management zone* (i.e., buffer zone) is maintained. The inner *riparian management zone* buffer is at least 50 feet wide (slope distance) from the active high-water mark (on both sides) of the stream.
channel and increases depending on forest type, slope stability, steepness, and terrain. Management activities in the inner riparian management zone buffer:

a. maintain or restore the native vegetation;

b. are limited to single-tree selection silviculture;

c. retain and allow for recruitment of large live and dead trees for shade and stream structure;

d. retain canopy cover and shading sufficient to moderate fluctuations in water temperature, to provide habitat for the full complement of aquatic and terrestrial species native to the site, and maintain or restore riparian functions;

e. exclude use of heavy equipment, except to cross streams at designated places, or where the use of such equipment is the lowest impact alternative;

f. avoid disturbance of mineral soil (where disturbance is unavoidable, mulch and seed are applied before the rainy season);

g. avoid the spread of pathogens and noxious weeds; and

h. avoid road construction and reconstruction.

Regional Supplement 27 (Existing US Indicator 6.5.e.1.b) For Category A streams, and for lakes and wetlands larger than 1 acre, an outer riparian management zone buffer is maintained. This buffer extends from the outer edge of the inner riparian management zone buffer to a distance of at least 150 feet from the edge of the active high-water mark (slope distance, on both sides) of the stream channel. In this outer riparian management zone buffer, harvest occurs only where:

a. single-tree or group selection silviculture is used;

b. post-harvest canopy cover maintains shading sufficient to moderate fluctuations in water temperature, provide habitat for the full complement of aquatic and terrestrial species native to the site, and maintain or restore riparian functions;

c. new road construction is avoided, and reconstruction enhances riparian functions and reduces sedimentation; and

d. disturbance of mineral soil is avoided (where disturbance is unavoidable, mulch and seed are applied before the rainy season).

Regional Supplement 28 (Existing US Indicator 6.5.e.1.c) For Category B streams, a 25-foot (slope distance) inner riparian management zone buffer is created and managed according to provisions for inner riparian management zones buffers for Category A. A 75-foot (slope distance) outer riparian management zone buffer (for a total buffer of 100 feet) is created and managed according to provisions for outer riparian management zone buffer for Category A.

Regional Supplement 29 (Existing US Indicator 6.5.e.1.d) For Category C streams, and for lakes and wetlands smaller than 1 acre, a riparian management zone buffer 75 feet wide (on both sides of the stream) is established that constrains management activities to those that are allowed in outer riparian management zones buffer zones of Category A streams.

Regional Supplement 30 (Existing US Indicator 6.5.e.1.e) For Category D streams, management:

a. maintains root strength and stream bank and channel stability;

b. recruits coarse wood to the stream system; and

c. minimizes management-related sediment transport to the stream system.
areas are managed to maintain and/or restore hydrologic processes, water quality, and habitat characteristics (see NMFS (1996); state water quality standards; Karr (1981) which may include: the capacity for water to infiltrate the soil; habitat for riparian species; moderating water temperature; controlling sedimentation; clean gravel for spawning; physical structures to protect the integrity of the stream channel; including pools used by anadromous fish. Forest owners or managers retain and recruit sufficient large, green trees; snags; understory vegetation; down logs; and other woody debris in riparian zones to provide shade, erosion control, and in-channel structures.

**Indicator 6.7.6 (Existing US Indicator 6.5.e.2)** In limited circumstances, or if minor in extent, minor variations from the stated minimum riparian management zone* SMZ widths and layout for specific stream segments, wetlands*, and other water bodies* are permitted in limited circumstances, provided The Organization* the forest owner or manager demonstrates that the alternative configuration maintains the overall extent of the buffers* and provides equivalent or greater environmental protection* than FSC-US Indicator 6.7.5 (without the regional supplementary requirements) for those stream segments, water quality, and aquatic species wetlands*, and other water bodies*, based on site-specific conditions and the Best Available Information*. The Organization* the forest owner or manager develops a written set of supporting information, including a description of the riparian habitats* and species* addressed in the alternative configuration. The CB must verify that the variations meet these requirements, based on the input of an independent expert in aquatic ecology or closely related field.

**Intent:** This Indicator allows for minor variations in the physical layout of the buffers for specific stream segments in cases where the landowner/manager must also comply with legal requirements that compel layouts different than those specified in the Standard, without reducing the overall extent of the buffer and quality of management within the buffer for those stream segments.

**Indicator 6.7.7 (Based on IGI 6.7.2– IGI 6.7.4)** Restoration* activities are implemented when protection* measures fail to protect* water bodies*, riparian areas*, or water quality* and quantity from impacts of activities on the Management Unit*. Where past protection* measures implemented by the present or previous owner are no longer effective, The Organization* implements measures to mitigate negative impacts to, and, if possible, restore* the water body*, riparian area*, or water quality* and quantity.

Where activities on the Management Unit* that are not within its direct control (e.g., road maintenance, right-of-way construction) have the potential to significantly affect water bodies* and/or riparian areas*, The Organization* works within its sphere of influence to attempt to implement protective* measures and remedy instances in which past measures are no longer effective.

**Intent:** The goal of this Indicator* is to address damaging activities (not just management
activities*) initiated by The Organization* or by others. While there may be some limitations as to what The Organization* may feasibly be able to do to address others’ activities, The Organization* does have a responsibility to try and control activities of individuals within the Management Unit*.

In this case, “restore” means to repair the damage done to environmental values that resulted from legal or illegal activities. However, The Organization* is not necessarily obliged to fully restore* those environmental values that have been affected by factors beyond the control of The Organization*, for example by natural disasters, by climate change, or by the legally authorized activities of third parties, such as public infrastructure, mining, hunting, or settlement. FSC-POL-20-003, The Excision of Areas from the Scope of Certification, describes the processes by which such areas may be excised from the area certified, when appropriate.

Consultation Questions:

The Standard Development Group is requesting assistance in establishing a threshold for use of the term, 'significant' in Indicator 6.7.7.

1) What kinds of activities and impacts on waterbodies and/or riparian areas should not require attempts to implement protective and/or remedy measures?

2) What kinds of activities and impacts on waterbodies and/or riparian areas planning should require attempts to implement protective and/or remedy measures?

Indicator 6.7.8 (Existing US Indicator 6.5.g) Authorized recreation use on the FMU Management Unit* is managed to avoid negative impacts to soils*, water, plants, wildlife, and wildlife habitats*.

Intent: This Indicator* focuses on recreation use and not recreation trails, which are covered in Indicators 6.7.4 and 10.10.16.5.e. Unauthorized use of vehicles on the FMU-Management Unit* is considered trespassing, which is an illegal activity and should be addressed accordingly.

Guidance: This includes on-trail and off-trail recreation use. Recreation use includes but is not limited to: motorized and non-motorized vehicles, horses, hiking, and mountain biking.

Indicator 6.7.9 (Existing US Indicator 6.5.h) Grazing by domesticated animals is controlled to protect in-stream habitats* and water quality*, the species* composition and viability of the riparian vegetation, and the banks of the stream channel from erosion.
Guidance: The location and intensity* of grazing (livestock numbers) and/or season of use (grazing duration) should be managed to avoid adverse impacts. Unauthorized grazing should be treated as any other illegal activity on the Management Unit* forest and addressed accordingly.

(Existing US Indicator 6.5.a) The forest owner or manager has written guidelines outlining conformance with the Indicators of this Criterion.

C6.8 The Organization* shall manage the landscape* in the Management Unit* to maintain and/or restore* a varying mosaic of species, sizes, ages, spatial scales*, and regeneration cycles appropriate for the landscape values* in that region, and for enhancing environmental and economic resilience*. (C10.2 and 10.3 P&C V4)

Indicator 6.8.1 (Existing US Indicator 6.3.a.1) The Organization* The forest owner or manager maintains, enhances, and/or restores* a mosaic of species* and underrepresented successional* stages in the FMU that would naturally occur on the types of sites found on the FMU-Management Unit*. Where old forest*-growth, late, and early successional* habitats* of different community types that would naturally occur on the forest* are underrepresented in the landscape* relative to natural conditions, a portion of the forest* is managed to enhance and/or restore* old forest*-growth, late, and early successional* characteristics.

Intent: The goal of this Indicator is to maintain, enhance, or restore the biological diversity associated with the mix of successional stages by forest type that would occur across the FMU under natural conditions. This goal includes plants, vertebrates, invertebrates, fungi, lichens, and other organisms associated with those plant community types and other elements of site diversity. The goal is not to maximize diversity through management, create "museum forests," explicitly mimic natural disturbance regimes, or to re-create pre-European-settlement conditions. Non-catastrophic disturbance should be the focus of analyzing for natural disturbance.

Guidance: The landowner or manager should consider and apply the best available science and resources when determining natural disturbance and successional processes. The number of potential plant communities that can be represented, as well as the number of successional stages at any one time, will vary greatly with ownership size and forest site. Landscape context, including local and regional landscape needs and opportunities as well as current and desired future ecological conditions should also be considered in developing diversity goals. While managing for the range of plant communities and stages or age classes appropriate to the forest size and sites, the land owner/manager may consider operational and financial feasibility and landowner objectives in deciding their location, amount, and distribution.
The plant community type and development stage data generated in Indicator 6.1.a (for example, a community/development stage matrix table) and baseline information from Indicator 6.1.b may be used as the basic measurement for this Indicator. The level of detail and quantification may vary with the scale and intensity of management, and is based on the best available data available. This information should also be used in determining where restoration is needed.

While all forests must meet the requirements of this Indicator, the methods used to meet the Indicator (e.g., location and extent of communities and age classes) may be influenced by other ownership objectives if the ecological objectives of this Indicator are met. The size and conditions of stands should be sufficient to maintain ecological conditions (e.g., light, humidity, structure) required by species characteristic of the development stage. Ownership Size Considerations: There is no expectation to manage for a particular development stage in situations where the range of natural disturbances is such that there would be a very low probability of that stage occurring on a small parcel. For example, on small parcels there is not an expectation to create even-aged patches in forest types that do not typically experience stand-replacing disturbances. As ownership size increases the probability of any one development stage occurring would increase, and hence the expectation that these stages would be represented in the managed forest at one or a number of locations (increasing with forest size).

**Indicator 6.8.2 (Existing US Indicator 6.3.a.3)** When they are present, management maintains the area, structure, composition, and processes of all Type 1 and Type 2 old growth*. Type 1 and Type 2 old growth* are also protected* and buffered as necessary with conservation zones*, unless an alternative plan is developed that provides greater overall protection* of old growth* values.

*Type 1 old growth* is protected from harvesting and road construction. *Type 1 old growth* is also protected from other timber management activities*, except as needed to maintain the ecological values associated with the stand*, including old growth* attributes (e.g., remove exotic non-native species*, conduct controlled burning, and thinning from below in dry forest* types when and where restoration* is appropriate).

*Type 2 old growth* is protected from harvesting to the extent necessary to maintain the area, structures, and functions of the stand. Timber harvest in *Type 2 old growth* must maintain old growth* structures, functions, and components, including individual trees that function as refugia* (see Indicator 6.3.g).

On public lands*, *Type 1 and Type 2 old growth* is protected from harvesting, as well as from other timber management activities*, except if needed to maintain the values associated with the stand* (e.g., remove exotic non-native species*, conduct controlled burning, and thinning from below in forest* types when and where restoration* is appropriate).
On tribal* Indian lands, timber harvests may be permitted in Type 1 and Type 2 old growth* in recognition of their sovereignty and unique ownership. Timber harvest is permitted in situations where:

a. old growth* forests* comprise a significant portion of the tribal* ownership;

b. a history of forest* stewardship by the tribe* exists;

c. High Conservation Values* (HCV) attributes* are maintained or enhanced;

d. old growth* structures are maintained;

e. conservation zones* representative of old growth* stands* are established;

f. landscape*-level considerations are addressed; and

g. rare, threatened, and endangered species* are protected*.

Applicability: On all ownerships, when management activities* (including timber harvest) create and maintain conditions that emulate Type 2 old growth* stands* but don’t meet the definition of Type 2 old growth* due to those ongoing management activities*, the management system that created those conditions may be used to maintain them.

Consultation Question:

The Standard Development Group recognizes the importance of the Standard in sustaining and expanding late seral stage forest ecosystems, including old growth. The Standards Development Group wants to ensure that the Standard does not penalize certificate holders who have sustained or expanded these areas of late seral stage forest, and, as such, those forests could potentially fall under the definition of Type 1 or Type 2 old growth either now or in the future.

Can you provide any examples or real-world scenarios of forest stands that have matured or are maturing into late seral stage forest that could potentially fall under the current definition of Type 1 or Type 2 old growth, such that conformance with indicator 6.8.2 would be a barrier for achieving or continuing certification?

Consultation Question:

The Standard Development Group is requesting assistance in establishing a threshold for use of the term, ‘significant’ in Indicator 6.8.2. What portion of tribal ownership comprised of old growth should be required to allow timber harvest (when all other criteria are also addressed)?

Indicator 6.8.3 (New) Where there are regionally specific maximum opening sizes (both average and absolute) per Indicator 6.6.5, and rotation lengths meet or exceed culmination of mean annual increment* for natural forest* stands of similar forest* type and site class, maximum opening sizes (both average and absolute) may be increased by 20% above those specified. For each 10-year increase in rotation length, opening sizes may be increased by an
Intent: This Indicator* encourages stands* with longer rotation lengths by providing greater flexibility in opening sizes when the regional supplementary requirements of Indicator 6.6.5 provide limits on opening sizes.

Guidance: If the Management Unit* does not have growth and inventory data for similar natural stands* on the Management Unit* needed to establish culmination of mean annual increment*, growth and inventory data from similar forest* types and site classes of natural forests* off the Management Unit* are expected to be used to establish culmination of mean annual increment*. Historical data from public lands* such as National Forests may be the best source of information for calculating culmination of mean annual increment*.

C6.9 The Organization* shall not convert natural forest to plantations*, nor natural forests or plantations* on sites directly converted from natural forest to non-forest* land use, except when the conversion:

a. affects a very limited portion* of the area of the Management Unit*;

b. will produce clear, substantial, additional, secure long-term conservation* benefits in the Management Unit*; and

c. does not damage or threaten High Conservation Values*, nor any sites or resources necessary to maintain or enhance those High Conservation Values*.

(C6.10 P&C V4 and Motion 2014#7)

Applicability: Criterion 6.9 references conversion* from “natural forest” to plantation* or to non-forest uses, but uses the term “natural forest” as it is defined globally. The US definition is different and only represents a part of what is defined as “natural forest” globally. “Natural forest**” and “semi natural forest*,” as defined in this Standard, when combined together represent the concept of “natural forest” as it is used in this Criterion*.

Intent: All three circumstances must be met in order for conversion* to be allowed.

Guidance on “conversion***”: In general, improvements to land (including provision of utilities, improved roads, and surveyed blocks) that are likely to result in development are considered precursors to conversion*. Advanced cases of improvements are considered conversion*. For example, surveying and demarcating the land in and of itself does not constitute conversion*, but installation of roads to each parcel is considered conversion*. Although it may be difficult to distinguish some management activities* that are geared toward development from acceptable silvicultural* prescriptions (e.g., “real estate cuts” versus “shelterwood cuts”), it is the responsibility of the The Organization* certificate holder to disclose the future goals for that management to the Certification Body*.
Note that the following are not considered to be conversion* per Indicator 6.9.1: Restoration plantations established on degraded, semi-natural forests*; and plantations* established on former plantations*, on agricultural lands, and on non-forested lands that were historically naturally forested, but have been used for non-forest purposes since before 1994 (see additional conditions in Criterion 6.10).

Definition of “non-forest land”: Non-forest land consists of land that is managed for reasons other than the production of forest* products, values, or amenities. Non-forest land includes land that does not classify as a forest* ecosystem* (including old agricultural fields, grasslands). “Non-forest land uses” include land that is forested, but current zoning and/or conditional use permits present intentions for future conditions of the land that will result in the loss of, or degradation of, production of forest* products, values, or amenities (e.g., commercial or industrial development, residential use).

Indicator 6.9.1 (Based on IGI 6.9.1 and US Indicators 6.10.a–6.10.e) There is no conversion* of natural forest* or semi-natural forest* to plantations*, nor conversion* of natural forest* or semi-natural forests* to non-forest land use, nor conversion* of plantations* to non-forest land use when on sites directly converted* from natural forest* or semi-natural forest*, except when the conversion*:

a. affects a very limited portion* of the Management Unit*;

b. will produce clear, substantial, additional, secure, long-term* conservation* benefits in the Management Unit*; and

c. does not damage or threaten High Conservation Values*, nor any sites or resources necessary to maintain or enhance those High Conservation Values*.

Applicability: Definition of “very limited portion”: less than 2% of the certified forest area on the FMU over a rolling five-year period. Lands that are converted* for forest* management purposes (e.g., roads, landings, management buildings) are not included in calculations of the very limited portion* of the Management Unit* this limit.

Plantations* may can be established on forest* sites that lack the vast majority of the native forest* ecosystem* components (see Indicator 10.2.b), as these lands do not fit the definitions of natural forest* or semi-natural forest*. Guidance for classifying forests as natural forest* or semi-natural forest* vs. plantation* is provided in Annex I.

Intent of “clear, substantial, additional, secure, long-term* conservation* benefits across the forest* Management Unit***: Conditions that enable these conservation* benefits are limited by the following:

● The Organization* forest owner or manager provides documentation that any conversion* to non-forest uses will result in additional conservation* and/or restoration* of natural forest*, particularly High Conservation Value Areas* HCVF and/or imperiled (or “rare”) species rare, threatened, and endangered species* habitats*, at levels
above and beyond those otherwise required by the FSC-US FM this Standard, and carries out that increased conservation* and restoration*.

- Negative environmental impacts of conversion* to non-forest uses may be offset through compensatory management activities*. The conservation* benefits used to offset conversion* to non-forest use must lead to equal or greater conservation* values than those lost by the conversion*. The compensatory activities may include establishment of conservation easements, contributions to local land trusts, transfer of lands to land trusts or public ownership, etc.
- In general, maintenance of an FSC certificate for the remainder of forest* lands does not constitute sufficient conservation* benefit.

*(Existing US Indicator 6.10.a) Forest conversion to non-forest land uses does not occur, except in circumstances where conversion entails a very limited portion of the forest management unit (note that Indicators 6.10.a, b, and c are related and all need to be conformed with for conversion to be allowed).

*(Existing US Indicator 6.10.b) Forest conversion to non-forest land uses does not occur on high conservation value forest areas (note that Indicators 6.10.a, b, and c are related and all need to be conformed with for conversion to be allowed).

*(Existing US Indicator 6.10.c) Forest conversion to non-forest land uses does not occur, except in circumstances where conversion will enable clear, substantial, additional, secure, long term conservation benefits across the forest management unit (note that Indicators 6.10.a, b, and c are related and all need to be conformed with for conversion to be allowed).

*(Existing US Indicator 6.10.d) Natural or semi-natural stands are not converted to plantations. Degraded, semi-natural stands may be converted to restoration plantations.

*(Existing US Indicator 6.10.e) Justification for land-use and stand-type conversions is fully described in the long-term management plan, and meets the biodiversity conservation requirements of Criterion 6.3 (see also Criterion 7.1.l)

Indicator 6.9.2 *(Existing US Indicator 6.10.f) Areas converted* to non-forest use for facilities associated with subsurface mineral and gas-severed rights that were transferred or retained by prior owners, or with other conversion* outside the control of The Organization*, the certificate holder, are identified on maps. The Organization* the forest owner or manager consults with the Certification Body* to determine if removal of these areas from the scope of the certificate is warranted. To the extent allowed by these transferred rights, The Organization* the forest owner or manager exercises control over the location of surface disturbances in a manner that minimizes adverse environmental and social impacts.

If The Organization* the certificate holder at one point held these rights and then sold them, then subsequent conversion* of forest* to non-forest use would be subject to Indicators 6.9.1.
Applicability: This Indicator applies to situations where The Organization holds the surface rights to lands where other individuals or organizations also have the right to implement activities, such as when surface rights and mineral rights have been severed and the holder of the mineral rights wishes to access those minerals, or when The Organization owns the land but another entity has use rights for the land (e.g., utility and access rights-of-way). In these situations, while the other rights holder has the right to implement certain activities, The Organization may still be able to set some expectations for how the activities will be implemented and/or for restoration after they are completed.

Guidance: If the conversion will result in significant loss of forest resources, and where financially feasible, then The Organization the forest owner or manager should make a good faith effort to buy the rights before conversion occurs.

C6.10 Management Units containing plantations that were established on areas converted from natural forest after November 1994 shall not qualify for certification, except where:

a) clear and sufficient evidence is provided that The Organization was not directly or indirectly responsible for the conversion; or
b) the conversion affected a very limited portion of the area of the Management Unit and is producing clear, substantial, additional, secure long-term conservation benefits in the Management Unit. (C10.9 P&C V4)

Consultation Note:

The Standard Development Group recognizes that there may be changes needed for the indicators of Criterion 6.10 once the ongoing efforts to revise the FSC Conversion Policy are finalized. These changes will be incorporated between drafts, or in a later US national standard revision process, depending on when the revised FSC Conversion Policy is approved.

Applicability: This Criterion only applies to plantations established in areas converted from natural forests or semi-natural forests. Plantations that are established in other ecosystems (steppe, grassland, etc.) are not covered by this Criterion. See additional conditions regarding plantation establishment on rare or threatened non-forest habitats in Criterion 6.9.

Intent: The November 1994 cutoff date refers to the date of conversion, not the date of plantation establishment. The subsequent requirements do not address plantation areas (or
harvested units*) that have been harvested and replanted as plantations* since 1994 if the date of conversion* was prior to the cutoff date.

**Indicator 6.10.1** *(Based on IGI 6.10.1)* Based on Best Available Information*, accurate information related to prior land use and forest* type present before and after conversion* is compiled on all conversions* from natural forest* or semi-natural forest* since 1994. Information includes:

- a. maps and/or photographs noting location of converted* land;
- b. description of previous and current conditions including forest* community types, size class and/or successional* stages, and reason for conversion*; and
- c. acres converted*.

**Indicator 6.10.2** *(Adapted from IGI 6.10.2 and US Indicator 10.9.a)* Areas converted from natural forest* or semi-natural forest* to plantation* since November 1994 are not certified, except where:

- a. The Organization* provides clear and sufficient evidence that it was not directly or indirectly responsible for the conversion*; or
- b. the conversion* is producing clear, substantial, additional, secure, long-term* conservation* benefits in the Management Unit*; and the total area of plantation* on sites converted from natural forest* or semi-natural forest* since November 1994 is a very limited portion* of the Management Unit*.

**Indicator 6.10.3** *(Existing US Indicator 10.9.b)* For plantations* established in areas converted after 1994 per (a) in Indicator 6.10.2, The Organization* the forest owner or manager develops and implements a plan to restore* the plantation* stands* to conditions characteristic of natural forest* or semi-natural forest* and to manage those stands* in compliance with all Indicators* of Principles 1–10 as quickly as feasible. A very limited portion* of the Management Unit* may remain plantation* (consistent with (b) of Criterion 6.10).

Applicability: This Indicator* is only applicable to those conditions where the current owner or manager was not responsible for the conversion* as stipulated in Indicator 6.10.2.

Intent: The intent is to limit certification of plantations* established in areas converted* from natural forest* or semi-natural forest* after November 1994.

Guidance: Younger plantations* with significant capital invested may need to be managed with a moderate level of intensity to recoup investment before full or significant restoration* measures are fully implemented. In these cases, restoration* may be phased in as stands* reach merchantable ages. Contractual supply obligations and binding supply agreements are generally not acceptable as rationale for delaying restoration*.

Examples of activities that are carried out in restoration plantations include:
• modification of the management plan* from commercial to restoration*;
• enrichment plantings of native species*;
• management of soils* and coarse woody debris* to restore or enhance soil* fertility;
• restoration* and/or enhancement of native wildlife habitats*;
• restoration* and/or enhancement of structural diversity* by recruiting mid-story and/or understory components;
• control of unwanted vegetation, is-limited to levels that allow restoration* of native species*;
• restoration* of the fire regime common to natural stands*, is-implemented when feasible.

PRINCIPLE 7: MANAGEMENT PLANNING
The Organization* shall have a management plan* consistent with its policies and objectives* and proportionate to scale*, intensity*, and risks* of its management activities*. The management plan* shall be implemented and kept up to date based on monitoring information in order to promote adaptive management*. The associated planning and procedural documentation shall be sufficient to guide staff, inform affected stakeholders* and interested stakeholders*, and to justify management decisions. (P7 P&C V4)

Intent: This Principle* is intended to ensure that management of the FMU Management Unit* is described in a comprehensive management plan*. The plan should be developed with expertise and public input appropriate to the scale* of the operation. The management plan*, and the process of its development, should embody and consider all of the Principles* and Criteria* in this Standard.

The management plan* may consist of a variety of documents or an umbrella document that describes how a collection of management documents relate to an integrated strategy for managing the forest*. This may include a combination of ownership-level plans, unit plans, site-level plans (e.g., harvest plans), GIS, published guidelines (e.g., regional silviculture* or best management practice* guides), landowner policies, and other information.

Guidance on scale* and intensity* of operations: All management plans*, regardless of the scale* and intensity* of operations must address the Indicators of Criterion 7.1 and Criterion 7.2 unless otherwise noted in the guidance below.

C7.1 The Organization* shall, proportionate to scale*, intensity*, and risk* of its management activities*, set policies (visions and values) and objectives* for management, which are environmentally sound, socially beneficial, and economically viable. Summaries of these policies and objectives* shall be incorporated into the management plan* and publicized. (C7.1a P&C V4)
Intent: Criterion 7.1 ensures that a written management plan*, as described in the Principle*-level intent and guidance above, exists for the Management Unit *property within the scope of the certificate. The actions and management objectives* detailed in the plan are specific, achievable, measurable, and adaptive. They are also sufficient to meet the requirements of this Standard.

Whenever the term “management plan” is used, it refers to any combination of documents and systems that meet the intent of the Indicator*.

Indicator 7.1.1 *(Adapted from IGI 7.1.1) Visions and values* and associated policies contribute to meeting the requirements of this Standard, and are summarized in the management plan*.

Indicator 7.1.2 *(Existing US Indicator 7.1.c) The management plan* describes: a) current conditions of the timber and non-timber forest* resources being managed; eb) historical ecological conditions*; bc) desired future conditions*; and d) applicable management objectives* and activities to move the FMU Management Unit* toward desired future conditions*, including those to achieve compliance with the Standard.

Guidance: “Current conditions” are based on forest* inventories or other information sources, as applicable. The level of detail in the plan may be a summary of the inventory data or more general in nature as indicated by the resource, and is commensurate with the resource and intensity* of management (e.g., general descriptions of water body* or wetland* types and extent may suffice).

“Desired future conditions” are the characteristics that describe the long-term* (e.g., 30–50 years) vision of the FMU Management Unit*, such as the amount and age or development class distribution of forest* types, species* composition, products, habitats* and values, and other resources. Desired future conditions* must be consistent with the requirements of this Standard.

The purpose of establishing historic conditions* is to facilitate creating a baseline for assessing environmental impacts of operations, to facilitate establishing desired future conditions*, and to determine when restoration* may be needed. When historic conditions* are not available, best estimates from available sources may be used. Historic conditions* should be used as guidelines for estimating ecological components of naturally occurring conditions.

“Management objectives” are typically time specific, measurable results that correspond to the goals. It is acceptable for The Organization* to include objectives in their management plan* that are not specifically related to achieving conformance with the Standard, as long as those objectives do not conflict with the requirements of the Standard. Additionally, The
Organization* is not limited to implementing only those management objectives* and activities that are described in the management plan* (as long as additional objectives and activities are not in conflict with requirements of the Standard). However, management plans* must be updated (even if the time period identified in Indicator 7.4.1 has not yet expired) when there is new information from monitoring, and incorporation of these other activities should be achieved at the same time.

Forest* resources include timber, fish and wildlife, and non-timber forest products*.

C7.2 The Organization* shall have and implement a management plan* for the Management Unit* which is fully consistent with the policies and management objectives* as established according to Criterion 7.1. The management plan* shall describe the natural resources that exist in the Management Unit* and explain how the plan will meet the FSC certification requirements. The management plan* shall cover forest* management planning and social management planning proportionate to scale*, intensity*, and risk* of the planned activities. (C7.1 P&C V4)

Indicator 7.2.1 (Existing US Indicator 7.1.c) The management plan* describes: a) current conditions of the timber and non-timber forest resources being managed; b) desired future conditions; c) historical ecological conditions; and d) applicable management objectives and activities to move the FMU toward desired future conditions achieve the management objectives* defined in Indicator 7.1.2.

Indicator 7.2.2 (Existing US Indicator 7.1.a) The management plan* identifies the ownership and legal* status of the FMU Management Unit* and its resources, including rights* held by the owner(s) and established rights* held by others (per Criteria 1.2, 3.1, and 4.1).

Guidance: Legal* status information may be summarized in the management plan* as appropriate to the scale* and complexity of the ownership and the relevance of applicable legal* constraints on management activities*.

Ownership status includes ownership type (e.g., fee, easement, lease).

Rights* held by others may include: customary uses and use rights*; Indigenous Peoples* rights*; conservation easements, deed restrictions, and other easements or rights* held by others; and leasing arrangements.

Indicator 7.2.3 (Existing US Indicator 7.1.b) The management plan* describes the history of land use and past management, current forest* types and associated development, size class and/or successional* stages, and natural disturbance regimes* that affect the FMU Management Unit* (see per Indicator 6.1.a1).
Guidance: This Indicator* refers to information already compiled in Indicator 6.1.1.

Natural disturbance regimes* include wind, fire, insects, and pathogens. Typical disturbance events in terms of opening size, intensity of disturbance, range, and frequency of disturbance are described to the extent they are known.

Indicator 7.2.4 (New) The management plan* considers the potential impact of climate change–related risks and vulnerabilities on achievement of management objectives* and desired future conditions*, and describes what climate change adaptation strategies*, if any, are being implemented to address identified impacts.

Guidance: Considerations should address the Best Available Information* (per the Climate Change Toolkit in Annex L), acknowledge that response plans for future disturbances may be beyond historic parameters, and identify if climate change–related changes in conditions are likely within the timeframe of a given management decision (e.g., rotation length).

Climate change adaptation strategies* associated with ecosystems* and biodiversity* are generally categorized into three types: resistance, resilience, and facilitated transformation. Resistance strategies maintain the current system for as long as possible even as changes occur. Resilience strategies help a system cope with a changing climate, particularly through maintenance of critical ecological processes. Facilitated transformation strategies facilitate transitions within a system to better align the system with anticipated future climate conditions. The types of strategies implemented by The Organization*, if any, will likely be influenced by the information available to The Organization* and its management objectives*.

Indicator 7.2.5 (Existing US Indicator 7.1.d) The management plan* includes a description of the landscape* within which the FMU Management Unit* is located and describes how landscape*-scale habitat* elements described in Criterion 6.8 6.3 will be addressed.

Guidance: The landscape* description and landscape* management objectives* consider elements such as:
- land uses and trends in the surrounding landscape*;
- a general description of forest*-ownership types and parcel sizes in the landscape*;
- forest* types, type of management, and general condition of forests* within the landscape*;
- significant water bodies* and other features that cross the FMU Management Unit* boundary;
- diversity of habitats* across the ownership, as indicated by forest type; and
- species* or species* groups that may be significantly affected by habitat* loss or fragmentation on the FMU Management Unit*.
Indicator 7.2.6 (Existing US Indicator 7.1.e) The management plan* includes a description of the following resources and outlines activities to conserve* and/or protect:
   a. rare, threatened, and/or endangered species* and natural communities (see per Criterion 6.4 6.2);
   b. plant species* and community diversity and wildlife habitats* (see per Criterion 6.6 6.3);
   c. water resources (see per Criterion 6.7 6.5);
   d. soil* resources (see per Criterion 6.7 6.3);
   e. Representative Sample Areas* (see per Criterion 6.5 6.4); and
   f. High Conservation Value Forests (see Principle 9); and other special management areas.

Guidance: The management plan* should have sufficient detail to describe the current resources and how The Organization* the landowner/manager complies with the referenced Criteria 6.2, 6.3, 6.4, 6.5, and Principle 9.

The management plan* may reference supporting guidelines and policies that describe specific management practices. Site-specific information and practices may be included in operational plans.

Indicator 7.2.7 (Based on existing US Indicators 9.1.c and 9.3.a) The management plan* describes the High Conservation Value* assessment results and the management strategies* necessary to ensure the maintenance and/or enhancement of all High Conservation Values* (per Principle 9).

(Existing US Indicator 9.1.c) A summary of the assessment results and management strategies (see Criterion 9.3) is included in the management plan summary that is made available to the public.

(Existing US Indicator 9.3.a) The management plan and relevant operational plans describe the measures necessary to ensure the maintenance and/or enhancement of all high conservation values present in all identified HCVF areas, including the precautions required to avoid risks or impacts to such values (see Principle 7). These measures are implemented.

Indicator 7.2.8 (Existing US Indicator 7.1.f) If invasive species* are present, the management plan* describes invasive species* conditions, and applicable management objectives*, and summarizes the invasive species* prevention and control strategies how they will be controlled (per see Indicator 6.6.4).

Guidance: The plan may reference supporting guidelines and policies that describe specific management practices.
Indicator 7.2.9 (Existing US Indicator 7.1.g) The management plan* describes how current or anticipated impacts of insects and diseases, current or anticipated outbreaks on forest* conditions and management objectives* goals, and how insects and diseases will be addressed managed (per see Criteria 10.7 and 10.8).

Intent: Disease may include biotic factors (e.g., fungi and other pathogens) and abiotic factors (e.g., acidic deposition).

Guidance: Potential impacts on stocking or harvest are described.

The management plan* may reference supporting guidelines and policies that describe specific management activities* practices.

This description is commensurate with the likelihood of outbreaks or infestations.

Indicator 7.2.10 (Existing US Indicator 7.1.h) If pesticides* chemicals are used, the plan describes what is being used, applications, and how the management system conforms with Criterion 10.76.6.

Indicator 7.2.11 (Existing US Indicator 7.1.i) If biological controls agents* are used, the management plan* describes what is being used, applications, and how the management system conforms with Criterion 10.8 6.8.

Indicator 7.2.12 (Existing US Indicator 7.1.j) The management plan* incorporates the results of the evaluation of social impacts, including:
   a. traditional cultural resources and rights* of use (per see Criteria 3.1 and 4.1);
   b. potential conflicts with customary uses and use-rights* (per see Criteria 1.2, 3.2, and 4.2);
   c. management of ceremonial, archeological, and historic sites (per see Criteria 3.5 and 4.5);
   d. management of aesthetic* values (per see Indicator 4.5.1);
   e. public access to and use of the forest*, and other recreation issues; and
   f. local and regional socioeconomic conditions and economic opportunities, including creation and/or maintenance of quality jobs (per see Criterion 2.4 and Indicator 4.3.1), local* purchasing opportunities (per see Indicator 4.3.1), and participation in local* development opportunities (per see Indicators 4.4.1 and 5.4.2).

Indicator 7.2.13 (Existing US Indicator 7.1.k) The management plan* describes the general purpose, condition, and maintenance needs of the transportation system* network (see Indicator 6.7.4).

Intent: The transportation system* network includes roads, skid trials, landings, and stream
crossings.
Management needs include maintenance, upgrades, closures, etc.

**Indicator 7.2.14 (Existing US Indicator 7.1.l)** The *management plan* describes the *silvicultural* and other management systems used and how they will sustain, over the *long term* *forest* ecosystems present on the FMU. For *plantations*, this includes describing the relationship between the *plantations* and *natural forest conservation* and *restoration* objectives within the *management unit*.

**Guidance:** Per Indicator 5.2.3, *The Organization* must use *silvicultural* management systems that improve or maintain health and quality across the *management unit*; per Indicator 10.1.2, regeneration must be to pre-harvest or more *natural conditions*; and per Indicator 10.5.1, *silvicultural* practices must be ecologically appropriate for the site and *management objectives*. The requirements of these *Indicators* help to ensure that management systems sustain *forest* ecosystems over the *long term*.

Harvesting practices that do not improve or maintain health and quality of the residual *stand* and the regeneration of potential future *stands*, and that are driven by short-term economic gain, can be collectively referred to as “exploitative” harvests. These kinds of practices will not sustain *forest* ecosystems over the *long term* and do not meet the requirements of Indicator 5.2.3, Indicator 10.1.2, Indicator 10.5.1, nor Indicator 7.2.14. “High-grading” is one broad type of exploitive harvesting where the highest-value trees are removed without regard for the residual *stand* or regeneration objectives. Other exploitative practices are commonly referred to as a “commercial clearcut” and “selective harvest,” but such terms may also be mistakenly applied to acceptable *silvicultural* practices. The implementation of diameter-limit harvests also can have results that do not achieve the outcomes required by this Standard. However, these terms are difficult to quantify and vary in their usage across the US. The terms are less important than the outcomes achieved.

“Other management systems” refers to management systems where the primary objective is not timber production, such as *restoration* areas in *plantations*.

*(Existing US Indicator 10.5.c)* Management plans should clearly state the extent and location of areas selected for such restoration, as well as the rationale for their selection.

**Indicator 7.2.15 (Existing US Indicator 7.1.m)** The *management plan* describes how *species selection* and harvest rate calculations were developed to meet the requirements of Criterion 5.2.

**Intent:** “*species selection*” refers to species selected to harvest, retain, and promote *regeneration*. 

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Guidance: The management plan\textsuperscript{*} describes the methods used to calculate the harvest level, and describes how that level is consistent with the composition, structures, and functions of the FMU Management Unit\textsuperscript{*} in accordance with Criterion 6.6\textsuperscript{.3} and other applicable Criteria\textsuperscript{*}.

**Indicator 7.2.16 (Existing US Indicator 7.1.n)** The management plan\textsuperscript{*} includes a description of monitoring procedures necessary to address the requirements of Criterion 8.2.

**Indicator 7.2.17 (Existing US Indicator 7.1.o)** The management plan\textsuperscript{*} includes maps describing the resource base, the characteristics of general management zones, special management areas, restoration\textsuperscript{*} areas, conservation zones\textsuperscript{*}, and protected areas\textsuperscript{*} at a level of detail to achieve management objectives\textsuperscript{*} and protect\textsuperscript{*} sensitive sites.

Intent: “Sensitive sites” is used in reference to sites that are more sensitive and vulnerable to impact from the types of forest\textsuperscript{*} management practices that will occur on the Management Unit\textsuperscript{*}.

Guidance: Depending on the map scale (e.g., forest\textsuperscript{*}-level vs. stand\textsuperscript{*}-level) and purpose and intensity\textsuperscript{*} of management, maps should include:
- property boundaries and ownership;
- roads and trails;
- planned management activities\textsuperscript{*}, including forest\textsuperscript{*} product harvest areas;
- forest\textsuperscript{*} types by age class\textsuperscript{*};
- topography, soils\textsuperscript{*}, water courses, and water bodies\textsuperscript{*};
- wetlands and riparian areas\textsuperscript{*} zones;
- archeological and cultural sites and customary use areas;
- locations of unique and sensitive natural communities, habitats\textsuperscript{*}, and features;
- rare, threatened, and endangered species\textsuperscript{*};
- Representative Sample Areas\textsuperscript{*}; and
- designated protected areas\textsuperscript{*} and High Conservation Values\textsuperscript{*} Forests.

The location of sensitive sites (e.g., rare plants or archaeological sites) need not be made publicly available to protect\textsuperscript{*} the resource.

*(Existing US Indicator 7.1.p)* The management plan\textsuperscript{*} describes and justifies the types and sizes of harvesting machinery and techniques employed on the FMU to minimize or limit impacts to the resource.

**Indicator 7.2.18 (Existing US Indicator 7.1.r)** The management plan\textsuperscript{*} describes the stakeholder consultation process.
Indicator 7.2.19 (New) The management plan* includes estimates of benefits and costs related to social, economic, and environmental impacts of management activities* (i.e., externalities* per Indicator 5.3.1).

Indicator 7.2.20 (New—Based on existing US FF Indicator 7.1.b) Activities undertaken on the Management Unit* are consistent with the management plan*.

C7.3 The management plan* shall include verifiable targets* by which progress towards each of the prescribed management objectives* can be assessed. (new)

Indicator 7.3.1 (Adapted from IGI 7.3.1) Verifiable targets* are established for each management objective* and are used as the basis for monitoring, as described in Principle 8.

Guidance: Targets are measurable (where possible), address short-term and long-term* time frames (as applicable), and each is supported by a rationale, including underlying assumptions.

C7.4 The Organization* shall update and revise periodically the management planning and procedural documentation to incorporate the results of monitoring and evaluation, stakeholder engagement*, or new scientific and technical information, as well as to respond to changing environmental, social, and economic circumstances. (C7.2 P&C V4)

Indicator 7.4.1 (Existing US Indicator 7.2.a) The management plan* is kept up to date. It is reviewed on an ongoing basis and is updated whenever necessary to incorporate the results of monitoring or new scientific and technical information or stakeholder* engagement*, as well as to respond to changing environmental, social, and economic circumstances. At a minimum, a full revision occurs every 10 years. The management plan* is reviewed and revised at least every 10 years (unless a longer planning period is a statutory requirement, but not to exceed 15 years).

Consultation Note:

The Standard Development Group is working to confirm that Indicator 7.4.1 is not in conflict with established regulations, rules and/or formal policies for management planning cycles on US Forest Service lands. If any conflicts are identified, the indicator and/or guidance will be adapted for Draft 2.

Consultation Question:
Are there scenarios or other rationale that would justify, for ecological reasons, longer planning periods than would be allowed by Indicator 7.4.1?

Intent: The rigor of the review and update is contingent upon the scale* and intensity* of management, and updates should focus on those aspects of the management plan* where changes are necessary.

It is not the intent that a hard-copy management plan* is re-written every time there is a harvest or a natural disturbance (wildfire or pest infestation) on some part of the FMU Management Unit*. When the impact is large enough to require changes in management strategy, it may require revision of specific parts of the management plan*.

Reasons for modifying the management plan* may include but are not limited to: 1) in response to, and to incorporate, the results of monitoring as outlined in Principle 8; 2) whenever changes are proposed to the plan’s primary objectives or management system; 3) whenever a significant environmental impact, threat or natural disturbance occurs; 4) whenever significant changes in uses of the Management Unit* occur; and 5) when there are significant changes in socioeconomic circumstances.

The management system may incorporate ongoing and dynamic processes or data such as GIS.

C7.5 The Organization* shall make publicly available* a summary of the management plan* free of charge. Excluding confidential information*, other relevant components of the management plan* shall be made available to affected stakeholders* on request, and at cost of reproduction and handling. (C7.4 P&C V4)

Intent: The owner or manager of a private forest* may withhold proprietary information (e.g., timber volumes by size and age class*, marketing strategies, and other financial information, see Criterion 8.5) but is required to share information from the plan that informs stakeholders* of management activities* and implementation of the Principles*, Criteria*, and Indicators* found in this Standard.

Indicator 7.5.1 (Existing US Indicator 7.4.a) While respecting landowner confidentiality confidential information*, the management plan* or a management plan* summary that outlines the elements of the plan described in Criterion 7.1 and Criterion 7.2 is available to the public either at no charge or a nominal fee.

Guidance: See Criterion 8.4 8.5 for more information on respecting landowner confidentiality
and what is acceptable to provide in a public summary. Limited elements of the plan may be excluded to protect the security of environmentally sensitive and/or proprietary information.

When possible, The Organization* should post a summary of the management plan* on their website, but at a minimum, this summary is made available upon request.

Information that is considered confidential can be presented in such a way as to protect its confidentiality, including data on production, inventory, growth, costs of operation, and other information deemed to provide a competitive advantage or proprietary in nature. This information can be represented in the public summary as trends, percentages, or in terms of its relation to the goals and limits outlined in the management plan*.

Indicator 7.5.2 (Adapted from IGI 7.5.2) While respecting confidential information*, relevant components of the management plan* are provided upon request to affected stakeholders*, at cost for reproduction and handling.

Indicator 7.5.3 (Existing US Indicator 7.4.b) For Managers of public lands* forests*, The Organization* makes draft and final management plans*, revisions, and supporting documentation easily accessible for public review and comment prior to their implementation. The Organization* Managers address addresses public comments and modifies modify the plans to ensure compliance with this Standard.

Applicability: This Indicator* is applicable only to public lands* forests.

C7.6 The Organization* shall, proportionate to scale*, intensity*, and risk* of management activities*, proactively and transparently engage affected stakeholders* in its management planning and monitoring processes, and shall engage interested stakeholders* on request. (C4.4 P&C V4)

Intent: Engagement with stakeholders* in monitoring processes is addressed per Indicator 8.2.2 and is therefore not addressed in the Indicators* of this Criterion*.

Guidance: The Organization* is expected to “consider in good faith” management planning input provided by stakeholders* and rights holders*. This means that The Organization* must honestly consider whether the input can be addressed in planning, whether it is aligned with the Standard and can be achieved without detracting from The Organization’s* ability to conform with the rest of the Standard (including Indicator 5.5.1’s requirement for ensuring long-term* economic viability*), whether it conflicts with input received from other stakeholders and/or experts*, and whether it is feasible given the ecological context of the site and/or management unit*. Input regarding legal* rights must also be considered from the perspective
of ensuring that the rights* are not violated.

The Organization* is encouraged to document significant stakeholder* input and how it was used or why it was not used, and then respond directly to the stakeholder* with this information.

Indicator 7.6.1 (Existing US Indicator 4.4.b) The Organization* The forest owner or manager seeks and considers in good faith input in management planning from affected stakeholder* and affected rights holder*. People who would likely be affected by management activities.

Indicator 7.6.2 (Existing US Indicator 4.4.c) Affected stakeholders* and affected rights holder* People who are subject to direct adverse effects of management operations are apprised of relevant activities in advance of the action and provided an opportunity to offer input so that they may express concern.

Intent: This Indicator* focuses on stakeholder consultation in operations that may directly and negatively affect stakeholders, such as logging, burning, spraying, or traffic.

Guidance: To apprise likely affected neighbors and other stakeholders* of specific management operations, The Organization* may post signs or other measures that are readily noticeable by likely affected stakeholders* but that do not necessarily require direct communication. Some situations may warrant direct communication. Advance notice should be within a time frame appropriate to the situation.

Indicator 7.6.3 (Adapted from IGI 7.6.4) Upon request, interested stakeholders* are provided with an opportunity for engagement* regarding planning for management activities* that affect their interests. The Organization* considers their input in good faith.

Indicator 7.6.4 (Existing indicator 4.4.d) For public lands* forests, engagement includes the following components:

a. Clearly defined and accessible methods for public participation are provided in both short term and long term* planning processes, including harvest plans and operational plans.

b. Public notification is sufficient to allow interested stakeholders* the chance to learn of upcoming opportunities for public review and/or comment on the proposed management.

c. An accessible and affordable appeals process to planning decisions is available. Planning decisions incorporate the results of public consultation. All draft and final planning documents, and their supporting data, are made readily available to the public.

Applicability: This Indicator only applies to public lands*.
Intent: FSC certification does not preclude any individual or group from seeking legislative or judicial relief.

Guidance: Interested stakeholders* may be wide-ranging geographically.

Public engagement* should be accessible to individuals, organizations, and other social units that could be affected economically, environmentally, or socially by management activities* on the Management Unit*. This minimally includes all citizens of the relevant entity (county, city, state or nation).

PRINCIPLE 8: MONITORING AND ASSESSMENT

The Organization* shall demonstrate that progress toward achieving the management objectives*, the impacts of management activities*, and the condition of the Management Unit* are monitored* and evaluated proportionate to the scale*, intensity*, and risk* of management activities*, in order to implement adaptive management*. (P8 P&C V4)

Intent: A key aspect of forest* management is monitoring to ensure that current conditions are known and can be compared with desired future conditions* and management objectives*, and as necessary to adjust management techniques to address social, economic, or environmental effects. Monitoring ensures that forest* management, conservation, and restoration* objectives continue to be met as effectively as possible, even given unanticipated outcomes and/or changing conditions. Principle 8 is concerned with design and implementation of the monitoring program. Principle 8 also identifies requirements that enable an FSC chain-of-custody* to operate.

Monitoring programs should be designed appropriate to the scale* and intensity* of forest* management. The monitoring protocols required per Indicator 8.1.1 and Indicator 8.2.1 may consist of a variety of documents or an umbrella document that describes how a collection of monitoring documents relate to an integrated program for monitoring as required by this Principle*. This may include a combination of ownership-level, unit, and/or site-level monitoring approaches, GIS, published guidelines, landowner policies, and other information.

Guidance: Monitoring should be focused on data that are of sufficient detail to evaluate current conditions; the effects of management on economic, environmental, and social resources of the Management Unit*; and to track progress toward desired future conditions*, verifiable targets*, and management objectives*.

The monitoring protocol(s) should describe procedures and their frequency, and be sufficient to ensure that current conditions are known and can be compared with desired future conditions* and management objectives*.
Scale of Operations: *Medium* and *large* ownerships are expected to have systematic and robust data collections for resources that are affected by management, while smaller operations may have informal and qualitative requirements for data collection.

*Intensity* and frequency of operations: More and/or better data are needed for resources that are significantly or frequently altered (e.g., timber stocking composition and *stand* structure) than for those that are minimally impacted (e.g., *protected areas* where there are no operations).

C8.1 *The Organization* shall *monitor* the implementation of its *management plan*, including its policies and *management objectives*, its progress with the activities planned, and the achievement of its *verifiable targets*. (new)

**Indicator 8.1.1 (Based on existing US Indicator 8.1.a)** *The Organization* The forest owner or manager develops and consistently implements a regular, comprehensive, and replicable written protocol to monitor its policies associated with *visions and values*, *management objectives*, and achievement of *verifiable targets* relevant to the Standard.

*(Existing US Indicator 8.4.a)* The forest owner or manager monitors and documents the degree to which the objectives stated in the management plan are being fulfilled, as well as significant deviations from the plan.

**Indicator 8.1.2 (New)** The protocol, per Indicator 8.1.1, includes specific procedures to monitor and evaluate: a) how changes in the assessed potential impact of climate change–related risks and vulnerabilities may affect achievement of *management objectives* and *desired future conditions*; and b) the effectiveness of *climate change adaptation strategies* implemented to address identified impacts (per Indicator 7.2.4).

C8.2 *The Organization* shall *monitor* and evaluate the environmental and social impacts of the activities carried out in the *Management Unit*, and changes in its environmental condition. (C8.2 P&C V4)

**Indicator 8.2.1 (Based on existing US Indicator 8.1.a)** *The Organization* The forest owner or manager develops and consistently implements a regular, comprehensive, and replicable written protocol to monitor and evaluate the environmental and social impacts of *management activities* and changes in environmental conditions, aligned with Annex J.

Intent: Indicators 6.6.4, 9.4.1, 10.2.2, 10.3.2, 10.7.5, and 10.8.1 explicitly require monitoring and therefore must be addressed in the monitoring protocol. While the other elements of Annex J are not explicitly required, monitoring at some level (for applicable elements of Annex
J) will most likely be needed for conformance with and/or demonstration of conformance with the rest of the Standard. Therefore, Annex J provides a structure to assist *The Organization* with developing its monitoring protocol.

Guidance: The frequency, scale and intensity of monitoring will be unique to the *Management Unit* due to its unique context and activities. Similar to the guidance for Indicator 8.1.1, the *scale*, *intensity*, and frequency of *management activities* that occur within the *Management Unit* will affect the level of monitoring needed for any particular element of Annex J. However, some level of monitoring will most likely be needed for all applicable elements. Non-applicable elements of Annex J are those associated with an activity or value that does not occur on the *Management Unit*, and/or values that occur outside of the management unit that are not affected by activities occurring on the *Management Unit*.

*(Existing US Indicator 8.2.a.1)* For all commercially harvested products, an inventory system is maintained. The inventory system includes at a minimum: a) species, b) volumes, c) stocking, d) regeneration, and e) stand and forest composition and structure; and f) timber quality.

*(Existing US Indicator 8.2.a.2)* Significant, unanticipated removal or loss or increased vulnerability of forest resources is monitored and recorded. Recorded quantitative and qualitative information includes date and location of occurrence, description of disturbance, and quantitative and qualitative extent and severity of loss, and may be both quantitative and qualitative.

*(Existing US Indicator 8.2.c)* *The Organization* forest owner or manager periodically obtains data needed to monitor presence on the FMU of:
1) Rare, threatened and endangered species and/or their habitats;
2) Common and rare plant communities and/or habitats;
3) Location, presence, and abundance of invasive species;
4) Condition of protected areas, set-asides, and buffer zones;
5) High Conservation Values Forests (see Criterion X.X).

*(Existing US Indicator 8.2.d.1)* Monitoring is conducted to ensure that site specific plans and operations are properly implemented, environmental impacts of site disturbing operations are minimized, and that harvest prescriptions and guidelines are effective.

*(Existing US Indicator 8.2.d.2)* A monitoring program is in place to assess the condition and environmental impacts of the forest-road system.

*(Existing US Indicator 8.2.d.3)* *The Organization* landowner or manager monitors relevant socio-economic issues (see Indicator X.X.X), including the social impacts of harvesting, participation in local economic opportunities (see Indicator X.X.X), the creation and/or maintenance of quality job opportunities (see Indicator X.X.X), and local purchasing opportunities (see Indicator X.X.X).
**Indicator 8.2.2** *(New)* The Organization* seeks input in monitoring processes from affected stakeholders*, and engages interested stakeholders* on request. When stakeholder input on monitoring and/or responses to management activities* are received, they are considered in good faith

*(Existing US Indicator 8.2.d.4)* Stakeholder responses to management activities are monitored and recorded as necessary.

Guidance: The Organization* is expected to “consider in good faith” monitoring input provided by stakeholders* and rights holders*. This means that The Organization* must honestly consider whether the input can be addressed through the monitoring program, whether it is aligned with the Standard and can be achieved without detracting from The Organization’s* ability to conform with the rest of the Standard (including Indicator 5.5.1’s requirement for ensuring long-term* economic viability*), whether it conflicts with input received from other stakeholders* and/or experts*, and whether it is feasible given the ecological context of the site and/or management unit*.

The Organization* is encouraged to document significant stakeholder* concerns and how the input was used or why it was not used, and then respond directly to the stakeholder* with this information.

**Indicator 8.2.3** *(Existing US Indicator 8.2.d.5)* Where—for cultural sites identified per Indicator 3.5.1 that are significant of cultural significance to a Native American* group and for which the Native American* group holds rights* exist, the opportunity to jointly monitor the sites of cultural significance is offered to tribal* representatives *(see Principle 3)*. Where feasible, the opportunity to jointly monitor other sites and resources of interest to a Native American* group is also offered to tribal* representatives.

*(Existing US Indicator 8.2.e)* The Organization* forest owner or manager monitors the costs and revenues of management in order to assess productivity and efficiency.

**C8.3** The Organization* shall analyze the results of monitoring and evaluation and feed the outcomes of this analysis back into the planning process. *(C8.4 P&C V4)*

**Indicator 8.3.1** *(Existing US Indicator 8.4.b)* Where monitoring indicates that management objectives* and verifiable targets* guidelines, including those necessary for conformance with this Standard, are not being met, or if changing conditions indicate that a change in management strategy is required for conformance with the Standard necessary, the management plan*—operational plans, and/or other plan implementation measures are is revised. to ensure the objectives and guidelines will be met. If monitoring shows that the management objectives and guidelines themselves are not sufficient to ensure conformance
with this Standard, then the objectives and guidelines are modified.

Intent: This Indicator* requires that the results of monitoring be reflected in the implementation of the management plan*. Revisions to the management plan* as a result of monitoring are also addressed in Criterion 7.4.7.2.

**Indicator 8.3.2 (Existing US Indicator 8.4.b)** If monitoring shows that the management objectives* and verifiable targets* guidelines themselves are not sufficient to ensure conformance with this Standard, then the objectives and guidelines are modified.

Intent: This Indicator* requires that the results of monitoring be reflected in the implementation of the management plan*. Revisions to the management plan* as a result of monitoring are also addressed in Criterion 7.4.7.2.

**C8.4 The Organization** shall make publicly available* a summary of the results of monitoring free of charge, excluding confidential information*. (C8.5 P&C V4)

**Indicator 8.4.1 (Existing US Indicator 8.5.a)** While protecting landowner confidentiality confidential information*, either full monitoring results or an up-to-date summary of the most recent monitoring information is readily available maintained (per Criteria 8.1 and 8.2), covering the Indicators listed in Criterion 8.2, and is available to the public, free or at a nominal price, upon request, at no cost.

**C8.5 The Organization** shall have and implement a tracking and tracing system proportionate to scale*, intensity*, and risk* of its management activities*, for demonstrating the source and volume in proportion to projected output for each year, of all products from the Management Unit* that are marketed as FSC certified. (C8.3 P&C V4)

**Consultation Note:**

Indicators in Criterion 8.5 are aligned with chain of custody requirements previously maintained and audited by Certification Bodies. This would mean that Certification Bodies would no longer need to independently maintain and audit chain of custody requirements for FSC 'Forest Management/Chain of Custody (FM/COC)' certified organizations. The Standard Development Group’s intent is to increase transparency regarding expectations of certificate holders and increase consistency of requirements between Certification Bodies and certificate holders.
**Intent:** Chain of custody* (i.e., CoC) is an important aspect of the FSC system. For products claimed to be sourced from FSC-certified forests*, chain of custody* tracks certified products from the forest* of origin throughout the supply chain. The critical first link in the supply chain, and the focus of this Criterion*, is from the point of harvest to the transfer of ownership, and it is the responsibility of The Organization* forest owner/manager of a FSC-certified forest to maintain the integrity of certified products within this first link in the supply chain.

**Indicator 8.5.1 (Existing US Indicator 8.3.a)** When forest* products, including non-timber forest products*, are being sold as FSC-certified, The Organization* the forest owner or manager has implements a documented system that to track and trace all products sold from the Management Unit* until the point of ownership transfer prevents mixing of FSC-certified and non-certified forest* products prior to the point of sale.

**Intent:** This Indicator* does not require The Organization* forest owner or manager to maintain a separate chain of custody* certificate, but rather to be able to sell an FSC-certified product as certified to a chain of custody* business. Tracking and tracing prevents the mixing of FSC-certified and non-certified forest* products prior to the point of ownership transfer.

**Guidance:** The point of ownership transfer is also known as the “forest gate” and may be identified as, for example, the stump, on-site concentration yard, off-site mill/log yard, lump-sum sale/per unit/pre-paid agreement, or log landing.

*(Existing US Indicator 8.3.b)* The forest owner or manager maintains documentation to enable the tracing of the harvested material from each harvested product from its origin to the point of sale.

**Indicator 8.5.2 (Based on Existing US Indicator 8.2.b and IGI 8.5.2)** The Organization* the forest owner or manager maintains records of forest products that are sold harvested timber and NTFPs (volume and product and/or grade) for a minimum of five years. Records must adequately ensure that the requirements under Criterion 5.2 5.6 are met. Compiled information includes the following:

a. species* group;
b. product name, description, or grade;
c. volume (or quantity) of product;
d. information to trace the material to the point of origin;
e. date or timeframe when the product was harvested, hauled outside the forest gate, or delivered to the purchaser; and
f. whether the material was sold or delivered as FSC-certified.

**Guidance:** Actual volumes are used for per unit sales and estimated volumes are used for lump-sum sales.
Indicator 8.5.3 (Based on IGI 8.5.3) Sales invoices for the point of ownership transfer and transport documents are kept for a minimum of five years for all FSC-certified products sold or delivered by The Organization*. Sales invoices identify, at a minimum, the following information:

- a. name and address of purchaser;
- b. the date of ownership transfer;
- c. *species* group;
- d. product name, description, or grade;
- e. the volume (or quantity) of product sold;
- f. The Organization’s* certificate code; and
- g. the FSC claim “FSC 100%,” identifying products sold as FSC-certified.

Where sales invoices do not accompany transportation of the product, transport documents and/or other documentation related to certified products track, at a minimum, the following information:

- a. The Organization’s* certificate code;
- b. identification of the purchaser and destination;
- c. the date of transport or delivery;
- d. *species* group;
- e. product name, description, or grade;
- f. the volume (or quantity) delivered;
- g. load or batch reference number; and
- h. reference linking the shipment to the sales invoice.

Guidance: Actual volumes are used for per-unit sales and estimated volumes are used for lump-sum sales. Transfer documents are synonymous with delivery documents.

In some situations, The Organization* that holds the FSC Forest Management certificate and The Organization* that holds the FSC Chain of Custody certificate are the same entity, and therefore a sales invoice is not generated for materials that are transferred from the Management Unit* to a primary manufacturing facility. In these situations, alternative documentation that contains the information detailed in Indicator 8.5.3, and that can be linked to the materials transferred, will need to be maintained for a minimum of five years.

Consultation Question:

In the limited situations identified in the Indicator 8.5.3 guidance, where the same entity holds both the FSC Forest Management certificate and the FSC Chain of Custody certificate between which materials are transferred, what kind of documentation is generated that could be used to demonstrate conformance with the intent of the
PRINCIPLE 9: HIGH CONSERVATION VALUES*
The Organization* shall maintain and/or enhance the High Conservation Values* in the Management Unit* through applying the precautionary approach*. (P9 P&C V4)

Intent: High Conservation Values* Forests are managed to protect and maintain or enhance their identified values high conservation value attributes. In some cases, active management is consistent with these attributes, and in other cases (e.g., primary most old-growth forests*), active management is specifically precluded.

FSC introduced the concept of High Conservation Value Forests (HCVFs) in 1999 to ensure identification and proper management of forest* areas with exceptional conservation value. With Principle and Criteria Version 5, FSC re-framed the concept to focus on the values (i.e., High Conservation Values*) themselves, while also recognizing the importance of the areas that are necessary for the existence and maintenance of the High Conservation Values* (i.e., High Conservation Value Area*, HCVA). FSC defines High Conservation Value Forests as those that possess one or more of the following High Conservation Values (HCVs):

1. HCV forest areas containing globally, regionally or nationally significant concentrations of biodiversity values (e.g., endemism, endangered species, refugia), including RTE species and their habitats;
2. HCV forest areas containing globally, regionally or nationally significant large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance;
3. HCV forest areas that are in or contain rare, threatened or endangered ecosystems;
4. HCV forest areas that provide basic services of nature in critical situations (e.g., watershed protection, erosion control);
5. HCV forest areas fundamental to meeting basic needs of local communities (e.g., subsistence, health); or,
6. HCV forest areas critical to local communities’ traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).

The FSC US National High Conservation Values* HCVF Assessment Framework (Annex K) may be used as a resource for assessing the presence of High Conservation Values* on the FMU-Management Unit*, as well as managing and monitoring those that are identified. and includes definitions, data resources, and guiding questions.

See Appendix F ‘High Conservation Value Forests’ for definitions and guidance on the terms listed above.
C9.1 *The Organization*, through engagement* with affected stakeholders*, interested stakeholders*, and other means and sources, shall assess and record the presence and status of the following *High Conservation Values* in the *Management Unit*, proportionate to the scale*, intensity*, and risk* of impacts of management activities*, and likelihood of the occurrence of the *High Conservation Values*:

HCV 1 – Species diversity. Concentrations of biological diversity*, including endemic species and rare, threatened, or endangered species, that are significant* at global, regional, or national levels.

HCV 2 – Landscape*-level ecosystems* and mosaics. *Intact Forest Landscapes* and large landscape*-level ecosystems* and ecosystem* mosaics that are significant* at global, regional, or national levels, and that contain viable populations of the great majority of the naturally occurring species in natural patterns of distribution and abundance.

HCV 3 – Ecosystems* and habitats*. Rare, threatened, or endangered ecosystems*, habitats*, or refugia*.

HCV 4 – Critical* ecosystem services*. Basic ecosystem services* in critical* situations, including protection* of water catchments and control of erosion of vulnerable soils and slopes.

HCV 5 – Community needs. Sites and resources fundamental for satisfying the basic necessities of local communities* or Indigenous Peoples* (for livelihoods, health, nutrition, water, etc.), identified through engagement* with these communities or Indigenous Peoples*.

HCV 6 – Cultural values. Sites, resources, habitats*, and landscapes* of global or national cultural, archaeological, or historical significance, and/or of critical* cultural, ecological, economic, or religious/sacred importance for the traditional cultures of local communities* or Indigenous Peoples*, identified through engagement* with these local communities* or Indigenous Peoples*. (C9.1 P&C V4 and Motion 7:2014)

**Indicator 9.1.1 (Adapted from IGI 9.1.1)** A documented assessment is completed using Best Available Information* that records the location and status of *High Conservation Values*, as defined in *Criterion* 9.1 and the High Conservation Value Areas* on which they rely, in a manner consistent with the *High Conservation Value* Framework in Appendix Annex K. If *The Organization* learns of new applicable information, the assessment is updated to incorporate the information.

(Existing US Indicator 9.1.a) The forest owner or manager identifies and maps the presence of *High Conservation Value Forests (HCVF)* within the FMU and, to the extent that data are available, adjacent to their FMU, in a manner consistent with the assessment process, definitions, data sources, and other guidance described in Appendix F.

Given the relative rarity of old growth forests in the contiguous United States, these areas are normally designated as HCVF, and all old growth must be managed in conformance with Indicator 6.3.a.3 and requirements for legacy trees in Indicator 6.3.f.
Indicator 9.1.2 (IGI 9.1.2) The assessment includes identification of Intact Forest Landscapes* that existed within the Management Unit* as of January 1, 2017.

Indicator 9.1.3 (Adapted from IGI 9.1.3) The Organization* conducts culturally appropriate* engagement* with affected rightsholders*, affected stakeholders*, and interested stakeholders* and uses the resulting input in the assessment.

(Existing US Indicator 9.1.b) In developing the assessment, the forest owner or manager consults with qualified specialists, independent experts, and local community members who may have knowledge of areas that meet the definition of HCVs.

Indicator 9.1.4 (Existing US Indicator 9.2.b) For public lands* forests, The Organization* conducts a transparent and accessible public review of proposed High Conservation Values*, High Conservation Value Areas*, attributes and HCVF areas and management strategies* (per Criterion 9.2) is carried out. Relevant information from stakeholder consultations and other public review is integrated into High Conservation Value* HCVF and High Conservation Value Area* descriptions, delineations, and management strategies*.

Applicability: This Indicator* only applies to public lands*.

Guidance: If it is not possible to integrate information received from stakeholder consultations and public review, The Organization* should document the reason why it was not integrated. Examples of when this situation may occur include stakeholder recommendations that would not result in conformance with the Standard, stakeholder feedback that is in conflict with information received from other stakeholders and/or experts*, recommendations that are infeasible given the ecological context of the site or Management Unit*, etc.

C9.2 The Organization* shall develop effective strategies that maintain and/or enhance the identified High Conservation Values*, through engagement* with affected stakeholders*, interested stakeholders*, and experts*. (C9.2 P&C V4)

Indicator 9.2.1 (Existing US Indicator 9.3.a) The Organization* management plan and relevant operational plans describes the measures identifies the threats to High Conservation Values* and develops management strategies* necessary to ensure High Conservation Value* maintenance and/or enhancement of all high conservation values present in all identified HCVF areas, including the precautions required to avoid risks or impacts to such values (see Principle 7) consistent with the High Conservation Value* Framework in Appendix Annex K. These measures are implemented.

Indicator 9.2.2 (Existing US Indicator 9.2.a) The Organization* forest owner or manager holds consultations with affected rightsholders*, affected stakeholders*, interested stakeholders*,
stakeholders and experts* to confirm that proposed HCVF locations and their attributes have been accurately identified, and that effective management strategies* appropriate options for the maintenance and/or enhancement of their High Conservation Values* and High Conservation Value Areas* attributes have been adopted.

**Guidance:** Experts* are normally independent, but may include employees of The Organization* forest owner/manager who possess the requisite expertise. However, external stakeholders with experience pertinent to the High Conservation Value* HCVF attribute must always be consulted.

**Indicator 9.2.3 (Based on IGI 9.2.4, 9.2.5, 9.2.7, 9.3.3, and 9.3.4)** The vast majority* of each Intact Forest Landscape* identified per Indicator 9.1.2 is designated as core area* and management strategies* are developed to protect* these core areas*. The management strategies* may allow limited industrial activity* within core areas*, but only if all effects of the industrial activity*, including fragmentation*:

a. are restricted to a very limited portion of the core area*;
b. do not reduce the core area* below 123,500 acres; and
c. will produce clear, substantial, additional long-term* environmental and social benefits.

**C9.3 The Organization* shall implement strategies and actions that maintain and/or enhance the identified High Conservation Values*. These strategies and actions shall implement the precautionary approach* and be proportionate to the scale*, intensity*, and risk* of management activities*. (C9.3 P&C V4)

**Indicator 9.3.1 (Based on IGI 9.3.1 and IGI 9.3.2)** The Organization* implements the management strategies* identified per Criterion 9.2. Any other management activities* implemented in High Conservation Value Areas* must maintain or enhance the High Conservation Values* and the extent of the High Conservation Value Area*, including defined core areas* of Intact Forest Landscapes*. All activities are implemented in a manner consistent with the precautionary approach*. High Conservation Values* are considered to be critical, fundamental, significant*, or valuable, and therefore any threat to a High Conservation Value* is considered to be a threat of severe or irreversible damage.

*(Existing US Indicator 9.3.b)* All management activities in HCVFs must maintain or enhance the high conservation values and the extent of the HCVF.

**Indicator 9.3.2 (Adapted from IGI 9.3.5)** The Organization* responds immediately to mitigate negative impacts to High Conservation Values* resulting from activities implemented by The Organization* or others and actions are taken to restore* and protect the High Conservation Values*.
Intent: The goal of this Indicator* is to address damaging activities (not just management activities*) initiated by The Organization*, or by others, that represent a threat of severe or irreversible damage. While there may be some limitations as to what The Organization* may feasibly be able to do to address others’ activities, The Organization* does have a responsibility to try and control activities of individuals within the Management Unit*.

In this case, “restore” means to repair the damage done to environmental values that resulted from legal* or illegal activities. However, The Organization* is not necessarily obliged to restore those environmental values that have been affected by factors beyond the control of The Organization*, for example by natural disasters, by climate change, or by the legally* authorized activities of third parties, such as public infrastructure, mining, hunting, or settlement. FSC-POL-20-003, The Excision of Areas from the Scope of Certification, describes the processes by which such areas may be excised from the area certified, when appropriate.

Indicator 9.3.3 (Existing US Indicator 9.3.c) If the High Conservation Values* or the High Conservation Value Areas* HCVF on which they rely attributes cross ownership boundaries, and where High Conservation Values* maintenance of the HCV attributes would be improved by coordinated management, then The Organization* forest owner or manager attempts to coordinate conservation efforts with adjacent landowners.

C9.4 The Organization* shall demonstrate that periodic monitoring is carried out to assess changes in the status of High Conservation Values*, and shall adapt its management strategies to ensure their effective protection*. The monitoring shall be proportionate to the scale*, intensity*, and risk* of management activities*, and shall include engagement* with affected stakeholders*, interested stakeholders*, and experts*. (C9.4 P&C V4)

Indicator 9.4.1 (Existing US Indicator 9.4.a) The Organization* forest owner or manager monitors, or participates in a program to periodically annually monitor, the status of the specific High Conservation Values* attributes, including the effectiveness of the management strategies* measures employed for their maintenance or enhancement. The monitoring program is designed and implemented consistent with the High Conservation Value* Framework in Annex K requirements of Principle 8.

Intent: Except where High Conservation Values* attributes change rapidly or demonstrate ecological instability, or where site-disturbing management activities* occur, annual monitoring of all High Conservation Values* HCVF may not be necessary and/or may be combined with other field activities.

Guidance: High Conservation Values* HCVFs that are not managed and/or are not easily
accessible may have a basic form of monitoring, but the monitoring needs to adequately allow *The Organization* forest owner/manager to be able to evaluate whether the values of the conservation attributes are being impacted.

**Indicator 9.4.2 (Adapted from IGI 9.4.2)** *The Organization* includes engagement* with affected rightsholders*, affected stakeholders*, interested stakeholders*, and experts* in its monitoring program.

Guidance: Engagement with experts* will generally be during establishment of the monitoring program, although in some cases consultation with experts* may be needed as part of implementing the program. For rightsholders* and stakeholders*, engagement* should be part of both establishment and implementation of the monitoring program.

*The Organization* is expected to “consider in good faith” monitoring input provided by stakeholders* and rights holders*. This means that *The Organization* must honestly consider whether the input can be addressed through the monitoring program, whether it is aligned with the Standard and can be achieved without detracting from *The Organization’s* ability to conform with the rest of the Standard (including Indicator 5.5.1’s requirement for ensuring long-term* economic viability*), whether it conflicts with input received from other stakeholders* and/or experts*, and whether it is feasible given the ecological context of the site and/or Management Unit*.

*The Organization* is encouraged to document significant stakeholder* concerns and how the input was used or why it was not used, and then respond directly to the stakeholder* with this information.

**Indicator 9.4.3 (Adapted from IGI 9.4.4)** Management strategies* are adapted when monitoring or other new information shows that these strategies are insufficient to ensure the maintenance and/or enhancement of High Conservation Values*.

(Existing US Indicator 9.4.b) When monitoring results indicate increasing risk to a specific HCV attribute, the forest owner/manager re-evaluates the measures taken to maintain or enhance that attribute, and adjusts the management measures in an effort to reverse the trend.

Intent: Management strategies* measures are adjusted to the extent allowed by law.

Where risks to High Conservation Values* attributes are beyond the control of *The Organization* forest owner/manager (e.g., acid deposition, invasive species* that are impractical to control), the rationale for lack of action to address those risks is documented.
PRINCIPLE 10: IMPLEMENTATION OF MANAGEMENT ACTIVITIES

Management activities* conducted by or for The Organization* for the Management Unit* shall be selected and implemented consistent with The Organization*’s economic, environmental, and social policies and objectives* and in compliance with the Principles* and Criteria* collectively. (new)

C10.1 After harvest or in accordance with the management plan*, The Organization* shall, by natural or artificial regeneration methods, regenerate vegetation cover in a timely fashion to pre-harvesting or more natural conditions*. (new)

Indicator 10.1.1 (Adapted from IGI 10.1.1) Harvested sites are regenerated in a timely manner to maintain environmental values identified per Indicator 6.1.1.

Indicator 10.1.2 (Adapted from IGI 10.1.2) Regeneration activities are implemented in a manner that:
- for harvest of existing plantations*, regenerate to the vegetation cover that existed prior to the harvest or to more natural conditions* using ecologically well-adapted species*;
- for harvest of natural forests* or semi-natural forests*, regenerate to pre-harvest* or to more natural conditions*; or
- for harvest of degraded semi-natural forests*, regenerate to more natural conditions*.

Specific to the Southwest Region

Regional Supplement1 Regeneration is normally through natural regeneration. Artificial regeneration may be used as a supplement (e.g., to fill gaps, restore species* diversity, or for other restoration*, or where seed trees are lacking).

Guidance: Regeneration harvests* should create favorable conditions for natural seedling establishment (e.g., by considering seedbeds, and light conditions, leaving seed trees upslope or upwind, and leaving seed trees with desirable phenotypic characteristics, such as straight boles and healthy crowns).

Specific to the Ozark-Ouachita Region

Regional Supplement2 Natural regeneration is used rather than plantings, except when necessary for restoring* specific habitats*, stand* types, or species*.

C10.2 The Organization* shall use species for regeneration that are ecologically well adapted to the site and to the management objectives*. The Organization* shall use
Native species* and local genotypes* for regeneration, unless there is clear and convincing justification for using others. (C10.4 and C10.8 P&C V4)

Indicator 10.2.1 (Adapted from IGI 10.2.1) Species* chosen for regeneration are ecologically well adapted to the site, are native species*, and are of local* provenance, unless written justification is provided for using non-local* genotypes* of the native species*.

Intent: The goal of this Indicator* is to maintain local* genetic diversity.

(Existing US Indicator 6.3.e) When planting is required, a local source of known provenance is used when available and when the local source is equivalent in terms of quality, price and productivity. The use of non-local sources are justified, such as in situations where other management objectives (e.g., disease resistance or adapting to climate change) are best served by non-local sources. Native species suited to the site are normally selected for regeneration.

Indicator 10.2.2 (Based on IGI 10.2.2) The Organization* has the option to develop a plan to allow for the use of non-native species* for regeneration when non-local* genotypes* of native species* are either not adequate for maintaining or enhancing local* diversity as part of climate change adaptation strategies*, or not an option due to disease or pest vulnerabilities. A plan:

a. prioritizes use of non-native species* in the following manner:
   i. species* that are native to and sourced from the broader ecozone in which the management unit* occurs;
   ii. species* that are native to and sourced from neighboring regions; and
   iii. species* that are native to and sourced from the North American continent.

b. is based on Best Available Information*, including peer-reviewed science that demonstrates that the performance of non-native species* will result in greater benefit to wildlife, water quality*, climate change adaptation, and other values compared to native species*;

c. includes a documented plan to carefully monitor non-native species* to detect unusual mortality, disease, or insect outbreaks and adverse ecological impacts;

d. is spatially and temporally explicit and includes maps of planted areas; and

e. is developed in collaboration with experts* who have knowledge and experience with the non-native species* being considered and potential ecological effects of its introduction.

C10.3 The Organization* shall only use alien species* when knowledge and/or experience have shown that any invasive impacts can be controlled and effective mitigation measures are in place. (C6.9 and C10.8 P&C V4)

Intent: This Criterion* applies to how non-native exotic species* are controlled and monitored
when they are utilized, and includes all non-native exotic species*, including trees and other plants (e.g., herbaceous erosion* control mixes or plants used for wildlife food and cover) and animals used in forest* management.

**Indicator 10.3.1 (Existing US Indicator 6.9.a)**
The use of non-native exotic species* is contingent on the availability of credible scientific data indicating that any such species* is non-invasive and its application does not pose a risk to native biodiversity*.

**Intent:** This Indicator* also covers seed mixed mixes and species* used for erosion* control.

**Guidance:** State lists of invasive/exotic plant species invasive species* should generally be used as the basis for determining if a species* is invasive. New cultivars, hybrids, and uncommon plants (e.g., some of those promoted for use on wildlife food plots) may not have been evaluated by state invasive plant councils. If such species* and/or varieties are being used, then The Organization* forest owner/manager is expected to consult with a state expert* in invasive species* plants.

Unless evidence suggests otherwise, a species* that is not identified as being invasive is assumed to not pose a risk to native biodiversity*.

**Indicator 10.3.2 (Existing US Indicator 6.9.b)**
If non-native exotic species* are used, their provenance and the location of their use are documented, and their ecological effects are actively monitored and documented, and effective mitigation measures are in place to control their spread outside the area in which they are established.

**Guidance:** Monitoring intensity reflects the persistence and risk posed by the species* and may be justified by consultation with regional experts* or literature.

**Indicator 10.3.3 (Existing US Indicator 6.9.c)**
The Organization* forest owner or manager takes timely action to control curtail or significantly reduce any adverse impacts resulting from their use of non-native species* exotic species.

**Applicability:** If The Organization* forest owner or manager is compliant with Indicator 10.3.1 6.9.a, and an outbreak of an exotic species a non-native species* occurs, then the outbreak of the non-native species* exotic species does not constitute non-compliance with Indicator 10.3.2 6.9.b.

**Intent:** This Criterion* is specifically for cases that involve the intentional use of non-native species* exotic species—it does not address invasive species* exotic plants or animals (this is addressed in Indicator 6.6.4 Criterion 6.3).
C10.4 The Organization* shall not use genetically modified organisms* in the Management Unit*. (C6.8 P&C V4)

Indicator 10.4.1 (Existing US Indicator 6.8.d) Genetically modified organisms* (i.e., GMOs) are not used for any purpose.

Intent: FSC-POL-30-602 Genetically Modified Organisms* provides a definition and guidance on the interpretation of Indicator 10.4.1 Criterion 6.8.

Genetically improved organisms (e.g., Mendelian crossed) are not considered to be genetically modified organisms* (GMOs) (i.e., results of genetic engineering) and may be used. The prohibition of genetically modified organisms* applies to all organisms, including trees.

C10.5 The Organization* shall use silvicultural practices that are ecologically appropriate for the vegetation, species, sites, and management objectives*. (new)

Indicator 10.5.1 (Adapted from IGI 10.5.1) Silvicultural* practices are implemented that are ecologically appropriate (per Indicator 7.2.15) for the site and management objectives*.

C10.6 The Organization* shall minimize or avoid the use of fertilizers*. When fertilizers* are used, The Organization* shall demonstrate that use is equally or more ecologically and economically beneficial than use of silvicultural* systems that do not require fertilizers, and prevent, mitigate, and/or repair damage to environmental values*, including soils. (C10.7 P&C V4 and Motion 2014#7)

Applicability: Mitigation or repair of damage to environmental values (identified per Indicator 6.1.1) resulting from use of fertilizer* is addressed through Indicator 6.3.3.

Indicator 10.6.1 (Existing US Indicator 10.6.d) The use of fertilizers* is minimized or avoided. Fertilizer* is applied only when all of the following conditions are met:

a. Soil* classification or foliar analysis indicates one or more nutrients are a limiting factor for forest* productivity.

b. The ecological benefits of using fertilizers* are greater than the benefits of using silvicultural* systems that do not require their use.

c. The economic benefits of using fertilizers* are greater than the benefits of using silvicultural* systems that do not require their use.

d. Data and/or scientific literature suggest that the response to fertilization is economically and ecologically justified.
d. Where necessary, due to topography, soils*, or other conditions, measures are taken to protect* environmental values and prevent damage from fertilizer* runoff or leaching. This includes preventing influences on native low-nutrient ecological systems*, such as pitcher plant bogs, or on-ground and surface water quality*, including through the use of buffer zones*.

e. Fertilizer* application maintains or enhances soil* condition and site productivity.

f. Fertilizer* types, rates, frequencies, and site of application are documented.

Guidance: Fertilizer* use is normally avoided in natural forests* and semi-natural forests*.

C10.7 The Organization* shall use integrated pest management and silviculture* systems which avoid, or aim at eliminating, the use of chemical pesticides*. The Organization* shall not use any chemical pesticides* prohibited by FSC policy. When pesticides* are used, The Organization* shall prevent, mitigate, and/or repair damage to environmental values* and human health. (C6.6 and C10.7 P&C V4)

Consultation Note:

The Indicators of Criterion 10.7 have been revised to align with the newly revised FSC Pesticides Policy. The revised policy is available for review from the FSC US web site, which also provides additional information and other resource materials associated with the revised policy.

The Standard Development Group recognizes that there may be further changes needed for the indicators of Criterion 10.7 once the ongoing effort to develop International Generic Indicators for FSC Highly Hazardous Pesticides is finalized. These changes will be incorporated between drafts, or in a later US national standard revision process, depending on when the new International Generic Indicators are approved.

Applicability: Mitigation or repair of damage to environmental values (identified per Indicator 6.1.1) resulting from use of pesticides* is addressed through Indicator 6.3.3.

Intent: This Criterion* is guided by the FSC Pesticides Policy (FSC-POL-30-001 EN) and related documents. In addition, World Health Organization Type 1A and 1B and chlorinated hydrocarbon pesticides, pesticides that are persistent, toxic or whose derivatives remain biologically active and accumulate in the food chain beyond their intended use, and any pesticides banned by international agreement, shall be prohibited.

This Criterion* and its Indicators* also require that The Organization* forest owner/manager strive to reduce the use of other chemical pesticides* and biocides and work towards toward
their eventual phase-out whenever feasible, consistent with the FSC Pesticides Policy on the use of chemical pesticides.

Guidance: A pesticide* is any substance, or mixture of substances of chemical or biological ingredients, intended for repelling, destroying, or controlling any pest or regulating plant growth. This includes insecticides, rodenticides, acaricides, molluscicides, larvaecides, nematicides, fungicides, and herbicides. A chemical pesticide* is any synthetically produced pesticide*.

Per the FSC Pesticides Policy, The Organization* is required to use integrated pest management* to consider the different control techniques available to them and look for non-pesticide* options, and more specifically non-chemical pesticide* options, when they are economically feasible and will reduce risks* to human and environmental health. If the integrated pest management* indicates that use of a chemical pesticide* is the best control technique, the FSC Pesticides Policy requires a comparison of different potential chemical pesticides* to determine which will provide the best outcomes with the least risk*, and then documentation of risks* and mitigation associated with any chemical pesticides* selected for use. These different components of an overall pest management approach are addressed by a number of Indicators* in this Criterion*, but may be addressed by The Organization* in either a single document, or a collection of documents and documented information.

**Indicator 10.7.1 (Based on IGI 10.7.1) Integrated pest management* (i.e., IPM), including selection of silviculture* systems, is used to avoid, or aim to eliminate, the frequency, extent, and amount of chemical pesticide* applications, and result in non-use or overall reductions in applications. Use of integrated pest management* is documented.**

**Intent:** Minimization is a stepwise process that includes: 1) silviculture and other management activities that avoid the need for chemical pesticides; and then, 2) activities that minimize the use of pesticides that cannot be avoided. There is no termination point for the integrated pest management*. The integrated pest management* should continually aim to avoid and eliminate the use of chemical pesticides* by considering information such as advancements in science and technology and market signals (i.e., those that make alternative control measures operationally or financially feasible).

**Guidance:** The forest owner/manager should employ silvicultural systems, integrated pest management, and strategies for controlling vegetation that minimize negative environmental effects. This may include: creation and maintenance of habitat* that discourages pest outbreak; creation and maintenance of habitat* that encourages natural predators; evaluation of pest populations and establishment of action thresholds; diversification of species* composition and structure; use of low-impact mechanical methods; use of prescribed fire; use of longer rotations or selection harvest; use of uneven-age management.
Indicator 10.7.2 *(Based on IGI 10.7.2)* Prior to using chemical pesticides*, the requirements of the Environmental and Social Risk Assessment (ESRA) framework for Organizations (FSC-POL-30-001 V3-0 FSC Pesticides Policy clause 4.12) are met.

Indicator 10.7.3 *(IGI 10.7.7)* When pesticides* are used:

a. the selected pesticide*, application method, timing and pattern of use offers the least risk* to humans and non-target species*; and

b. objective evidence demonstrates that the pesticide* is the only effective, practical, and cost-effective way to control the pest.

*(Existing US Indicator 6.6.b)* All toxicants used to control pests and competing vegetation, including rodenticides, insecticides, herbicides, and fungicides are used only when and where non-chemical management practices are: a) not available; b) prohibitively expensive, taking into account overall environmental and social costs, risks and benefits; c) the only effective means for controlling invasive and exotic species; or d) result in less environmental damage than non-chemical alternatives (e.g., top soil disturbance, loss of soil litter and down wood debris). If chemicals are used, the forest owner or manager uses the least environmentally damaging formulation and application method practical.

Written strategies are developed and implemented that justify the use of chemical pesticides. Whenever feasible, an eventual phase-out of chemical use is included in the strategy. The written strategy includes an analysis of options for, and the effects of, various chemical and non-chemical pest control strategies, with the goal of reducing or eliminating chemical use.

*(Existing US Indicator 6.6.e)* Chemicals and application methods are selected to minimize risk to non-target species and sites. When considering the choice between aerial and ground application, forest owner or manager evaluates the comparative risk to non-target species and sites, the comparative risk of worker exposure, and the overall amount and type of chemicals required.

Indicator 10.7.4 *(Existing US Indicator 6.6.d)* When whenever pesticides* chemicals are used, a written prescription is prepared that describes the site-specific hazards and environmental risks*, and the precautions that workers* will employ to avoid or minimize those hazards and risks*, and includes a map of the treatment area.

Chemicals are applied only by workers who have received proper training in application methods and safety. They are made aware of the risks, wear proper safety equipment, and are trained to minimize environmental impacts on non-target species and sites.

**Guidance:** *The Organization’s* Environmental and Social Risk Assessment supports the conditions described in 10.7.4.*
Indicator 10.7.5 (Existing US Indicator 6.6.e) If chemical pesticides* chemicals are used, the effects are monitored and the results are used for adaptive management. Records are kept of pest occurrences, control measures, and incidences of worker* exposure to chemicals.

Indicator 10.7.6 (Adapted from IGI 10.7.4) Pesticide* transport, storage, handling, application, and emergency procedures for cleanup following accidental spillages are shown to comply with applicable national laws* and local laws* and regulations.

Indicator 10.7.7 (Adapted from IGI 10.7.6) Damage to human health from pesticide* use is mitigated or repaired when it occurs, within The Organization’s* sphere of influence.

Intent: This Indicator* addresses damage to human health that results from improper use of pesticides* (i.e., use that contradicts the pesticide* label and/or The Organization’s* Environmental and Social Risk Assessment).

(Existing US Indicator 6.6.a) No products on the FSC list of Highly Hazardous Pesticides are used (see FSC-POL-30-001-EN-FSC Pesticides policy 2005 and associated documents).

C10.8 The Organization* shall minimize, monitor*, and strictly control the use of biological control agents* in accordance with internationally accepted scientific protocols*. When biological control agents* are used, The Organization* shall prevent, mitigate, and/or repair damage to environmental values*. (C6.8 P&C V4)


Genetically improved organisms (e.g., Mendelian crossed) are not considered to be genetically modified organisms (GMOs) (i.e., results of genetic engineering), and may be used. The prohibition of genetically modified organisms applies to all organisms including trees.

Applicability: Mitigation or repair of damage to environmental values (identified per Indicator 6.1.1) resulting from use of biological control agents* is addressed through Indicator 6.3.3.

Indicator 10.8.1 (Based on IGI 10.8.1) The use of biological control agents* is minimized, monitored*, and controlled. Biological control agents* are used only as part of The Organization’s* integrated pest management* system per Indicator 10.7.1.

Indicator 10.8.2 (Adapted from IGI 10.8.2) Use of biological control agents* complies with internationally accepted scientific protocols* (e.g., Food and Agriculture Organization of the United Nations (FAO) Code of Conduct for the Import and Release of Exotic Biological Control).
Indicator 10.8.3 (IGI 10.8.3) The use of biological control agents* is recorded, including type, quantity, period, location, and reason for use.

(Existing US Indicator 6.8.a) Biological control agents are used only as part of a pest management strategy for the control of invasive plants, pathogens, insects, or other animals when other pest control methods are ineffective, or are expected to be ineffective. Such use is contingent upon peer-reviewed scientific evidence that the agents in question are non-invasive and are safe for native species.

(Existing US Indicator 6.8.b) If biological control agents are used, they are applied by trained workers using proper equipment.

(Existing US Indicator 6.8.c) If biological control agents are used, their use is documented, monitored and strictly controlled in accordance with state and national laws and internationally accepted scientific protocols. A written plan will be developed and implemented justifying such use, describing the risks, specifying the precautions workers will employ to avoid or minimize such risks, and describing how potential impacts will be monitored.

C10.9 The Organization* shall assess risks* and implement activities that reduce potential negative impacts from natural hazards* proportionate to scale, intensity, and risk*. (new)

Indicator 10.9.1 (Based on IGI 10.9.1 and IGI 10.9.2) Management activities* are implemented to mitigate, within The Organization’s* sphere of influence, potential negative impacts of natural hazards* on infrastructure*, forest* resources, and communities in the Management Unit*, while maintaining the ecosystem* function of natural disturbances where feasible.

Guidance: In forest* types that are fire-adapted or at risk of wildfire, The Organization* identifies and applies site-specific fuels management practices, based on: 1) natural fire regimes; 2) risk of wildfire; 3) potential economic losses; 4) public safety; and 5) applicable laws* and regulations.

Indicator 10.9.2 (Based on IGI 10.9.3 and 10.9.4) Management activities* are implemented to increase the resilience* of ecosystems* to catastrophic natural disturbances* identified per Indicator 6.1.1.

Guidance: In the context of climate change, linkages may exist between expected future impacts of climate change and catastrophic natural disturbances*. The fuels management practices identified in Indicator 10.9.1 Guidance may be relevant in this context. The Climate Change Toolkit in Annex L provides additional resources.
In applicable situations, the forest owner or manager identifies and applies site-specific fuels management practices, based on: (1) natural fire regimes, (2) risk of wildfire, (3) potential economic losses, (4) public safety, and (5) applicable laws and regulations.

C10.10 The Organization* shall manage infrastructural development*, transport activities, and silviculture* so that water resources and soils are protected, and disturbance of and damage to rare and threatened species*, habitats*, ecosystems*, and landscape values* are prevented, mitigated, and/or repaired. (C6.5 P&C V4)

The elements of the Criterion* are addressed through the Indicators* of Criteria 6.1, 6.3, 6.4, and 6.7 and as such no Indicators* are included here. Any non-conformances shall be assessed to the Indicators* of these other Criteria*.

C10.11 The Organization* shall manage activities associated with harvesting and extraction of timber and non-timber forest products* so that environmental values* are conserved, merchantable waste is reduced, and damage to other products and services is avoided. (C5.3 and C6.5 P&C V4)

Indicator 10.11.1 (Existing US Indicator 7.1.q) Written plans for harvesting and other significant site-disturbing management activities* required to carry out the management plan* are prepared prior to implementation. Plans clearly describe the activity, the relationship to management objectives*, outcomes, any necessary environmental safeguards, measures to protect* and/or enhance potentially affected environmental and social values, and health and safety measures, and include maps of adequate detail.

Intent: This Indicator* ensures that potential impacts and outcomes of site-specific activities are addressed in a way that reflects the intent of a more general (not site-specific) management plan*.

Desired outcomes include both the immediate post-activity condition (e.g., stocking and composition) and desired longer-term outcomes (e.g., regeneration).

Other significant site-disturbing management activities* may include, but are not limited to: site preparation, prescribed burns, use of chemicals or biological control agents*, and road building or significant road maintenance.

Guidance: Operation plans may be integrated into the management plan* (more likely on small ownerships) or be a separate document prior to the activity (e.g., a form or narrative, with associated map).
Harvest activity descriptions include the *silvicultural* system and specific practice, and desired post-harvest condition and other outcomes (e.g., regeneration).

This *Indicator* may be addressed with a combination of documents, such as contracts, maps, *best management practices*, and pre-harvest checklists.

For *public lands*, plans should be made available to the public prior to commencement of significant operations. *The Organization* should address public comments as part of the process of revising the plans.

**Consultation Questions:**

The Standard Development Group is requesting assistance in establishing a threshold for use of the term, ‘significant’ in Indicator 10.11.1.

1) What kinds of site-disturbing management activities should not require written plans prior to implementation?

2) What kinds of site-disturbing management activities should require written plans prior to implementation?

**Indicator 10.11.2 (Existing US Indicator 5.2.b)** *The Organization* forest owner or manager takes measures to optimize the use of harvested *forest* products and explores product diversification where appropriate and consistent with *management objectives*.

**Indicator 10.11.3 (Existing US Indicator 5.3.a)** Management practices are employed to minimize the loss and/or waste of harvested *forest* products.

Guidance: “Waste” consists of damage or underutilization of harvested products, except where portions of harvested material need to be left on-site to maintain *woody debris*, nutrient cycling, or other ecological functions (see Criterion 6.6 and the other *Indicators* of this *Criterion*).

**Indicator 10.11.4 (Existing US Indicator 6.5.c, with elements of 5.3.b)** *Management activities*, including site preparation, harvest prescriptions, *techniques*, timing, and equipment, are selected and used to protect *soil* and water resources, residual trees, and other *forest* resources and to avoid erosion, landslides, and significant soil disturbance. Logging and other activities that significantly increase the risk of landslides are excluded in areas where risk of landslides is high. The following are addressed: This includes:

a. Logging and other activities that significantly increase the *risk* of landslides are excluded in areas where risk of landslides is high.

b. Slash is concentrated only as much as necessary to achieve the goals of site
preparation and the reduction of fuels to moderate or low levels of fire hazard.
c. Disturbance of topsoil is limited to the minimum necessary to achieve successful regeneration of *species* native to the site.
d. *Rutting* and compaction *are minimized.*
e. *Soil* erosion *is not accelerated.*
f. Burning is only done when consistent with *natural disturbance regimes*.
g. Natural ground cover disturbance is minimized to the extent necessary to achieve regeneration objectives.
h. Whole tree harvesting on any site over multiple rotations is only done when research indicates soil productivity will not be harmed.
i. Low impact equipment and technologies is used where appropriate.
j. Residual trees are not significantly damaged to the extent that health, growth, or values are affected.
k. Damage to *non-timber forest products* is minimized.
l. In *plantations*, intensive practices, such as windrowing, bedding, and/or ripping, are used only when required to achieve successful regeneration and when negative ecological impacts of these intensive practices are described and mitigated.

**Consultation Questions:**

The Standard Development Group is requesting assistance in establishing thresholds for use of the term, ‘significant’ in Indicator 10.11.4.

1) **What kinds of other activities (besides logging) should not occur in areas where risk of landslides is high?**

2) **What kinds of activities should be allowed to occur in areas where risk of landslides is high?**

3) **What kinds of impacts to health, growth, or values would represent significant damage to residual trees?**

*(Existing US Indicator 5.3.b) Harvest practices are managed to protect residual trees and other forest resources, including:

- soil compaction, *rutting* and erosion are minimized;
- residual trees are not significantly damaged to the extent that health, growth, or values are noticeably affected;
- damage to NTFPs is minimized during management activities; and
- techniques and equipment that minimize impacts to vegetation, soil, and water are used whenever feasible.*

*(Existing US Indicator 10.6.a) Forest operations do not result in long-term adverse impacts to soil productivity, water resources, and hydrology. Soil disturbance is minimized during road/trail work and site preparation, and site preparation is done in accordance with BMPs.*
Intent: This Indicator* includes soil* productivity, function, and habitat* (including the leaf litter layer and fine woody debris*), and non-timber forest products* in all stands, management systems, and harvest objectives.

Guidance: Attention to this Indicator* is expected to increase with the amount and frequency of woody material removed from the site (e.g., biomass removals and whole-tree harvests).

Decisions are made based on objective data regarding slope*, erosion*-hazard rating, potential for soil* compaction, rutting*, and risk of landslides.

To protect* soils* in areas having a high risk of landslides, logging plans should include tree retention* critical for slope* stability, and low-impact harvesting systems such as skyline cable or helicopter.

Clearcutting and other activities that significantly increase the risk* of failure should not be conducted on unstable slopes*.

All soil*-disturbing activities, including road and trail construction, are conducted only during periods of weather when soil* compaction, rutting*, surface erosion*, or sediment transport into streams and other water bodies* of water can be adequately controlled. Soils* should be dry enough or frozen to minimize disturbance and compaction.

In addition, the following guidance is region-specific:

Pacific Coast (PC):
- On slopes* greater than 30%, ground-based yarding should be used only when it is possible to do so without exacerbating soil* erosion*.
- On slopes* greater than 50%, cable or helicopter logging should be used if it is technically feasible and will not result in adverse environmental effects due to the management operation.

Ozark-Ouachita Region (OO):
- Deepening and scouring of existing drainages due to silvicultural* or logging operations should be absent.

C10.12 The Organization* shall dispose of waste materials* in an environmentally appropriate manner. (C6.7 P&C V4)

Indicator 10.12.1 (Adapted from IGI 10.12.1) Collection, clean-up, transportation, and disposal of all waste materials* is done in an environmentally appropriate way that conserves environmental values identified per Indicator 6.1.1.
Guidance: *Waste materials* include: lubricants, anti-freeze, hydraulic fluids, containers, *pesticides*, herbicides, paints, batteries, fuels and oils, trash, abandoned equipment, etc.

*(Existing US Indicator 6.7.a)* The forest owner or manager, and employees and contractors, have the equipment and training necessary to or respond to hazardous spills.

*(Existing US Indicator 6.7.b)* In the event of a hazardous material spill, the forest owner or manager immediately contains the material and engages qualified personnel to perform the appropriate removal and remediation, as required by applicable law and regulations.

**Indicator 10.12.2 (Existing US Indicator 6.7.c)** In localities where *best management practices* or *local laws* and regulations do not fully address the provisions of this Indicator*, hazardous materials and fuels are stored in leak-proof containers in designated storage areas, that are outside of *riparian management zones*, and away from other ecologically sensitive features, until they are used or transported to an approved off-site location for disposal. There is no evidence of persistent fluid leaks from equipment or of recent groundwater or surface water contamination.

Intent: “Off-site” refers to a designated disposal location formally recognized and/or designated by a local* government authority.
Annex A: Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Adaptive management</td>
<td>A systematic process of continually improving management policies and practices by learning from the outcomes of existing measures. [Source: Based on World Conservation Union (IUCN). Glossary definitions as provided on IUCN website.]</td>
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<tr>
<td>Administrative</td>
<td>Administrative rules, procedures, or regulations that have been promulgated to carry out laws.</td>
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<td>requirements</td>
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<tr>
<td>Aesthetics</td>
<td>The (attractive) appearance or sound of something. [Source: Oxford English Dictionary]</td>
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<tr>
<td>Affected stakeholder</td>
<td>Any person, group of persons or entity that is or has a high probability of being subject to the effects of the activities of a Management Unit*. Examples include but are not restricted to (for example in the case of downstream landowners), persons, groups of persons or entities located in the neighborhood of the Management Unit*. The following are examples of affected stakeholders*:&lt;br&gt;• local communities*&lt;br&gt;• indigenous peoples*&lt;br&gt;• workers*&lt;br&gt;• forest* dwellers&lt;br&gt;• neighbors&lt;br&gt;• downstream landowners&lt;br&gt;• local processors&lt;br&gt;• local businesses&lt;br&gt;• tenure and use rights holders*, including landowners, organizations authorized or known to act on behalf of affected stakeholders*, for example social and environmental NGOs, labor unions, etc. [Source: FSC-STD-01-001 V5-2]</td>
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<tr>
<td>Age class</td>
<td>Intervals into which the age range of a tree crop is divided; also, the trees falling into such an interval.</td>
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<tr>
<td>Alien species</td>
<td>See non-native species*.</td>
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<tr>
<td>Applicable law</td>
<td>Means applicable to The Organization* as a legal person or business enterprise in or for the benefit of the Management Unit* and those laws which affect the implementation of the FSC Principles and Criteria. This includes any combination of statutory law (Parliamentary-approved) and case law (court interpretations), subsidiary regulations, associated administrative procedures, and the national constitution (if present) which invariably takes legal precedence over all other legal instruments. [Source: FSC-STD-01-001 V5-2]</td>
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<tr>
<td><strong>Aquatic habitat</strong></td>
<td><em>Habitat</em> for plants and animals that has surface water essential to an organism's survival, as differentiated from <em>wetland</em> habitats* characterized by saturated <em>soils</em> or <em>riparian areas</em> zones*. Examples include streams, ponds, and <em>vernal ponds</em>.</td>
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<tr>
<td><strong>Baseline conditions</strong></td>
<td>Ecological, economic, and social conditions at the beginning of a planning or management cycle.</td>
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<tr>
<td><strong>Best Available Information</strong></td>
<td>Data, facts, documents, <em>expert</em> opinions, and results of field surveys or consultations with <em>stakeholders</em> that are most credible, accurate, complete, and/or pertinent and that can be obtained through <em>reasonable</em> effort and cost, subject to the scale* and intensity* of the <em>management activities</em> and the <em>precautionary approach</em>. [Source: FSC-STD-60-004 V2-0]</td>
</tr>
<tr>
<td><strong>Best management practices (BMPs)</strong></td>
<td>A practice considered by the state or authorized tribe to be the most effective means (technological, economic, and institutional) of preventing or reducing environmental or social impacts, including for water, roads, runoff, etc. <em>BMPs Best management practices</em> are generally identified by states or <em>tribal</em> entities and, in the case of <em>water quality</em>, approved by the US EPA.</td>
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<tr>
<td><strong>Binding agreement</strong></td>
<td>A deal or pact, written or not, which is compulsory to its signatories and enforceable by law. Parties involved in the agreement do so freely and accept it voluntarily. [Source: FSC-STD-60-004 V2-0]</td>
</tr>
<tr>
<td><strong>Biological control agents</strong></td>
<td>Living organisms used to eliminate or regulate the population of other living organisms. [Source: Based on FSC-STD-01-001 V4-0 and World Conservation Union (IUCN). Glossary definitions as provided on IUCN website.]</td>
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<tr>
<td><strong>Biological diversity (biodiversity)</strong></td>
<td>The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic <em>ecosystems</em> and the ecological complexes of which they are a part; this includes diversity within <em>species</em>, between <em>species</em> and of <em>ecosystems</em>. [Source: Convention on Biological Diversity 1992, Article 2]</td>
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<tr>
<td><strong>Buffer/buffer zones</strong></td>
<td>A strip of vegetation that is left or managed to reduce the impact of a treatment or action of one area on another. Examples include <em>riparian management zones</em>, <em>conservation</em> <em>buffers</em> around rare bird nests, and...</td>
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<td><strong>conservation</strong> buffers* around cultural sites of significance. See also Riparian Management Zone and Streamside Management Zone.</td>
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<tr>
<td><strong>Catastrophic natural disturbances</strong></td>
<td>The natural events that occur infrequently (i.e., on a time scale of decades or centuries), and that significantly alter the forest* at the landscape* level.</td>
</tr>
<tr>
<td><strong>Certification Certifying Body (CB)</strong></td>
<td>An FSC-accredited body that performs third-party auditing auditor services.</td>
</tr>
<tr>
<td><strong>Chain of custody (CoC)</strong></td>
<td>The path taken by raw materials, processed materials, finished products, and co-products from the forest* to the consumer or (in the case of reclaimed/recycled materials or products containing them) from the reclamation site to the consumer, including each stage of processing, transformation, manufacturing, storage and transport where progress to the next stage of the supply chain involves a change of ownership (independent custodianship) of the materials or the product. [Source: FSC-STD-40-004 V2-1] The channel through which products are distributed from their origin in the forest to their end-use.</td>
</tr>
<tr>
<td><strong>Chemical pesticides</strong></td>
<td>Synthetically produced pesticides*. [Source: FSC-POL-30-001 V3-0] The range of insecticides, fungicides, fertilizers and hormones that are used in forest management.</td>
</tr>
</tbody>
</table>
| **Child labor** | “Oppressive child labor*” means a condition of employment under which (1) any employee under the age of sixteen years is employed by an employer (other than a parent or a person standing in place of a parent employing his own child or a child in his custody under the age of sixteen years in an occupation other than manufacturing or mining or an occupation found by the Secretary of Labor to be particularly hazardous for the employment of children between the ages of sixteen and eighteen years or detrimental to their health or well-being in any occupation, or (2) any employee between the ages of sixteen and eighteen years is employed by an employer in any occupation which the Secretary of Labor shall find and by order declare to be particularly hazardous for the employment of children between such ages or detrimental to their health or well-being; but oppressive child labor* shall not be deemed to exist by virtue of the employment in any occupation of any person with respect to whom the employer shall have on file an unexpired certificate issued and held pursuant to regulations of the Secretary of Labor certifying that such...
A person is above the oppressive child-labor age. The Secretary of Labor shall provide by regulation or by order that the employment of employees between the ages of fourteen and sixteen years in occupations other than manufacturing and mining shall not be deemed to constitute oppressive child labor if and to the extent that the Secretary of Labor determines that such employment is confined to periods which will not interfere with their schooling and to conditions which will not interfere with their health and well-being. [Source: The Fair Labor Standards Act of 1938, as amended; 29 U.S.C. 201]

**Consultation Question:**

Are there any inherent conflicts between this US legislative definition of ‘child labor’ and the associated definitions of ‘hazardous work,’ ‘heavy work,’ ‘light work,’ ‘minimum age,’ and ‘worst forms of child labor,’ which are all derived from International Labour Organization materials?

<p>| <strong>Climate change adaptation strategies</strong> | Climate change adaptation strategies associated with ecosystems and biodiversity are generally categorized into three types: resistance, resilience, and facilitated transformation. Resistance strategies maintain the current system for as long as possible even as changes occur. Resilience strategies help a system cope with a changing climate, particularly through maintenance of critical ecological processes. Facilitated transformation strategies facilitate transitions within a system to better align the system with anticipated future climate conditions. |
| <strong>Coarse woody debris</strong> | Dead trees left standing or fallen and the remains of branches on the ground in forests. |
| <strong>Collective bargaining</strong> | A voluntary negotiation process between employers or employers’ organization and workers’ organization, with a view to the regulation of terms and conditions of employment by means of collective agreements. [Source: ILO Convention 98, Article 4] |
| <strong>Complaint</strong> | The expression of dissatisfaction or concern by any person or organization presented to The Organization, relating to its management activities or its conformity with the FSC Principles and Criteria, where a response is expected. [Source: Adapted from FSC-STD-60-004 V1-0 definition of dispute and Merriam-Webster] |
| <strong>Confidential information</strong> | Private facts, data and content that, if made publicly available, might put at risk The Organization, its business interests or its relationships with stakeholders, clients and competitors. [Source: FSC-STD-60-004 V2-0] |</p>
<table>
<thead>
<tr>
<th><strong>Conflicts between the Principles and Criteria and laws</strong></th>
<th>Situations where it is not possible to comply with the <em>Principles</em> and <em>Criteria</em> and a law at the same time. [Source: FSC-STD-01-001 V5-2]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Connectivity</strong></td>
<td>A measure of how connected or spatially continuous a corridor, network, or matrix is. The fewer gaps, the higher the <em>connectivity</em>. Related to the structural <em>connectivity</em> concept; functional or behavioral <em>connectivity</em> refers to how connected an area is for a process, such as an animal moving through different types of <em>landscape</em> elements. Aquatic <em>connectivity</em> deals with the accessibility and transport of materials and organisms, through groundwater and surface water, between different patches of aquatic <em>ecosystems</em> of all kinds. [Source: Based on R.T.T. Forman. 1995. <em>Land Mosaics</em>. The Ecology of Landscapes and Regions. Cambridge University Press, 632pp]</td>
</tr>
<tr>
<td><strong>Conservation/Protection</strong></td>
<td>These words are used interchangeably when referring to <em>management activities</em> designed to maintain the identified environmental or cultural values in existence <em>long-term</em>. <em>Management activities</em> may range from zero or minimal interventions to a specified range of appropriate interventions and activities designed to maintain, or compatible with maintaining, these identified values. [Source: FSC-STD-01-001 V5-2]</td>
</tr>
<tr>
<td><strong>Conservation Areas Network</strong></td>
<td>Those portions of the <em>Management Unit</em> for which <em>conservation</em> is the primary and, in some circumstances, exclusive objective; such areas include <em>Representative Sample Areas</em>, <em>conservation zones</em>, protection areas, <em>connectivity</em> areas, and <em>High Conservation Value Areas</em>. [Source: FSC-STD-60-004 V2-0]</td>
</tr>
<tr>
<td><strong>Conservation zone</strong></td>
<td>Areas designated within which maintenance and/or <em>restoration</em> of such <em>species</em> and community type(s) are the highest priority. Harvesting timber, <em>other management activities</em>, and other uses are allowed within <em>conservation zones</em> if they protect and/or enhance do not detract from maintenance or enhancement of the <em>species</em> or community type(s).</td>
</tr>
<tr>
<td><strong>Conversion</strong></td>
<td>The modifications to the structure and dynamics of a <em>forest</em> as a result of <em>management activities</em>, resulting in a significant reduction in the complexity of the forest system; or the transformation of a <em>forest</em> into a permanently non-<em>forested</em> area; or the transformation of a <em>natural forest</em> or <em>semi-natural forest</em> into a <em>plantation</em>.</td>
</tr>
<tr>
<td><strong>Core area</strong></td>
<td>The portion of each <em>Intact Forest Landscape</em> designated to contain the most important cultural and ecological values. <em>Core areas</em> are managed to exclude industrial activity. <em>Core areas</em> meet or exceed the definition of <em>Intact Forest Landscape</em>. [Source: FSC-STD-60-004 V2-0]</td>
</tr>
</tbody>
</table>
| **Credible scientific analysis** | Scientific opinions supported by data and explanations in articles published by peer-reviewed professional journals that deal with the natural or social
<table>
<thead>
<tr>
<th><strong>FSC® NATIONAL FOREST STEWARDSHIP STANDARD OF THE UNITED STATES (V2-0 D1-0)</strong></th>
</tr>
</thead>
</table>

| sciences and **judges-judged** to be relevant to the matter in **questions** question. Credible scientific analysis may also include non-peer reviewed studies when conducted by **experts** qualified **professionals** in accordance with accepted scientific methods. **Scientific credibility**, as it applies to this Standard, is based on a body of scientific work and on the **judgement** of experienced professionals. |

<table>
<thead>
<tr>
<th><strong>Criterion (pl. Criteria)</strong></th>
<th>A means of judging whether or not a <strong>Principle</strong>* (of forest* stewardship) has been fulfilled. [Source: FSC-STD-01-001 V5-2]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Critical</strong></td>
<td>The concept of criticality or fundamentality in Principal 9 and HCVs* relates to irreplaceability and to cases where loss or major damage to this HCV* would cause serious prejudice or suffering to <strong>affected stakeholders</strong>*. An <strong>ecosystem</strong> service is considered to be critical (HCV 4*) where a disruption of that service is likely to cause, or poses a threat of, severe negative impacts on the welfare, health or survival of <strong>local communities</strong>*, on the environment, on HCVs*, or on the functioning of significant infrastructure (roads, dams, buildings etc.). The notion of criticality here refers to the importance and risk for natural resources and environmental and socio-economic values. [Source: FSC-STD-01-001 V5-2]</td>
</tr>
<tr>
<td><strong>Culmination of mean annual increment</strong></td>
<td>The peak average yearly growth in volume of trees or a forest* stand, calculated by dividing the total volume by the age of the stand.</td>
</tr>
<tr>
<td><strong>Culturally appropriate</strong></td>
<td>Means/approaches for outreach to target groups that are in harmony with the customs, values, sensitivities, and ways of life of the target audience. [Source: FSC-STD-60-004 V2-0]</td>
</tr>
<tr>
<td><strong>Cumulative effects/impacts</strong></td>
<td>Individual consequences of an action or repeated actions, which may or may not be observable, that reinforce one another as they occur over time until they cross a threshold and manifest as a stronger outcome than any of the individual consequences would be by themselves.</td>
</tr>
<tr>
<td><strong>Customary law</strong></td>
<td>Interrelated sets of <strong>customary rights</strong>*.</td>
</tr>
<tr>
<td><strong>Customary rights</strong></td>
<td>Rights which result from a long series of habitual or customary actions, constantly repeated, which have, by such repetition and by uninterrupted acquiescence, acquired the force of a law within a geographical or sociological unit. [Source: FSC-STD-01-001 V5-2]</td>
</tr>
</tbody>
</table>

NOTE: Due to the well-established legal structure in the United States for property rights, the rights of individuals and communities are established within the legal system, including any **customary rights***, with the potential exception of **customary rights** held by **Native American*** groups. |

| **Customary tenure** | Rights that result from a long series of habitual or customary actions, constantly repeated, which have, by such repetition and by uninterrupted |
acquiescence, acquired the force of a law within a geographical or sociological unit.

Desired future conditions

A description of the forest* and/or resource conditions that are believed necessary if goals and objectives are fully achieved. Desired future condition* typically includes forest* attributes such as forest* structure, age class* distribution, species composition, standing timber quality, and stand* arrangement. For the purposes of this Standard, managing for desired future conditions* implies that all other requirements in this Standard have been fully met.

Discrimination

Includes - a) any distinction, exclusion or preference made on the basis of race, color, sex, religion, political opinion, national extraction, social origin, sexual orientation, gender identity, which has the effect of nullifying or impairing equality of opportunity or treatment in employment or occupation; b) such other distinction, exclusion or preference which has the effect of nullifying or impairing equality of opportunity or treatment in employment or occupation as may be determined by the Member concerned after consultation with representative employers’ and workers’ organizations* where such exist, and with other appropriate bodies. [Source: Adapted from ILO Convention 111, Article1). “Sexual orientation” and “gender identity” were added to the definition provided in Convention 111, as they have been identified as an additional type of discrimination which may occur]

Dispute

A dispute* exists when the parties have exhausted consultative avenues to resolve a complaint* or other their differences and the following occurs: a person or persons whose rights* or interests are directly affected by The forest manager’s Organization’s* activities gives written notice to The manager Organization*, indicating that they wish to pursue a dispute* resolution process and specifying which rights* or interests are affected, by which management activities*, in which location, and what modifications are considered appropriate to avoid or mitigate impacts on the rights* or interests; OR, the manager The Organization* gives written notice to the disputant, in order to trigger the dispute* resolution process and bring closure to the disagreement.

Dispute of substantial duration

Dispute* that continues for more than twice as long as the predefined timelines in the FSC System (this is, for more than 6 months after receiving the complaint*, based on FSC-STD-20-001). [Source: FSC-STD-60-004 V2-0]

Dispute of substantial magnitude

Dispute* that involves one or more of the following:
- Where the negative impact of management activities* on local communities* legal* rights or on Native American* groups’ legal*
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>rights or customary rights*</td>
<td>is of such a scale that it cannot be reversed or mitigated</td>
</tr>
<tr>
<td>Where the negative impact</td>
<td>of management activities* to the environment or social welfare is of such a scale and context that it cannot be reversed or mitigated</td>
</tr>
<tr>
<td>Physical violence</td>
<td></td>
</tr>
<tr>
<td>Significant destruction of</td>
<td>property</td>
</tr>
<tr>
<td>Presence of law enforcement</td>
<td>or armed security contractors;</td>
</tr>
<tr>
<td>Acts of intimidation</td>
<td>against workers* and affected stakeholders*</td>
</tr>
<tr>
<td>A dispute* can become</td>
<td>of substantial magnitude if it is of substantial duration*, implies a significant number of interests and has a significant negative impact to the forest* resource/value</td>
</tr>
<tr>
<td>A complaint* can immediately become a dispute of substantial magnitude*</td>
<td>if it represents a credible, imminent, and irreparable threat to or from any of the above</td>
</tr>
</tbody>
</table>

Disputes of substantial magnitude* are not common and represent the exception. [Source: Adapted from FSC-STD-60-004 V2-0]

<table>
<thead>
<tr>
<th>Term</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Downed woody debris</td>
<td>Wood from fallen trees or branches that lie on the forest floor, where it provides important microhabitats and performs the various functions of nutrient cycling. Downed woody debris is commonly categorized as large and/or coarse or fine woody debris.</td>
</tr>
<tr>
<td>Ecological community</td>
<td>An area defined by its dominant vegetation using the International Classification of Ecological Communities; an Association or Alliance as used by NatureServe, or a Natural Community as used by some state “Natural Heritage Programs” (actual organization or agency name may vary by state).</td>
</tr>
<tr>
<td>Economic viability</td>
<td>The capability of developing and surviving as a relatively independent social, economic or political unit. Economic viability may require but is not synonymous with profitability [Source: Based on the definition provided on the website of the European Environment Agency].</td>
</tr>
<tr>
<td>Ecosystem (also Ecological system)</td>
<td>A dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit. [Source: Convention on Biological Diversity 1992, Article 2]</td>
</tr>
<tr>
<td></td>
<td>A group of plant community types that tend to co-occur within landscapes with similar ecological processes, substrates, and/or environmental gradients.</td>
</tr>
<tr>
<td></td>
<td>NOTE: A given terrestrial ecological system* will typically manifest itself in a landscape* at intermediate geographic scales of tens to thousands of hectares acres and persist for 50 or more years. Therefore, these units are intended to encompass common successional* pathways for a given</td>
</tr>
</tbody>
</table>
| **Ecosystem services** | The benefits people obtain from ecosystems*. These include:  
- provisioning services such as food, forest* products and water;  
- regulating services such as regulation of floods, drought, land degradation, air quality, climate and disease;  
- supporting services such as soil* formation and nutrient cycling; and  
- cultural services and cultural values such as recreational, spiritual, religious and other non-material benefits.  


Functions performed by natural ecosystems that benefit human society, such as hydrological services (water supply, filtration, flood control), protection of the soil, breakdown of pollutants, recycling of wastes, habitat for economically important wild species (such as fisheries), and climate regulation. |
<p>| <strong>Employment and occupation</strong> | Includes access to vocational training, access to employment and to particular occupations, and terms and conditions of employment. [Source: ILO Convention 111, Article 1.3] |
| <strong>Endangered species</strong> | A species* officially designated by the US Fish and Wildlife Service, the National Marine Fisheries Service, or a state wildlife program agency as having its continued existence threatened over all or a significant portion of its range. |
| <strong>Endemic species</strong> | A species* that is unique to a particular water body*, place, or region. |
| <strong>Engaging/engagement</strong> | The process by which The Organization* communicates, consults and/or provides for the participation of interested and/or affected stakeholders* ensuring that their concerns, desires, expectations, needs, rights* and opportunities are considered in the establishment, implementation and updating of the management plan*. [Source: FSC-STD-01-001 V5-2] |
| <strong>Environmental Impact Assessment (EIA)</strong> | Systematic process used to identify potential environmental and social impacts of proposed projects, to evaluate alternative approaches, and to design and incorporate appropriate prevention, mitigation, management, and monitoring measures. [Source: Based on Environmental impact assessment, guidelines for FAO field projects. Food and agriculture organization of the United Nations (FAO). Rome, FSC-STD-01-001 V5-2] |</p>
<table>
<thead>
<tr>
<th>Erosion</th>
<th>The displacement of soil* from one place to another by any means, including water, wind, gravity, logging, and road building.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Even-aged silviculture</td>
<td><em>Silvicultural</em> systems in which <em>stands</em> of trees of roughly the same age and size are grown and harvested simultaneously. Even-aged systems may involve intermediate entries that remove some trees before the final, or &quot;regeneration&quot;, harvest, when a new even-aged class of trees is established. A regeneration harvest is designed to remove all or most of the trees within a defined <em>age/size class</em>, or to convert a <em>stand</em> containing trees having a variety of ages, sizes, or <em>species</em> to a more uniform <em>stand</em>. The timing of the regeneration harvest is termed the “rotation age” of the timber stand. Even-aged <em>silvicultural</em> systems include clearcut, seed-tree, shelterwood, two-age <em>silviculture</em>, and variable retention systems. Even-aged <em>stands</em> may contain more than one <em>age/size class</em> of trees on the site at any one time for <em>silvicultural</em> reasons or environmental enhancement. For instance, a variable retention system typically retains 10%–25% of the vegetative cover present before harvest on-site and intermixed with the new even-aged stand, to maintain structures and functions important for wildlife. Classic shelterwood and seed-tree cuts retain mature trees from the harvested <em>stand</em> during the establishment of the next crop of trees, but these are taken out during a “removal” harvest to leave one <em>age/size class</em> for future management.</td>
</tr>
</tbody>
</table>
| Expert | An expert:  
• has knowledge or skill that is specialized and profound as the result of substantial practical or academic experience; and/or  
• is a recognized authority on a topic by virtue of published material on this topic, their stature within the professional community, and the broadly recognized related experience; and/or  
• possesses a wealth of experience on a topic, possibly through practical means including the accumulation of traditional knowledge.  
[Source: Based on FSC-GUI-60-009 V1-0]  
**NOTE:** Some requirements for consultation with experts may be fulfilled through use of experts employed by the Organization. Some requirements specifically indicate the need for the expert to be independent of the Organization. |
<p>| Externalities | The positive and negative impacts of activities on stakeholders that are not directly involved in those activities, or on a natural resource or the environment, which do not usually enter standard cost accounting systems, such that the market prices of the products of those activities do not reflect the full costs or benefits. [Source: FSC-STD-01-001 V5-2] |</p>
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fair compensation</td>
<td>Remuneration that is proportionate to the magnitude and type of services rendered by another party or of the harm that is attributable to the first party. [Source: FSC-STD-01-001 V5-2]</td>
</tr>
<tr>
<td>Family forest (also Small forest)</td>
<td>A forest Management Unit* up to 2,470 acres in size, as defined by the FSC US's Family Forest Program (SLIMF) Streamlined Certification Procedures (FSC-POL-20-101 at <a href="http://www.fscus.org/documents/">http://www.fscus.org/documents/</a>).</td>
</tr>
<tr>
<td>Fertilizer</td>
<td>Mineral or organic substances, most commonly N, P2O5 and K2O, which are applied to soil for the purpose of enhancing plant growth. [Source: FSC-STD-60-004 V2-0]</td>
</tr>
<tr>
<td>Forced or compulsory labor</td>
<td>Work or service exacted from any person under the menace of any penalty and for which the said person has not offered himself/herself voluntarily. [Source: ILO Convention 29, Article 2.1]</td>
</tr>
</tbody>
</table>
| Forest | (1) The property or portions of a property that is under certificate or being assessed for certification; the corresponding FSC International nomenclature is 'Defined Forest Area.'  
(2) Generally, an ecosystem* characterized by tree cover; more particularly, a plant community* predominantly of trees and other woody vegetation that is growing closely together. |
| Forest-dependent | Local communities* for whom forests* provide sites and/or resources that are fundamental for satisfying their basic necessities (i.e., livelihoods, health, nutrition, water); that is, the sites and/or resources provided are irreplaceable (i.e., alternatives are not readily accessible or affordable), and loss of or damage to them would cause serious suffering of, or prejudice to, the community as a whole. |
| Forest integrity | The composition, dynamics, functions and structural attributes of a natural forest. |
| Forest management/manager | The person(s) responsible for the operational management of the forest resource and of the enterprise, as well as the management system and structure, and the planning and field operations. |
| Forest owner | A person, group, corporation, public agency or other legal entity with legal title to a forest property. |
| FSC member (FSC membership) | a person or organization who is a member of the Forest Stewardship Council. This is different from a certificate holder, who maintains a Forest Management or Chain of Custody certificate. |
| Fragmentation | The process of dividing habitats* into smaller patches, which results in the loss of original habitat*, loss in connectivity*, reduction in patch size, and increasing isolation of patches. Fragmentation* is considered to be one of the single most important factors leading to loss of native species*. |
especially in *forested* landscapes*, and one of the primary causes of the present extinction crisis. In reference to *Intact Forest Landscapes*, the *fragmentation* of concern is understood to be that caused by human industrial activities. [Source: Adapted from: Gerald E. Heilman, Jr. James R. Strittholt Nicholas C. Slosser Dominick A. Dellasala, *BioScience* (2002) 52 (5): 411-422]

| Free, Prior, and Informed Consent (FPIC) | A legal condition whereby a person or community can be said to have given consent to an action prior to its commencement, based upon a clear appreciation and understanding of the facts, implications and future consequences of that action, and the possession of all relevant facts at the time when consent is given. *Free, prior, and informed consent* includes the right to grant, modify, withhold or withdraw approval. [Source: Based on the Preliminary working paper on the principle of Free, Prior and Informed Consent of Indigenous Peoples (...) (E/CN.4/Sub.2/AC.4/2004/4 8 July 2004) of the 22nd Session of the United Nations Commission on Human Rights, Sub-commission on the Promotion and Protection of Human Rights, Working Group on Indigenous Populations, 19–23 July 2004]

| Gap Analysis Project (GAP)/GAP status | The US Geological Survey’s Gap Analysis Project (GAP) develops data and tools to support the science of determining how well are we protecting common plants and animals. One of these tools is the Protected Areas Database of the United States (PAD-US), which identifies the status of protected* areas represented in the database through GAP Status Codes (i.e., GAP status), which are a measure of management intent to conserve biodiversity*, and are defined as:

- **GAP Status 1**: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a natural state within which disturbance events (of natural type, frequency, and intensity, and legacy) are permitted to proceed without interference or are mimicked through management.
- **GAP Status 2**: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a primarily natural state, but which may receive uses or management practices that degrade the quality of existing natural communities, including suppression of natural disturbance.
- **GAP Status 3**: An area having permanent protection from conversion of natural land cover for most of the majority of the area, but subject to extractive uses of either a broad, low-intensity type (e.g., logging, Off Highway Vehicle recreation) or localized intense type (e.g., mining). It also confers protection to federally listed endangered and threatened species throughout the area.
- **GAP Status 4**: There are no known public or private institutional mandates or legally recognized easements or deed restrictions held by the managing entity. **Lack of irrevocable easement or mandate** to prevent conversion of natural habitat types to anthropogenic habitat types. The area generally allows conversion to unnatural land cover throughout or management intent is unknown. **Allows for intensive use throughout the tract. Also includes those tracts for which the existence of such restrictions or sufficient information to establish a higher status is unknown.**

<table>
<thead>
<tr>
<th>Gender equality</th>
<th>Gender equality* or gender equity means that people of all gender identities have equal conditions for realizing their full human rights and for contributing to, and benefiting from, economic, social, cultural and political development. [Source: Adapted from FAO, IFAD and ILO workshop on ‘Gaps, trends and current research in gender dimensions of agricultural and rural employment: differentiated pathways out of poverty’, Rome, 31 March to 2 April 2009.]</th>
</tr>
</thead>
</table>
| Genetically modified organisms (GMO) | Biological organisms that have had their genetic material artificially altered in a way that does not occur naturally by mating or natural recombination or both. [Source: Based on FSC-POL-30-602 FSC Interpretation on GMO (Genetically Modified Organisms)]
Examples of techniques covered by this definition include:
• recombinant DNA techniques using viral or bacterial vectors
• the direct introduction of DNA into an organism (e.g., by microinjection)
• cell fusion or hybridization
Clones, hybrids formed by natural pollination processes, or the products of tree selection, grafting, vegetative propagation, or tissue culture are not GMO*, unless produced by GMO* techniques. |
| Genotype | The genetic constitution of an organism. [Source: FSC-STD-01-001 V5-2] |
| Good faith | The principle of good faith* implies that the parties make every effort to reach an agreement, conduct genuine and constructive negotiations, avoid delays in negotiations, respect concluded agreements, and give sufficient time to discuss and settle disputes*. [Source: Adapted from FSC Policy Motion 40/2017] |
| Habitat | (1) Those parts of the environment (aquatic, terrestrial, and atmospheric) often typified by a dominant plant form or physical characteristic, on which an organism depends, directly or indirectly, in order to carry out its life processes. (2) The specific environmental conditions in which organisms thrive in the wild. |
| **Harvest unit** | A spatial unit of *forest* management that defines a single *harvest silvicultural* prescription.  

**NOTE:** The landing is not a part of the *harvest unit*. |
| --- | --- |
| **Hazardous work (in the context of child labor)** | Any work which is likely to jeopardize children’s physical, mental or moral health, should not be undertaken by anyone under the age of 18 years. Hazardous *child labor* is work in dangerous, or unhealthy conditions that could result in a child being killed or injured/maimed (often permanently) and/or made ill (often permanently) as a consequence of poor safety and health standards and working arrangements. In determining the type of hazard *child labor* referred to under (Article 3(d) of the Convention No 182, and in identifying where they exist, consideration should be given, inter alia, to:  
- Work which exposes children to physical, psychological or sexual abuse;  
- Work underground, under water at dangerous heights or in confined spaces;  
- Work with dangerous machinery, equipment and tools, or which involves the manual handling or transport of heavy loads;  
- Work in unhealthy environment which may, for example, expose children to hazardous substances, agents or processes, or to temperatures, noise levels, or vibrations damaging to their health;  
- Work under particularly difficult conditions such as work for long hours or during the night or work where the child is unreasonably confined to the premises of the employer.  
| **Heavy work (in the context of child labor)** | Refers to work that is likely to be harmful or dangerous to children’s health.  
[Source: FSC report on generic criteria and indicators based on ILO Core Conventions principles, 2017] |
| **High Conservation Value Forests (HCVF)** | **High Conservation Value Forests possess one or more of the following attributes:**  
1. Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values (e.g., endemism, endangered species, refugia).  
2. Forest areas containing globally, regionally or nationally significant large landscape level forests, contained within, or containing the management unit, where viable populations of |
<table>
<thead>
<tr>
<th>High Conservation Value (HCV)</th>
<th>Any of the following values:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>HCV 1:</strong> Species diversity. Concentrations of <em>biological diversity</em>(^<em>) including <em>endemic species</em>(^</em>), and rare, threatened or endangered species(^<em>), that are <em>significant</em>(^</em>) at global, regional or national levels.</td>
</tr>
<tr>
<td></td>
<td><strong>HCV 2:</strong> <em>Landscape</em>(^<em>)-level ecosystems(^</em>) and mosaics. <em>Intact Forest Landscapes</em>(^<em>), large <em>landscape</em>(^</em>)-level ecosystems(^<em>) and <em>ecosystem</em>(^</em>) mosaics that are <em>significant</em>(^<em>) at global, regional or national levels, and that contain viable populations of the great majority of the naturally occurring <em>species</em>(^</em>) in natural patterns of distribution and abundance.</td>
</tr>
<tr>
<td></td>
<td><strong>HCV 3:</strong> <em>Ecosystems</em>(^<em>) and <em>habitats</em>(^</em>). Rare, threatened, or endangered ecosystems(^<em>), <em>habitats</em>(^</em>) or <em>refugia</em>(^*).</td>
</tr>
<tr>
<td></td>
<td><strong>HCV 4:</strong> <em>Critical</em>(^<em>) <em>ecosystem services</em>(^</em>). Basic <em>ecosystem services</em>(^<em>) in <em>critical</em>(^</em>) situations, including protection of water catchments and control of <em>erosion</em>(^<em>) of vulnerable <em>soils</em>(^</em>) and slopes.</td>
</tr>
<tr>
<td></td>
<td><strong>HCV 5:</strong> Community needs. Sites and resources fundamental for satisfying the basic necessities of <em>local communities</em>(^<em>) or <em>Indigenous Peoples</em>(^</em>) (for example for livelihoods, health, nutrition, water), identified through <em>engagement</em>(^<em>) with these communities or <em>Indigenous Peoples</em>(^</em>).</td>
</tr>
<tr>
<td></td>
<td><strong>HCV 6:</strong> Cultural values. Sites, resources, <em>habitats</em>(^<em>) and <em>landscapes</em>(^</em>) of global or national cultural, archaeological or historical...</td>
</tr>
<tr>
<td><strong>High Conservation Value Areas (HCVA)</strong></td>
<td>Zones and physical spaces which possess and/or are needed for the existence and maintenance of identified High Conservation Values*. [Source: FSC-STD-60-004 V2-0]</td>
</tr>
<tr>
<td><strong>Historic conditions</strong></td>
<td>Ecological conditions and processes existing prior to substantial modern human disturbance of the site, based on Best Available Information*.</td>
</tr>
<tr>
<td><strong>High grading (high grade logging)</strong></td>
<td>A tree-removal practice in which only the best quality, most valuable timber trees are removed, often without regenerating new tree seedlings or removing the remaining poor quality and suppressed understory trees and, in doing so, degrading the ecological health and commercial value of the forest*. High grading stands as a counterpoint to sustainable resource management. [Source: Based on Glossary of Forest Management Terms. North Carolina Division of Forest Resources. March 2009] The practice of removing higher quality trees in favor of removing lower quality trees.</td>
</tr>
</tbody>
</table>
| **ILO Core (Fundamental) Conventions** | These are labor standards that cover fundamental principles and rights at work: freedom of association and the effective recognition of the right to collective bargaining; the elimination of all forms of forced or compulsory labor; the effective abolition of child labor*; and the elimination of discrimination in respect of employment and occupation. The eight Fundamental Conventions are:  
  - Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87);  
  - Right to Organise and Collective Bargaining Convention, 1949 (No. 98);  
  - Forced Labour Convention, 1930 (No. 29);  
  - Abolition of Forced Labour Convention, 1957 (No. 105);  
  - Minimum Age Convention, 1973 (No. 138);  
  - Worst Forms of Child Labour Convention, 1999 (No. 182);  
  - Equal Remuneration Convention, 1951 (No. 100);  
  - Discrimination (Employment and Occupation) Convention, 1958 (No. 111)  
  [Source: FSC report on generic criteria and indicators based on ILO Core Conventions principles, 2017] |
### ILO Declaration on Fundamental Principles and Rights at Work and Its Follow-up, adopted by the International Labor conference at its Eighty-sixth Session, Geneva, 18th June 1998 (Annex revised 15 June 2010)

A resolute reaffirmation of ILO principles (art 2) which declares that all Members, even if they have not ratified the Conventions in question, have an obligation, arising from the very fact of membership in the organization, to respect, to promote and to realize, in good faith and in accordance with the Constitution, the principles concerning the fundamental rights which are the subject of those Conventions, namely:

- Freedom of association and the effective recognition of the right to collective bargaining*
- The elimination of all forms of forced or compulsory labor*
- The effective abolition of child labor*; and
- The elimination of discrimination in respect of employment and occupation.

[Source: FSC report on generic criteria and indicators based on ILO Core Conventions principles, 2017]

### Indicator

A quantitative or qualitative variable which can be measured or described, and which provides a means of judging whether a Management Unit* complies with the requirements of an FSC Criterion*. Indicators* and the associated thresholds thereby define the requirements for responsible forest* management at the level of the Management Unit* and are the primary basis of forest* evaluation. [Source: FSC- STD-01-002, October 2017]

A specific requirement in the FSC-US forest management standard, subordinate to the Principles and Criteria.

### Indigenous Peoples

People and groups of people that can be identified or characterized as follows:

- The key characteristic or criterion is self-identification as Indigenous Peoples* at the individual level and acceptance by the community as their member;
- Historical continuity with pre-colonial and/or pre-settler societies;
- Strong link to territories and surrounding natural resources;
- Distinct social, economic or political systems;
- Distinct language, culture and beliefs;
- Form non-dominant groups of society;
- Resolve to maintain and reproduce their ancestral environments and systems as distinctive peoples and communities.

The existing descendants of the peoples who inhabited the present territory of a country wholly or partially at the time when persons of a different culture or ethnic origin arrived there from other parts of the world, overcame them and by conquest, settlement, or other means reduced them to a non-dominant or colonial situation; people who today live more in conformity with their particular social, economic, and cultural customs and traditions than with the institutions of the country of which they now form a part. In the US, Indigenous peoples are recognized members of American Indian tribes, Native American Nations, Bands, Rancherias, and Tribal Corporations, recognized by those particular tribes. They may include groups that have not been officially recognized by the Federal government. Members may include persons who have either married into or been adopted by Native American families.

<table>
<thead>
<tr>
<th>Industrial activity</th>
<th>Industrial forest* and resource management activities* such as road building, mining, dams, urban development and timber harvesting. [Source: FSC-STD-60-004 V2-0]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure</td>
<td>In the context of forest* management, roads, bridges, culverts, log landings, quarries, impoundments, buildings and other structures required in the course of implementing the management plan*. [Source: FSC-STD-60-004 V2-0]</td>
</tr>
<tr>
<td>Intact Forest Landscape</td>
<td>A territory within today's global extent of forest* cover which contains forest* and non-forest* ecosystems* minimally influenced by human economic activity, with an area of at least 500 km² (50,000 ha) and a minimal width of 10 km (measured as the diameter of a circle that is entirely inscribed within the boundaries of the territory). [Source: Intact Forests / Global Forest Watch. Glossary definition as provided on Intact Forest website. 2006-2014]</td>
</tr>
<tr>
<td>Integrated pest management (IPM)</td>
<td>Careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations, encourage beneficial populations and keep pesticides* and other interventions to levels that are economically justified and reduce or minimize risks to human and animal health and/or the environment. IPM* emphasizes the growth of a healthy forest* with the least possible disruption to ecosystems* and encourages natural pest control mechanisms. [Source: Based on FAO International Code of Conduct on Pesticide Management] A pest or weed management strategy that focuses on long-term prevention or suppression of pest or weed problems through a combination of techniques such as encouraging biological control, use of resistant varieties, and adoption of alternate cultural practices to make the habitat less-conducive to pest development.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
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<td>-------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Intellectual property</td>
<td>Practices as well as knowledge, innovations, and other creations of the mind. [Source: Based on the Convention on Biological Diversity, Article 8(j); and World Intellectual Property Organization. What is Intellectual Property? WIPO Publication No. 450(E)]</td>
</tr>
<tr>
<td>Intensity</td>
<td>A measure of the force, severity, or strength of a management activity or other occurrence affecting the nature of the activity’s impacts. [Source: FSC-STD-01-001 V5-2]</td>
</tr>
</tbody>
</table>
| Interested stakeholder                    | Any person, group of persons, or entity that has shown an interest, or is known to have an interest, in the activities of a Management Unit. The following are examples of interested stakeholders.  
  - Conservation organizations, for example environmental NGOs;  
  - Labor (rights) organizations, for example labor unions;  
  - Human rights organizations, for example social NGOs;  
  - Local development projects;  
  - Local governments;  
  - National government departments functioning in the region;  
  - FSC National Offices;  
  - Experts on particular issues, for example High Conservation Values. [Source: FSC-STD-01-001 V5-2] |
| Intermittent stream                       | A mapped or unmapped stream with a defined channel, banks, and bed that typically flows for less than 12 months of the year and/or that flows below ground for portions of its length. |
| Internationally accepted scientific protocol | A predefined science-based procedure which is either published by an international scientific network or union or referenced frequently in the international scientific literature. [Source: FSC-STD-01-001 V5-2] |
| Invasive species                          | A species capable of rapid reproduction and spatial expansion, which may displace more specialized native species and/or is difficult to eradicate. Invasive species can alter ecological relationships among native species and can affect ecosystem function and human health. Invasive species are of particular ecological concern if they are not native exotic to the area in question. |
| Lands and territories                     | For the purposes of the Principles and Criteria these are lands or territories that Indigenous Peoples or local communities have traditionally owned, or customarily used or occupied, and where access to natural resources is currently vital to the sustainability of their cultures and livelihoods. [Source: Based on World Bank safeguard OP 4.10 Indigenous Peoples, section 16 (a). July 2005]  
  In the context of Native Americans, this term includes ancestral territory and tribal territory, and is, therefore, not limited to the lands reserved for |
the settlement of *Native Americans* and/or other currently recognized *tribal* lands.

| **Landscape** | For the purposes of this Standard, the term “landscape” refers to a delineation of land area that captures similar environmental and ecological conditions including climate, geology, soils, water, and biology. USFS-defined Ecological Sections (Cleland 2005, update of Bailey/USFS) or smaller units are recommended for use to define *landscape* for purposes of RSA* establishment and assessment* ([discussion and map available at http://www.natureserve.org/explorer/eodist.html#ecoregions](http://www.natureserve.org/explorer/eodist.html#ecoregions)). For many other purposes, “landscapes” will often occur at smaller scales than ecological sections. In some contexts, “landscape” as used in this Standard simply refers to consideration of the area surrounding a particular site. In developing the description of “landscape” *The Organization* considers the *Management Unit*’s* ability to influence and impact the surrounding area, as well as the potential for other owners to influence and impact the area that the *Management Unit* falls within. Some larger *Management Units* may represent the full *landscape* that needs to be considered, while other typically smaller *Management Units* may occur within a broader *landscape* that should be considered. |
| **Landscape values** | *Landscape values* can be visualized as layers of human perceptions overlaid on the physical *landscape*. Some *landscape values*, like economic, recreation, subsistence value, or visual quality are closely related to physical *landscape* attributes. Other *landscape values* such as intrinsic or spiritual value are more symbolic in character and are influenced more by individual perception or social construction than physical *landscape* attributes. [Source: Based on website of the Landscape Value Institute] For the purposes of Criterion 6.8 and Criterion 10.10, these values are focused on how the mosaic of *ecosystems*, age structure, *species* composition, *species* distribution, *fragmentation*, and other ecological conditions occur across the *landscape*. |
| **Large forest (also large ownership)** | When used in reference to an ownership or *Management Unit*, it is an area a forest greater than 50,000 acres in size. |
| **Late successional** | Forest in old-growth or mature seral stages. |
| **Legacy tree** | A tree, usually mature or remnant of growth, that provides a biological legacy. For the purposes of this Standard, it is an individual old tree that functions as a refuge or provides other important structural habitat values. |
| **Legal** | In accordance with primary legislation (*national laws* or *local laws*) or secondary legislation (subsidary regulations, decrees, orders, etc.). “Legal” also includes rule-based decisions made by *legally competent* agencies where such decisions flow directly and logically from the laws and regulations. Decisions made by *legally competent* agencies may not be *legal* if they do not flow directly and logically from the laws and regulations and if they are not rule-based but use administrative discretion. [Source: FSC-STD-01-001 V5-2]  

**NOTE:** In the United States, treaties and reserved treaty rights are legally binding. |
| **Legal registration** | National or *local* *legal* license or set of permissions to operate as an enterprise, with *rights* to buy and sell products and/or services commercially. The license or permissions can apply to an individual, a privately-owned enterprise, or a publicly owned corporate entity. The *rights* to buy and sell products and/or services do not carry the obligation to do so, so *legal* registration applies also to *Organizations* operating a *Management Unit* without sales of products or services; for example, for unpriced recreation or for *conservation* of *biodiversity* or *habitat*. [Source: FSC-STD-01-001 V5-2] |
| **Legal status** | The way in which the *Management Unit* is classified according to law. In terms of tenure, it means the category of tenure, such as communal land or leasehold or freehold or State land or government land, etc. If the *Management Unit* is being converted from one category to another (for example, from State land to communal indigenous land) the status includes the current position in the transition process. In terms of administration, *legal status* could mean that the land is owned by the nation as a whole, is administered on behalf of the nation by a government department and is leased by a government Ministry to a private sector operator through a concession. [Source: FSC-STD-01-001 V5-2] |
| **Legally competent** | Mandated in law to perform a certain function. [Source: FSC-STD-01-001 V5-2] |
| **Light work** | *National laws* or regulations may permit the employment or work of persons 13 to 15 years of age on *light work* which is a) not likely to be harmful to their health or development; and b) not such as to prejudice their attendance at school, their participation in vocational orientation, or training programs approved by the competent authority or their capacity to benefit from the instruction received. [Source: ILO Convention 138, Article 7] |
| **Living wage** | See *Fair compensation*. |
| **Local** | In or within reasonable proximity to the *Management Unit* to have a significant impact on the economy or the environmental values of the |
| **Management Unit***, or to be significantly affected by the *management activities* or the biophysical aspects of the *Management Unit*. On *public lands*, this also includes all citizens of the relevant entity (county, city, state, or nation).

Adjacent to the forest, or in other ways show significant impact from forest operations. On public lands, this also includes all citizens of the relevant entity (county, city, or state).

**Local communities**

Communities of any size that are in or adjacent to the *Management Unit*, and also those that are close enough to have a significant impact on the economy or the environmental values of the *Management Unit* or to have their economies, *rights* or environments significantly affected by the *management activities* or the biophysical aspects of the *Management Unit*. On *public lands*, this also includes all citizens of the relevant entity (county, city, state, or nation). [Source: adapted from FSC-STD-01-001 V5-2]

Those communities that lie either within or adjacent to the FMU, or in other ways show significant impact from forest operations. On public lands, this also includes all citizens of the relevant entity (county, city, or state).

**Local laws**

The whole suite of primary and secondary laws (acts, ordinances, statutes, decrees) which is limited in application to a particular geographic district within a national territory, as well as secondary regulations, and tertiary administrative procedures (rules/requirements) that derive their authority directly and explicitly from these primary and secondary laws. *Tribal* laws are included within this definition of local laws. Laws derive authority ultimately from the Westphalian concept of sovereignty of the Nation State. [Source: FSC-STD-01-001 V5-2]

All legal norms given by organisms of government whose jurisdiction is less than the national level, such as departmental, municipal and customary norms.

**Long-term**

The time-scale of the *forest* owner or manager as manifested by the objectives of the *management plan*, the rate of harvesting, and the commitment to maintain permanent *forest* cover. The length of time involved will vary according to the context and ecological conditions, and will be a function of how long it takes a given *ecosystem* to recover its natural structure and composition following harvesting or disturbance or to produce mature or primary conditions. This may extend beyond the duration of a certificate. [Source: Adapted from FSC-STD-01-002 V1-0 FSC Glossary of Terms (2009)]
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Management activity</strong></td>
<td>Any or all operations, processes, or procedures associated with managing a forest*, including but not limited to: planning, consultation, harvesting, access construction and maintenance, silvicultural* activities (planting, site preparation, tending), monitoring, assessment, and reporting. [Source: FSC Canada National Boreal Standard 2004]</td>
</tr>
<tr>
<td><strong>Management objective</strong></td>
<td>Specific management goals, practices, outcomes, and approaches established to achieve the requirements of this Standard. [Source: FSC-STD-60-004 V2-0]</td>
</tr>
<tr>
<td><strong>Management plan</strong></td>
<td>The collection of documents, reports, records and maps that describe, justify and regulate the activities carried out by any manager, staff, or Organization* within or in relation to the Management Unit*, including statements of objectives and policies. [Source: FSC-STD-01-001 V5-2]</td>
</tr>
<tr>
<td><strong>Management strategy</strong></td>
<td>A plan of action for how a management objective* or other desired outcome will be achieved.</td>
</tr>
</tbody>
</table>
| **Forest Management Unit** | A spatial area or areas submitted for FSC certification with clearly defined boundaries managed to a set of explicit long term* management objectives* which are expressed in a management plan*. This area or areas include(s):  
- all facilities and area(s) within or adjacent to this spatial area or areas under legal* title or management control of, or operated by or on behalf of The Organization*, for the purpose of contributing to the management objectives*; and  
- all facilities and area(s) outside, and not adjacent to this spatial area or areas and operated by or on behalf of The Organization*, solely for the purpose of contributing to the management objectives*.  
[Source: FSC-STD-01-001 V5-2]  
A unit of forest under the FSC certificate managed under a single management plan. A forest management unit may consist of single or multiple parcels. |
<p>| <strong>Minimum age (of employment)</strong> | Is not less than the age of finishing compulsory education, and which in any case, should not be less than 15 years. However, a country, whose economy and educational facilities are insufficiently developed, may initially specify a minimum age of 14 years. National laws* may also permit the employment of 13-15-year-olds in light work* which is neither prejudicial to school attendance, nor harmful to a child’s health or development. The ages 12-13 can apply for light work* in countries that specify a minimum age of 14. [Source: ILO Convention 138, Article 2] |
| <strong>Mid-Sized Forest Medium forest</strong> | When used in reference to an ownership or Management Unit*, it is an area A forest between 2,475 and 50,000 acres in size. |</p>
<table>
<thead>
<tr>
<th><strong>Native American</strong></th>
<th>Of or relating to the <em>Indigenous Peoples</em> of the conterminous United States (not including Alaska, Hawaii, or any US territories).</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>National laws</strong></td>
<td>The whole suite of primary and secondary laws (acts, ordinances, statutes, decrees), which is applicable to a national territory, as well as secondary regulations, and tertiary administrative procedures (rules/requirements) that derive their authority directly and explicitly from these primary and secondary laws. [Source: FSC-STD-01-001 V5-2]</td>
</tr>
<tr>
<td><strong>Native species</strong></td>
<td><em>Species</em>, subspecies, or lower taxon, occurring within its natural range (past or present) and dispersal potential (that is, within the range it occupies naturally or could occupy without direct or indirect introduction or care by humans). [Source: Convention on Biological Diversity (CBD). Invasive Alien Species Programme. Glossary of Terms as provided on CBD website] Species that naturally occur within the forest community type; endemic to the area.</td>
</tr>
<tr>
<td><strong>Natural conditions</strong></td>
<td>For the purposes of the <em>Principles</em> and <em>Criteria</em> and any applications of restoration techniques, the term “more natural conditions” provides for managing sites to favor or restore <em>native species</em> and associations of <em>native species</em> that are typical of the locality, and for managing these associations and other environmental values so that they form <em>ecosystems</em> typical of the locality. [Source: Adapted from FSC-STD-01-001 V5-2]</td>
</tr>
<tr>
<td><strong>Natural disturbance regime</strong></td>
<td>Disturbance processes such as wind, fire, insects, and pathogens that are characteristic of the <em>forest</em> <em>ecosystem</em>, site, and region. Disturbance regimes are typically characterized by the range of extent, intensity, and return interval of a similar event expected for a given site. For the purposes of this Standard, non-<em>catastrophic natural disturbance</em> should be the focus of analyzing for natural disturbance.</td>
</tr>
<tr>
<td><strong>Natural forest</strong></td>
<td><em>Natural forests</em> include <em>old growth</em> and <em>primary forests</em> as well as managed <em>forests</em> where most of the principal characteristics and key elements of native <em>ecosystems</em>, such as complexity, structure, wildlife, and <em>biological diversity</em>, are present. See also <em>semi-natural forest</em>.</td>
</tr>
<tr>
<td><strong>Natural hazards</strong></td>
<td>Disturbances that can present risks to social and environmental values in the <em>Management Unit</em> but that may also comprise important <em>ecosystem</em> functions; examples include drought, flood, fire, landslide, storm, avalanche, etc. [Source: FSC-STD-60-004 V2-0]</td>
</tr>
<tr>
<td><strong>Non-native Exotic species (exotic plant species)</strong></td>
<td>A <em>species</em>, subspecies or lower taxon, introduced outside its natural past or present distribution; includes any part, gametes, seeds, eggs, or propagules of such <em>species</em> that might survive and subsequently reproduce. [Source: Convention on Biological Diversity (CBD), Invasive</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
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<tr>
<td>------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Alien Species Programme definition for ‘alien species.’ | Glossary of Terms as provided on CBD website
An introduced species not native or endemic to the area in question. For the purpose of this Standard, non-native plant species are those not native to the forest community type that would naturally be found there. |
| Non-timber forest products (NTFP)        | All forest products other than timber derived from the Management Unit*, including other materials obtained from trees such as resins and leaves, as well as any other plant and animal products. [Source: adapted from FSC-STD-01-001 V5-2] |
| Obligatory code of practice              | A manual or handbook or other source of technical instruction which The Organization* must implement by law. [Source: FSC-STD-01-001 V5-2] |
| Occupational disease                     | Any disease contracted as a result of an exposure to risk factors arising from work activity. [Source: International Labour Organization (ILO). Bureau of Library and Information Services. ILO Thesaurus as provided on ILO website] |
| Occupational injuries                    | Any personal injury, disease or death resulting from an occupational accident. [Source: International Labour Organization (ILO). Bureau of Library and Information Services. ILO Thesaurus as provided on ILO website] |
| Old growth                               | (1) The oldest seral stage in which a plant community* is capable of existing on a site, given the frequency of natural disturbance events, or (2) a very old example of a stand* dominated by long-lived early- or mid-seral species*. The onset of old growth* varies by forest* community and region. Depending on the frequency and intensity of disturbances, and site conditions, old-growth* forests will have different structures, species* compositions, age distributions, and functional capacities than younger forests. Old-growth* stands* and forests* include:
Type 1 Old Growth: 3 acres or more that have never been logged and that display old-growth* characteristics.
Type 2 Old Growth: 20 acres or more that have been logged, but which retain significant old-growth* structure and functions. |
<p>| The Organization                         | The person or entity holding or applying for certification and therefore responsible for demonstrating compliance with the requirements upon which FSC certification is based. [Source: FSC-STD-01-001 V5-2] |</p>
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pathogen</td>
<td>Any agent that causes disease, especially microorganisms, such as bacteria or fungi.</td>
</tr>
<tr>
<td>Perennial stream</td>
<td>A mapped or unmapped stream with a defined channel, banks, and bed that contains water flows year-round. Sub-surface reaches located downstream of the upper most point of perennial flow (i.e., perennial initiation point) shall be treated as perennial.</td>
</tr>
<tr>
<td>Pesticide</td>
<td>Any substance, or mixture of substances of chemical or biological ingredients intended for repelling, destroying or controlling any pest, or regulating plant growth. [Source: FAO International Code of Conduct on Pesticide Management]</td>
</tr>
<tr>
<td></td>
<td>NOTE: This definition includes insecticides, rodenticides, acaricides, molluscicides, larvaecides, nematicides, fungicides, and herbicides.</td>
</tr>
<tr>
<td></td>
<td>A substance used to kill or control harmful, competitive, or destructive organisms.</td>
</tr>
<tr>
<td>Planning unit</td>
<td>The specific geographic area for which a sustained yield harvest level is being calculated. Planning units should generally be comprised of land that contains similar or commonly associated forest types. Depending upon the scale of ownership, planning units may range in size from a single stand (for example, small, private landowners) to entire watersheds. A planning unit may include the entire Forest Management Unit if not larger than watersheds.</td>
</tr>
<tr>
<td>Plant community</td>
<td>See ecological community*.</td>
</tr>
<tr>
<td>Plantation</td>
<td>Forest areas lacking most of the principal characteristics and key elements of native ecosystems as defined by FSC-approved national and regional standards of forest stewardship, which result from the human activities of either planting, sowing or intensive silvicultural treatments (source: FSC-STD-01-001). The use of establishment or subsequent management practices in planted forest stands that perpetuate the stand-level absence of most principle characteristics and key elements of native forest ecosystems will result in a stand being classified as a plantation. A forest area established by planting or sowing with, using either native species or non-native species, often with one or few species, regular spacing, and even ages, and which lacks most of the principal characteristics and key elements of native forest ecosystems. The use of establishment or subsequent management practices in planted forest stands that perpetuate the stand-level absence of most principle characteristics and key elements of native forest ecosystems will result in a stand being classified as a plantation.</td>
</tr>
</tbody>
</table>
characteristics and key elements of native forest* ecosystems* will result in a stand being classified as a plantation*. The details addressing ecological conditions used in stand*-level classification are outlined in related guidance. Except for highly extenuating circumstances, the following are classified as plantations*:

- cultivation of exotic species non-native species* or recognized exotic non-native sub-species*, except when used in conformance with Indicator 10.2.2;
- block plantings of cloned trees resulting in a major reduction of within-stand* genetic diversity compared to what would be found in a natural stand* of the same species*; and
- cultivation of any tree species* in areas that were naturally non-forested* ecosystems*.

[Source: adapted from FSC-STD-01-001 V5-2]

**NOTE:** Guidance for differentiating between natural forest* or semi-natural forest* and plantation* is provided in Annex I.

<table>
<thead>
<tr>
<th>Pre-harvest</th>
<th>The diversity, composition, and structure of the forest* or plantation* prior to felling timber and appurtenant activities such as road building. [Source: FSC-STD-60-004 V2-0]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precautionary principle/approach</td>
<td>An approach requiring that when the available information indicates that management activities* pose a threat of severe or irreversible damage to the environment or a threat to human welfare, The Organization* will take explicit and effective measures to prevent the damage and avoid the risks* to welfare, even when the scientific information is incomplete or inconclusive, and when the vulnerability and sensitivity of environmental values are uncertain. [Source: Based on Principle 15 of Rio Declaration on Environment and Development, 1992, and Wingspread Statement on the Precautionary Principle of the Wingspread Conference, 23–25 January 1998] This principle establishes that a lack of information does not justify the absence of management measures. On the contrary, management measures should be established in order to maintain the conservation of the resources (<a href="http://www.fao.org/docrep/006/X8498E/x8498e04.htm">http://www.fao.org/docrep/006/X8498E/x8498e04.htm</a>); an approach to the management of risk when scientific knowledge is incomplete (<a href="http://www.croplifeasia.org/biotechnology-glossary.html">http://www.croplifeasia.org/biotechnology-glossary.html</a>).</td>
</tr>
<tr>
<td>Primary forest</td>
<td>Forest* ecosystems* that have retained a forest ecosystem with the principal characteristics and key elements of native ecosystems*, such as complexity, structure, and diversity, an abundance of mature trees, and have remained that is relatively undisturbed by human activity (i.e., lack visible indications of human economic activity). Human impacts in such</td>
</tr>
</tbody>
</table>
forest areas have normally been limited to low levels of hunting, fishing, and very limited, non-commercial harvesting of forest products. Such ecosystems are also referred to as "mature," "old-growth," or "virgin" forests. See also old growth.

NOTE: In fire- or other disturbance-dominated ecosystems, primary forest may not always be dominated by mature trees, or any trees at all, but instead may present as a mosaic of older and younger stands.

Principle
An essential rule or element; in FSC’s case, of forest stewardship. [Source: FSC-STD-01-001 V5-2]

Protected areas
A portion Portions of the forest of special biological, cultural, or historical significance that is are designated, mapped, and managed principally to protect its their biological, cultural, or historic attributes. Only management activities (including logging) implemented to achieve for any purpose other than ecological improvements are prohibited allowed in protected areas.

Protection
See Conservation.*

Public land forest
Land Forestland held in government ownership in trust for the citizens of a city, county or parish, state, or nation. For the purpose of requirements that are specific to “public lands”, tribal lands are excluded from this definition, even though the US federal government has a trust responsibility to tribes for the management of tribal lands. For the purpose of this Standard, public land refers to non-federal public land.

Publicly available
In a manner accessible to or observable by people generally. [Source: Collins English Dictionary, 2003 Edition]

Rare ecological community (including plant community)
Those ecological communities* that have been identified by state or federal agencies or natural heritage databases to be rare, consistent with the parameters for determining RTE rare, threatened, and endangered species*.

Rare species
See rare, threatened, and endangered species*

Rare, threatened, and endangered species (RTE species)
Species* (including plants, animals, and other organisms) that are federally-listed (i.e., by the US Fish and Wildlife Service or National Marine Fisheries Service) or state-listed (i.e., by state natural heritage or other state agencies) as threatened, endangered, or sensitive; and species that are listed by the Natural Heritage Database or NatureServe as critically imperiled, imperiled, or vulnerable. This includes all G1—G3 and S1—S2 species. Some S3-ranked species, including all S3 species that are listed as candidates for federal or state listing, will also be considered rare. Other S3 species may be considered rare based on the assessment by the landowner or manager conducted under per Indicator 6.1.1 Criterion 6.1.
| **Ratified** | The process by which an international law, convention or agreement (including multilateral environmental agreement) is legally* approved by a national legislature or equivalent legal mechanism, such that the international law, convention, or agreement becomes automatically part of national law* or sets in motion the development of national law* to give the same legal* effect. [Source: FSC-STD-01-001 V5-2] |
| **Reasonable** | Judged to be fair or appropriate to the circumstances or purposes, based on general experience. [Source: Shorter Oxford English Dictionary] |
| **Refugia** | (plural) Habitat* in which a population can persist and from which it can disperse when the surrounding habitat* becomes suitable for it to live in; locations and habitats* that support populations of organisms that are limited to a small fragment of their previous geographic range. |
| **Regeneration harvest** | Any removal of trees intended to assist regeneration already present or to make regeneration possible. |
| **Representative Sample Areas (RSAs)** | Portions of the Management Unit* delineated for the purpose of conserving* or restoring* viable* examples of an ecosystem* that would naturally occur in that ecological region. RSA* may also:
  a. serve to conserve* or restore* an under-represented ecological condition (i.e., forest* successional* phases, ecological communities); and/or
  b. serve as a set of conservation zones* or refugia* for species*, communities, and/or community types not addressed in other Criteria* of this Standard.
[Source: adapted from FSC-STD-60-004 V2-0]  
Ecologically viable representative samples designated to serve one or more of three purposes: 1) To establish and/or maintain an ecological reference condition; or 2) To create or maintain an under-represented ecological condition (i.e., includes samples of successional phases, forest types, ecosystems, and/or ecological communities; or 3) To serve as a set of protected areas or refugia for species, communities and community types (e.g. developmental stages) not captured in other Criteria of this Standard (e.g. to prevent common ecosystems or components from becoming rare). |
<p>| <strong>Resilience</strong> | The ability of a system to maintain key functions and processes in the face of stresses or pressures by either resisting or adapting to change. Resilience* can be applied to both ecological systems* and social systems. [Source: IUCN World Commission on Protected Areas (IUCN-WCPA). 2008. Establishing Marine Protected Area Networks – Making it Happen. Washington D.C.: IUCN-WCPA National Oceanic and Atmospheric Administration and The Nature Conservancy.] |</p>
<table>
<thead>
<tr>
<th><strong>Restore (Restoration)</strong></th>
<th>The process of modifying or repairing a habitat* or ecosystem* to introduce or reintroduce composition, structures, and functions that are native to the site.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Restoration plantation (Restoration planting)</strong></td>
<td>A stand established through artificial regeneration that will be managed with a central goal of returning a site to a natural forest condition.</td>
</tr>
<tr>
<td><strong>Retention</strong></td>
<td>Living vegetation, including trees, shrubs, and herbaceous species*, that is retained during even-aged and two-aged regeneration harvests.</td>
</tr>
<tr>
<td><strong>Rights</strong></td>
<td>In the context of access rights and use rights*, “rights” is used to reference legal* rights and customary rights* held by Native American* groups, and legal* rights held by all other rights holders*.</td>
</tr>
<tr>
<td><strong>Rights holder</strong></td>
<td>Persons and groups, including Native American groups*, traditional peoples*, and local communities*, with legal* rights or, in the case of Native American* groups, with legal* or customary rights*, including treaty rights, to land and/or resources within the Management Unit*. For rights* held by Native American groups*, traditional peoples*, and forest-dependent* local communities*, free, prior, and informed consent* is required to determine management decisions. [Source: Adapted from FSC-STD-60-004 V2-0]</td>
</tr>
<tr>
<td><strong>Riparian area zone</strong></td>
<td>Interface between upland communities and a water body* often delineated and managed to conserve the plant and wildlife habitat* characteristics of the area and to protect* adjacent aquatic habitats* and ecosystems*. Riparian areas* vary in width according to biotic and abiotic characteristics and may be wider than a riparian management zone* (RMZ), which is designed to protect* water quality* and aquatic habitat*. A zone of interaction between aquatic and terrestrial ecosystems along streams, lakes, wetlands, and other water bodies. Riparian areas both influence water bodies and are influenced by them, and include both plant and wildlife habitats that are influenced by the proximity to aquatic ecosystems.</td>
</tr>
<tr>
<td><strong>Riparian management zone (RMZ)</strong></td>
<td>Areas next to rivers, streams, wetlands*, vernal pools*, seeps and springs, lake and pond shorelines, karst, and other hydrologically sensitive areas where management practices are modified to protect* water quality* and aquatic habitats* by minimizing non-point source pollution to surface waters. In addition to their primary purpose of protecting* water quality*, these areas also provide similar ecological functions to riparian areas*. A strip of land, adjacent to streams, lakes, wetlands, and other water bodies managed to conserve plant and wildlife habitats characteristic of the</td>
</tr>
<tr>
<td>Riparian zone and to protect adjacent aquatic habitats and water quality. An RMZ may vary in width depending on the habitat values specific to the site (e.g., stream or wetland type) and may be wider than a stream management zone designed solely to protect water quality and aquatic habitat.</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td></td>
</tr>
<tr>
<td>Riparian zone</td>
<td>See riparian area*.</td>
</tr>
<tr>
<td>Risk</td>
<td>The probability of an unacceptable negative impact arising from any activity in the Management Unit* combined with its seriousness in terms of consequences. [Source: FSC-STD-01-001 V5-2]</td>
</tr>
<tr>
<td>Rutting</td>
<td>The creation of depressions made by tires and treads of mechanical equipment such as trucks, skidders, tractors, all-terrain vehicles (ATV), and other equipment. Rutting may occur in the general harvest area and on facilities such as roads and skid trails. Ruts may result from harvest operations or other uses such as recreational ATV use.</td>
</tr>
<tr>
<td>Scale</td>
<td>A measure of the extent to which a management activity* or event affects an environmental value or a Management Unit*, in time or space. An activity with a small or low spatial scale* affects only a small proportion of the forest* each year, an activity with a small or low temporal scale* occurs only at long intervals. [Source: FSC-STD-01-001 V5-2]</td>
</tr>
<tr>
<td>Scale, intensity, and risk</td>
<td>See individual definitions for scale*, intensity*, and risk*.</td>
</tr>
<tr>
<td>Semi-natural forest</td>
<td>A forest* ecosystem* with many of the characteristics of native ecosystems* present. Semi-natural forests* exhibit a history of human disturbance (e.g., harvesting or other silvicultural* activities), are very common in the United States, and include a considerable amount of unmanaged, and most of the managed, forest* land other than plantations*.</td>
</tr>
</tbody>
</table>
| Significant | For the purposes of Principle 9, HCV 1, 2 and 6* there are three main forms of recognizing significance*.
- A designation, classification or recognized conservation* status, assigned by an international agency such as IUCN or Birdlife International;
- A designation by national or regional authorities, or by a responsible national conservation* organization, on the basis of its concentration of biodiversity*;
- A voluntary recognition by the manager, owner or Organization*, on the basis of available information, or of the known or suspected presence of a significant* biodiversity* concentration, even when not officially designated by other agencies. |
<table>
<thead>
<tr>
<th><strong>Silviculture (Silvicultural)</strong></th>
<th>The art and science of controlling the establishment, growth, composition, health and quality of forests* and woodlands to meet the targeted diverse needs and values of landowners and society on a sustainable basis. [Source: Nieuwenhuis, M. 2000. Terminology of Forest Management. IUFRO World Series Vol. 9. IUFRO 4.04.07 SilvaPlan and SilvaVoc]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Slope</strong></td>
<td>The incline of the land surface measured in degrees from the horizontal or in percent as determined by the number of units change in elevation per 100 of the same measurement units; also characterized by the compass direction in which it faces.</td>
</tr>
<tr>
<td><strong>Small forest</strong></td>
<td>When used in reference to an ownership or Management Unit*, See see Family Forest*.</td>
</tr>
<tr>
<td><strong>Snag</strong></td>
<td>A standing dead tree.</td>
</tr>
<tr>
<td><strong>Soil</strong></td>
<td>Earth material (rock) so modified by physical, chemical, and biological agents that it will support rooted plants. Soil* also includes organic material, biotic communities, and species* that live in the ground and that contribute to ecological productivity.</td>
</tr>
<tr>
<td><strong>Special areas</strong></td>
<td>Areas with important ecological or cultural values where timber management is modified to conserve those values.</td>
</tr>
<tr>
<td><strong>Species</strong></td>
<td>The main category of taxonomic classification into which genera are subdivided, comprising a group of similar interbreeding individuals sharing a common morphology, physiology, and reproductive process.</td>
</tr>
<tr>
<td><strong>Species composition</strong></td>
<td>The species* that occur on a site or within an ecosystem* at any point in time.</td>
</tr>
<tr>
<td><strong>Stakeholder</strong></td>
<td>See affected stakeholder* and interested stakeholder*.</td>
</tr>
<tr>
<td><strong>Stand</strong></td>
<td>Plant communities*, particularly of trees, sufficiently uniform in composition, constitution, age, spatial arrangement, or condition to be distinguished from adjacent communities; also, may delineate a silvicultural* or management entity.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>------</td>
<td>------------</td>
</tr>
<tr>
<td>Streamside management zone (SMZs)</td>
<td>See riparian management zone*. Land and vegetation areas next to lakes and streams where management practices are modified to protect water quality, fish, and other aquatic resources. These areas are complex ecosystems that provide food, habitat and movement corridors for both water and land communities. Also, because these areas are next to water, SMZs help minimize nonpoint source pollution to surface waters. In the Appalachia, Ozark-Ouachita, Southeast, Mississippi Alluvial Valley, Southwest, Rocky Mountain, and Pacific Coast regions, there are requirements for minimum SMZ widths and explicit limitations on the activities that can occur within those SMZs. These are outlined as requirements in Appendix E.</td>
</tr>
<tr>
<td>Structural diversity</td>
<td>The diversity in a plant community* that results from the variety of physical forms of the plants within the community (such as the layering of vegetation into groundcover, shrub layer, as well as understory, mid-story, and overstory trees).</td>
</tr>
<tr>
<td>Succession</td>
<td>Progressive changes in species* composition and forest* community structures caused by natural processes (non-human) over time.</td>
</tr>
<tr>
<td>Sustained yield harvest levels</td>
<td>Harvest levels and rates that do not exceed growth over successive harvests, that contribute directly to achieving desired future conditions*, and that do not diminish the long-term* ecological integrity and productivity of the site. The sustained yield harvest level specific to the certified FMU is based on calculations made according to Indicator 5.6.a in this Standard.</td>
</tr>
<tr>
<td>Tenure (also long-term tenure, legal tenure, tenure claim)</td>
<td>Socially-defined agreements held by individuals or groups, recognized by legal* statutes or customary practice, regarding the “bundle of rights* and duties” of ownership, holding, access and/or usage of a particular unit of land or the associated resources therein (such as individual trees, plant species*, water, minerals, etc.). [Source: Adapted from World Conservation Union (IUCN). Glossary definitions provided on IUCN website]</td>
</tr>
<tr>
<td>Threat</td>
<td>An indication or warning of impending or likely damage or negative impacts. [Source: Based on Oxford English Dictionary]</td>
</tr>
<tr>
<td>Threatened species</td>
<td>Any species* officially designated by a state or federal agency, which is likely to become endangered within the foreseeable future throughout all or a significant portion of its range.</td>
</tr>
<tr>
<td>Timber harvesting level</td>
<td>The actual harvest quantity executed on the Management Unit*, tracked by either volume (e.g., cubic meters or board feet) or area (e.g., hectares or acres) metrics for the purpose of comparison with calculated (maximum) sustained yield harvest level*. [Source: Adapted from FSC-STD-60-004 V2-0]</td>
</tr>
<tr>
<td><strong>Traditional knowledge</strong></td>
<td>Information, know-how, skills and practices that are developed, sustained and passed on from generation to generation within a community, often forming part of its cultural or spiritual identity. [Source: Based on the definition by the World Intellectual Property Organization (WIPO). Glossary definition as provided under Policy/Traditional Knowledge on the WIPO website] Legal rights of ownership that individuals and corporations have over products of their creativity and inventiveness. In the context of Principle 3, intellectual property includes rights claimed by indigenous peoples over their traditional cultural knowledge about the use of forest species or management systems in forest operations, particularly in instances where that knowledge is commercialized.</td>
</tr>
<tr>
<td><strong>Traditional peoples</strong></td>
<td>Social groups or peoples who do not self-identify as indigenous and who affirm rights* to their lands, forests* and other resources based on long established custom or traditional occupation and use. [Source: Forest Peoples Programme (Marcus Colchester, 7 October 2009)]</td>
</tr>
<tr>
<td><strong>Transportation system</strong></td>
<td>Permanent and temporary haul roads, skid trails, and recreational trails.</td>
</tr>
<tr>
<td><strong>Tribal</strong></td>
<td>Of or relating to the Native Americans* of a particular land base.</td>
</tr>
<tr>
<td><strong>Type 1 old growth</strong></td>
<td>See old growth*.</td>
</tr>
<tr>
<td><strong>Type 2 old growth</strong></td>
<td>See old growth*.</td>
</tr>
<tr>
<td><strong>Uphold</strong></td>
<td>To acknowledge, respect, sustain and support. [Source: FSC-STD-01-001 V5-2]</td>
</tr>
<tr>
<td><strong>Use rights</strong></td>
<td>Rights* for the use of forest resources of the Management Unit* that can be defined by local custom or mutual agreements, or be prescribed by other entities holding access rights. These rights may restrict the use of particular resources to specific levels of consumption or particular harvesting techniques. [Source: FSC-STD-01-001 V5-2]</td>
</tr>
<tr>
<td><strong>Usufruct rights</strong></td>
<td>See ‘Use rights’.</td>
</tr>
<tr>
<td><strong>Vast majority</strong></td>
<td>80% of the total area of Intact Forest Landscapes* within the Management Unit* as of January 1, 2017. The vast majority* also meets or exceeds the minimum definition of Intact Forest Landscape*. [Source: FSC-STD-60-004 V2-0]</td>
</tr>
<tr>
<td><strong>Verifiable targets</strong></td>
<td>Specific goals, such as desired future forest conditions*, established to measure progress towards the achievement of each of the management objectives*. These goals are expressed as clear outcomes, such that their</td>
</tr>
<tr>
<td><strong>Vernal pool (vernal pond)</strong></td>
<td>A seasonal body of water, typically a self-contained depression, that contains species not normally found in perennial <em>water bodies</em>. <em>Vernal pool</em> types, <em>species</em>, and identification will vary by region. <em>Vernal pools</em> that occur in eastern and midwestern <em>forests</em> are characterized by a unique suite of amphibian and invertebrate <em>species</em>. In Mediterranean-type climates (i.e., wet winters and dry summers), especially on coastal terraces in southwestern California, the central valley of California, and areas west of the Sierra Mountains, the term “vernal pool” applies to shallow, seasonally flooded wet meadows with emergent hydrophytic vegetation and invertebrate <em>species</em> not found in other <em>wetland</em> types.</td>
</tr>
<tr>
<td><strong>Very limited portion</strong></td>
<td>The area affected shall not exceed 0.5% of the area of the <em>Management Unit</em> in any one year, nor affect a total of more than 5% of the area of the <em>Management Unit</em>. <em>(Previously defined in guidance for Indicator 6.10.a) less than 2% of the certified forest area on the FMU over a rolling five year period. Lands that are converted for forest management purposes (e.g. roads, landings, management buildings) are not included in calculations of this limit.</em></td>
</tr>
<tr>
<td><strong>Very limited portion of core area</strong></td>
<td>The area affected shall not exceed 0.5% of the area of the <em>core area</em> in any one year, nor affect a total of more than 5% of the area of the <em>core area</em>. <em>(Source: FSC-STD-60-004 V2-0)</em></td>
</tr>
<tr>
<td><strong>Viable</strong></td>
<td>In the context of <em>Representative Sample Areas</em>, viability means that the critical components and functions of a dynamic, stochastic system at any time remain in a domain where the future existence of these components and functions is highly probable.</td>
</tr>
<tr>
<td><strong>Visions and values</strong></td>
<td>Policies of <em>The Organization</em> that together provide a clear, specific, compelling picture of what <em>The Organization</em> will look like at a specific time in the future (i.e., vision) and the boundaries within which <em>The Organization</em> will operate in pursuit of its vision (i.e., values).</td>
</tr>
</tbody>
</table>
| **Waste materials** | Unusable or unwanted substances or by-products, such as:  
  - Hazardous waste, including chemical waste and batteries;  
  - Containers;  
  - Motor and other fuels and oils;  
  - Rubbish including metals, plastics and paper; and  
  - Abandoned buildings, machinery and equipment. *(Source: FSC-STD-60-004 V2-0)* |
| **Water bodies** | Seasonal, temporary, and permanent brooks, creeks, streams, rivers, ponds, and lakes. Water bodies* include riparian or wetland* systems, lakes, swamps, bogs and springs. [Source: FSC-STD-60-004 V2-0] |
| **Water quality** | Timing and volume of water flow and the purity of water determined by a series of standard physio-chemical parameters (e.g., turbidity, temperature, bacterial count, pH, and dissolved oxygen), or by biological parameters (e.g., community composition and functionality), as well as the incidence of disease. |
| **Wetland** | Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil* conditions. Wetlands* generally include swamps, marshes, bogs and similar areas. [Source: US Environmental Protection Agency] |
| **Woody debris** | All woody material, from whatever source, that is dead and lying on the forest* floor, where it provides important microhabitats and performs various functions of nutrient cycling. Woody debris* is commonly categorized as large and/or coarse, or fine, and both provide important but different ecological values. |
| **Workers** (workers) | All employed persons including public employees as well as “self-employed” persons. This includes part-time and seasonal employees, of all ranks and categories, including laborers, administrators, supervisors, executives, contractor employees as well as self-employed contractors and sub-contractors. [Source: ILO Convention 155, Occupational Safety and Health Convention, 1981]  
Employees of contractors, overlapping or third party licensees, as well as employees of the applicant firm and subcontractors. Both union and non-union workers are included. |
| **Workers’ organization** | Any organization of workers* for furthering and defending the interest of workers* (adapted from ILO Convention 87, Article 10). It is important to note that rules and guidance on composition of workers’ organization* vary from country to country, especially in relation to those who are considered as rank and file members, as well those who are deemed to have power to “hire and fire”. Workers’ organizations* tend to separate association between those who can “hire and fire” and those who cannot. [Source: FSC report on generic criteria and indicators based on ILO Core Conventions principles, 2017] |
| **Worst forms of child labor** | Comprises a) all forms of slavery or practices similar to slavery, such as the sale and trafficking of children, debt bondage and serfdom, and forced labor, including forced or compulsory recruitment of children for use in |
armed conflict; b) the use, procuring, or offering of a child for prostitution, for the production of pornography, or for pornographic performance; c) the use, procuring, or offering of a child for illicit activities, in particular for production and trafficking of drugs as defined in the relevant international treaties; d) work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety, or morals of children.

[Source: ILO Convention 182, Article 3]
ANNEX B: FSC US Regions Map
ANNEX C: Applicable Laws, Regulations and Nationally Ratified Agreements

Relevant international treaties/agreements to which the United States is a signatory:

- Convention on Nature Protection and Wild Life Preservation in the Western Hemisphere (1940)
- The Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat (1971)
- United Nations Conference on the Human Environment
- Convention Concerning the Protection of the World Cultural and Natural Heritage (Paris, France, 16 Nov 1972)
- International Plant Protection Convention (IPPC) (1979 Revised Text) (Rome, Italy, 1979)
- Convention on the Conservation of Migratory Species of Wild Animals (Bonn, Germany, 23 Jun 1979)
- UN Declaration on the Rights of Indigenous Peoples (UNDRIP, 2007)

The below is a federal overview; state laws also play an important role in governing forest management, permitting, species classification, and other aspects of forestry. Please also see 36 CFR—Parks, Forests, and Public Property, which is the US Forest Service’s official and complete text of agency regulations. Additionally, Title 16 of the US Code is the legal basis governing conservation and national parks and forests.

<table>
<thead>
<tr>
<th>Category</th>
<th>Name of Law/Legislation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Legal rights to harvest</td>
<td></td>
</tr>
</tbody>
</table>
| 1.1 Land tenure* and management rights | ● Forest Reserve Act of 1891  
● Organic Act (1897)  
● Bankhead-Jones Farm Tenant Act of 1937  
● Multiple-Use Sustained-Yield Act (1960)  
● National Forest Management Act (1976)  
● Cooperative Forestry Assistance Act of 1978 |
| 1.2 Concession licenses | ● 36 CFR §223: Sale and disposal of national forest system timber  
● This is also largely regulated at the state level |
## 1.3 Management and harvesting planning
- Wilderness Act (1964)
- Bankhead-Jones Farm Tenant Act of 1937
- National Forest Management Act (1976)
- Cooperative Forestry Assistance Act of 1978
- Multiple-Use-Sustained-Yield Act of 1960 (MUSYA)
- Federal Land Policy and Management Act of 1976
- 2012 USFS Planning Rule (36 CFR §219)
- Forest Service Directives: Forest Service Manuals (FSM) and Forest Service Handbooks (FSH)
- Food, Agriculture, Conservation, and Trade Act of 1990
- Forest Stewardship Act of 1990

## 1.4 Harvesting permits
- USDA Regulations: 36 CFR §251 and 36 CFR §223
- See relevant state laws governing harvesting permits

## 2. Taxes and fees
### 2.1 Payment of royalties and harvesting fees
- Knutson-Vandenber (K-V) Act of 1930
- The USFS is authorized to charge fees for many uses and services on NFS lands[1]

### 2.2 Value-added taxes and other sales taxes
*Sales tax is assessed at the state level*

### 2.3 Income and profit taxes
- Internal Revenue Code of 1986
- Relevant state taxes

## 3. Timber harvesting activities
### 3.1 Timber harvesting regulations
- Lacey Act (1900) and 2008 amendment
- Multiple-Use-Sustained-Yield Act of 1960 (MUSYA)
- Federal Land Policy and Management Act of 1976
- National Forest Management Act (1976)
- Cooperative Forestry Assistance Act of 1978
- Food, Conservation, and Energy Act of 2008
- 2012 USFS Planning Rule (36 CFR §219)
- USDA Regulations (36 CFR §251)

### 3.2 Protected sites and *species*
- Lacey Act (1900)
- Endangered Species Act (1973)
- National Historic Preservation Act (1966)
### 3.3 Environmental requirements
- Lacey Act (1900: 16 USC Ch. 53 §3371–3378)
- Bankhead-Jones Farm Tenant Act of 1937
- Clean Air Act (1970; 42 USC Ch. 85)
- National Environmental Policy Act (NEPA; 1970; 42 USC Ch. 55)
- Clean Water Act (1972)
- Endangered Species Act (1973)
- Resource Conservation and Recovery Act (1976)
- Cooperative Forestry Assistance Act of 1978
- Comprehensive Environmental Response, Compensation, and Liability Act of 1980
- 2012 USFS Planning Rule (36 CFR §219)
- Food, Agriculture, Conservation, and Trade Act of 1990
- Forest Stewardship Act of 1990

### 3.4 Health and safety
- Occupational Safety and Health (OSH) Act
- EPA Toxic Substances Control Act (TSCA) Title VI (EPA formaldehyde emission regulation)
- US Housing and Urban Development (HUD) Manufactured Home Construction and Safety Standards (24 CFR §3280)
- 49 CFR Parts 300–399: Regulations of the Federal Motor Carrier Safety Administration (FMCSA)

### 3.5 Legal* employment
- Relevant US federal and state labor and employment laws, including but not limited to:
  - Fair Labor Standards Act (FLSA)
  - Immigration and Nationality Act (INA)

### 4. Third parties’ rights

#### 4.1 Customary rights*
- Although not explicitly addressed in US regulations, the US is a signatory to the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), which addresses indigenous peoples and customary land rights.

#### 4.2 Free, Prior, and Informed Consent*
- Free, prior, and informed consent (FPIC)* is established in international law (UN Declaration on the Rights of Indigenous Peoples), to which the US is a signatory. However, FPIC* is not addressed explicitly in the US Code.
- U.S. court cases may clarify the standing of FPIC* in the US. The Supreme Court case *Montana v. United States* held “that tribes have civil jurisdiction over ‘nonmembers who enter [into] consensual relationships with [a] tribe or its members’ and over nonmembers who threaten or ‘[have] some direct effect on the
political integrity, the economic security, or the health or welfare of [a] tribe."[2]

| 4.3 Indigenous Peoples’ rights* | ● 25 USC §1–17, establishing the Bureau of Indian Affairs  
● Healthy Forest Restoration Act (2003) |

5. **Trade and transport**

| 5.1 Classification of species*, quantities, qualities | *Classification systems are assessed at the regional USFS level* |

| 5.2 Trade and transport | ● Lacey Act (1900) and 2008 amendment  
● Endangered Species Act (1973)  
● 15 CFR: Commerce and Foreign Trade |

| 5.3 Offshore trading and transfer pricing | ● Internal Revenue Code of 1982  
● Countries with transfer pricing regulations generally follow guidelines from the Organisation for Economic Cooperation and Development (OECD) guidelines  
● Although the IRS provides rules for transfer pricing, offshore trading is often difficult to regulate by national governments |

| 5.4 Custom regulations | ● Homeland Security Act of 2002 and establishment of Customs and Border Protection  
● 15 CFR: Commerce and Foreign Trade |

| 5.5 CITES | ● Lacey Act (1900) and 2008 amendment  
● Endangered Species Act (1973) |

6. **Due diligence/due care**

| 6.1 Due diligence/due care procedures | ● The Lacey Act (1900) does not contain specific due diligence requirements but requires “due care,” which has been used in cases of Lacey Act infringement[3] (i.e., it is the responsibility of those in the timber/forestry industries to ensure practices and trade do not violate the Lacey Act).  
● Penalties for violation of the Lacey Act are financial penalties and possible imprisonment. |

7. **Ecosystem services***
● Food Security Act of 1985
● Food, Conservation, and Energy Act of 2008
● Food, Agriculture, Conservation, and Trade Act of 1990
● National Forest-Dependent Rural Communities Economic Diversification Act of 1990

ANNEX D: Dispute Management System Framework

Background on the Structure of the Dispute Resolution Criteria

This Standard requires The Organization* to have a system in place to identify, prevent, and resolve disputes* related to:
- Applicable law* (Criterion 1.6);
- Working conditions while working for The Organization* (Criterion 2.6); and
- Impacts of management activities* on affected local communities*, other affected stakeholders*, and Native American* groups (Criteria 4.6 and 3.2).

FSC has developed a consistent, standardized framework to address the application of a system for managing (i.e., receiving, managing, and resolving) disputes amongst various parties and aspects of forest* management. The framework for addressing disputes* throughout the Standard is provided in the Indicators* of Criterion 1.6 and is designed to address the various types of disputes* raised by individuals, communities, and/or Native American* groups. It is intended to ensure the appropriate level of response and action required is taken by The Organization*.

FSC has applied this framework to each applicable Criterion* (1.6, 2.6, 3.2, and 4.6) and supports the use of the same framework to meet the requirements of the Indicators* in different Criteria*. The general framework steps identified in Criterion 1.6 and applied in Criteria 2.6, 3.2, and 4.6 are:

1.) A system is in place whereby people can make their disputes* known to The Organization* (Criterion 1.6.1).
2.) A general dispute resolution process (see guidance, below) is in place and needs to be adapted through culturally appropriate* engagement* prior to implementation. Disputes* are resolved in a timely manner* via this process (Criterion 1.6.2).
3.) For Principles 1, 3, and 4 only: If the dispute* is elevated to a dispute of substantial magnitude*, then the value or right at risk* must be maintained/protected* while the dispute* is being resolved (Criterion 1.6.2).
4.) Records of disputes* are kept, as well as outcomes of actions taken (Criterion 1.6.3).
5.) The Organization* manages and resolves disputes* in a manner consistent with this Annex (Criterion 1.6.4).

Where applicable laws* exist for resolving grievances and/or compensation out of court, implementation of these legal* provisions might suffice to conform with relevant Indicators* in Criteria 1.6, 2.6, 3.2, and/or 4.6.

This framework is intended to provide parties with an avenue to manage dispute* resolution in good faith* and outside of court. However, if good faith* is exhausted and the parties have not agreed on a resolution, The Organization’s* responsibility (per the above Step 2) ends. The party bringing the dispute* may: 1) discontinue their pursuit of the dispute*; 2) address the dispute* to The Organization’s* Certification Body* (if the dispute* pertains to conformance with FSC standards); 3) address the dispute* to FSC International per FSC-PRO-01-008, Processing Complaints in the FSC Certification Scheme (if the dispute* pertains to the FSC system); or 4)
seek resolution through the court system (if the *dispute* pertains to a *legal* issue). Parties with a *dispute* are always encouraged to first bring the issue forward to *The Organization* for resolution prior to enacting the *Certification Body’s* *dispute* resolution system or a *legal* procedure.

### Pertinent Definitions

<table>
<thead>
<tr>
<th><strong>Complaint</strong></th>
<th>The expression of dissatisfaction or concern by any person or organization presented to <em>The Organization</em>, relating to its <em>management activities</em> or its conformity with the FSC Principles and Criteria, where a response is expected.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dispute</strong></td>
<td>A <em>dispute</em> exists when the parties have exhausted consultative avenues to resolve a <em>complaint</em> or other differences and the following occurs: a person or persons whose <em>rights</em> or interests are directly affected by <em>The Organization’s</em> activities gives written notice to <em>The Organization</em>, indicating that they wish to pursue a <em>dispute</em> resolution process and specifying which <em>rights</em> or interests are affected, by which <em>management activities</em>, in which location, and what modifications are considered appropriate to avoid or mitigate impacts on the <em>rights</em> or interests; OR, <em>The Organization</em> gives written notice to the disputant, in order to trigger the <em>dispute</em> resolution process and bring closure to the disagreement.</td>
</tr>
<tr>
<td><strong>Dispute of substantial duration</strong></td>
<td><em>Dispute</em> that continues for more than twice as long as the predefined timelines in the FSC System (i.e., for more than 6 months after receiving the complaint, based on FSC-STD-20-001).</td>
</tr>
</tbody>
</table>
| **Dispute of substantial magnitude** | *Dispute* that involves one or more of the following:
  - Where the negative impact of *management activities* on *local communities’ legal* rights or on *Native American* groups’ *legal* rights or *customary rights* is of such a scale that it cannot be reversed or mitigated
  - Where the negative impact of *management activities* to the environment or social welfare is of such a scale and context that it cannot be reversed or mitigated
  - Physical violence
  - Significant destruction of property
  - Presence of law enforcement or armed security contractors
  - Acts of intimidation against *workers* and *affected stakeholders*
  - A *dispute* can become of substantial magnitude if it is of *substantial duration*, implies a significant number of interests and has a significant negative impact to the *forest* resource/value
  - A *complaint* can immediately become a *dispute of substantial magnitude* if it represents a credible, imminent, and irreparable threat to or from any of the above
*Disputes of substantial magnitude* are not common and represent the exception. |
| **Engaging/engagement** | The process by which *The Organization* communicates, consults, and/or provides for the participation of *interested* and/or *affected stakeholders*, ensuring that their concerns, desires, expectations, needs, rights, and |
opportunities are considered in the establishment, implementation and updating of the management plan.

| Good faith | The principle of good faith implies that the parties make every effort to reach an agreement, conduct genuine and constructive negotiations, avoid delays in negotiations, respect concluded agreements, and give sufficient time to discuss and settle disputes.
| Management Activity | Any or all operations, processes, or procedures associated with managing a forest, including but not limited to: planning, consultation, harvesting, access construction and maintenance, silvicultural activities (planting, site preparation, tending), monitoring, assessment, and reporting.

Guidance for Organizations

The following sections provide additional guidance for implementing the dispute management framework. For instance, information is provided on dispute management as it relates to Native American groups, guidance is provided for developing the dispute resolution process component of the broader dispute management framework, and several rare situations involving disputes are clarified.

Dispute Management Processes and Native American Groups

Disputes from Native American groups are normally dealt with using the structure as described above. However, when disputes from Native American groups are related to the implementation of agreements they have with The Organization, these are addressed by the other Indicators in Principle 3.

Dispute Resolution Process

The design of the dispute resolution processes and the related resolution mechanisms should consider the following:

- Account for a wide range of situations, including addressing cases of disputes of substantial magnitude.
- The use of different approaches to resolving the dispute, which may include a neutral third party to facilitate mediation, negotiation, or other conciliatory processes. These should match the level and nature of the dispute.
- Consensual or restorative processes such as mediation, negotiation, or other conciliatory processes where the goal is for the parties to reach agreement are preferred;
- Disputes are best dealt with by those closest to the situation and with the relevant parties involved. If there is a dispute of substantial magnitude, the response should be tied to the specific area that is under dispute.
- In the case of disputes arising from the infringement of Native American groups’ rights, an immediate cessation of operations should be part of the resolution mechanism, for as long as is required to establish an appropriate dispute resolution process. The intention here is to require that the parties engage in dialogue to properly
identify the nature and scope of the dispute* and appropriate mechanisms for resolving such a dispute*.

- Cessation of operations via disputes of substantial magnitude*: If the dispute* is or becomes a dispute of substantial magnitude*, operations may be required to be suspended in the area directly related to where the dispute* exists. For example, suspending operations may be used as a last resort when the previous actions have failed to resolve the issues, or may be necessary while The Organization* is working with their Certification Body* to determine whether planned activities would or would not be in conformance with the Standard. It is then required that the dispute* resolution process includes mechanisms to address disputes of substantial magnitude*.

If a dispute* occurs, The Organization* is expected to follow the steps required in their dispute* resolution process, to respond in a timely manner, to document the dispute* and the process used, and to justify unresolved disputes*. It is also expected that all parties involved in the dispute* are working in good faith* and in a reasonable* manner, and that all parties can demonstrate the efforts deployed to resolve the dispute*.

The Standard also requires that The Organization’s* dispute* resolution processes be publicly available* to inform parties, at least, of the general process. The Standard does not necessarily require the specific aspects of the dispute* resolution process implemented with a specific party to be publicly available*.

For interested stakeholders*, no dispute* resolution process is formally required to be put in place. However, the Standard requires The Organization* to provide opportunities for engagement* in the planning process of management activities* upon request. Interested stakeholders* may also address complaints* regarding The Organization’s* conformance with FSC standards through The Organization’s* Certification Body* and complaints* regarding the FSC system through FSC's Dispute* Resolution Framework (see FSC-PRO-01-008, Processing Complaints in the FSC Certification Scheme).
ANNEX E: Training for workers*

Proportionate to the scale*, intensity*, and risk* of the forest* operation, workers* receive training that ensures they are able to:

1.) understand their rights per Criterion* 2.1; and

2.) recognize instances of sexual harassment and discrimination* and are aware of the mechanisms available to report such cases (Criterion* 2.2).

Proportionate to the scale*, intensity*, and risk* of the forest* operation, workers* receive training, as applicable to their specific job responsibilities, that ensures they are able to:

3.) implement forest* management plans* and operations that comply with applicable laws* (Criterion* 1.5);

4.) safely handle and dispose of hazardous substances to ensure that use does not pose health risks* (Criterion* 2.3);

5.) safely carry out their respective components of the management plan* (Criterion* 2.5);

6.) identify where Native American* groups have legal* and customary rights* related to management activities* per Indicator 3.1.2;

7.) identify sites of special cultural, ecological, economic, religious, or spiritual significance to Native American* groups and implement the necessary measures to protect* them before the start of forest* management activities* to avoid negative impacts (Criterion* 3.5 and Criterion* 4.7);

8.) identify where local communities* have legal* and customary rights* related to management activities* (Criterion* 4.2);

9.) assess potential social, economic, and environmental impacts per Indicator 4.5.1 and develop appropriate mitigation measures per Indicator 4.5.2;

10.) implement activities related to the maintenance and/or enhancement of ecosystem services*, when FSC Ecosystem Services Claims are used per Indicator 5.1.3;

11.) appropriately handle, apply, and store pesticides* in accordance with The Organization’s* procedures (Criterion* 10.7); and

12.) implement The Organization’s* procedures for cleaning up spills of waste materials* (Criterion* 10.12).
ANNEX F: Culturally Appropriate Communication and Free, Prior, and Informed Consent (FPIC)

**Scope:** The following guidance focuses on communication and FPIC* processes with Native American* groups that hold legal* or customary rights* that may be affected by forest* management activities*. The FPIC* guidance provided would also apply in any circumstances where there are non-tribal* traditional peoples* or forest-dependent* local communities* that hold legal* rights which may be affected by management activities*. Due to the well-established legal* structure in the United States for property rights, the rights* of non-tribal* traditional peoples* or local communities* are established within the legal* system, including any customary rights*; therefore, for these non-tribal* groups, customary rights* do not need to be considered separately. Additionally, while The Organization* must assess the existence of rights* held by non-tribal* traditional peoples* or local communities*, there is very limited occurrence in the US of these kinds of rights* and most Organizations* will not need to consider FPIC* with non-tribal* groups.

**NOTE:** The below guidance is based on materials developed by a consultant working on behalf of FSC US, following direct in-person interactions with Native American* groups.

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**PERTINENT DEFINITIONS**

**Culturally appropriate:** Means/approaches for outreach to target groups that are in harmony with the customs, values, sensitivities, and ways of life of the target audience.

**Customary rights:** Rights that result from a long series of habitual or customary actions, constantly repeated, which have, by such repetition and by uninterrupted acquiescence, acquired the force of a law within a geographical or sociological unit

**Forest-dependent:** Local communities for whom forests* provide sites and/or resources that are fundamental for satisfying their basic necessities (i.e., livelihoods, health, nutrition, water); that is, the sites and/or resources provided are irreplaceable (i.e., alternatives are not readily accessible or affordable), and loss of or damage to them would cause serious suffering of, or prejudice to, the community as a whole.

**Free, Prior, and Informed Consent (FPIC):** A legal* condition whereby a person or community can be said to have given consent to an action prior to its commencement, based upon a clear appreciation and understanding of the facts, implications, and future consequences of that action, and the possession of all relevant facts at the time when consent is given. Free, Prior, and Informed Consent* includes the right to grant, modify, withhold, or withdraw approval
Legal: In accordance with primary legislation (national laws* or local laws*) or secondary legislation (subsidiary regulations, decrees, orders, etc.). “Legal” also includes rule-based decisions made by legally competent* agencies where such decisions flow directly and logically from the laws and regulations. Decisions made by legally competent* agencies may not be legal* if they do not flow directly and logically from the laws and regulations and if they are not rule-based but use administrative discretion. NOTE: In the United States, treaties and reserved treaty rights are legally binding.

Local communities: Communities of any size that are in or adjacent to the Management Unit*, and also those that are close enough to have a significant impact on the economy or the environmental values of the Management Unit* or to have their economies, rights*, or environments significantly affected by the management activities* or the biophysical aspects of the Management Unit*. On public lands*, this also includes all citizens of the relevant entity (nation, county, city, or state).

Traditional peoples: Traditional peoples* are social groups or peoples who do not self-identify as indigenous and who affirm rights* to their lands, forests*, and other resources based on long-established custom or traditional occupation and use.

CULTURALLY APPROPRIATE* COMMUNICATION

Culturally Appropriate* Communication with Native American* Groups

Given that each Native American* group has its own individual culture, government, and associated internal processes, what is culturally appropriate* for one group may not be for another. The key components of achieving culturally appropriate* communication include:

1. Gathering information about the group in advance of initiating communication (i.e., some understanding of the group’s history, governance, etc.)
2. Learning about and getting to know the group as part of on-going communication
3. Adapting communication practices to make it more culturally appropriate* for the individual group, based on what is learned
4. Developing and sustaining the relationships built through the communication

When initiating contact and communication with a Native American* group, the following suggestions may be considered, but should not be interpreted as a comprehensive checklist of actions to be completed:

- Review the group’s official online materials (if available).
- Review other resources that provide further understanding of the culture, history, language, and rights* of the group that are not available from the group’s own materials.
- Always use the full correct name of the group as represented by the group in its materials.
- While the group’s Chairperson’s office is an essential first contact for formal communication, the office may not be responsive to unfamiliar sources and may not have the capacity to respond to all inquiries; therefore, communication channels may need to be established with staff who are interested in the pertinent subject matter (e.g.,
Cultural Resource personnel, forest* managers) and they may help to facilitate interactions with the group’s government officials when applicable.

- Native American* groups may suggest meeting with cultural leaders in addition to staff or the group’s government officials, in order to understand the cultural context of land management on a particular reservation. A Tribal Council may assist in locating cultural leaders.

- Generally, interactions with groups are best conducted as they are with any other government or organization; however, understanding their individual context will be valuable for building a relationship with the group. Individuals interested in engaging with a Native American* group are encouraged to:
  
  o attempt to understand the legal* and social background of the group in question; and
  
  o attempt to understand the cultural and social background of the reservation and the group’s membership (such information is often readily available by searching the Web).

- Remember that while much of the interaction with staff may be with non-tribal* members, all official decisions must eventually be ratified by the Council.

- Oversight of the Bureau of Indian Affairs/Department of the Interior is important to keep in mind if engagement is related to forest* management activities* on tribal* lands; land management activities*, and funding for such, are often provided by the federal government.

- Genuine interest in developing a relationship may be demonstrated by in-person communication efforts vs. phone or email.

- For governmental entities that are initiating communications, an important first step is to determine whether there are previously established government-to-government lines of communication or processes that should be observed; this kind of engagement is considered more formal in nature.

Guidance for Addressing a Lack of Response from a Native American* group to Initial Outreach:

- Remember that the ability of Native American* groups to respond can be limited by lack of staff or adequate funding.

- Be persistent.

- Be clear regarding expectations or needs.

- If possible, work with staff as well as the group’s government office. This may include repeated phone messages, emails (if an address can be obtained), and in-person communication. Once established, a relationship with an employee in the pertinent field (e.g., natural resources, cultural resources) can help to maintain proper communication and connection with the upper-level power structure of the group.

- Attempt to contact and interact with persons of interest in venues with which they are familiar, such as meetings, introductions by third parties, or conventions.

- Obtain advice from others who have previously established relationships with the individuals with whom contact is desired.
• Document contact attempts made and maintain a timeline to prove due diligence has been attempted. If no further communication is planned (due to lack of response), notify the individuals that have been the target of that communication regarding the decision and the potential implications of moving ahead without their feedback. This kind of communication may generate a response.

**Culturally Appropriate Communication with Non-Tribal Traditional Peoples and Local Communities**

Similar to the above guidance regarding communication with Native American groups, the key components of achieving culturally appropriate communication include:

1. Gathering information about the Traditional People or Forest-dependent Local Community in advance
2. Learning about and getting to know the group as part of on-going communication
3. Adapting communication practices to make it more culturally appropriate for the community, based on what is learned
4. Developing and sustaining the relationships built through the communication

When initiating contact and communication with a Traditional People or Forest-dependent Local Community, efforts should focus on identifying representatives who have delegated authority from the community, such as a mayor, commissioner, or other elected representative. If this is not possible, other individuals who can represent the community as a whole are preferred, such as community elders or other civic leaders.

**FREE, PRIOR, AND INFORMED CONSENT**

**Background:** The notion of Free, Prior, and Informed Consent (FPIC) is drawn from policy recommendations outlined in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and ILO Convention 169. FPIC is one of the key recommended policies for interactions with Indigenous People in these policy documents. FSC, in its role as the primary standards developer for management of forests owned or customarily used by Indigenous Peoples, considers FPIC “…a right, a principle, and a process to be applied in relations with Indigenous Peoples and those who have competing interests for their land and resources.” Therefore, the FSC FPIC policy strives to provide Indigenous People “…the right to participate in decision-making and to give, modify, withhold, or withdraw consent to an activity affecting the holder of this right.” FSC also applies FPIC policy to other non-tribal traditional peoples and local communities in certain contexts.

**Scope:** FPIC is required when The Organization’s management activities may overlap with or affect a Native American group’s legal rights or customary rights, including rights of tenure and rights of access to resources and ecosystem services, both within and external to Native American lands and territories. While very uncommon in the US, FPIC is also required if other non-tribal Traditional Peoples or forest-dependent local communities hold legal rights.

**STEP 1.** Assess the historical and/or current presence of Native American groups, Traditional Peoples, and Local Communities (see below) within or near the Management Unit (MU).
   - If none are identified, no FPIC is required
If presence is indicated, clearly identify the Native American* groups, Traditional Peoples*, or Local Communities*, and go to Step 2.

**Step 1 Guidance:**

- There are essentially no locations in the United States without historical tribal* presence.
- An internet search that looks for Native American* groups that now exist or that once existed in a particular locale is likely to turn up several possible qualifying entities. The US Forest Service maintains a comprehensive source of information on current tribal* lands and lands that were ceded to the US government (https://usfs.maps.arcgis.com/apps/webappviewer/index.html?id=fe311f69cb1d43558227d73bc34f3a32). State Historic Preservation Offices, Native American Heritage Commissions, or the equivalent exist in all states, and their websites and personnel are excellent resources for confirming or identifying such Native American* groups.
- Groups identified can include a variety of classifications, as described below with guidance regarding subsequent actions:

<table>
<thead>
<tr>
<th>Federally Recognized Tribes</th>
<th><strong>FPIC</strong>* needed, should be easily verifiable if a federally recognized tribal* government exists.</th>
</tr>
</thead>
<tbody>
<tr>
<td>State-Recognized Tribes</td>
<td><strong>FPIC</strong>* needed, should be easily verifiable if a state-recognized tribal* government exists. Tribal* government requires more examination than with federally recognized tribe to confirm protection of rights* of tribal* members.</td>
</tr>
<tr>
<td>Non-Recognized Tribes</td>
<td>Rights accorded to such groups by federal, state, or local* government should be assessed against the proposed FSC accreditation or proposed management activities*. If rights exist, seek <strong>FPIC</strong>* to the degree legally required by the state, etc. If legal* rights do not exist, no <strong>FPIC</strong>* required.</td>
</tr>
<tr>
<td>Local Communities*</td>
<td>Rights accorded to such groups by federal, state, or local government should be assessed against proposed FSC accreditation or management. If legal* rights exist, seek <strong>FPIC</strong>* to the degree legally required by the state, etc. If legal* rights do not exist, no <strong>FPIC</strong>* required.</td>
</tr>
<tr>
<td>Traditional Peoples* (potentially Appalachian Whites, Acadians (“Cajuns”), African American communities, Basque communities, Descendants of Original Spanish colonizers in the Southwest, etc.)</td>
<td>Rights accorded to such groups by federal, state, or local government should be assessed against proposed FSC accreditation or management. If legal* rights exist, seek <strong>FPIC</strong>* to the degree legally required by the state, etc. If legal* rights do not exist, no <strong>FPIC</strong>* required.</td>
</tr>
</tbody>
</table>

**STEP 2.** Identify representatives of the Native American* groups or other groups identified; decide whom to contact and how to vet various contacts.
Step 2 Guidance:

- If neither the official governmental representatives of the group nor the group’s government structure can be determined, further investigation may be needed to determine the validity of the group as a potential rights holder*. Once vetted, engagement* is best conducted through tribal* representatives.

- Federally and State-Recognized Tribes should have a tribal* government in place that is democratically chosen and recognized by the federal or state government. Normally the contact person for the tribe is the Chair or President of the Tribal Council, and in all cases an attempt must be made to contact the Chair or someone in their office. However, the Chairperson’s office is typically overwhelmed with requests of all sorts, and often only the most urgent are answered. Practically speaking it is often efficacious to also contact someone in the cultural resource, forestry, or natural resource department of the tribe (see above guidance for culturally appropriate* communication). It’s important that the tribal* governmental structure be respected by making sure that the Chairperson’s office is informed about all communication, but this may be handled by tribal* staff members once communication is established with them.

- Non-recognized Native American* groups require more investigation and validation to determine, for instance, if any state or local* governments acknowledge and validate the tribal* designation, even if these groups aren’t formally recognized by state or federal governments. See the table following the Step 1 Guidance for further considerations about how to determine the validity of a potential rights holder*.

STEP 3. Do the Native American* groups claim legal* and/or customary rights*, or do other identified groups claim legal* rights, within or near the Management Unit* that could be affected by management activities*?

- If No, no FPIC* required but the group should be treated as an interested stakeholder*.
- If Yes, inform the group of proposed management activities*.

Step 3 Guidance:

- Contact with legally recognized tribes is best conducted through their tribal* government offices, as described above. It is also helpful to make contact with staff managing tribal* resources (in addition to any “letters to the Chair”). If contact with a tribe by phone, email, or mail does not receive a response, attempt to make personal contacts and to build personal relationships with tribal* staff or leaders before proceeding (see guidance for culturally appropriate* communication above).

- As per FSC procedure, add any non-responsive group to the list of interested stakeholders* and continue to advise them of proposed activities during stakeholder outreach. As personnel and resources change, Native American* groups may choose to engage* even if they have not in the past, thus even if there is no response initially, it is important to continue to include the group in outreach.

STEP 4. Verify claims of legal* and customary rights* by Native American* groups and other identified groups.

- If legal* or customary rights* are verified for a Native American* group, or if legal* rights are verified for another identified group, go to Step 5.
- If a Native American* group or other identified group asserts its identity but no rights* can be verified, add them to the list of interested stakeholders* and inform the group of
such, but also inform them that only verified rights* can be considered in terms of FPIC* and decisions about certification or management activities* that may affect rights*.

Step 4 Guidance:
- Even if a Native American* group does not hold any legal* rights or customary rights* they are still an important stakeholder.
- Traditional People’s* groups and forest-dependent local communities* must demonstrate legal* rights to resources to be considered for FPIC*. Legal* rights can be identified and demonstrated through a title search and examination of historical rights to resources. The State Historic Preservation Office is often the most likely avenue to such research.

STEP 5. Does the rights holder* wish to engage with The Organization* regarding the proposed management activity(ies)*?
  - If No, no FPIC* process at this time.
  - If Not Now: a) determine why the rights holders* are not willing to enter the process; and b) ensure that management activities* will not violate verified rights*. The Organization* should consider approaching the group again if barriers can be overcome.
  - If Yes, go to Step 6.

Step 5 Guidance:
- Typically, the intent to obtain FPIC* is demonstrated through policy and procedures, work plans, and records of communication (or attempted communication) with rights holders*, when an agreed-upon FPIC* process is not (or not yet) in place.
- Even if the rights holder* does not wish to engage* in an FPIC* process, it is the responsibility of The Organization* to ensure that the rights* in question are not violated.
- If the rights holder* indicates a desire to engage* with The Organization* regarding the proposed management activity(ies)*, the management activity(ies)* may not be implemented without the rights holder’s* consent (or consent with conditions).

STEP 6. Through active and culturally appropriate* engagement*, move toward a decision regarding the management activity(ies)*.

Step 6 Guidance:
- The final and distinguishing element of FPIC* is the “consent” decision. It refers to the decision made by affected rights holders* and reached through a process of dialogue, deliberation, and community decision-making (by consensus, majority, etc.). The decision involves saying yes, no, or not at this time to a proposed management activity*. It may include options to apply conditions that, if met, would lead to consent being granted.
- Before beginning the FPIC* process, certificate holders and rights holders* may wish to clarify certain elements of the process, such as agreement on:
  o the scope of the FPIC* process (i.e., which rights* and management activities* will be addressed)
  o preferred communication pathways
  o a decision-making format and the decision makers or individuals who will speak for the rights holder*
- a coarse timeline for completion
- what conflict-resolving mechanisms will be used if needed
- how consent (and any conditions) will be documented
- what monitoring of the management activity(ies)* will be implemented, and how the rights holder* will be engaged* in the monitoring

- When FPIC* has not been obtained, it is the responsibility of The Organization* to demonstrate their best efforts to support a culturally appropriate* engagement* process with affected rights holders* that is advancing in good faith* with the intent of reaching an agreement regarding the proposed management activities*.

- FPIC* should be viewed as a process that results in a sustained relationship with the rights holder* that does not end at the point that a decision regarding the management activity(ies)* is made.

- It may not be appropriate to ask a rights holder* in the United States to participate in such a process and then sign a binding agreement*, as Native American* groups, in particular, may have already signed treaties and other binding agreements*.
ANNEX G: Representative Sample Area Methodology

The following guidance provides a methodology for identifying Representative Sample Areas* (RSA) for conservation* (i.e., maintaining or enhancing) or restoration* of viable* examples of ecosystems* that would naturally occur within the Management Unit*. If followed, this guidance will help to ensure conformance with Criterion 6.5. Documentation of the methodology used to establish RSAs*, and its outcomes, is required per Indicator 6.5.1. If The Organization* chooses to use a different methodology, documentation of rationale for the equivalency of that methodology will also be needed. Use of Best Available Information* for RSA* assessments is also required per Indicator 6.5.1.

This methodology (or an equivalent) is required for each Management Unit*, with the possible exception of those Management Units* smaller than 124 acres (50 hectares) when the conditions detailed in Interpretation #9 on the FSC Principles and Criteria (INT-STD-01-001_09) apply (see end of this guidance document).

If the Management Unit* extends into multiple USFS-defined ecological Sections (Cleland 2007, https://www.fs.fed.us/research/publications/misc/73326-wo-qtr-76d-cleland2007.pdf), completion of this methodology (or an equivalent) is recommended for each Section individually.

If The Organization* is able to demonstrate that either of the following scenarios are true, the associated conservation* areas may be considered in combination with the Management Unit* in Step 2 (Management Unit* ecosystem* assessment) and in Step 4 (RSA* establishment):

- a. The Organization* intentionally scoped conservation zones* or protected areas* out of the FSC certificate, but continues to manage them with long-term* conservation* objectives; or
- b. The Organization* intentionally transferred ownership of conservation zones* or protected areas* previously associated with the Management Unit* with the purpose of long-term* conservation* of those lands.

With the exception of the above-mentioned interpretation, this is the only scenario in which RSAs* may be established outside of the Management Unit*.

Notes on terminology:

- a. While an “ecosystem” as an ecological concept may be considered at many different scales, for the purposes of this guidance “ecosystem” is defined as “A dynamic complex of plant, animal, and micro-organism communities and their non-living environment interacting as a functional unit.” A given terrestrial ecological system* will typically manifest itself in a landscape at intermediate geographic scales of tens to thousands of acres and persist for 50 or more years. Therefore, these units are intended to encompass common successional pathways for a given landscape* setting. For the purposes of Representative Sample Areas*, this scale of representation is a mid-level classification, roughly equivalent to the “Group” level in the National Vegetation Classification (http://usnvc.org/explore-classification/).

- b. “Restoration” does not require the creation of a particular pre-existing ecosystem* when this would be infeasible due to situations such as the following:

  - i. Climate or other abiotic changes (e.g., hydrology, loss of substrate) have occurred that make it infeasible to restore* a particular community type
  - ii. Presence of an invasive species*, pest, or disease that makes restoration* infeasible
iii. It is cost prohibitive to restore* that ecosystem*

iv. Successful restoration* would require the collaboration of other/adjacent landowners who are unwilling to partner

v. Restoration* of a viable* ecosystem* is dependent on ecological functions that are not possible to restore*, create, or mimic

NOTE: Regardless of the feasibility of restoration* of a particular ecosystem*, conformance with the Standard requires The Organization* to take reasonable measures to mitigate and control ongoing, and prevent future, environmental degradation in the Management Unit* that results from a previous owner’s or Organization’s* activities.

c. “Viable” or “viability” means that the critical components and functions of a dynamic, stochastic system at any time remain in a domain where the future existence of these components and functions is highly probable.

d. “Permanent protection” refers to protection* levels that are equivalent to GAP Status*1 and GAP Status*2, and sometimes GAP Status*3. Where GAP Status*3 lands are under management goals and management activities* that support conservation* and/or restoration* of native ecosystems*, these lands may be considered. For GAP Status*3, The Organization* must demonstrate how the land is being protected to meet its conservation* and/or restoration* objectives at present and in the long term*.

Step 1. Extent of RSA* within the Management Unit*

Determine the appropriate extent of RSA* within the Management Unit*, based on the characteristics of the Management Unit* and the landscape* in which it occurs.

Per Indicator 6.5.3, Management Units* that are larger, occur in landscapes* with less protection* for native ecosystems* (all ecosystems* combined), and/or have more intensive management are expected to make greater contributions to conservation* and/or restoration* of native ecosystems*. Figure 1 provides two suggested pathways for conformance with Indicator 6.5.3—one based on the percent of the Management Unit* on which RSA* are established, and the other based on the number of RSA* established within the Management Unit* (i.e., the number of RSA* per native ecosystem* per ecological section).

Following Figure 1:

a. For each of the left three columns, determine which cell best represents the Management Unit*.

b. Add together the associated values (1, 2, or 3) of the selected cells in each column.

c. Reference the right-most two columns to estimate the appropriate extent of RSA in the Management Unit*.

While Figure 1 suggests a minimum extent of RSA*, if additional areas qualify as RSA* (above this minimum), The Organization* is expected to assess those additional areas as RSA*, within the context of Step 4.
**Step 2. Management Unit* Ecosystem* Assessment**

Determine which native ecosystems* (forested and non-forested, rare and common) would naturally occur within the **Management Unit***.

Consider which native ecosystems* currently occur, which occurred historically, and which could potentially occur within the **Management Unit*** given current and future conditions. This includes both those ecosystems* that already occur as viable* examples and those that could be restored* to such a status (considering the guidance on restoration* in the “Notes on Terminology” above).

**Step 3. Landscape* Ecosystem* Assessment**

For each of the ecosystems* identified in Step 2, gather information about the ecosystem’s* occurrences in the landscape* within which the **Management Unit*** exists.

Note that the **Management Unit*** itself is part of the landscape* and therefore should be considered as part of this assessment. Information that will inform Step 4 includes:

a. Whether or not any examples of the ecosystem* currently occur within the landscape*

b. The percentage of the ecosystem* examples that occur within the landscape* that are permanently protected*

c. The percentage (estimated) of the historical extent of the ecosystem* that currently remains within the landscape*

d. Whether there are any under-represented ecological conditions (e.g., successional* stages, plant community types) for the ecosystem*

Note: Links to example sources of Best Available Information* are provided below.

**Step 4. Representative Sample Area* Establishment**

---

**Table:**

<table>
<thead>
<tr>
<th>MU* Size</th>
<th>Landscape Protected*</th>
<th>MU Objective*</th>
<th>% of MU in RSAs</th>
<th># of RSA per Ecosystem*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large &gt;50,000 ac.</td>
<td>&lt;3%</td>
<td>Plantation</td>
<td>9</td>
<td>Min 5%</td>
</tr>
<tr>
<td>Medium 2,475-50,000 ac.</td>
<td>3-25%</td>
<td>Semi-Natural</td>
<td>8</td>
<td>Min 5</td>
</tr>
<tr>
<td>Small &lt;2,475 ac.</td>
<td>&gt;25%</td>
<td>Natural</td>
<td>7</td>
<td>or</td>
</tr>
</tbody>
</table>

* *MU = Management Unit, *Percent protected in the entire landscape, including the MU, *Addresses intensity of management, *Within each ecological section.
Within the Management Unit*, identify and delineate (i.e., map) RSA* for conserving* or restoring* viable* examples of ecosystems* identified in Step 2, given the outcomes from Step 1 regarding the appropriate extent of RSA* in the Management Unit*, and the information gathered in Step 3.

Overall, within The Organization’s* established RSA*, the expectation is for a greater emphasis on ecosystems* and ecological conditions that are in greater need of conservation* assistance. Regardless of the pathway taken to estimate the appropriate extent of RSA* in Step 1, this means emphasizing (i.e., larger examples and/or a greater number of examples) ecosystems* and ecological conditions where the Management Unit* may provide the greatest conservation* value, even if this means smaller and/or fewer examples of other ecosystems* identified in Step 2.

Considerations for which ecosystems to emphasize:

a. Ecosystems* with lower levels of protection* in the landscape* are expected to be emphasized over ecosystems* with higher levels of protection* in the landscape*.

b. Ecosystems* with a smaller extent remaining in the landscape* are expected to be emphasized over ecosystems* with greater extent remaining in the landscape*.

c. Establishment of RSA* for an ecosystem* identified in Step 2 is not essential if:
   i. More than 25% of the examples within the landscape* (including the Management Unit*) are permanently protected*; AND
   ii. Excluding the ecosystem* from RSA* establishment will allow for greater conservation* or restoration* of less protected ecosystems*, or of ecosystems* with a smaller extent remaining in the landscape*.

d. Establishment of RSA* for an ecosystem* that is very common within the landscape*, even if not well protected*, is not essential.

e. For ecosystems* where restoration* is infeasible (per the guidance in “Notes on Terminology” above), establishment of RSA* for restoring the ecosystem* is not expected.

f. If using a percentage of the Management Unit* as the basis for appropriate extent of RSA* (per Step 1), and establishment of viable* examples of all ecosystems* is not possible within that percentage, the above bulleted considerations will guide which ecosystems* should be priorities for RSA* establishment.

g. If using a numerical count of RSA* as the basis for appropriate extent of RSA* (per Step 1), this is the ideal number of RSA* per native ecosystem* per ecological section that would be established within the Management Unit*, but the above bulleted considerations may suggest that some ecosystems* should be emphasized over others (i.e., resulting in an even greater number of examples than the ideal for these ecosystems*, and possibly a lower number of examples for the others).

Considerations for each RSA*:

a. For ecosystems* that have multiple ecological conditions (e.g., successional* stages, plant community types), RSAs* are expected to focus more on under-represented conditions (Step 3).

b. There is no set appropriate acreage for an RSA*; the size may range from a few acres to hundreds of acres depending on the ecosystem*. Generally the size should be large enough to be viable*.
c. A single larger RSA* is generally preferable to multiple smaller RSAs*.

d. For ecosystems* that would naturally occur in mosaics, identifying RSAs* that are adjacent to other RSAs* is preferable to establishing RSAs* in isolation.

Step 5. Representative Sample Area* Management

The primary purpose of an RSA* is to conserve* (i.e., maintain or enhance) or restore* a particular native ecosystem*, as an ecological reference area.

RSAs* may also serve to conserve* or restore* an under-represented ecological condition, and/or serve as a set of protected areas* or refugia* for species*, ecological communities, and community types not captured in other parts of this Standard (as identified in the definition of RSA*). Management of RSAs* to achieve all of these purposes may range from a more “hands-off” scenario to a more intensive management scenario (such as when restoring* barrens or savanna), depending on the ecosystem* and the characteristics of that RSA*. Generally, activities that do not detract from the purpose(s) of the RSA* are allowable.

When management activities* (including timber harvest) create and maintain conditions that emulate a mature forest* or other successional* phases that may be under-represented in the landscape*, the management strategies* that created those conditions may be used to maintain them, and the area may be considered as a representative sample for the purposes of conformance with Criterion 6.5. RSA* serving as ecological reference areas will generally not be managed for timber harvest, unless it is a part of the conservation strategy to maintain or enhance the ecosystem*. Threats such as wildfire, natural pests, or pathogens may also warrant management activities* as a means to conserve the ecosystem*.

Sources of Best Available Information*:

a. Gap Analysis Project (GAP)
(online access via https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap)

b. PAD-US, the Protected Areas Database
(online access via https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap)

c. State Heritage Programs
find state-specific contact information online via https://www.natureserve.org/natureserve-network/directory#node-landing-page-directory-group-tabs-organizations)

d. NatureServe and NatureServe Explorer (online access via https://www.natureserve.org)

e. Federal, State, Tribal, and local agencies, such as the following (among many others):
   i. USFWS Environmental Conservation Online System (https://ecos.fws.gov/ecp/)
   ii. USFS Forest Inventory and Analysis program (https://www.fia.fs.fed.us)
   iii. USFS Regional Research Stations (https://www.fs.fed.us/research/)
   v. Tribal natural resources departments
   vi. State wildlife agencies
vi. Landscape Conservation Cooperatives (https://lccnetwork.org)

f. Global, national, regional, state, and local conservation organizations, such as the following (among many others):
   i. The Nature Conservancy, including state chapters (https://www.nature.org/en-us/)
   ii. World Wildlife Fund (https://www.worldwildlife.org)
   iii. National Wildlife Federation, including regional centers and state affiliates (https://www.nwf.org)
   iv. Regional and local land conservancies (https://www.landtrustalliance.org)
   v. Conservation Districts (https://www.nacdnet.org)

g. Regional planning efforts (e.g., watershed planning organizations/coalitions)

h. Universities

Relevant Interpretation:

<table>
<thead>
<tr>
<th>Code</th>
<th>INT-STD-01-001_09 (See also INT-STD-20-007_45)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirement (s)</td>
<td>FSC Principles and Criteria for Forest Stewardship V5-2, Criterion 6.5</td>
</tr>
</tbody>
</table>

a) Can a SLIMF owner or group scheme meet set-aside requirements outside the group?

b) If so, does a SLIMF owner or group scheme providing financial and other assistance to existing conservation areas within the forest landscape, constitute compliance with criterion 6.4?

c) How is the forest landscape defined?

a) Yes, if there are insufficient or no representative samples areas within the Management Unit (MU), and under the following conditions:

   • The MU is smaller than 50 ha;
   • The Organization shall identify rare and threatened species and their habitats in the MU. When they exist although are insufficient in size, measures for their survival and viability shall be identified and put in place.
   • The outside area is in the same forest landscape.
   • Sites to be conserved outside of the MU are representative samples of existing ecosystems.
• The outside area is not commercially harvested and is under a legal protection status, OR there is a binding contract between the Organization and the owner of the outside area to:
  o Protect the area in its natural stage;
  o Mark the boundaries of the area in the field and on maps;
  o Allow certification bodies to access area for inspection.

b) Financial assistance alone does not constitute compliance with the requirements of criterion 6.5. Some conservation efforts have to be demonstrated within the MU. Other examples of conservation efforts may be presented to PSU for evaluation on a case by case basis.

c) For the purpose of this interpretation, the forest landscape is defined as the quaternary water catchment area. If defining the boundaries of a quaternary water catchment area is not feasible, other delineations for defining the forest landscape may be used, based on vegetation zones or other biophysical characteristics reflecting the natural conditions in the country.

**Note:** This interpretation does not eliminate the option for SLIMF owners to meet the requirement of min. 10% Conservation Area Network at the level of the group entity within a group certification (see: FSC-STD-20-007, clause 5.3.6).
ANNEX H: Conservation Areas Network

The Conservation Areas Network* (CAN) is a new concept first identified in the International Generic Indicators (IGIs; FSC-STD-60-004) for FSC Principles and Criteria Version 5 (P&C V5). Generally, the CAN* is a set of areas within The Organization’s* Management Unit* that are managed primarily to conserve* environmental or cultural values for the long term*, (i.e., they are specifically designated for reaching objectives other than timber production). The CAN* does not require additional conservation* outcomes so much as it puts together a complete picture of conservation*-oriented objectives, composed of various conservation zones* and/or protected areas* recognized and required by specific elements of the Standard. However, per Indicator 6.5.5, the CAN* is to comprise at minimum 10% of the Management Unit* and therefore The Organization* will need to establish additional areas if below this minimum threshold. While termed a “network,” the areas that make up the CAN* do not need to be spatially connected.

Areas designated as part of the CAN* should be identified in a single section of the management plan*.

Table 1 identifies the areas that may be designated as part of the CAN* and their associated Criteria*. Unlisted areas may be included in the CAN* if aligned with the CAN* definition; determination of alignment will be the responsibility of the Certification Body*.

Small and/or Low Intensity Managed Forest (SLIMF) operations that are part of a group certification scheme may meet the minimum 10% requirement at the level of the group entity (per FSC-STD-20-007, clause 5.3.6).

If The Organization* is able to demonstrate either of the following scenarios are true, the associated conservation* areas may be considered in combination with the Management Unit* for the purpose of designating areas to be part of the CAN*.

a. The Organization* intentionally scoped conservation zones* or protected areas* out of the FSC certificate because they were already adequately protected; or
b. The Organization* intentionally transferred ownership of conservation zones* or protected areas* previously associated with the Management Unit* with the purpose of long-term* conservation* of those lands.

The acreage of the scoped-out or transferred lands must also be added to the acreage of the Management Unit* for the calculation of what is needed to achieve the minimum 10% requirement per Indicator 6.5.5.

Definitions:

Conservation/Protection: These words are used interchangeably when referring to management activities* designed to maintain the identified environmental or cultural values in existence long-term*. Management activities* may range from zero or minimal interventions to a specified range of appropriate interventions and activities designed to maintain, or compatible with maintaining, these identified values.

Conservation Areas Network: Those portions of the Management Unit* for which conservation* is the primary and, in some circumstances, exclusive objective; such areas include Representative Sample Areas*, conservation zones*, protection areas*, connectivity* areas, and High Conservation Value Areas*. 
**Conservation Zone:** Areas designated within which maintenance and/or *restoration* of such *species* and community type(s) are the highest priority. Harvesting timber, other *management activities*, and other uses are allowed within *conservation zones* if they do not detract from maintenance or enhancement of the *species* or community type(s).

**Protected Areas:** A portion of the forest of special biological, cultural, or historical significance that is designated, mapped, and managed principally to *protect* its biological, cultural, or historic attributes. Only *management activities* (including logging) implemented to achieve ecological improvements are allowed in protected areas.

Table 1. Summary of potential *Conservation Areas Network* inclusions based on the FSC US National Forest Stewardship Standard (V2-0)

<table>
<thead>
<tr>
<th>Conservation Areas Network* Inclusions</th>
<th>Criterion*/I Indicator*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Areas managed primarily to <em>conserve</em> <em>rights</em> held by others</td>
<td>C1.2</td>
</tr>
<tr>
<td>Areas managed primarily to <em>conserve</em> <em>rights</em> held by <em>Native American</em> groups</td>
<td>C3.2</td>
</tr>
<tr>
<td>Areas managed primarily to <em>conserve</em> sites of significance for <em>Native American</em> groups</td>
<td>C3.5</td>
</tr>
<tr>
<td>Areas managed primarily to <em>conserve</em> <em>rights</em> held by <em>local communities</em></td>
<td>C4.2</td>
</tr>
<tr>
<td>Areas managed primarily to <em>conserve</em> sites of significance for <em>local communities</em></td>
<td>C4.7</td>
</tr>
<tr>
<td>Areas managed primarily to avoid negative cultural impacts on <em>local communities</em></td>
<td>C4.5</td>
</tr>
<tr>
<td>Areas managed primarily to <em>conserve</em> <em>ecoystem services</em></td>
<td>C5.1 &amp; C6.3</td>
</tr>
<tr>
<td>Areas managed primarily to prevent negative impacts of <em>management activities</em> on environmental values and thereby <em>conserve</em> those values</td>
<td>C6.3</td>
</tr>
<tr>
<td>Areas managed primarily to <em>protect</em> <em>rare, threatened and endangered species</em> and their <em>habitats</em></td>
<td>C6.4</td>
</tr>
<tr>
<td>Areas established as <em>Representative Sample Areas (RSAs)</em>, including both RSAs* with <em>conservation</em> and with <em>restoration</em> objectives</td>
<td>C6.5</td>
</tr>
<tr>
<td>Areas managed primarily to <em>conserve</em> <em>rare ecological communities</em></td>
<td>Indicator 6.6.7</td>
</tr>
<tr>
<td>Areas managed primarily to <em>protect</em> <em>natural watercourses, water bodies</em> and <em>riparian areas</em></td>
<td>C6.7</td>
</tr>
</tbody>
</table>

NOTE: Following FSC Interpretation INT-STD-60-004_01, riparian zones "created" or planted for purely functional roles (e.g., *erosion* control) should be excluded from the CAN*. In a US context, this exclusion will likely be limited and would only apply to RMZs* that are not concurrently being managed for *conservation* of riparian areas* or ecological connectivity*, etc. (e.g., created *erosion* control *buffers* established in land reclamation areas previously used for strip mining).
<table>
<thead>
<tr>
<th>Areas managed primarily to conserve* ecological connectivity*</th>
<th>C6.4 &amp; C6.7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Areas managed primarily to restore* under-represented species* or successional* stages</td>
<td>C6.8</td>
</tr>
<tr>
<td>Areas managed primarily to conserve* old growth*</td>
<td>Indicator 6.8.2</td>
</tr>
<tr>
<td>Areas managed primarily for monitoring and/or research that supports conservation* of environmental and cultural values</td>
<td>P8</td>
</tr>
<tr>
<td>Areas identified as High Conservation Value Areas*</td>
<td>P9</td>
</tr>
</tbody>
</table>
ANNEX I: Plantation vs. Natural and Semi-Natural Forest

Background

FSC supports the responsible management of existing plantations* and the products derived from harvesting activities in these areas as a strategy to complement conservation* and the sustainable use of native forests*. As global consumption of forest* products continues to grow, responsibly managed plantations* certified by FSC can play a crucial role in ensuring their supply is sustainably sourced. While plantations* cannot replace the richness, stability, and beauty of native forests* or the complexity of the services they provide, applying the FSC standards to them ensures their management is defined by transparency and fairness, and minimizes negative environmental and social effects. Since 1994, FSC has prohibited conversions* of forests* to plantation*. Therefore, any plantations* converted after 1994 are ineligible for FSC certification (with very limited exceptions, as indicated per Criterion 6.10).

Purpose of Annex

This annex represents an update of the Plantation Classification guidance provided in the 2010 FSC US Forest Management Standard (Appendix G). It is not the intention of this update to change how plantations* are defined in the US, nor to move the threshold between plantation* and semi-natural forest*. The purpose of the update is to provide greater assistance and greater clarity for The Organization* and Certification Bodies* as questions arise regarding FSC-certified lands, or lands being assessed for certification.

It is not the expectation that existing FSC-certified Management Units* will be re-evaluated for plantations* based on this new guidance. It is also not expected that once a forest* is determined to be plantation* or natural forest*/semi-natural forest* that it will be reviewed again, unless there is a significant change in management objectives* or management activities*.

Guidance on the Classification of Plantations*

The presence of most of the principal characteristics and key elements of native forest* ecosystems* is primary to discerning natural forests* or semi-natural forests* from plantations*. Therefore, a "planted forest*" is not necessarily a "plantation*" since it may have most of the principal characteristics and key elements of native forest* ecosystems* endemic to an area. Additionally, given that the intensity* of management activities* may influence the presence of these characteristics/elements, classification of a forest* as a plantation* should be based on the presence or absence of these characteristics/elements.

As stated in the "plantation*" definition, there are three situations which, except for highly extenuating circumstances, will always indicate that the forest* in question is a plantation*. In all other cases, a forest* is determined to be either a natural forest* or semi-natural forest*, or a plantation*. This determination is made by evaluating the degree to which it provides the principal characteristics and key elements of native forest* ecosystems*, as compared to a natural stand* of similar forest* type and successional* stage. If a particular forest* does NOT hold these attributes, it must be clear that the absence of the attributes is a result of silvicultural* treatments for it to be determined to be a plantation*. Absence of these attributes could also be due to pests/disease, catastrophic natural disturbances*, or other situations out of the control of The Organization*. Silvicultural* treatments that could contribute to the absence of native forest*.
ecosystem* attributes (and therefore to the characterization of a stand* as a plantation*) are listed later in this annex under the section “Management Practices Related to Plantations*.”

Therefore, a plantation* is identified when a stand* does not provide most of the principal characteristics and key elements of native forest* ecosystems* relative to a natural forest* stand* AND it is clear that the absence of these attributes is a result of silvicultural* treatments, such as those plantation* management practices listed below.

Since almost all of the noted characteristics/elements are very difficult to measure directly, especially in the short time frame of an audit, The Organization* and Certification Bodies* must use professional judgment to evaluate sites for these characteristics/elements as well as keep abreast of research that is designed to specifically measure the effects of various silvicultural* treatments on them.

Pertinent definitions

**Plantation**: A forest* area established by planting or sowing with using either native species* or non-native species*, often with one or few species*, regular spacing, and even ages, and which lacks most of the principal characteristics and key elements of native forest* ecosystems*. The use of establishment or subsequent management practices in planted forest* stands* that perpetuate the stand*-level absence of most principle characteristics and key elements of native forest* ecosystems* will result in a stand* being classified as a plantation*. Except for highly extenuating circumstances the following are classified as plantations*:

- cultivation of non-native species* or recognized non-native sub-species, except when used in conformance with Indicator 10.2.2;
- block plantings of cloned trees resulting in a major reduction of within-stand* genetic diversity compared to what would be found in a natural stand* of the same species*; and
- cultivation of any tree species* in areas that were naturally non-forested ecosystems*.

**Semi-natural forest**: A forest* ecosystem* with many of the characteristics of native ecosystems* present. Semi-natural forests* exhibit a history of human disturbance (e.g., harvesting or other silvicultural* activities), are very common in the United States, and include a considerable amount of unmanaged, and most of the managed, forest* land other than plantations*.

**Natural Forest**: Natural forests* include old growth* and primary forests* as well as managed forests* where most of the principal characteristics and key elements of native ecosystems* such as complexity, structure, wildlife, and biological diversity* are present.

Principal Characteristics and Key Elements of Native Forest* Ecosystems*

The term “principal characteristics and key elements of native forest* ecosystems*” refers to the suite of characteristics that are typically found in natural forests* and semi-natural forests*, but not in plantations* (as defined in this Standard). These characteristics/elements will differ by forest* type, successional* stage, and the past management history of the site. Note that some of these characteristics/elements are not seen until the mid-development (understory re-initiation) stage, given allowances for historic range of natural variation.
Assessment of the presence or absence of the principal characteristics and key elements of native forest ecosystems should be done at the stand level, focusing on a representative sample of stands of varying stages of succession within the Management Unit. The degree of presence or absence of the characteristics/elements in the sampled stands should be assessed relative to a natural forest stand of the same forest type, succession stage, and site class. Some factors need to be assessed at the Management Unit spatial scale. There may be exceptions when the particular characteristic/element is not possible due to the size of the Management Unit.

The following provides attributes and practices that are associated with each of the five principal characteristics and key elements of native forest ecosystems (PCKE) to be assessed, along with guidance for determining if the characteristic/element is effectively present. If all five of the characteristics/elements are present, then the stands in question are natural forest or semi-natural forest and not plantation. If all five are not present, then the cause for their absence must be determined before making a final determination. If due to silvicultural treatments (such as those provided in the next section below), then the stands are plantations; if due to other reasons, then the stands may still be classified as natural or semi-natural forest.

1. PCKE: Within-Stand Species Diversity
   If three (3) of the following practices and/or attributes are present, this PCKE may be considered present.
   a. Species Diversity: Monoculture is avoided in planting, thinning, or other management activities in forest areas where single-species forest stands are not found naturally. Multiple species are maintained as the primary forest type on sites normally occupied by multiple-species forests. Number of tree species, and their relative distribution, is similar to what would be found in a natural stand of the same forest type and of the same successional stage.
   b. Native Species: Natural forests are composed of native species. Regardless of the number of tree species present, a natural forest is characterized by a predominance of species that are naturally occurring on the site, and a corresponding absence or scarcity of non-native species.
   c. Relative Species Composition: Silvicultural systems purposefully result in stands with dominant tree species consistent with dominant species associated with natural forest ecosystems occurring on similar sites with a similar successional stage.
   d. Silvicultural systems maintain or achieve tree species composition (relative abundance of species) consistent with the corresponding native forest types occurring on similar sites.
   e. Understory plant community species richness, abundance, and distribution are similar to what would be found in a natural stand of the same stage of stand succession and on a similar site.

2. PCKE: Within-Stand Structural Diversity:
   If four (4) of the following practices and/or attributes are present, this PCKE may be considered present.
   a. Variability in tree density and age of trees is similar to what would be found in natural stands of the same successional stage and site class.
   b. The physical characteristics (i.e., size and shape) of trees are similar to natural forest conditions of the same successional stage and site class.
c. Understory plant community structure and density is similar to natural stand* conditions of the same successional* stage and site class.

d. Size and distribution of snags*, den trees, and downed, coarse, and fine woody debris* are consistent with the stage of stand* succession* and disturbance regimes for native forest* types occurring on similar sites.

e. Stands* contain small patch openings (e.g., occupied by meadows, vernal pools, non-commercial trees, wetlands*), that provide structural diversity* consistent with native forest* types occurring on similar sites.

f. Even-aged silviculture* is only employed on forest* types that typically or regularly regenerate as even-aged stands* naturally through stand*-replacing events.

g. Stand* management regimes provide for tree retention*, and are characteristic of natural disturbance regimes* referred to in Criterion 6.3.

3. PCKE: Natural Ecological Succession*

If three (3) of the following practices and/or attributes are present, this PCKE may be considered present.

a. Stand* management regimes allow for natural successional* pathways.

b. Stands* are managed at least to the understory tree re-initiation stage prior to the regeneration (final) harvest*, unless early harvest is being implemented for the purposes of achieving PCKE 4.

c. Stand* management precludes reliance upon systematic intensive use of chemical pesticides* and/or fertilizers* to achieve management objectives*.

d. Stand* management regimes exclude intensive mechanical site preparation.

4. PCKE: Landscape* Level Diversity

If one (1) of the following practices and/or attributes is present, this PCKE may be considered present.

a. Stands* (including planted stands*) within the Management Unit* collectively provide diversity in the stages of succession* between stands* ranging from the stand* initiation stage to at least the understory re-initiation stage.

b. Representative variation in the intensity* and scale* of silvicultural* practices is consistent with disturbances in native forest* types on similar sites (e.g., fire, windthrow, disease, insects).

5. PCKE: Genetic Diversity

If one (1) of the following practices and/or attributes is present, this PCKE may be considered present.

a. Native species* suited to the site are selected for planting. A reasonable* investment is made to source local* seeds of known provenance for planting stock. The use of non-local seed sources is justified.

b. Non-native species* are only used when ecologically beneficial and on a limited scale*. In the context of non-SLIMF Management Units*, “limited” is consistent with a “very limited portion” as defined in the glossary.

Collectively, these characteristics are considered definitive for native forest* ecosystems* throughout the US. However, the quantitative representations of each of these characteristics on a given site exist along a spatial and temporal continuum ranging from abundant to marginally present depending on the forest* type, stage of succession*, the range of natural variation associated with the forest* type, and the past management history.
**Management Practices Related to Plantations**

Management practices that could contribute to the absence of native forest ecosystem attributes and to the characterization of a stand as a plantation include:

- a. Alteration of site hydrology or soil structure to establish tree species that would not establish in the absence of this alteration (e.g., deep soil disturbance during site preparation such as bedding, ripping, and other alterations of site hydrology or soil structure). This does not include restoration activities
- b. Application of fertilizers more than one time during a single rotation
- c. Systematic use of, and reliance on, chemical pesticides
- d. Silvicultural practices that result in less than 50% of naturally occurring tree species maintained (or recruited and maintained) and well-distributed throughout the stand
- e. Silvicultural practices that purposefully exclude dominant tree species representative of native ecosystems historically occurring on the site
- f. A single tree species is maintained as the primary forest type on sites normally occupied by multiple-species forests
- g. Silvicultural practices that purposely eliminate native understory species prior to crown closure or commercial harvest
- h. Use of non-native tree species for regeneration
- i. Cultivation of trees, of any species, in areas that were naturally non-forested (where trees otherwise would not exist)
- j. Monoculture plantings of cloned trees that result in significant reductions of within-stand genetic diversity relative to natural forest conditions
- k. Rotation lengths short enough to prevent stands from development into understory reinitiation stages
Annex J: Monitoring Impacts on Social and Environmental Values

Indicators 6.6.4, 9.4.1, 10.2.2, 10.3.2, 10.7.5, and 10.8.1 explicitly require monitoring and therefore must be addressed in the monitoring protocol. While the other elements of this annex are not explicitly required in any Indicator, monitoring at some level (for applicable elements) will most likely be needed for conformance with and/or demonstration of conformance with the rest of the Standard. Therefore, this annex provides a structure to assist The Organization with developing its monitoring protocol per Indicator 8.2.1.

The frequency, scale, and intensity of monitoring will be unique to the Management Unit due to its unique context and activities. The scale, intensity, and frequency of management activities that occur within the Management Unit will affect the level of monitoring needed for any particular element. However, some level of monitoring will most likely be needed for all applicable elements. Non-applicable elements are those associated with an activity or value that does not occur on the Management Unit, and/or values that occur outside of the Management Unit that are not affected by activities occurring on the Management Unit.

1) Monitoring per Indicator 8.2.1 is sufficient to identify and describe social impacts of management activities, including, where applicable:

i. Evidence of illegal or unauthorized activities (Criterion 1.4) and compliance with applicable laws, local laws, ratified international conventions, and obligatory codes of practice (Criterion 1.5);

ii. Outcomes of disputes (Criterion 1.6, Criterion 2.6, Criterion 4.6);

iii. Programs and activities regarding workers’ rights (Criterion 2.1), occupational health and safety (Criterion 2.3), payment of wages (Criterion 2.4), and workers’ training (Criterion 2.5);

iv. Gender equality, sexual harassment, and gender discrimination (Criterion 2.2);

v. When pesticides are used, the health of workers exposed to pesticides, consistent with The Organization’s Environmental and Social Risk Assessments for the pesticides used (Criterion 2.5 and Criterion 10.7);

vi. Identification of Native American groups and local communities that hold rights applicable to the Management Unit (Criterion 3.1 and Criterion 4.1), engagement with rights holders to achieve consent for management activities that affect their rights (Criterion 3.2 and Criterion 4.2), and relations with (Criterion 3.2, Criterion 3.3 and Criterion 4.2) Native American groups and/or local communities;

vii. Protection of sites of special cultural, ecological, economic, religious, or spiritual significance to Native American groups and local communities (Criterion 3.5 and Criterion 4.7), and persistence of areas of special significance and associated values of significance to Native American groups (Criterion 3.1 and Criterion 3.5);

viii. Use of traditional knowledge and intellectual property (Criterion 3.6);

ix. Local economic and social development (Criterion 4.2, Criterion 4.3, Criterion 4.4, Criterion 4.5) and use of local processing, local services, and local value-added manufacturing (Criterion 5.4);

x. Production of diversified benefits and/or products (Criterion 5.1), including an inventory system that documents: a) species, b) volumes, c) stocking, d)
regeneration, e) *stand* and *forest* composition and structure, and f) timber quality;

xi. Actual vs. projected annual harvests of timber and *non-timber forest products* (Criterion 5.2) and *long-term* economic viability (Criterion 5.5); and

xii. Maintenance and/or enhancement of *ecosystem services* (Criterion 5.1) and *High Conservation Values* 5 and 6 (identified in Criterion 9.1).

2) Monitoring per Indicator 8.2.1 is sufficient to identify and describe the environmental impacts of *management activities*, including, where applicable:

i. Results of regeneration activities (Criterion 10.1) and *silvicultural* activities (Criterion 10.5);

ii. Use of ecologically well-adapted *species* and *non-native species* for regeneration (Criterion 10.2), and any adverse impacts associated with the use of *non-native species* (for regeneration or other purposes) including, when applicable, impacts outside the *Management Unit* resulting from use of *non-native species* within the *Management Unit* (Criterion 10.3);

iii. Confirmation that *genetically modified organisms* are not being used (Criterion 10.4);

iv. Impacts from use of *fertilizers* (Criterion 10.6), *pesticides* (Criterion 10.7), and/or *biological control agents* (Criterion 10.8);

v. Impacts of infrastructural development, transport activities, and *silviculture* on *rare, threatened and endangered species*, *habitats*, *ecosystems*, *landscape values*, water, and *soils* (Criterion 6.7 and Criterion 10.10);

vi. Impacts of harvesting and extraction of timber on *non-timber forest products*, environmental values identified per Indicator 6.1.1, merchantable wood waste, and other products and services (Criterion 10.11); and

vii. Environmentally appropriate disposal of *waste materials* (Criterion 10.12).

3) Monitoring per Indicator 8.2.1 is sufficient to identify and describe changes in environmental conditions, including, where applicable:

i. Environmental values, ecosystem functions and *ecosystem services* identified per Indicator 6.1.1, including carbon sequestration and storage (Criterion 6.1) and including the effectiveness of actions identified and implemented to prevent, mitigate, and repair negative impacts to these environmental values (Criterion 6.3);

ii. *Rare, threatened, and endangered species* and their *habitats* (Criterion 6.4), *representative sample areas* and components of the *conservation areas network* (Criterion 6.5), naturally occurring *native species* and *biological diversity* (Criterion 6.6), water courses, *water bodies*, water quantity and water quality (Criterion 6.7), and the effectiveness of actions implemented to *conserve* and/or *restore* these values;

iii. *Landscape values* (Criterion 6.8) and *High Conservation Values* 1 to 4 (identified in Criterion 9.1) and the effectiveness of actions implemented to maintain and/or *restore* them;

iv. Conversion of *natural forest* or *semi-natural forest* to *plantations* or to *non-forest* (Criterion 6.9) and the status of *plantations* established after 1994 (Criterion 6.10);
v. Location, presence, and abundance of *invasive species* and the effectiveness of actions implemented to address them (Criterion 6.6); and

vi. Occurrence and impacts from *natural hazards* (Criterion 10.9) and any other significant, unanticipated removal or loss or increased vulnerability of *forest* resources, including, at a minimum, documentation of quantitative and qualitative information regarding: a) date and location of occurrence, b) description of disturbance, and c) extent and severity of loss.
Annex K: High Conservation Value Framework

Preface

The Forest Stewardship Council® (FSC) Principles and Criteria for Forest Stewardship (P&C; FSC-STD-01-001) give special attention to biological, ecological, social, or cultural values of outstanding significance. These values, referred to as High Conservation Values (HCV)*, and the areas needed for their existence and maintenance, are subject to the requirements of Principle 9 of the P&C.

Many of the resources that receive HCV* designation, such as concentrations of rare species*, are also addressed under Principle 6, Environmental Values and Impacts, of the P&C. The challenge for landowners seeking FSC certification is distinguishing between those resources that are adequately covered under Principle 6 (or other Principles) from those that rise to the level of needing to be considered under Principle 9.

As part of the FSC’s standards development process, FSC-US is required to periodically update the FSC US National Forest Stewardship Standard (NFSS). The High Conservation Value Framework must also be updated as part of the revision process, consistent with the current P&C, International Generic Indicators (FSC-STD-60-004), and FSC’s Guidance for Standards Development Groups: Developing National High Conservation Value Frameworks (FSC-GUI-60-009). The scope of this Framework is the conterminous United States (i.e., excluding Alaska, Hawaii and US Territories).
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1. Introduction

The Forest Stewardship Council® (FSC) Principles and Criteria for Forest Stewardship (P&C; FSC-STD-01-001) give special attention to biological, ecological, social, or cultural values of outstanding significance. These values, referred to as High Conservation Values (HCV)*, and the areas needed for their existence and maintenance, are subject to the requirements of Principle 9 of the P&C. Many of the resources that receive HCV* designation, such as concentrations of rare species*, are also addressed under Principle 6 (Environmental Values and Impacts), or other Principles* of the P&C. The challenge for landowners seeking FSC certification is distinguishing between values that are adequately covered under other Principles* from values that rise to the level of needing to be considered under Principle 9. Due to the threshold of significance, importance, and/or rarity required for HCV* status, not every Management Unit* will have an HCV*. The following guidance is intended to assist certified landowners and those seeking certification with identifying, managing, and monitoring HCVs* and thereby achieving conformance with Principle 9.

1.a. High Conservation Values

HCVs* demand a greater degree of protection* to ensure their long-term* maintenance or enhancement, particularly if they may be negatively affected by management activities*. This involves greater efforts to identify them (per Criterion 9.1), greater attention to determining (per Criterion 9.2) and implementing (per Criterion 9.3) appropriate management measures, and through monitoring both implementation and effectiveness of these measures (per Criterion 9.4). FSC recognizes six types of HCVs*:

- **HCV 1 – Species Diversity.** Concentrations of biological diversity, including endemic species*, and rare, threatened or endangered species*, that are significant* at global, national, or regional levels.
- **HCV 2 – Landscape-Level Ecosystems and Mosaics.** Intact Forest Landscapes* and large landscape-level ecosystems* and ecosystem* mosaics that are significant* at global, national, or regional levels, and that contain viable populations of the great majority of the naturally occurring species* in natural patterns of distribution and abundance.
- **HCV 3 – Ecosystems and Habitats.** Rare, threatened or endangered ecosystems*, habitats*, or refugia*.
- **HCV 4 – Critical Ecosystem Services.** Basic ecosystem services* in critical* situations, including protection* of water catchments and control of erosion* of vulnerable soils* and slopes.
- **HCV 5 – Community Needs.** Sites and resources fundamental for satisfying the basic necessities of local communities or Indigenous Peoples (for livelihoods, health, nutrition, water, etc.), identified through engagement with these communities or Indigenous Peoples.
- **HCV 6 – Cultural Values.** Sites, resources, habitats and landscapes* of global or national cultural, archaeological or historical significance*, and/or of critical* cultural, ecological, economic or religious/sacred importance for the traditional cultures of local communities* or Indigenous Peoples*, identified through engagement* with these local communities* or Indigenous Peoples*. 
1.b. Normative Aspects of this HCV* Framework

Unless clearly indicated otherwise, this Framework is considered guidance and, by definition, informative and not normative. However, The Organization* shall consider this HCV* Framework as they identify, manage and monitor HCVs* associated with the Management Unit*, per Indicators 9.1.1., 9.2.1, and 9.4.1. When this Framework references normative requirements, the applicable Criterion* or Indicator* is noted.

Any FSC Policy, Standard or Procedure referenced or quoted in this guidance document retains its normative status.

2. Terminology

For consistency, it is important that The Organization* and Certification Bodies* are working with a common set of terminology when addressing HCVs*. While not comprehensive, the following addresses some terms that have or may present particular difficulties. Note that Section 12 provides definitions for additional terms.

2.a. HCV vs. HCV Attribute vs. HCVA vs. HCVF

The first national forest* management standard in the US (V1.1) was developed under P&C Version 4, and used the terms “HCV Forest” (HCVF) and “HCV attributes”. “Attributes” referred to the values to be maintained or enhanced, and HCVF to the forests* in which the attributes occurred. For the US NFSS (V2.0) developed under P&C Version 5, values are now simply termed “HCV*” and the forested* and non-forested* areas that “possess and/or are needed for the existence and maintenance of identified HCVs*” are termed High Conservation Value Areas (HCVA)*. This expands the identification of HCV* to non-forested* areas.

2.b. Conservation Areas vs. HCVA

While all HCVA* should be considered conservation zones* or protected areas* (and included in the Conservation Areas Network*, per Criterion 6.5), not all conservation* areas will be HCVA*. Principle 9 addresses a fraction of the values addressed in other Principles*, and also addresses a small number of important environmental and social values that are not addressed elsewhere in the US NFSS. Examples of values within conservation* areas that would generally not rise to the level of HCV* within HCVA*, include riparian corridors where management is adapted to restore*, maintain, or enhance the riparian habitat, buffer zones* around nest sites of rare, threatened and endangered bird species*, and long-term* retention* areas that preserve viewpoints important to the economy of a local community*. Examples of HCVA* could include a regionally significant* breeding area for a number of critically imperiled herptile species* and the buffer* around it, in which management activities* are limited or modified to protect* the breeding area, a rare ecosystem* and the stands* around it that are managed to help control and exclude invasive species* from the rare ecosystem*, or the last nesting area of a nearly extinct bird species* that is highly sensitive to disturbance, and the area around it in which management activities* are prohibited during the nesting season.
2.c. Landscape

The US NFSS definition of "Landscape" provides a specific scale for purposes associated with Representative Sample Area (RSA) establishment and assessment, but recognizes that different scales are appropriate for consideration of "landscape" in other contexts associated with the Standard. For HCV* assessments and management, the "landscape" considered should be as defined in the second paragraph of the definition, i.e., the area within and around the Management Unit* that could be affected by the management activities* occurring within the Management Unit*, and also where activities occurring external to the Management Unit* could affect the ability of The Organization* to maintain significant* environmental and social values within the Management Unit*. Typically, a smaller management unit* will have a smaller landscape*, and a larger* management unit* a larger landscape*. However, this ‘rule’ will not apply in some situations, such as a smaller management unit* that occurs at the headwaters of an important waterway where the management activities* could have critical downstream impacts, or a larger management unit* that occurs in isolation within a developed environment.

2.d. Management Unit vs. Contiguous Lands

The Management Unit* consists of the defined lands that are managed together under “a set of explicit long-term* management objectives* which are expressed in a management plan*”. These lands may occur as a single contiguous block of land, or may occur as detached and separate blocks of land that are managed in concert.

Some types of HCV* require consideration of contiguous forest* or lands of a certain size. Identification of this kind of value should be completed initially without consideration of the Management Unit* boundaries—does such a value exist in the landscape within which any portion of the Management Unit* occurs? If so, the HCV* assessment should consider whether there are any portions of the Management Unit* that should be considered HCVA* due to their importance for maintaining the HCV*.

2.e. FSC US Regions vs. Regionally Significant

FSC US has defined a set of regions that represent differences that are important for conformance with particular Indicators* in Principle 6. For the purposes of assessing and identifying HCV 1* and HCV 2* (i.e., values that are significant at global, national, or regional levels), the “regional” context should be ecological only. Ecological Provinces defined by Cleland 2007 should be used for this purpose. If data for the region are limited, or in the cases of very small ecological provinces, a larger area may be justified. Where justified, using Best Available Information*, a comparable classification system (e.g., TNC’s Ecoregion Map) may be used instead. Therefore, as used in this HCV* Framework, regional considerations will always be at a sub-national scale.

Consultation Question:

Are Ecological Provinces (as defined by Cleland 2007) the appropriate scale for consideration of the regional significance of HCV 1 and HCV 2?
2.f. Precautionary Principle/Approach

Per Criterion 9.3, when the available information indicates that management activities* pose a threat of severe or irreversible damage to the environment or a threat to human welfare, The Organization* is required to take explicit and effective measures to prevent the damage and avoid the risks* to welfare, even when the scientific information is incomplete or inconclusive, and/or when the vulnerability and sensitivity of environmental values are uncertain, i.e., in a manner consistent with the precautionary approach*. Avoiding risks* when scientific information is incomplete or inconclusive is appropriate for Principle 9, given the vulnerability and sensitivity of the values in question. When implementing the precautionary approach*, HCVs* are understood to be critical*, fundamental, or significant* and therefore any threat to a HCV* is considered to be a threat of severe or irreversible damage.

2.g. Management

Management activities* may range from zero or minimal interventions to a specified range of appropriate interventions and activities designed to maintain or enhance identified HCV*. Maintenance or enhancement of HCVs* does not necessarily prohibit other uses of, or activities within, an HCVA*, including silvicultural* uses, as long as (per Indicator 9.3.1) any management activities* implemented in HCVAs* maintain or enhance the HCVs* and the extent of the HCVA*.

3. Information and Data Sources

3.a. Overarching Best Available Information*

The purpose of listing the below overarching Best Available Information* is to avoid having to list it repetitively for each HCV* in the following sections.

The Organization* is required to use Best Available Information* (per Indicator 9.1.1) and consult with rights holders* and stakeholders* (per Indicator 9.1.3) when completing their assessment and identification of HCVs*, and are also required to consult with rights holders*, stakeholders* and experts* when developing management strategies for HCVs* (per Indicator 9.2.2) and as part of their monitoring program (per Indicator 9.4.2). Finally, per Indicator 9.1.1 (through the reference to the types of HCV* defined in Criterion 9.1), The Organization* is required to identify HCV 5* and HCV 6* through engagement* with particular stakeholders* - local communities* and Indigenous Peoples* (i.e., Native American* groups). These four sources of information (i.e., Best Available Information*, rights holders*, stakeholders* and experts*) will be overlapping in many cases, and are presented all together in the following lists, as well as in other lists of information sources later in this document.

3.a.i. Best Available Information* for Identifying and Assessing HCVs*

- Data gathered to address rare or important ecological features associated with Criteria 6.1, 6.2, 6.3, and 6.4
- High Conservation Value* surveys of the Management Unit*
- Relevant databases and maps
**Culturally appropriate** engagement with **Native American** groups, affected **rights holders**, affected **stakeholders** and **interested stakeholders**, per the FSC US Guidance on **Free Prior and Informed Consent** (US NFSS, Annex F).

Existing assessments of environmental and social values undertaken by public agencies and/or other **conservation** groups, including State Wildlife Action Plans and NatureServe.

Existing assessments of environmental and social values undertaken on adjacent land ownerships.

**NOTE**: If the Management Unit has not been surveyed for social or environmental values, but is adjacent to an area with known significant values, then consultation with an expert may be critical for determining if the values also occur on the Management Unit and should be considered HCVs.

Initial consultation for HCV 1*, HCV 2* and HCV 3* is generally with state Natural Heritage Programs, state wildlife agencies, the US Fish and Wildlife Service (USFWS), and National Marine Fisheries Service (NMFS).

On **large** Management Units*, for HCV 1, HCV 2, HCV 3 and HCV 4*, an Management Unit-specific assessment including on-site review may be appropriate if the Management Unit* has not been assessed by an expert and evidence suggests that HCVs may be present.

For relevant elements of HCV 5* and HCV 6*, engagement with **local communities** and **Native Americans** (per Criterion 9.1)


### 3.a.ii. Best Available Information* for Developing Management Strategies for HCVs*

- **Culturally appropriate** engagement with **Native American** groups, affected **rights holders**, affected **stakeholders** and **interested stakeholders**, per the FSC US Guidance on **Culturally Appropriate Communication & Free Prior and Informed Consent** (US NFSS, Annex F).
- Consultation with experts*
- Existing **conservation** planning undertaken by public agencies and/or other **conservation** groups, including State Wildlife Action Plans and NatureServe.
- **High Conservation Value Guidance for Forest Managers (FSC-GUI-30-009)**

### 3.a.iii. Best Available Information* for Monitoring Methodologies

- **Engagement** with **rights holders**, consistent with Criteria 3.5, 4.5 and 4.7
- **Culturally appropriate** engagement with **Native American** groups, affected **stakeholders** and **interested stakeholders**, per the FSC US Guidance on **Culturally Appropriate Communication & Free Prior and Informed Consent** (US NFSS, Annex F).
- Existing **conservation** planning undertaken by public agencies and/or other **conservation** groups, including State Wildlife Action Plans and NatureServe.
3.b. Documenting HCV* Assessments

Per Indicator 9.1.1, The Organization* is required to document their HCV* assessment. This should be done in a transparent manner that can be reviewed by auditors and interested stakeholders*. The documentation may be in the form of an HCV* assessment report, or (similar to the management plan*) may be a collection of documents, reports, records, maps and other materials as applicable. However, if the second approach is taken, The Organization* should prepare a summary that identifies the various materials within the collection, and summarizes the assessment process and its conclusions.

Documentation should include:

- Who conducted the assessment (e.g., name, qualifications, affiliation)
- Rights holders*, experts* and stakeholders* consulted (e.g., name, affiliation, rights* held)
- Records demonstrating when and how culturally appropriate* consultations were implemented (e.g., records of phone calls, lists of meeting attendees, copies of email correspondence)
- What additional sources of Best Available Information* were used
- HCV* identified and associated areas designated as HCVA*, including detailed maps of HCV* and HCVA* (digital or paper-based)
- Status of identified HCV* (e.g., short-term and long-term* threats, overall viability)

Engagement* with experts* may include primary consultation (i.e., direct engagement* with the expert*) and/or secondary consultation. An example of secondary consultation is when a state empanels a committee of expert* botanists to determine which plants are rare, threatened, or endangered within a state or region (i.e., the landowner can rely on the committee’s work without engaging in independent consultation).

3.c. Culturally Appropriate Stakeholder Consultation

The primary source of Best Available Information* for HCV 5* and HCV 6* is direct consultation with local communities* and Native American* groups that have a connection to the Management Unit* or the landscape* in which it occurs. The US NFSS Annex F, Guidance for Culturally Appropriate Communication & Free, Prior and Informed Consent (FPIC), will assist The Organization* in determining the best engagement* approach and also with FPIC*, if required per Criterion 3.2 and/or Criterion 4.2. For engagement* with local communities* that are not explicitly addressed in the US NFSS Annex F, a variety of consultation approaches may be considered depending on the context and situation. Some local communities*, for example, may be approached through public notices and solicitations for information, whereas others may be better served through public meetings or face-to-face engagement* with stakeholder representatives (e.g., Town Managers, Board of Supervisors, County Planners, Water District Managers, or other government officials).
In some cases resources are of such importance to a Native American* group that tribal* representatives are unwilling to share the location of these resources with outside parties. In some cases, the location of particularly important sites are known to only a few tribal* members. In such situations, one potential approach is to periodically share maps of proposed management activities* with tribal* representatives and then leave it to their discretion as to whether to share information regarding potential HCVs* that might be affected by the management activities*.

3.d. When New Information Becomes Available

Per Indicator 9.1.1, if The Organization* learns of new applicable information, it needs to update the assessment to incorporate the information. New information may become available following research completed by The Organization* or others, as a result of HCV* monitoring The Organization* conducts, through the observations of staff or stakeholders* or through other means. If this information suggests that there may be an HCV* that was not previously identified, or that there has been a change in the status of a known HCV*, the assessment needs to be updated to reflect this information, and both management and monitoring adjusted as appropriate.

4. HCV Identification and Assessments

Per Indicator 9.1.1, it is primarily the responsibility of The Organization*, or the landowner seeking certification, to conduct HCV* assessments that are appropriate to the Management Unit*, its landscape* context, and the FSC US region in which it occurs, and that include identification of HCV* and HCVA*, status assessment of HCVs*, and engagement* with stakeholders* and rights holders*. Due to the unique context of each Management Unit*, this will generally result in a unique set of HCVs* and HCVA* for each Management Unit* that has HCVs*. It is important to note that one possible assessment finding is that a Management Unit* does not have any HCVs* present.

The rigor of the assessment, including engagement*, should increase in situations where, due to the context of the Management Unit* and its management activities*, there is a particularly high number of HCVs* and/or the risk* of negative impacts on the HCVs* is particularly high. Specific expectations for identification and assessment of HCV* within Family Forests* are provided in Section 11 of this Framework document.

If initial evaluations determine that there is a high potential for one or more HCVs*, The Organization* may choose to designate an HCVA* without further study (and then take appropriate steps to manage and monitor the area), instead of undertaking additional studies to determine if the area in question actually harbors the HCV(s)*.

4.a. National HCV for All Organizations

If any portion of an Intact Forest Landscape (IFL)* occurs within the Management Unit*, it will always be HCV 2* (per Indicator 9.1.2). The other National HCV* described below are considered HCV* except in very rare situations (for which The Organization* has very well developed and documented rationale). The Organization’s* HCV* assessment must consider
these National HCV* and also regionally and more locally significant environmental and social values—additional guidance on identifying these values follows.

4.a.i. Intact Forest Landscapes*. Per Principle 9, Intact Forest Landscapes (IFL)* shall be considered HCV (HCV 2*). Being the last remaining large unfragmented forested areas in the world, IFLs* are valued for their environmental, social, and intrinsic worth and are considered globally significant*.

Identifying IFLs*: Global Forest Watch (http://www.intactforests.org) and/or other data that are more recent, accurate and/or refined than those provided by Global Forest Watch, shall be used to identify IFL* that existed within the Management Unit* as of January 1, 2017. Areas identified by Global Forest Watch shall be considered IFL* unless evidence-based assessments determine that the area does not meet the definition of IFL* (i.e., the methodology used is more recent, accurate and/or refined than the Global Forest Watch methodology1). Areas that have been or continue to be disturbed by commercial or industrial activities*, developed areas, and areas with infrastructure* associated with the aforementioned activities and development, should not be included in IFLs*. Areas with evidence of old disturbances and low-intensity disturbances, such as selective logging for non-commercial purposes and hunting, should be included in IFLs*.

Managing IFLs*: Per Indicator 9.2.3, certificate holders for non-federal Management Units* are required to designate and manage at least 80% of the total area of IFL* identified within the Management Unit* and not less than 123,500 acres (50,000 ha) as core area, while the entirety of IFLs* on federal lands are to be designated and managed as core areas* (per USFS Supplement to Indicator 9.2.3). Core areas* are to include the most important cultural and ecological values and be managed to exclude industrial activity*. Core area* management strategies should maintain the extent and intactness of the forest ecosystems* and the viability of their biodiversity* concentrations, including plant and animal indicator species*, keystone species*, and/or guilds associated with large intact natural forest ecosystems*. Maintenance of IFL* core areas* will require identifying and addressing potential threats.

Limited industrial activity* within IFL* core areas* is allowed only if all effects of industrial activity*:

- Are restricted to a very limited portion* of the core area*, not to exceed 0.5% of the core area* in any one year, nor to affect a total of more than 5% of the core area*
- Do not reduce the core area* below 50,000 ha
- Will produce clear, substantial, additional, long-term conservation* and social benefits consistent with Criterion 9.2

Portions of IFLs* that are not designated as core areas* are still HCV 2* and therefore must be managed to maintain or enhance their HCV 2* values. This includes maintaining the viability of their biodiversity* concentrations, including plant and animal indicator species*, keystone species*, and/or guilds associated with large intact natural forest ecosystems*.

Monitoring IFLs*: The Organization* is expected to monitor trends, impacts of management activities*, and threats. The baseline condition of any variable is key, as trends and effectiveness may change over time. Annual monitoring of extent and intactness of the IFL* is

1 https://data.globalforestwatch.org/datasets/intact-forest-landscapes-2016
recommended so that new threats may be quickly identified. Both engagement* and ecological protection* strategies are fundamental to a working monitoring program.

4.a.ii. Old Growth* Forest*. All old growth* forest* (Type 1* and Type 2*) is HCV* (HCV 3*), and subject to the requirements of Principle 9. Additionally, per Indicator 6.8.2, Type 1* and Type 2* old growth* are to be protected*, including from timber management activities*, except as needed to maintain the ecological values associated with the stand*. Individual old growth* trees or stands* with old growth* trees that don't meet the definition of old growth* (Type 1* or Type 2*) are addressed as legacy trees* (per Indicator 6.6.3). Old growth* forest*, as defined, is always associated with pre-European remnant forests*. Type 1 Old Growth* may also represent primary forest*.

4.a.iii. Primary Forest*. All primary forest* is HCV* (HCV 3*), subject to the requirements of Principle 9, due to the rarity of forest* ecosystems* that have retained the principal characteristics and key elements of native ecosystems* and have remained relatively undisturbed by human economic activity. Any evidence or documentation that forest* management activities* have occurred in an area, even if it is not readily visible, would exclude the area from being primary forest*. In fire- or other disturbance-dominated ecosystems*, primary forest* may not always be dominated by mature trees, or any trees at all, but instead may present as a mosaic of older and younger stands*. Maintenance of this HCV* will focus on conserving* the principal characteristics and key elements of the native forest*, and limiting human economic activities.

4.a.iv. Wilderness Areas. Wilderness areas enrolled in the National Wilderness Preservation System (https://www.wilderness.net/) or a similar state-level system, meet the definition for HCV 6 and may also, in their entirety or within a portion of the area, meet the definition for HCV 2. Maintenance of this kind of HCV will preclude forest management activities and use of equipment that do not maintain or enhance the areas’ wilderness characteristics, taking into consideration the attributes associated with the designation of the specific Wilderness Area. Designated wilderness areas are found throughout the United States but are more common in the western regions (i.e., Pacific Coast, Rocky Mountains, and Southwest).

4.a.v. Drinking Water Supply Management Zones. Some communities have designated areas that are critical* for protection* of the community’s drinking water supplies. With rare exception, these meet the definition of HCV 4* and are subject to the requirements of Principle 9. This includes public water drinking systems that are regulated by the US Environmental Protection Agency2, but not smaller systems with more limited numbers of users. Maintenance of these areas does not necessarily preclude logging or other forest* management activities* so long as they are compatible with laws and regulations (Principle 1) and maintain or enhance the ecosystem service* (i.e., drinking water) provided to the community.

Additionally, any designated public drinking water surface supply (i.e., reservoir, lake, pond, or river), will meet the definition of HCV 4*. Areas within 250 feet of those surface supplies that

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2 https://www.epa.gov/compliance/safe-drinking-water-act-sdwa-compliance-monitoring

A public water system provides water for human consumption through pipes or other constructed conveyances to at least 15 service connections or serves an average of at least 25 people for at least 60 days a year. A public water system may be publicly or privately owned.
have soils* rated as prone to erosion*, slopes rated as high hazard for failure, and areas within the 100-year flood zone, should be included within the HCVA* for these HCV*.

4.a.vi. National Register of Historic Places. Authorized by the National Historic Preservation Act of 1966, the National Park Service’s National Register of Historic Places is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect* America’s historic and archeological resources. While occurrence of these registered historic places is likely rare within FSC certified lands, any that do occur are HCV 6* and subject to the requirements of Principle 9. Management activities* that maintain or enhance the HCV* are acceptable.

4.a.vii. UNESCO World Heritage Sites. The United Nations Educational, Scientific and Cultural Organization (UNESCO) seeks to encourage the identification, protection* and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity. This is embodied in an international treaty called the ‘Convention concerning the Protection of the World Cultural and Natural Heritage,’ adopted by UNESCO in 1972. Any sites that are included in the World Heritage List automatically meet the definition of HCV 6*. Management activities* that maintain or enhance the HCV* are acceptable.

4.b. National HCV for Federal Lands Only

Consistent with the expectation that ecosystem services* and other public benefits are given priority on federal lands, when the following occur on federal lands, they are considered HCV*.

4.b.i. Roadless Areas on Federal Lands. Large areas without any evidence of roads (including no evidence of skid trails) are extremely rare in the conterminous US and provide unique habitat*, with a higher likelihood of intact natural functions and ecosystem* processes. When they occur on federal lands, the following are considered HCV 3*:

- Undeveloped areas that are at least 1,000 acres in size and that meet the minimum criteria for wilderness consideration under the Wilderness Act—in regions with very little undeveloped land, the size of the area that should be considered may be smaller
- Any area that meets the definition of ‘roadless’ as provided in the Roadless Rule

Typically, maintenance of this kind of HCV* will preclude commercial forest* management, unless they can be achieved without the construction of new roads and maintain or enhance the wilderness characteristics.

4.b.ii. High Carbon Forests* on Federal Lands. Regulation of climate is a crucial ecosystem service*, and in turn, climate change can affect other ecosystem services* such as regulation of floods and drought. Forest* stands* that store relatively high amounts of carbon in their trees, soils*, and other components thus represent both an important value, and a potential threat if intensive harvests or other management significantly reduces their carbon stores. High carbon forests* are most likely to be found in publicly owned forests*, especially federally-administered forests*, where they are normally to be considered HCV 4*. While old growth* and other late successional* forests* are more likely to have higher carbon levels, stand age alone does not determine carbon levels. Definitions and information on the presence of such forests* are evolving. In the Pacific Northwest, sites on public lands* that have >200 Mg/ha of above-ground biomass, or are capable of easily reaching that threshold should generally be considered high
carbon, pending new information. Comparable thresholds for other regions are being developed by the Woods Hole Institute & Geos Institute. Peatlands in forested landscapes are also likely to have high carbon storage levels, and should also be assessed for their carbon storage function. Management strategies to maintain or enhance this HCV* (per Indicator 9.2.1) should maintain high carbon stands’ natural ability to store and sequester carbon. Harvests should be limited to operations that maintain that natural ability, and not reduce on-site carbon levels at any time, except in cases where necessary to protect* lives and property (e.g., thinning of smaller trees in urban interface zones) or to restore* stands* and ecosystems* to natural conditions* that are more resilient to fire or other disturbances (e.g., thinning of smaller trees in previously fire-suppressed areas).

4.c. HCVs Identified in the FSC US Controlled Wood National Risk Assessment

The US National Risk Assessment (US NRA) is the primary source of information used by FSC Chain of Custody* certificate holders that have Controlled Wood within the scope of their certificate to determine whether they have a risk of receiving materials from forests* in the conterminous US where certain undesirable activities are occurring. One category of risks assessed is the risk of receiving materials from forests* where the forest* management activities* threaten HCVs*. However, the scale of the assessment completed for the NRA was much more coarse than the assessment that is needed by a FSC Forest Management certificate holder. The US NRA is based on the existing Draft High Conservation Value Forest Assessment Framework for the conterminous US. Future revisions of the US NRA will need to be aligned with this HCV* Framework.

4.d. Additional Considerations for Identifying HCV*

Non-native ecosystems* will never be HCV 1*, HCV 2*, or HCV 3*

Not all wetlands* are HCV*; not all riparian areas* are HCV*—only those that: 1) have significant* concentrations of biodiversity* (including endemic* or rare, threatened and endangered species*) compared to other wetlands*riparian areas* globally, nationally, or regionally; 2) are landscape* scale* in nature, intact, and significant* compared to other wetlands* globally, nationally, or regionally (such as a particularly large, intact peatland); 3) are representative of a rare ecosystem* or habitat*, or serve as a refugia*; 4) provide a critical* ecosystem service*, such as water filtration or storage, the loss of which would directly cause suffering to recipients of the service; 5) provide a resource that is fundamental to satisfying a basic necessity of survival for a local community*; or 6) have significant* cultural, archaeological or historical value compared to other sites globally, nationally, or regionally, or are of critical* importance for Native American* groups.

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Not all rare, threatened and endangered species* are HCV*; not all listed species are HCV*—the focus of HCV 1* is that these HCV* represent concentrations of biodiversity*, typically areas that have a high number of endemic species* or rare, threatened and endangered species*, when compared to other areas globally, nationally, or regionally. Typically, an HCV 1* will not be identified for a single species*, with the exception being in situations where the species* is highly imperiled and is found in a population large enough to be considered a concentration or significant*, or where survival of the species* is critically dependent on the area in question (typically because there is so little habitat* remaining), or where Best Available Information* indicates that every surviving individual of the species* is critical to the viability of the species*, or where there is a particularly important genetic variant, subspecies, or variety.

No HCV* is defined only by the presence of big trees—other characteristics indicative of a particular HCV* type must also be present.

Not all fish-bearing streams are HCV*—similar to the wetlands* and rare, threatened and endangered species* considerations above, there would need to be additional characteristics, beyond simply presence of fish, for the stream to be considered an HCV*.

5. HCV 1 – Species Diversity

HCV 1 – Species* Diversity. Concentrations of biological diversity* including endemic species*, and rare, threatened or endangered species*, that are significant* at global, national, or regional levels.

5.a. Assessment and Identification of HCV 1*

Significant* concentrations of biodiversity* include areas that contain concentrations of rare, threatened, and endangered species*, endemic species*, natural communities, or other biodiversity* values that occur in numbers, frequency, quality, and/or density that are sufficiently outstanding to be considered unique or highly important in comparison with other areas within the ecoregion within which the Management Unit* is located. Identification and assessment of HCV 1* should begin with the national considerations provided in Sections 4.a and 4.b, and then follow the guidance below to determine if there are additional HCV*.

Assessing concentrations of biological diversity* that are significant* at global, national, or regional levels requires differentiating between resources that are addressed primarily by the requirements of Principle 6 versus those that rise to the level of being considered under Principle 9. All endemic species* and rare, threatened and endangered species* must be considered under Principle 6, but not all such occurrences result in HCV* designation and the requirements of Principle 9.

While HCV 1* focuses primarily on concentrations of biodiversity* with multiple endemic species* and/or rare, threatened and endangered species*, a concentration of a single species* may also rise to the level of HCV 1*. This is possible under two scenarios:

1. Important populations (e.g., particularly important genetic variants, subspecies or varieties), or a great abundance of an individual endemic* or rare, threatened and
endangered species* representing a substantial proportion of the regional, national or global population, which are needed to maintain the species* as a whole

2. Small populations of individual endemic* or rare, threatened and endangered species*, in cases where the regional, national, or global survival of that species* is critically dependent on the area in question (such species* are likely to be restricted to a few remaining areas of habitat*)—in these cases, there is often a consensus (among many stakeholders*) that every surviving individual is globally significant*

Concentrations of biodiversity* that occur temporally may also be HCV 1*. Examples could include regionally significant* hibernacula for bats, stop-over sites for migratory birds, or breeding areas (i.e., where an rare, threatened and endangered species* or endemic species* is temporarily concentrated).

5.a.i. Resources & Guidance for HCV 1*:

The below datasets are focused on areas likely to have concentrations of biodiversity* that are HCV 1*. Additional consultation with stakeholders* and/or experts* may be appropriate if the Management Unit* is adjacent to an identified area with regionally significant* concentrations of biodiversity* values, or if the Management Unit* contains ecosystems* and site conditions that are similar to such areas.

- International Union for the Conservation of Nature (IUCN) Management Category ‘Ia’ (when assigned to protected areas for inclusion in the United Nations Environment World Conservation Monitoring Center (WCMC) World Database for Protected Areas (WDPA) and the Commission for Environmental Cooperation (CEC) North American Terrestrial Protected Areas Database)
  - [https://www.unep-wcmc.org/resources-and-data/wdpa](https://www.unep-wcmc.org/resources-and-data/wdpa)
- NatureServe Maps of Biodiversity Hotspots & Biodiversity Importance
  - [https://www.natureserve.org/conservation-tools/naturereserve-hotspots-map](https://www.natureserve.org/conservation-tools/naturereserve-hotspots-map)
  - [https://www.natureserve.org/conservation-tools/projects/map-biodiversity-importance](https://www.natureserve.org/conservation-tools/projects/map-biodiversity-importance)
- Areas identified through The Nature Conservancy’s (TNC) Ecoregional Assessments as having significant* concentrations of biodiversity*
  - [https://www.conservationgateway.org/ConservationPlanning/SettingPriorities/EcoRegionalReports/Pages/EastData.aspx](https://www.conservationgateway.org/ConservationPlanning/SettingPriorities/EcoRegionalReports/Pages/EastData.aspx)

As not all areas with significant *concentrations of biodiversity* have been identified through the above datasets, the following considerations suggest contexts with a higher likelihood of HCV 1* occurrence. If any of the following exist within or adjacent to the Management Unit*, the HCV* assessment should be more rigorous in its evaluation of whether concentrations of biodiversity* that are significant* at global, national or regional scales* are, in fact, present within the Management Unit*.

Concentrations with Multiple Species*:

- UNESCO Biosphere Reserves

FSC® NATIONAL FOREST STEWARDSHIP STANDARD OF THE UNITED STATES (V2-0 D1-0)
Areas placed in the federal Protected Areas Database (PAD) as GAP Status 1 or GAP Status 2

- [https://gapanalysis.usgs.gov/padus/data/download/](https://gapanalysis.usgs.gov/padus/data/download/)
- [https://gapanalysis.usgs.gov/padus/](https://gapanalysis.usgs.gov/padus/)
- [https://gapanalysis.usgs.gov/padus/viewer/](https://gapanalysis.usgs.gov/padus/viewer/)

Areas with a number of species* that are included on the IUCN Red List and are classified by IUCN as Critically Endangered, Endangered, or Vulnerable

- [https://www.iucnredlist.org/search/map](https://www.iucnredlist.org/search/map)

Management Units* with federally-designated "critical habitat" for a number of species* that are federally listed as threatened or endangered

- [https://ecos.fws.gov/ipac/](https://ecos.fws.gov/ipac/)

A county or watershed identified by NatureServe as having a large number of species* of conservation* concern

- [http://www.natureserve.org/watershed-map](http://www.natureserve.org/watershed-map)

Areas with a number of viable populations of rare, threatened and endangered species* associated with the same ecosystem* type or ecosystem* mosaic. NOTE: Accessing data for this scale of assessment may be more difficult for some Organizations*, but these kinds of places can be identified using the following resources

- Consultation with state Natural Heritage Program or similar state agency
- State and federal threatened species* and endangered species* assessments
- US Fish and Wildlife Service Information for Planning and Consultation (IPaC) web tool (https://ecos.fws.gov/ipac/)

Regionally significant* migratory staging areas, seasonal breeding sites, migratory corridors, and other seasonal concentrations of species*

- [https://www.audubon.org/important-bird-areas](https://www.audubon.org/important-bird-areas)
- Other data sources: State Natural Heritage Programs, Federal and state wildlife agencies, surveys and assessments of the Management Unit*, local or regional conservation* organizations

Management Units* with known occurrences of natural communities or habitats* identified as critically imperiled or critically rare, or endemic habitats* that are severely limited in distribution and/or occurrence

- Data sources: State Natural Heritage Programs, State Wildlife Action Plans, surveys and assessments of the Management Unit*, local* or regional conservation* organizations

Roadless areas (i.e., areas without evidence of roads or skid trails) greater than 500 acres

Concentrations with a Single Species*:

- Management Units* with federally-designated “critical habitat” or known occurrences of a species* listed as “critically endangered” by IUCN or “critically imperiled” by NatureServe, where only a very small population of the species* remains extant and survival of the species* is dependent on maintenance of the habitat*/occurrence
5.b. Strategies for Managing HCV 1

In addition to the Best Available Information* identified in Section 3.a, the following resources may provide strategies for maintaining or enhancing HCV 1* identified through the above assessment:

- US Fish and Wildlife Service species* recovery plans
- Landscape Conservation Cooperative Network
- State Natural Heritage Program, or conservation* organization, species* assessments
- State fish and wildlife department, or similar state agency, species* assessments and management plans
- State Wildlife Action Plans
- Regional or local conservation* organization landscape* conservation* plans
- In addition, per C9.2 of the Standard, affected rights holders*, affected stakeholders* and interested stakeholders*, and experts* shall be engaged in the development of strategies for maintaining or enhancing HCV 1*. Appropriate experts* may include agency staff, academics, and qualified ecologists

Strategies to maintain HCV 1* occurrences should consider: Conservation zones*, protected areas*, harvest prescriptions, and/or other strategies to protect* threatened, endangered, endemic species*, or other concentrations of biological diversity* and the ecological communities and habitats* upon which they depend, sufficient to prevent reductions in the extent, integrity, quality, and viability of the habitats* and species* occurrences. Where
strategies are intended to enhance HCV 1* occurrences, they should consider: measures to develop, expand, and/or restore* habitats* for such species*.

5.c. Monitoring HCV 1*

In addition to the Best Available Information* identified in Section 3.a, the following resources may provide strategies and/or data for monitoring HCV 1* identified through the above assessment:

- Consultation with the agency, or agencies, with regulatory authority over the elements (e.g., rare, threatened, or endangered species*; federally-designated “critical habitat”) that result in designation of the area as a concentration of biological diversity* that is significant* at global, national, or regional levels
- Review of species* assessments, management plans, and recovery plans, where available
- Site-specific field surveys if warranted

Monitoring programs for HCV 1* should have sufficient scope, detail and frequency to detect changes in the HCVs*, relative to the initial assessment and status identified for each HCV*.

6. HCV 2 – Landscape-Level Ecosystems and Mosaics

HCV 2 – Landscape*‐Level Ecosystems* and Mosaics. Intact Forest Landscapes* and large landscape*‐level ecosystems* and ecosystem* mosaics that are significant* at global, national, or regional levels, and that contain viable populations of the great majority of the naturally occurring species* in natural patterns of distribution and abundance.

6.a. Assessment and Identification of HCV 2

Identification and assessment of HCV 2* should begin with the national considerations provided in Sections 4.a and 4.b, and then follow the guidance below to determine if there are additional HCV*. Assessing landscape*‐level ecosystems* and mosaics requires identifying IFLs* and other large forested* and non‐forested* areas that are significant* at global, national, or regional levels. Using much of the same Best Available Information* from HCV 1*, the assessment must distinguish between those ecological features that are addressed only as part of Principle 6 from those that rise to the level of HCV* under Principle 9.

While Intact Forest Landscapes (IFL)* are defined as being minimally influenced by human economic activity and globally significant* (see Section 4.a.i), other HCV 2* are not required to be as undisturbed or pristine, and assessment of significance* at an ecoregion or coarser scale is needed.

The term “large” is challenging to define and can vary by region. A 1,000‐acre forest* in the Pacific Northwest, for example, might not be considered notably large, but a forest* of the same size in the Midwest or Southeast might be relatively large. The focus of HCV 2* is on forests* of a such as size as to make them significant* at a regional scale. Assessments for HCV 2*
features, therefore, must consider regional contexts. Generally, “large” should be related to the area needed to maintain viable populations, especially of large or wide-ranging species*.

For the purposes of this Framework “…contain viable populations of the great majority of naturally occurring species in natural patterns of distribution and abundance” can be understood as the presence and relatively natural distribution of the majority of the species* expected to occur in a specific landscape* or ecosystem* mosaic, with recognition that some species* may be locally extirpated or missing. Therefore, an area will not qualify as HCV 2* if it has lost many of the species* typical of such ecosystems* in their natural state, or been so heavily disturbed that the relative abundance, spatial distribution, and/or regeneration has been seriously and permanently altered. Man-made, converted, heavily degraded or fragmented* ecosystems* typically do not qualify, such as those with a dominance of invasive species*, disrupted size/age class* distributions of populations, and a loss of significant ecosystem* processes (e.g. fruit masting, dispersal of key species*).

6.a.i. Guidance & Resources for Non-IFL* HCV 2*:

In addition to the overarching information sources provided in Section 3.a and those identified for HCV 1*, large landscape* level ecosystems* or mosaics may also be assessed and identified using the following resources:

- Aerial photography, LiDAR data, and/or satellite imagery
- Aerial surveys and/or ground visits if the weight-of-evidence suggests that potential for forest* fragmentation* that might not be visible on remote-sensing imagery
- Reports and analyses from Natural Heritage Programs, NatureServe, IUCN Red List, USFWS, The Nature Conservancy, Global Forest Watch, WWF, and others
- Forests recognized as being significant* at the region or coarser scale in formally recognized reports or peer-reviewed journals, due to the unusual landscape*-scale biodiversity* values provided by size and condition of the forest* relative to regional forest* land cover and land use trends
- Consultation with topic area experts*

Additionally, the following considerations suggest contexts with a higher likelihood of HCV 2* occurrence. If any of the following contexts exist within or encompassing the Management Unit*, the HCV* assessment should evaluate more closely whether the landscape*-scale forest* is significant* at global, national or regional scales:

- Natural forests* that have experienced lesser levels of past human disturbance (e.g., minimal timber harvesting) or other management (e.g. fire suppression), or areas within such forests* (e.g., part or all of ownerships or Management Units*)
- Managed native forests* with successional* stages, forest* structures, and species* composition that are similar in distribution and abundance to native forests* that have experienced minimal human disturbance, excluding traditional Indigenous management regimes
- Native forests* or ecosystem* mosaics recognized as being significant* to biodiversity* conservation* because they contain landscape*-scale biodiversity* values that are not present on other forests* due to landscape*-scale habitat* modifications on surrounding lands, (such as land use conversion* or forest*management practices that have significantly altered forest* biodiversity* values)
● Native forests*, where if the characteristics of the landscape*-scale forest* or ecosystem* mosaic (e.g., age class* structure or relative species* abundance) were significantly altered, it would significantly affect regional biodiversity*

● Forests* that provide important habitat* connectivity* between and/or buffering of larger forest* areas and/or refugia*; and wilderness areas, forests* that are roadless, and/or have not been affected by management activities*

6.b. Strategies for Managing Non-IFL HCV 2

In addition to the Best Available Information* identified in Section 3.a, the following resources may provide strategies for maintaining or enhancing HCV 2* identified through the above assessment:

● Reports and analyses from Natural Heritage Programs, NatureServe, IUCN Red List, USFWS, The Nature Conservancy, Global Forest Watch, WWF, and others

● Regional and local* conservation* organization landscape* conservation* plans

● If the HCV 2* is the result of a particular management system, the continuation of that system will likely be the most effective management strategy

● Appropriate experts* may include agency staff, academics, and qualified ecologists

Strategies to maintain HCV 2* occurrences should consider: Strategies that fully maintain the extent and intactness of the forest* ecosystems* and the viability of their biodiversity* concentrations, including plant and animal indicator species*, keystone species*, and/or guilds associated with large intact natural forest* ecosystems*. Examples include conservation zones* and protected areas*, with any commercial activity in areas that are not protected being limited to low-intensity operations that fully maintain forest* structure, composition, regeneration, and disturbance patterns at all times. Where strategies are intended to enhance HCV 2* occurrences, they should consider: measures to restore* and reconnect forest* ecosystems*, their intactness, and habitats* that support natural biological diversity*, and measures to restore* species* and ecosystem* function in areas where roads have been abandoned.

6.c. Monitoring Non-IFL HCV 2

In addition to the Best Available Information* identified in Section 3.a, the following resources may provide strategies and data for monitoring HCV 2* identified through the above assessment:

● Periodic evaluation of aerial photographs, LiDAR data, or satellite imagery to determine if forest* fragmentation* is occurring within the HCV 2*, if recent/current images are available

● Aerial surveys and/or ground visits if the weight-of-evidence suggests that potential for forest* fragmentation* that might not be visible on remote-sensing imagery

● Monitoring of road usage and other access points to HCV 2*
7. HCV 3 – Ecosystems and Habitats

HCV 3 – Ecosystems* and Habitats*. Rare, threatened or endangered ecosystems*, habitats*, or refugia*.

7.a. Assessment and Identification of HCV 3

Identification and assessment of HCV 3* should begin with the national HCVs* in Section 4.a and 4.b, and then follow the guidance below to determine if there are additional HCV 3*. In determining whether an ecosystem* or habitat* should be considered rare, consideration should be given to rarity at an ecoregion scale, the level of threat that it faces or its rare or unique species* composition or other rare or unique characteristics, such as distinctiveness in terms of size, quality (particularly lack of human disturbance), or location within the ecosystem’s* geographic range (e.g., northern-most example of a particular ecosystem*).

When assessing the potential for HCV 3* specifically associated with refugia*, there are two types which may have an HCV* (in addition to seasonal refuges considered under HCV 1*):

- Ecological refugia*: Isolated areas which are sheltered from current changes (e.g. human threats or climatic events), and where plants and animals typical of a region may survive
- Evolutionary refugia*: areas where certain types or suites of organisms persisted during a period when climatic events (e.g. glaciations) greatly reduced habitable areas elsewhere. Such refugia* often support high overall species* richness and significant numbers of endemic species*

7.a.i. Guidance & Resources for HCV 3*:

In addition to the above overarching information sources identified in Section 3.a and those identified for HCV 1*, rare ecosystems*, habitats* and refugia* may also be assessed and identified using the following resources:

- Databases for rare, threatened, and endangered ecosystems*
  - NatureServe: http://explorer.natureserve.org/ (ecosystems* listed as “imperiled” or “critically imperiled” at global, national and/or state scales)
  - IUCN Red List of Ecosystems: https://www.iucn.org/resources/tools/iucn-red-list-ecosystems
- Landscape Conservation Cooperative Network
- State Wildlife Action Plans
- Regional or local* conservation* organization landscape* conservation* plans
- Experts* and stakeholders*
  - State and federal natural resource agencies, including Natural Heritage Programs, or similar state agencies
  - Academic experts*
  - Appropriate local*, state, and regional professional organizations
  - NGOs with knowledge regarding rare, threatened, or endangered ecosystems* (e.g., The Nature Conservancy; World Wildlife Fund)
Additionally, the following considerations suggest contexts with a higher likelihood of HCV 3 occurrence. If any of the following contexts exist within or adjacent to the Management Unit*, the HCV* assessment should be more rigorous in its evaluation of whether rare ecosystems*, habitats* or refugia* are, in fact, present within the Management Unit*:

- Ecosystems* or habitats* that depend on highly localized soil* types, locations, hydrology or other climatic or physical features, such as some types of limestone karst ecosystems*, alpine ecosystems*, or riverine forests* in arid zones
- Roadless areas that are non-linear in configuration, and >500 acres in size or with unique characteristics
- Ecosystems* or habitats* that have been greatly reduced by human activities compared to their historic extent

A more rigorous assessment may entail additional efforts to acquire more detailed or finer-scale* data regarding ecosystem* occurrences and or presence of particular indicator species*, more extensive consultation with experts* and/or regional conservation* organizations, and/or conducting field surveys (i.e., by state Natural Heritage programs or other plant community experts*).

7.b. Managing and Monitoring HCV 3

In addition to the Best Available Information* identified in Section 3.a, the best resources to provide strategies for maintaining or enhancing HCV 3* identified through the above assessment will likely be those already identified for HCV 1* and HCV 2*. The best resources to provide strategies and data for monitoring HCV 3* identified through the above assessment will likely be those already identified for HCV 2*.

Strategies to maintain HCV 3* occurrences should consider: Strategies that fully maintain the extent and integrity of rare or threatened ecosystems*, habitats*, or refugia*. Where strategies are intended to enhance HCV 3* occurrences, they should consider: Measures to restore* and/or develop rare or threatened ecosystems*, habitats*, or refugia*.

8. HCV 4 – Critical Ecosystem Services

HCV 4 – Critical* Ecosystem Services*. Basic ecosystem services* in critical* situations, including protection of water catchments, flood control and attenuation, and control of erosion* of vulnerable soils* and slopes*.

8.a. Assessment, Identification, Management, and Monitoring of HCV 4

Assessing areas for HCV 4* requires distinguishing those areas where the ecosystem services* rise above the level of Principle 6 and warrant additional consideration under Principle 9. For the purposes of this HCV* Framework, critical* ecosystem services* include, at a minimum, watersheds surrounding surface sources of public drinking water, floodplains, and steep slopes* rated high hazard for slope* failure. HCV 4* is focused on basic services of nature for human needs but may also include basic services of nature that protect other HCVs*.

An ecosystem service* is critical where a disruption of that service poses a threat of severe, catastrophic or cumulative negative impacts on the welfare, health or survival of local
*communities*, on the functioning of important infrastructure (roads, dams, reservoirs, hydroelectric schemes, irrigation systems, buildings, etc.), or on other *HCVs*. The focus of this *HCV* is on provision of a *critical* service to the entirety, or a substantial portion, of the *local community*, not to individuals within that community. For example, an area that is important to the irrigation system of a single or limited number of farmers or ranchers would not reach the level of *HCV 4*, but if the system supplies irrigation for a substantial portion of a farming/ranching-dependent community, it would.

Identification and assessment of *HCV 4* should begin with the national considerations provided in Section 4.a and 4.b, and then follow the guidance below to determine if there are additional *HCV*.

### 8.a.i. Guidance & Resources for *HCV 4*:

In addition to the above overarching information sources provided in Section 3.a and those identified for *HCV 1*, *critical* ecosystem services* may also be assessed and identified, and management and monitoring strategies developed using the following resources.

*Watersheds surrounding surface waters used for public drinking water*

**Identification & Assessment:**
- Consultation with municipal, county, and regional water supply agencies or water districts
- Review of available maps and databases of public drinking water supplies. These are typically available from county or state government agencies
- Maps and databases related to *soil erosion* potential or the potential for *slope* failure

**Developing Management Strategies:**
- Review of management plans prepared by municipal, county, regional, and state agencies, where available
  - Adherence to *best management practices* for road construction and *forest* management to prevent *soil erosion*

**Monitoring:**
- Monitoring for *soil erosion* or *slope* failure through aerial surveys or ground visits
- Monitoring for *erosion* and sedimentation resulting in the discharge of sediment into public drinking water supplies

*Slopes* rated as high-hazard for *slope* failure

**Identification & Assessment:**
- Review of available maps and databases
- Consultation with appropriate municipal, county, regional, and state agencies

**Developing Management Strategies:**
- Review of management plans prepared by municipal, county, regional, and state agencies, where available
  - Review of academic studies related to *forest* management on high-hazard *slopes*
  - Adherence to *best management practices*, where available, for *forest* management and road construction on high-hazard *slopes*
Monitoring:
- Monitoring for culvert and road washouts
- Monitoring channel stability downstream of culvert installations
- Monitoring for minor slope* failure that could cascade into major slope* failure
- Monitoring for areas of exposed soil* that are subject to erosion*

Soils* vulnerable to erosion*

Identification & Assessment:
- County soil* surveys (https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm).
- Consultation with county and state soil* scientists

Developing Management Strategies & Monitoring:
- Similar to high-hazard slopes*

Other ecosystem services*, including flood control and attenuation

Identification & Assessment:
- Review of available maps and databases, including FEMA flood maps
- Consultation with appropriate municipal, county, regional, and state agencies
- Special attention to extensive floodplain or wetland* ecosystems* that are critical* to mediating flooding or in controlling stream flow regulation and water quality*

Developing Management Strategies & Monitoring:
- All of the above

Strategies to maintain HCV 4* occurrences should consider: Strategies to protect any water catchments of importance to local communities* located within or downstream of the Management Unit*, and areas within the unit that are particularly unstable or susceptible to erosion*. Examples may include conservation zones*, protected areas*, harvest prescriptions, chemical use restrictions, and/or prescriptions for road construction and maintenance, to protect* water catchments and upstream and upslope areas. Where strategies are intended to enhance HCV 4*, they should consider: Management strategies* to restore* water quality* and quantity, and to maintain or enhance carbon sequestration and storage.

9. HCV 5 – Community Needs

HCV 5 – Community Needs. Sites and resources fundamental for satisfying the basic necessities of local communities or Indigenous Peoples (for livelihoods, health, nutrition, water, etc.), identified through engagement with these communities or Indigenous Peoples.

9.a. Assessment, Identification, Management, and Monitoring of HCV 5

Identification of areas with HCV 5* requires (per Criterion 9.1) engaging with Native American* groups and local communities* to determine if there are sites and/or resources fundamental for satisfying their basic necessities. This HCV* Framework does not identify specific HCV 5* at a national scale.
A site or resource is fundamental for satisfying basic necessities if the services it provides are irreplaceable (i.e., if alternatives are not readily accessible or affordable), and if its loss or damage would cause serious suffering or prejudice to affected stakeholders*. Determinations of whether a resource is “fundamental” should be made through engagement* with the communities or Native Americans*. Basic necessities in the context of HCV 5* may cover any or all of the provisioning services of the environment, including tangible materials that can be consumed, exchanged or used directly in manufacture, and which form the basis of daily life. The presence of this HCV* is assessed at the scale of a community, whether local* or Native American*, not at the scale of an individual (i.e., whether any portion of the Management Unit* provides resources that are essential for significant portions of a community, not just for one or a few individuals within a community).

In the United States, it is less common for a Management Unit* to be fundamental for satisfying the basic necessities of local communities*. Regardless, managers must engage with local communities* to consider the potential for such situations. It is more likely that a Management Unit*, or portion of a Management Unit*, would be fundamental for satisfying the basic necessities of Native American* groups, such as livelihoods, health, nutrition, water and other medicines.

The information provided by local communities* and/or Native American* groups through culturally appropriate* communication should be considered the Best Available Information* for the HCV* assessment and identification, as well as for developing management and monitoring approaches. This is particularly true for determining the ‘fundamentality’ of the resource. Where possible, management strategies should be developed collaboratively with representatives of the local communities* and/or Native American* groups. A Free, Prior and Informed Consent* process is required (per Criterion 4.2) when Traditional Peoples* or a forest-dependent* local community* has legal* rights associated with the HCV*, or (per Criterion 3.2) when a Native American* group has legal* or customary rights* associated with the HCV*. See the FSC US Guidance on Culturally Appropriate Communication and Free Prior and Informed Consent (US NFSS, Annex F).

10. HCV 6 – Cultural Values

HCV 6 – Cultural Values. Sites, resources, habitats* and landscapes* of global or national cultural, archaeological or historical significance*, and/or of critical* cultural, ecological, economic or religious/sacred importance for the traditional cultures of local communities* or Indigenous Peoples*, identified through engagement* with these local communities* or Indigenous Peoples*.

10.a. Assessment, Identification, Management, and Monitoring of HCV 6

Determining areas to be considered as having HCV 6* attributes includes identifying: a) places of significant* cultural, archaeological or historical importance; and b) sites of critical* importance to local communities* and/or Native American* groups. Information about the first will most likely be available through existing databases and appropriate agencies. The second is required to be identified through consultation with appropriate parties (per Criterion 9.1). While engagement* with local communities* and Native Americans* for the purposes of HCV 6* (and
also HCV 5*) can be combined with engagement* with communities and Native Americans* for the purposes of Criterion 2.2, Principle 3, and Criterion 4, HCV 6* values are not limited to situations where communities or Native American* groups have legal* or customary rights*.

Identification and assessment of HCV 6* should begin with the national HCVs* identified in Section 4.a and 4.b, and then follow the guidance below to determine if there are additional HCV*.

The Best Available Information* for assessment and identification of HCV 6* for places that are globally or nationally significant* cultural, archaeological or historical importance will likely be held in federal, state, and regional databases. Consultation with the State Historic Preservation Office, or similar agency, is also a valuable source of information, for assessment and identification, and also for developing strategies for management and monitoring. Additionally, many Native American* groups have Tribal* Historic Preservation Officers, and when available, these individuals should also be consulted.

The information provided by local communities* and/or Native American* groups through culturally appropriate* communication is the Best Available Information* for the HCV* assessment and identification of sites of critical* importance to these communities, as well as for developing management and monitoring approaches. This is particularly true for determining the “criticality”* of the value. The assessment should consider:

- If the Management Unit* includes sites that are critical to the cultural identity of a local community* or Native American* group, and/or that include cultural features created intentionally by humans, and/or
- If the Management Unit* includes or occurs within an outstanding natural landscape* that has evolved as a result of social, economic, administrative, and/or religious imperative

Where possible, management strategies should be developed collaboratively with representatives of the local communities* and/or Native American* groups.

A Free, Prior and Informed Consent* process is required (per Criterion 4.2) when Traditional Peoples* or a forest-dependent* local community* have legal* rights of access or use rights* associated with the HCV*, or (per Criterion 3.2) when a Native American* group has legal* or customary rights* associated with the HCV*. See the FSC US Guidance on Culturally Appropriate Communication and Free Prior and Informed Consent (US NFSS, Annex F).

Consultation Question:

Would it be helpful to include examples for some or all of the HCV types? If yes, for which HCV types?

11. Small-Scale Management Units and HCV

To be completed in alignment with the Family Forest alternate indicators.
### 12. Pertinent Definitions

<table>
<thead>
<tr>
<th>Critical</th>
<th>The concept of criticality or fundamentality in Principal 9 and HCVs(^<em>) relates to irreplaceability and to cases where loss or major damage to this HCV(^</em>) would cause serious prejudice or suffering to affected stakeholders(^<em>). An ecosystem(^</em>) service is considered to be critical (HCV 4(^<em>)) where a disruption of that service is likely to cause, or poses a threat of, severe negative impacts on the welfare, health or survival of local communities(^</em>), on the environment, on HCVs(^<em>), or on the functioning of significant infrastructure (roads, dams, buildings etc.). The notion of criticality here refers to the importance and risk(^</em>) for natural resources and environmental and socio-economic values. [Source: FSC-STD-01-001 V5-2]</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Conservation Value (HCV)</td>
<td>Any of the following values:</td>
</tr>
<tr>
<td></td>
<td>• HCV 1: Species diversity. Concentrations of biological diversity(^<em>) including endemic species(^</em>), and rare, threatened or endangered species(^<em>), that are significant(^</em>) at global, regional or national levels.</td>
</tr>
<tr>
<td></td>
<td>• HCV 2: Landscape(^<em>)-level ecosystems(^</em>) and mosaics. Intact Forest Landscapes(^<em>), large landscape(^</em>)-level ecosystems(^<em>) and ecosystem(^</em>) mosaics that are significant(^<em>) at global, regional or national levels, and that contain viable populations of the great majority of the naturally occurring species(^</em>) in natural patterns of distribution and abundance.</td>
</tr>
<tr>
<td></td>
<td>• HCV 3: Ecosystems(^<em>) and habitats(^</em>). Rare, threatened, or endangered ecosystems(^<em>), habitats(^</em>) or refugia(^*).</td>
</tr>
<tr>
<td></td>
<td>• HCV 4: Critical(^<em>) ecosystem services(^</em>). Basic ecosystem services(^<em>) in critical(^</em>) situations, including protection of water catchments and control of erosion(^<em>) of vulnerable soils(^</em>) and slopes.</td>
</tr>
<tr>
<td></td>
<td>• HCV 5: Community needs. Sites and resources fundamental for satisfying the basic necessities of local communities(^<em>) or Indigenous Peoples(^</em>) (for example for livelihoods, health, nutrition, water), identified through engagement(^<em>) with these communities or Indigenous Peoples(^</em>).</td>
</tr>
<tr>
<td></td>
<td>• HCV 6: Cultural values. Sites, resources, habitats(^<em>) and landscapes(^</em>) of global or national cultural, archaeological or historical significance(^<em>), and/or of critical(^</em>) cultural, ecological, economic or religious/sacred importance for the traditional cultures of local communities(^<em>) or Indigenous Peoples(^</em>), identified through engagement(^<em>) with these local communities(^</em>) or Indigenous Peoples(^*).</td>
</tr>
<tr>
<td>[Source: Based on FSC-STD-01-001 V5-2]</td>
<td></td>
</tr>
<tr>
<td>High Conservation Value Areas (HCVA)</td>
<td>Zones and physical spaces which possess and/or are needed for the existence and maintenance of identified High Conservation Values(^*). [Source: FSC-STD-60-004 V2-0]</td>
</tr>
</tbody>
</table>
| Landscape | For the purposes of this Standard, the term “landscape” refers to a delineation of land area that captures similar environmental and ecological conditions including climate, geology, soils, water, and biology. USFS-defined Ecological Sections (Cleland 2005, update of Bailey/USFS) or smaller units are recommended for use to define landscape* for purposes of RSA* establishment and assessment. For many other purposes, “landscapes” will often occur at smaller scales* than ecological sections. In some contexts, “landscape” as used in this Standard simply refers to consideration of the area surrounding a particular site. 
In developing the description of “landscape” The Organization* considers the Management Unit’s* ability to influence and impact the surrounding area, as well as the potential for other owners to influence and impact the area that the Management Unit* falls within. Some larger Management Units* may represent the full landscape* that needs to be considered, while other typically smaller Management Units* may occur within a broader landscape* that should be considered. |
| Precautionary principle/approach | An approach requiring that when the available information indicates that management activities* pose a threat of severe or irreversible damage to the environment or a threat to human welfare, The Organization* will take explicit and effective measures to prevent the damage and avoid the risks* to welfare, even when the scientific information is incomplete or inconclusive, and when the vulnerability and sensitivity of environmental values are uncertain. [Source: Based on Principle 15 of Rio Declaration on Environment and Development, 1992, and Wingspread Statement on the Precautionary Principle of the Wingspread Conference, 23–25 January 1998] |
| Significant | For the purposes of Principle 9, HCVs 1, 2 and 6* there are three main forms of recognizing significance*.
- A designation, classification or recognized conservation* status, assigned by an international agency such as IUCN or Birdlife International;
- A designation by national or regional authorities, or by a responsible national conservation* organization, on the basis of its concentration of biodiversity*;
- A voluntary recognition by the manager, owner or Organization*, on the basis of available information, or of the known or suspected presence of a significant* biodiversity* concentration, even when not officially designated by other agencies.
Any one of these forms will justify designation as HCVs 1, 2 and 6*. Many regions of the world have received recognition for their biodiversity* importance, measured in many different ways. Existing maps and classifications of priority areas for biodiversity* conservation* play an essential role in identifying the potential presence of HCVs 1, 2* and 6*. [Source: FSC-STD-01-001 V5-2] |
13. Literature Cited


USEPA. 2015. Rare ecosystems in the conterminous U.S. EnvironAtlas Fact Sheet (www.epa.gov/eviroatlas/).
 ANNEX L: Climate Change Toolkit

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Toolkit Introduction

Draft 1 of the US National Forest Stewardship Standard (NFSS) incorporates planning for a changing climate, specifically in Principles, 6, 7, 8, and 10. The FSC US Standard Development Group recognizes that planning for climate change should evolve as scientific understanding of potential impacts improves. As the body of scientific literature grows, so does our ability to conceptualize forest* management planning frameworks and processes that incorporate climate change considerations.

This toolkit is designed to help certificate holders martial the Best Available Information* and apply it to the context of their Management Unit* and the NFSS. Much work has already been conducted to project the likely effects of climate change at regional and national scales. The Organization* can use this toolkit to identify those projections, relate them to their management objectives* and Management Unit, and consider management strategies* that are likely to be the most successful.

To help The Organization* be successful in this process, this toolkit provides 1) a commonly accepted conceptual framework for managing forests* to adapt to climate change, 2) expectations for climate change assessments and documentation, and 3) guidance to interpret the climate change related requirements of the NFSS as well as related web-based sources for Best Available Information*.

Conceptual Framework for Managing Forests* to Adapt to a Changing Climate

The structure for managing forests* for a changing climate in the NFSS is modeled after forest* management concepts developed by the Northern Institute of Applied Climate Science (NIACS),

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a collaborative partnership among the United States Forest Service (USFS), universities, conservation* organizations, and forest* industry. NIACS developed a framework for climate-informed forest* management known as the Adaptation Workbook. The Organization* can use this framework to contextualize how managing for a changing climate can be integrated into forest* management. Many of the following concepts are addressed by indicators in the NFSS.

The Adaptation Workbook process provides “structured flexibility” as managers work through a sequence of the following five broad steps (Swanston et al., 2016).

1. Define area of interest, goals, and objectives
2. Assess climate change impacts and vulnerabilities
3. Evaluate management objectives* given impacts and vulnerabilities
4. Identify adaptation options and tactics for implementation; options often include one or more of the following:
   - Resistance
   - Resilience
   - Transition
5. Monitor and evaluate effectiveness

![Adaptation Workbook Process](image)

**Figure 1.** Adaptation Workbook Process. Source: Forest Adaptation Resources: Climate Change Tools and Approaches for Land Managers, 2nd Edition (Swanston et al. Ch. 5, page 75, 2016).

Below, the specific requirements in NFSS Indicators* are cross-walked to the steps in the Adaptation Workbook process. This is shown for visualization purposes only. However, many of the climate change adaptation strategies* cited in this toolkit are either based on or were born out of similar conceptual frameworks.
### Table 1. FSC US NFSS and Adaptation Planning Steps Crosswalk

<table>
<thead>
<tr>
<th>Step 1: Define area of interest, goals, and objectives</th>
<th>Principle 7</th>
<th>Indicator 7.1.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 2: Assess climate change impacts and vulnerabilities</td>
<td>Principle 6</td>
<td>Indicator 6.1.1</td>
</tr>
<tr>
<td>Step 3: Evaluate management objectives given impacts and vulnerabilities</td>
<td>Principle 7</td>
<td>Indicator 7.2.4</td>
</tr>
<tr>
<td>Step 4: Identify adaptation approaches and tactics for implementation</td>
<td>Principle 7</td>
<td>Indicator 7.2.4</td>
</tr>
<tr>
<td></td>
<td>Principle 10</td>
<td>Indicator 10.2.2</td>
</tr>
<tr>
<td></td>
<td>Principle 10</td>
<td>Indicator 10.9.2</td>
</tr>
<tr>
<td>Step 5: Monitor and evaluate effectiveness</td>
<td>Principle 8</td>
<td>Indicator 8.1.2</td>
</tr>
</tbody>
</table>

### Additional Resources for Conceptualizing Management Frameworks that Address Climate Change

The Climate Change Resource Center website (CCRC) is a national-level resource for forest* landowners and managers. The CCRC provides credible, targeted information for forest* adaptation including original content, summaries of tools, adaptation frameworks and examples, links to relevant scientific literature, and a compendium of adaptation approaches. The Adaptation Workbook is also available as a smartphone app, and was developed through a broad collaborative framework that is an effective approach for integrating Adaptation Planning into The Organization’s* management planning process.

The Climate Smart Conservation guide is a collaboration led by the National Wildlife Federation. The guide breaks adaptation planning into discrete, manageable steps that help conservationists and land managers incorporate climate change considerations into their work.

The Adaptation for Conservation Targets (ACT) Framework is another tool for incorporating climate change into natural resource management. This tool considers the effects of climate change in the development of management actions. Management actions can be in support of specific species*, ecosystems*, or ecological functions. The premise of this framework is that development of management for climate change can rely on local* knowledge and does not necessarily need to rely on detailed projections of climate change or its effects.

Additional background and educational media on climate change and natural resource management can be found at the following outlets:

- **CCRC Education**: Three education modules that cover Climate Change Science and Modeling, Climate Change Effects on Forests and Grasslands, and Responses to Climate Change. Many other educational resources related to climate change topics and adaptation planning are also available.
- **NIACS YouTube**: Adaptation Planning and Practices Course playlist, an adaptation concepts presentation, and short videos.
Expectations for Climate Change Assessments and Documentation

Climate change is addressed within several Principles* in the NFSS (see Table 1, above). Of these instances, evaluations and assessments are necessary to achieve conformance with Indicators 6.1.1 and 7.2.4 (see in-depth descriptions to help The Organization* comply with each Indicator*, below). In both indicators*, the NFSS is not explicit about the methods, format, or documentation of the evaluations and assessments. Consideration of the following guidance will help The Organization* successfully comply with the expectations for these evaluations and assessments.

When completing climate change evaluations and assessments, The Organization* should rely on the Best Available Information* from national, regional, and local* scales. They are not expected to develop their own scientific projections of climate change impacts. Rather, they should use Best Available Information* to assess their own Management Unit*.

Evaluations and assessments related to climate change should be accomplished in a transparent manner that can be reviewed by the Certification Body*. The documentation may be in the form of an assessment report, or (similar to the management plan*) may be a collection of documents, reports, records, maps and other materials as applicable. However, if the second approach is taken, The Organization* should prepare a summary that identifies the various materials within the collection and that summarizes the assessment process and its conclusions.

Documentation should include:

- Any experts* consulted (e.g., name and affiliation)
- What additional sources of Best Available Information* were used
- Findings from the evaluations or assessments
- When appropriate, the activities implemented on the Management Unit*

Guidance to Interpret the Climate Change Related Requirements of the NFSS as well as Outlets for Best Available Information*

Climate Change in Principle 6

Indicator 6.1.1 requires an assessment of conditions that identify environmental values that may be affected by management activities*, and this assessment must include potential future impacts of climate change and catastrophic natural disturbances*.

The effects that climate change will have on ecosystems* is not completely known, but some projections are likely more reliable than others. In order to make informed, productive decisions regarding adapting forest* management to a changing climate, managers need to be acquainted with the Best Available Information* and able to apply it to their Management Unit*. In particular, this means considering on which topics and projections there exists scientific consensus, for which topics expectations are less certain, and how expectations may vary depending on spatial and temporal scales.

For instance, the impacts of climate change are expected to vary spatially as well as temporally. Depending on region, the ability of forests* to provide environmental values may be influenced, for instance, by future trends in temperature, precipitation regime, or frequency of natural
disturbance events. Most environmental trends related to climate change are expected to be exacerbated over time (e.g., in 100 years, some regions will be more drought prone than they are 25 years from the present).

Changes in environmental conditions, consequently, will have varying effects on forest* and non-forest* ecosystems*. For this assessment, it is pertinent for The Organization* to explore the vulnerability of ecosystems* associated with the Management Unit* and the most probable effect the environmental changes will have on those ecosystems*. The following assessment steps provide a framework for exploring vulnerabilities and potential impacts.

When managers consider the ability of the Management Unit* to continue to provide environmental values, they should document the regional and temporal predicted changes in environmental conditions associated with their Management Unit*. The most comprehensive approach will involve an assessment at the regional, state, and local* (i.e., Management Unit*) level. The assessment should provide answers to the following questions and should access the listed types of information.

1) How are climatic conditions expected to change in my region, state, and on my Management Unit*?

**Best Available Information** includes
- Information on regional projected climate change effects on ecosystems* such as ecosystem*, regional, and other vulnerability and impact assessments for climate change
  - Regional Information (click on your region): [https://www.fs.usda.gov/ccrc/](https://www.fs.usda.gov/ccrc/)
  - USDA Regional Climate Hubs: [https://www.climatehubs.usda.gov/commodity/forests-woodlands](https://www.climatehubs.usda.gov/commodity/forests-woodlands)
  - National Climate Assessment reports: [https://nca2018.globalchange.gov/](https://nca2018.globalchange.gov/)
  - Climate Change Vulnerability Assessments Across the Nation: [https://www.fs.usda.gov/managing-land/sc/vulnerability-assessments#:~:text=Climate%20change%20assessments%20brin g%20together,expected%20impacts%20of%20climate%20change.&text=They%20can%20vary%20greatly%20in,a%20specific%20location%20or%20resource.](https://www.fs.usda.gov/managing-land/sc/vulnerability-assessments#:~:text=Climate%20change%20assessments%20brin g%20together,expected%20impacts%20of%20climate%20change.&text=They%20can%20vary%20greatly%20in,a%20specific%20location%20or%20resource.)
    - [https://usfs.maps.arcgis.com/apps/Cascade/index.html?appid=f09164baef5d47d3ad728deaa1a28e7b](https://usfs.maps.arcgis.com/apps/Cascade/index.html?appid=f09164baef5d47d3ad728deaa1a28e7b)
- Climate Change Topics list at [https://www.fs.usda.gov/ccrc/topics](https://www.fs.usda.gov/ccrc/topics) including, for example, climate change refugia* and ecosystem services*
- Regional, state, and local* natural resource management organizations and experts* (if the above resources are not available or adequate)

2) How are the forest* (and non-forest*) ecosystems* in my region, state, and on my Management Unit* likely to respond to the expected changes in climatic conditions?
Best Available Information* includes
- See #1, above.
- Maps, future desired conditions and management objectives*, and information on past and future management from the management plan* that help answer this question for your Management Unit*.

3) What environmental values, especially those on the Management Unit*, will likely be affected by the changes?

Best Available Information* includes
- See #1 and #2, above
- Other environmental values identified associated with the Indicator 6.1.1 assessment.

Climate Change in Principle 7
Indicator 7.2.4 requires that the management plan*: a) consider potential impacts of climate change related risks and vulnerabilities on achievement of management objectives* and desired future conditions*, and b) describe any climate change adaptation strategies* that are implemented.

This Indicator* is intended to address and evaluate risks, vulnerabilities, challenges, and opportunities associated with climate change as they relate to management objectives* and desired future conditions*. Secondarily, The Organization* is also required to describe the management strategies*, also known as climate change adaptation strategies*, that they have implemented to address risks and opportunities, if any.

Depending on expected future changes in climatic conditions (see Indicator 6.1.1), current or past management objectives* may no longer be pragmatic. For instance, warmer winters or decreases in winter snowpack could lead to increased large herbivore populations (e.g., white-tailed deer) that play key roles in the success or failure of forest* regeneration activities. Increased variability in precipitation trends could lead to increased drought or increased probability of flooding in depressions and lower areas on the landscape*, each coming with their own silvicultural* complications depending on the desired ecosystem* type. Finally, some changes in future climatic conditions may benefit certain ecosystem* types or species*, and these should be addressed, too—for instance, longer growing seasons may make it possible to favor more southern species*, or higher concentrations of atmospheric carbon dioxide could increase tree growth rates.

When disparities are identified between The Organization’s* current or past management objectives* and objectives that are likely to be successful in a changed future climate, The Organization* may choose to implement climate change adaptation strategies* to address these disparities. Per Indicator 7.2.4 Guidance, these strategies may be categorized as resistance, resilience*, and facilitated transition (see also, assisted migration). Examples of each strategy are provided, below (Swanson et. al., 2016). Note that overlap exists between these strategy categories:

Resistance:
- Sustaining fundamental ecological functions
  - Reduce competition for moisture, nutrients, and light
• Restore or maintain fire in fire-adapted ecosystems

• Reduce the impact of biological stressors
  o Improve the ability of forests* to resist pests and pathogens
  o Address new and existing invasive species*

• Maintain or create refugia*
  o Prioritize and maintain sensitive or at-risk species* or ecological communities*, especially those at the edge of their historic range
  o Establish artificial reserves for at-risk and displaced species*

Resilience*:

• Increase ecosystem* redundancy across the landscape*
  o Expand the boundary of reserve areas to increase diversity
  o Manage habitats* over a range of sites and conditions

• Promote landscape* connectivity*
  o Reduce and avoid landscape* fragmentation*
  o Maintain and create habitat* corridors

• Maintain and enhance genetic diversity
  o Use seeds, germplasm, and other genetic material from across a greater geographic range
  o Favor existing genotypes* that are better adapted to projected future conditions

Facilitated Transition:

• Facilitate community adjustments through species* transitions
  o Favor or restore* native species* that are expected to be adapted to future conditions
  o Guide changes in species* composition at early stages of stand*
    development
  o Manage for species* and genotypes* with wide moisture and temperature tolerances

• Maintain and enhance genetic diversity
  o Use seeds, germplasm, and other genetic material from across a greater geographic range
  o Favor existing genotypes* that are better adapted to projected future conditions

In addition to the Guidance provided with Indicator 7.2.4 in the main body of the Standard, this overall evaluation should result in an indication of the feasibility of meeting current management objectives* (e.g., business as usual) and, subsequently, an overview of resulting changes in management objectives* and/or implemented climate change adaptation strategies*. This process is intended to be informal but should provide answers to the following questions and should access the listed types of information.

1) What are the risks, vulnerabilities, challenges, and opportunities associated with achieving the Management Unit’s* current management objectives* in a climate changed future?

Best Available Information* includes

• Soils*, hydrology, habitat* type, or past management influences from the management plan*
• Current management objectives* and timelines for achievement from the management plan*
• Ecosystem* responses to projected future climate conditions identified per Indicator 6.1.1
• Managing for Change: https://www.fs.usda.gov/ccrc/education/managing-change

2.) What climate change adaptation strategies*, if any, are being implemented?

Best Available Information* includes
• A list of potential adaptation approaches that may be suitable for your ecosystem*
  o Forest Adaptation Resources: climate change tools and approaches for land managers, 2nd edition (Adaptation Strategies and Approaches in Chapters 3 and 4; figures on page 31 and 32; Box 10 on page 34)
  o Other lists of adaptation actions, such as this list specifically for the western United States www.adaptationpartners.org/library.php
  o Compendium of Adaptation Approaches: https://www.fs.usda.gov/ccrc/climate-projects/adaptation-approaches
• Regional, state, and local* natural resource management organizations and experts* (if the above resources are not available or adequate)
• Actual climate change adaptation strategies* in the management plan*

Climate Change in Principle 8
Indicator 8.1.2 requires that The Organization’s* monitoring protocol include specific procedures to evaluate: a) how changes in the assessed potential impact of climate change related risks and vulnerabilities may affect achievement of management objectives* and desired future conditions*, and b) the effectiveness of climate change adaptation strategies* implemented to address identified impacts (per Indicator 7.2.4).

This Indicator* is intended to ensure alignment of management objectives* with climate change related risks and vulnerabilities identified per Indicator 7.2.4. It is also intended to elicit a methodology to evaluate (i.e., including information collection and evaluation of that information) the effectiveness of climate change adaptation strategies* that have been implemented. This process should be geared toward developing a monitoring procedure that can help inform adjustments to future management to account for new information, conditions, and observations as they relate to a changing climate. The process should address the following concepts:

1) Ongoing collection of new Best Available Information* by periodically accessing sources of Best Available Information*
• Information on regional projected climate change effects on ecosystems* such as ecosystem*, regional, and other vulnerability and impact assessments for climate change
  o Regional Information (click on your region): https://www.fs.usda.gov/ccrc/
  o USDA Regional Climate Hubs: https://www.climatehubs.usda.gov/commodity/forests-woodlands
• Regional, state, and local* natural resource management organizations and experts* (if the above resources are not available or adequate)

2) Ongoing assessment of the implication of new Best Available Information* for The Organization’s* achievement of current management objectives*

Best Available Information* includes
• Use of insights gained from #1, above
• See also #1 at 7.2.4, above

3) Ongoing collection of data associated with specific climate change adaptation strategies* that are being implemented—this data is used to assess the effectiveness of climate change adaptation strategies* (#4, below)

Best practices include consideration of the following factors to help improve the usefulness of monitoring (Swanson et. al., 2016)
• Identify an adaptation monitoring variable that is measurable and that will be useful to evaluate achievement. Examples include
  o Seedling survival rate
  o Overstory mortality rate
  o Diameter or basal area growth
• Identify a measurable criterion for evaluation. This is usually a meaningful value or threshold for success. Examples include
  o 70% seedling survival after 5 years
  o 3 square feet/acre average annual basal area growth over five years
• Describe the details of monitoring (e.g., data collected, frequency, and duration of monitoring)

4) Ongoing assessment of the effectiveness of climate change adaptation strategies* using the data collected in #3, above. Are the implemented climate change adaptation strategies* working, or should you consider new ones? NOTE: depending on the specific activities associated with the climate change adaptation strategy*, effectiveness may not be determined except after extended periods of time (i.e., decades).

Climate Change in Principle 10
Indicator 10.2.2 introduces flexibility by allowing The Organization* to develop a plan for the use of non-native species* of North American origin for regeneration. This flexibility applies when: a) non-local genotypes* of native species* are either not adequate for maintaining or enhancing local diversity as part of climate change adaptation strategies*, or b) when native species* are not an option due to disease or pest vulnerabilities.

In the context of climate change adaptation strategies*, Indicator 10.2.2 is likely most relevant to Organizations* that have implemented a facilitated transformation (see also, assisted migration) strategy (see Climate Change in Principle 7, above).

Indicator 10.9.2 requires that management activities* are implemented to increase the resilience* to catastrophic natural disturbances* identified per Indicator 6.1.1.
Climate change is expected to increase the potential for natural disturbance events such as wildfire, extreme wind, and ice storms (Swanson et al., 2016). The intent of this Indicator* is to require that the Organization* act proactively to make their forest* more robust to disturbance events, particularly those that are likely to increase in severity and/or frequency in their region. Examples of climate change adaptation strategies* that can be used to increase resilience* to natural disturbance include establishing fuel breaks to slow the spread of fire, altering forest* structure or composition to reduce risk or severity of wildfire, and altering forest* structure to reduce severity or extent of wind and ice damage (Swanson et al., 2016). Best practices for achieving conformance with Indicator 10.9.2 include:

1) Accessing Best Available Information* at the region, state, and local* level to determine how climate change is expected to change climatic conditions and how forest* types and other ecosystems* are expected to react

Best Available Information* includes
- See #1-#3 at Indicator 6.1.1, above
- Focus is on information that addresses changes in expected natural disturbance severity and frequency

2) Identification of ecosystem* risks and vulnerabilities as they relate to natural disturbance events using information collected in #1, above

Best Available Information* includes
- See #1 at Indicator 7.2.4, above

3) Identification and implementation of climate change adaptation strategies* that are focused on increasing the resilience* of ecosystems* at risk to natural disturbance events

Best Available Information* includes
- A list of potential climate change adaptation strategies* that may be suitable for your ecosystem*
  - Forest Adaptation Resources: climate change tools and approaches for land managers, 2nd edition (Adaptation Strategies and Approaches in Chapters 3 and 4; figures on page 31 and 32; Box 10 on page 34)
  - Other lists of climate change adaptation strategies*, such as this list specifically for the western United States www.adaptationpartners.org/library.php
  - Compendium of Adaptation Approaches: https://www.fs.usda.gov/ccrc/climate-projects/adaptation-approaches
- Regional, state, and local* natural resource management organizations and experts* (if the above resources are not available or adequate)

Bibliography

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