

**Forest Stewardship Council
United States
National Forest Stewardship Standard**

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

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

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Serving as the Standard Development Group

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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 *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 *The Organization** has evidence of *long-term* rights** to use and manage the *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 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 .

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 .

*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 The *management plan** and *management activities** demonstrate compliance with all *applicable laws**, including *national laws** and *local laws**.

Guidance: 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 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 *The Organization** 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 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 Organization** that all payments are paid on a timely basis.

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 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 *The Organization** implements strategies intended to prevent illegal and unauthorized activities on the *Management Unit** .

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

Guidance: 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 If illegal or unauthorized activities occur, *The Organization** implements strategies designed to curtail such activities and correct the situation to the extent possible for meeting all *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 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 are also applicable.

Indicator 1.5.1 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).

Guidance: *The Organization** may demonstrate compliance by maintaining a list of applicable binding international agreements and completing an assessment to confirm compliance. A list of relevant laws, treaties, and agreements can be found in Annex C . 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 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 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 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 *The Organization** prevents or identifies and resolves *disputes** in a manner consistent with the *dispute** management framework outlined in Annex D.

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 *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 *The Organization** demonstrates a *long-term** commitment to adhere to the FSC *Principles** and *Criteria** and FSC and FSC US policies, and has a *publicly available** statement of commitment to manage the *Management Unit** in conformance with FSC standards and policies.

Indicator 1.8.2 If *The Organization** 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 their entire operation, however they are not required to do so. See FSC-POL-20-003, FSC-POL-20-002, and other FSC policy documents for additional guidelines for partial certification.

Indicator 1.8.3 *The Organization** 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 *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 *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 *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 *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.

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 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 Parental leave practices follow applicable *national laws** and *local laws** and/or regulations.

Indicator 2.2.3 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 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 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 *The Organization** meets or exceeds all applicable *national laws** and *local laws** and/or regulations covering health and safety of *workers** (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 *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 Contracts and other written agreements include safety requirements for *workers**.

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 Employee compensation meets or exceeds the prevailing *local** norms within the forestry industry.

Guidance: "Compensation" includes salary or wages, and benefits.

Indicator 2.4.2 Employee wages, employee salaries, and contracts are paid on time.

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 *Workers** are qualified to properly implement the *management plan**; *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 *riparian management zone**, *rare, threatened, and endangered species**, and *High Conservation Value** 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 *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-proprietary 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?**

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 *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=fe311f69cb1d43558227d73bc34f3a32>

Indicator 3.1.2 Per Annex F, *The Organization** identifies and documents *legal** and/or *customary rights**, including contested *rights**, applicable to the *Management Unit** that are held by 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 *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 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 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 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 *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.

C3.3 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 When *Free, Prior, and Informed Consent** is granted by a *Native American** group, it is documented in writing.

Indicator 3.3.2 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.

C3.4 *The Organization** shall recognize and *uphold** the *rights**, customs, and culture of *Indigenous Peoples** as defined in the United Nations Declaration on the Rights of Indigenous Peoples (2007) and ILO Convention 169 (1989). (C3.2 P&C V4)

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 *The Organization, through *engagement** with the *Native American** groups identified in Indicator 3.1.1 and use of other sources of *Best Available Information**, identifies sites of special cultural, ecological, economic, religious, or spiritual significance and for which these *Native American** groups hold *legal** and/or *customary rights**.**

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 special cultural, ecological, economic, 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 Through *engagement** with the *rightsholders**, *The Organization** develops, documents, and implements measures to protect or enhance sites of special significance identified per Indicator 3.5.1. 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**.

The confidentiality of sensitive *tribal** knowledge is maintained in keeping with *applicable laws** or at the behest of *tribal** representatives. If necessary, public summaries of *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 *The Organization** respects the confidentiality of and *protects** *tribal** traditional *knowledge** and *intellectual property** and 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 When *traditional knowledge** or *intellectual property** is used, written protocols are jointly developed prior to such use and signed by *tribal** representatives or *tribal** members to protect and *fairly compensate** them for such use.

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 *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 *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 *The Organization** provides work opportunities to qualified *local** applicants and seeks opportunities for purchasing *local** goods and services of equal price and quality.

Intent: *The Organization** 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 Organization**, of potential contractors and service providers (e.g., foresters, loggers); work opportunities are advertised in area newspapers.

Indicator 4.3.2 Commensurate with the size and scale of operation, *The Organization** provides and/or supports vocational learning opportunities associated with *forest** management.

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 The Organization* participates in local* economic development and 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 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 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?

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**.

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)

C5.1 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 *The Organization** demonstrates knowledge of the operation's current and potential impact on the *local** economy as it relates to existing and potential markets for *ecosystem services** applicable to the *Management Unit** (e.g., timber, *non-timber forest products**, water, carbon sequestration, recreation).

Indicator 5.1.2 Consistent with *management objectives**, *The Organization** strives to diversify the economic use of the *forest** according to Indicator 5.1.1 .

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

Intent: Economic diversification is expected to be evaluated in terms of its ecological impacts and not impede maintaining *forest** composition, structure, function, and other requirements present in this Standard. Developing new markets 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 *The Organization** complies with FSC-PRO-30-006 when making FSC promotional claims regarding *ecosystem services**.

C5.2 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 In *Management Units** where products are being harvested, *The Organization** 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, 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 *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 *scale** and *intensity** of the *forest** management operation.

For *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 Average annual harvest levels, over rolling periods 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 can 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 Rates and methods of timber harvest lead to achieving desired conditions and improve or maintain health and quality across the *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 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**.

C5.3 *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 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 by that *species**.

At minimum, the values addressed by *The Organization** per Criterion 4.5 should be considered.

C5.4 *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 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 *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 On *public lands** where *forest** products are harvested and sold, some sales of *forest** products or contracts are scaled or structured to allow small 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.

C5.5 *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 *The Organization** 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 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 *management activities** .

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 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** 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 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*^{*}, considering environmental values that occur both inside and outside the *Management Unit*^{*}. The assessment includes:

- a. *forest*^{*} community types, 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*^{*} and hydrologic functions;
- e. *soil*^{*} resources;
- 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*^{*} related to forest community types, size class, and/or *successional*^{*} stages;
- 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 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 (“S”) scales. The evaluation to determine which S3-ranked *species*^{*} warrant recognition as *rare, threatened, and endangered species*^{*} and which communities warrant recognition as *rare ecological communities*^{*} should be based on the following: S3 *species*^{*}/communities that are candidates for federal or state listing should be considered *rare, threatened, and*

endangered species/rare ecological communities**. S3 *species*/communities* that have been proposed for federal or state listing should also be given priority. The assessment should be designed to identify and recognize as *rare, threatened, and endangered species** 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** .

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* 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** stages from regeneration through *old growth** characteristic of regional forest dynamics (see also Indicator 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 6.5) and *High Conservation Values** (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); c) *habitats** for other *species** potentially at *risk** due to management; and d) climate change refugia. See also Indicators 6.7.1 and 10.2.1 .

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 Prior to commencing site-disturbing activities, *The Organization** assesses and documents the potential short-term and *long-term** impacts of planned *management activities** on environmental values identified per Indicator 6.1.1. The assessment 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).

Intent: This *Indicator** focuses on assessing potential impacts to environmental values identified per Indicator 6.1.1, 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 Using the findings of the impact assessment (per Indicator 6.2.1), effective management approaches and field prescriptions are developed and implemented that: 1) prevent or minimize negative short-term and *long-term** impacts; and 2) maintain and/or enhance the environmental values identified per Indicator 6.1.1.

Intent: This *Indicator** focuses on developing/implementing management measures to avoid or minimize impacts identified in Indicator 6.2.1. 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**.

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 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 above-ground 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 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 On *public lands**, assessments developed per Indicator 6.1.1 and management approaches developed per 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** when determining the measures to be taken inside the *Management Unit**. (C6.2 P&C V4)**

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

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

Indicators 6.4.1 through 6.4.3 follow a logical sequence in which applicants are required to develop a list of *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 *rare, threatened, and endangered species** is indicated, *The Organization** is required to follow a *precautionary approach** and manage as though they are present.

Indicator 6.4.1 If there is a likely presence of *rare, threatened, and endangered species** as identified per Indicator 6.1.1 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 *rare, threatened, and endangered species** are present.

Surveys are conducted by individuals 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 reported to the manager of the appropriate database.

Intent: “Likely” is a judgment decision by *The Organization** 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 *Management Unit** (e.g., scale, scope, degree of *risks**) *The Organization** 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 When *rare, threatened, and endangered species** are present, or assumed to be present, modifications in *management activities** are made to maintain, *restore**, and/or enhance the extent, quality, and viability of *species** and their *habitats**. *Conservation zones** and/or *protected areas** are established for *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 are based on *Best Available Information** .

Intent: The goal of this *Indicator** is to be aware of *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**'s adaptation to climate change (e.g., to potential *habitats** at various elevations or latitudes).

Indicator 6.4.3 For *medium** and *large** public management units* , *management plans** and *management activities** are designed to support *species**'s recovery as well as *landscape**-level *biodiversity** conservation goals.

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

Indicator 6.4.4 Within the capacity of *The Organization** , hunting, fishing, trapping, collecting, and other activities are controlled to avoid the risk of impacts to *rare, threatened, and*

*endangered species** and *rare ecological communities** (see also Criterion 1.4).

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: This indicator focuses on application of the *precautionary approach** in order to avoid irreversible negative consequences to *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.

Protection of High Conservation Values* ; 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.*

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.*

Additional guidance is included in Annex G.

Indicator 6.5.1 Per Annex G and using *Best Available Information**, *The Organization** assesses and documents: a) the native *ecosystems** that would naturally occur on the *Management Unit**, including those that do not currently occur on the *Management Unit**; and b) their representation, status, and *protection** in the *landscape**.

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

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

Guidance on scaling for assessments of Representative Sample Areas : The Organization* for small* and medium* Management Units* may comply with this Indicator* through more informal consultation.*

Indicator 6.5.2 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**.

Indicator 6.5.3 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 *Management activities** within *Representative Sample Areas** are limited to activities that support or do not detract from the *Representative Sample Area** objectives for *ecosystem** *conservation** or *restoration**.

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 activities** as a means to *conserve** the *ecosystem**.

Indicator 6.5.5 The *Representative Sample Area** assessment (per Indicator 6.5.1) is reviewed as part of the review of the *management plan** and, if necessary, updated; 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**.

Indicator 6.5.6 *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 *Large**, contiguous *public land** *Management Units** establish and maintain a network of *conservation zones** and/or *protected areas** sufficient in size to maintain *species** dependent on interior core *habitats**.

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

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 To the extent feasible, given the size of the ownership, 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, and Indicator 6.6.7 , 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 Criterion 6.7.

This *Indicator*^{*} addresses management for elements of *habitat*^{*} diversity across the *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 *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*^{*} is expected to be able to use cover type maps as a *habitat*^{*} assessment tool. The plant community type and successional stage or *age class*^{*} data generated in Indicators 6.1.1 and 6.4.2 (e.g., a community/-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 *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.

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 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.

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 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 large live trees, live trees with decay or declining health, *snags**, and well-distributed coarse down and dead *woody debris**. *Legacy trees** where present are not harvested;

- a. provide vertical and horizontal complexity;
- b. are generally representative of the *species** naturally found on the site; and
- c. 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 *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** 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** 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 *The Organization** develops and implements a written strategy to prevent or control *invasive species** It includes:

- a. an assessment of the presence and extent of *invasive species** and the degree of threat to *native species** and *ecosystems**;
- b. *management activities** 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**.

Intent: This *Indicator** minimizes the risk of *invasive species** to native *ecosystems** on the *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** 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 .

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

Indicator 6.6.5 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 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).

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 *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 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 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 When *even-aged silviculture** (e.g., clearcut, seed tree, regular or irregular shelterwood, deferment cuts) is employed, live trees and native vegetation are retained and opening sizes 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.

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. 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. 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 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**, slope stability, upslope management, presence of critical *refugia**, and extent and intensity of harvesting across the *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. No individual block is larger than 60 acres.

Regional Supplement5 *Even-aged silviculture** may be employed where:

- a. *native species** require openings for regeneration or vigorous young-stand development;
- 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 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 No 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 5 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 is 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 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 *Even-aged silviculture** is employed only where it is ecologically appropriate to the *forest** type, or when human activity (e.g., high grading, fire exclusion, introduction of *non-native species**) has created an imbalance in the *natural disturbance regime** that can be remedied only by this method.

Specific to the Southwest Region

Regional Supplement10 *Even-aged silviculture** is employed only in predominantly even-aged *forest** types, such as aspen.

Regional Supplement11 When *even-aged silviculture** is employed, the size of harvest openings is based on the natural regeneration requirements of the *species** on the site, and 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 scientific literature.

Indicator 6.6.6 For purposes of *restoration**, *The Organization** has the option to develop a plan to allow for departures from the opening size limits associated with Indicator 6.6.5.. The plan is:

- a. developed by *experts** in ecological and/or related fields (e.g., wildlife biology, hydrology, landscape ecology, forestry/*silviculture**);
- b. based on *Best Available Information**, including peer-reviewed science regarding *natural disturbance regimes** for the *Management Unit**;
- c. spatially and temporally explicit and includes maps of proposed openings or areas;
- d. able to demonstrate that the variations will result in equal or greater benefit to wildlife, water quality, *ecosystem** processes, and other values compared to Indicator 6.6.5 (without any supplementary regional requirements), including for sensitive and *rare, threatened, and endangered species**; and
- e. developed in collaboration with affected *rights holders**, *affected stakeholders**, and *interested stakeholders**.

Applicability: This *Indicator** is applicable only under situations where *The Organization** has opted to develop rationale for opening sizes that depart from explicit regional limits set forth in the regional supplementary requirements of Indicator 6.6.5 .

Indicator 6.6.7 When a *rare ecological community** is present, *The Organization** maintains, *restores**, or enhances community viability. 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 outlines the process for identifying which S3 communities must be *protected** and managed as a rare community.

Guidance: *Conservation** measures 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 *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 Management maintains, enhances, and/or *restores** the plant and wildlife *habitat** of *riparian areas** 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** 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** frequently extend beyond, and may have different management guidelines than, those required by Indicator 6.7.. *Management activities** in *riparian areas** 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 for *habitat** management will vary in width with ecological importance and with the *intensity** of timber harvest adjacent to the areas. *The Organization** 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 width and characteristics. Flexibility rather than uniform areas widths is appropriate if based on scientifically based outcomes that maintain or *restore** ecological function.

Indicator 6.7.2 *Management activities** meet or exceed *best management practices** (i.e., BMPs) for the protection of water quality and quantity.

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 The *transportation system** is designed, constructed, and maintained to reduce and minimize short-term and *long-term** environmental impacts and adverse *cumulative 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-:

- a. road density;
- b. *soil** and water disturbance, including *erosion* and sediment discharge to streams;
- c. fragmentation of wildlife *habitat** and migration corridors; and
- d. area converted to roads, landings, and skid trails.

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 to periods of weather when conditions are favorable to minimize road damage, surface *erosion**, and sediment transport;
- restricting access on roads that are not immediately necessary for management purposes;
- posting or monitoring enforcement;
- constructing roads on slopes in excess of 60% with full bench cuts or minimal side cast;
- removing roads, bridges, culverts, and water bars when roads are decommissioned;
- recontouring or revegetating slopes, and establishing ecologically functional drainage patterns;
- locating landings on ecologically suitable sites, and minimizing ~~and~~ the size and the number of landings;
- seeding, mulching, or covering landings with slash after use;
- minimizing *riparian area** crossings;
- installing stream crossings at an angle that causes least ecological disturbance;
- using water diversion structures 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**.

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

*The Organization** 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 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: 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 Using *Best Available Information**, *The Organization** documents and implements *riparian management zone** (i.e., RMZ) guidelines that are adequate for *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). 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).

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 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 *riparian management zone** is designed to allow harvesting and provide flexibility for *forest** management.

Regional Supplement1 All *perennial streams** have *riparian management zones** (i.e., RMZs or buffers) that include an inner *riparian management zone** and an outer *riparian management zone**. *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 *riparian management zones** of these dimensions, wider *riparian management zones** are needed.

Table 1. Widths of inner and outer *riparian management zones. Widths of outer *riparian management zones** are applicable where data do not support narrower widths¹**

Riparian zone type	SLOPE CATEGORY				
	1%–10%	11%–20%	21%–30%	31%–40%	41% +
Inner Zone (perennial)	25	25	25	25	25
Outer Zone (perennial)	55	75	105	110	140
Total for perennial	80	100	130	135	165
Zone for Intermittent	40	50	60	70	80

¹All distances are in feet -slope distance and are measured from the high-water mark.

Regional Supplement2 The inner *riparian management zone** 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**, 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** is designed as a virtual no-harvest zone, while allowing the removal of selected high-value trees.

Regional Supplement3 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** (25 feet from the high-water mark), except for the removal of windthrown trees.

Regional Supplement4 Outer *riparian management zones**, outside and in addition to inner *riparian management zones**, 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** is based on the landform, erodibility of the *soil**, stability of the 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** is calculated according to Table 1.

Regional Supplement5 Harvesting in outer *riparian management zones** is limited to single-tree and group selection, while maintaining at least 50% of the overstory.

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 The entire *riparian management zone** of *intermittent streams** is managed as an outer *riparian management zone**.

Regional Supplement8 The *management activities** do not result in observable siltation of intermittent streams.

Specific to the Ozark-Ouachita Region

Regional Supplement9 Table 2 provides *riparian management zone** (i.e., streamside management zone) widths.

Table 2. <i>Riparian management zone*</i> widths for perennial and intermittent watercourses^{1,2}						
Soil erosion susceptibility	Slope Category (%)					
	0%	10%	20%	30%	40%	50%
Slight	75	75	80	105	130	155
Moderate	75	75	100	140	170	200
Severe	75	90	130	170	210	250

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 *Riparian management zones** are established for all *perennial streams** and *intermittent streams**. Single-tree harvest may be carried out in *riparian management zones**, except in no-cut zones. A minimum of 80% crown cover is maintained throughout the *riparian management zone**. A 10-foot no-cut zone (from each bank) is established to maintain streambank stability for *perennial streams** and *intermittent streams**.

Regional Supplement11 Use of chemicals is prohibited in *riparian management zones**, unless necessary to control *invasive species** that would otherwise threaten the viability of the *ecosystem**.

Regional Supplement12 Skid trails and operation of heavy equipment are prohibited in *riparian management zones**, except at designated crossings.

Specific to the Southeast Region

Regional Supplement13 *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**. At a minimum, management of *riparian management zones** has the following characteristics:

- a. *Riparian management zone** design and management is based on state *best management practices**.
- b. *Riparian management zone** 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** 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**.

Specific to the Mississippi Alluvial Valley Region

Regional Supplement15 *Riparian management zones** are created and maintained in accordance with Table 36.

Table 3 Riparian Management Zone* Widths¹							
		Slope					
Stream Class	Soil erosion susceptibility²	0%	10%	20%	30%	40%	50%
		Total RMZ width (ft) per side³					
Perennial	Slight	75	75	80	105	130	155
	Moderate	75	75	100	140	170	200
	Severe	75	90	130	170	210	250
Intermittent	All erosion categories	30	30	30	30	30	30

¹ Table 3 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 Supplement16 For *perennial streams**, the inner zone of the *riparian management zone** 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**.

Regional Supplement17 For *perennial streams**, timber harvest in the outer zone of the *riparian management zone** 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 Supplement18 Within intermittent *riparian management zones**, *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 Supplement19 Prescribed burning is allowed in *riparian management zones** when *water quality** and the structures and composition of the *forest** within the *riparian management zones** can be maintained.

Specific to the Southwest Region

Regional Supplement20 *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** 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** is measured from the edge of the *wetland**.)

Regional Supplement21 *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 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** ; and
- e. width is increased in areas of *riparian management zone** 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**.

Regional Supplement22 Management in the *riparian management 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 *Transportation systems** and mechanical operations (including any form of significant ground-disturbing activity) in *riparian management zones** do not compromise the filtration, shading, nutrient, and habitat functions of the *riparian management zone**. 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** 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. Storage, handling, or use of hazardous materials is prohibited in *riparian management zones**.

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

Specific to the Rocky Mountain Region

Applicability : Some discretion may be applied to stream segments that support no fish, rarely contribute surface flow to other streams or other *water bodies**, and normally have surface flow less than six months of the year. In such instances *riparian management zone** widths should follow those designated, but management restrictions should be more flexible, as long as riparian concerns continue to receive highest priority. *The Organization** 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 *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** exceed 35%, the *riparian management zone** boundary is at least 100 feet. If wetlands touch the *riparian management zone**, then the *riparian management zone** boundary is extended to include the *wetland**. *Riparian management zone** width is extended wherever necessary to protect riparian functions.

Regional Supplement25 Management in the *riparian management zones** takes a conservative approach that puts aquatic and riparian concerns above timber consideration. Roads are prohibited in *riparian management zones**, 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**, except on permanent roads. Temporary roads or designated skid trails across the *riparian management zone** 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**.

Specific to the Pacific Coast Region

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 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** 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** :

- 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 Supplement27 For Category A streams, and for lakes and wetlands larger than 1 acre, an outer *riparian management zone** is maintained. This buffer extends from the outer edge of the inner *riparian management zone** 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** , 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 Supplement28 For Category B streams, a 25-foot (slope distance) inner *riparian management zone** is created and managed according to provisions for inner *riparian management zones** for Category A. A 75-foot (slope distance) outer *riparian management zone** (for a total buffer of 100 feet) is created and managed according to provisions for outer *riparian management zone** for Category A.

Regional Supplement29 For Category C streams, and for lakes and wetlands smaller than 1 acre, a *riparian management zone** 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** of Category A streams.

Regional Supplement30 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.

Indicator 6.7.6 In limited circumstances, or if minor in extent, variations from the stated minimum *riparian management zone** widths and layout for specific stream segments, *wetlands**, and other *water bodies** are permitted, provided *The Organization** demonstrates that the alternative configuration maintains the overall extent of the *buffers** and provides equivalent or greater environmental *protection** than Indicator 6.7.5 (without the regional supplementary requirements) for those stream segments, *wetlands**, and other *water bodies**, based on site-specific conditions and *Best Available Information**. *The Organization** develops a written set of supporting information, including a description of the riparian *habitats** and *species** addressed in the alternative configuration.

Indicator 6.7.7 *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 Authorized recreation use on the *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 10.10.1. Unauthorized use of vehicles on the *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 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** and addressed accordingly.

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 *The Organization** maintains, enhances, and/or restores* a mosaic of *species** and underrepresented *successional** stages that would naturally occur on the types of sites found on the *Management Unit**. Where old *forest**, 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**, late, and early *successional** characteristics.

Indicator 6.8.2 When 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 *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** .

On *public lands**, *Type 1* and *Type 2 old growth** are 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 *non-native species**, conduct controlled burning, and thinning from below in *forest** types when and where *restoration** is appropriate).

On *tribal** 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** 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 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 additional 20%.

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** 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 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: 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** .

*Plantations** may be established on *forest** sites that lack the vast majority of the native *forest ecosystem** components, 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** 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** and/or *rare, threatened, and endangered species* habitats**, at levels above and beyond those otherwise required by 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.

Indicator 6.9.2 Areas *converted** to non-forest use for facilities associated with severed rights that were transferred or retained by prior owners, or with other *conversion** outside the control of *The Organization**, are identified on maps. *The Organization** 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** exercises control over the location of surface disturbances in a manner that minimizes adverse environmental and social impacts.

If *The Organization** at one point held these rights and then sold them, subsequent *conversion** of *forest** to non-forest use would be subject to Indicators 6.9.1. and 6.9.2.

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** 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 *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 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 For *plantations** established in areas converted after 1994 per (a) in Indicator 6.10.2, *The Organization** develops and implements a plan to *restore** the *plantation* stands** to *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: This *Indicator** limits 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, limited to levels that allow *restoration** of *native species**;
- *restoration** of the fire regime common to natural *stands**, 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&CV4)**

Intent: This *Principle** is intended to ensure that management of the *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 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** within the scope of the certificate. The *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 *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 The *management plan** describes: a) current conditions of the timber and non-timber *forest** resources being managed; b) *historic conditions**; c) *desired future conditions**; and d) applicable *management objectives** to move the *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 *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 The *management plan** describes activities to achieve the *management objectives** defined in Indicator 7.1.2.

Indicator 7.2.2 The *management plan** identifies the ownership and *legal** status of the *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: *use rights**; *Indigenous Peoples* rights**; conservation easements, deed restrictions, and other easements or *rights** held by others; and leasing arrangements.

Indicator 7.2.3 The *management plan** describes the history of land use and past management, current *forest** types and associated size class and/or *successional** stages, and *natural disturbance regimes** that affect the *Management Unit** (per Indicator 6.1.1).

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 The *management plan** includes a description of the *landscape** within which the *Management Unit** is located and describes how *landscape*-scale habitat** elements described in Criterion 6.8 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 *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 *Management Unit**.

Indicator 7.2.6 The *management plan** includes a description of the following resources and outlines activities to *conserve**:

- a. *rare, threatened, and endangered species** and natural communities (per Criterion 6.4);
- b. plant *species** and community diversity and wildlife *habitats** (per Criterion 6.6);
- c. water resources (per Criterion 6.7);
- d. *soil** resources (per Criterion 6.7);
- e. *Representative Sample Areas** (per Criterion 6.5); and
- f. other special management areas.

Guidance: The *management plan** should have sufficient detail to describe the current resources and how *The Organization** complies with the referenced Criteria .

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 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).

Indicator 7.2.8 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 (per Indicator 6.6.4).

Guidance: The plan may reference supporting guidelines and policies that describe specific management practices.

Indicator 7.2.9 The *management plan** describes how current or anticipated impacts of insects and diseases on *forest** conditions and *management objectives** will be addressed (per 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** .

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

Indicator 7.2.10 If *pesticides** are used, the plan describes how the management system conforms with Criterion 10.7.

Indicator 7.2.11 If *biological control agents** are used, the *management plan** describes how the management system conforms with Criterion 10.8 .

Indicator 7.2.12 The *management plan** incorporates the results of the evaluation of social impacts, including:

- a. traditional cultural resources and *rights** (per Criteria 3.1 and 4.1);
- b. potential conflicts with *rights** (per Criteria 1.2, 3.2, and 4.2);
- c. management of ceremonial, archeological, and historic sites (per Criteria 3.5 and 4.5);
- d. management of *aesthetic** values (per 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 Criterion 2.4 and Indicator 4.3.1), *local** purchasing opportunities (per Indicator 4.3.1), and participation in *local** development opportunities (per Indicators 4.4.1 and 5.4.2).

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

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

Indicator 7.2.14 The *management plan** describes the *silvicultural** and other management systems used and how they will sustain, over the *long term**, *forest** *ecosystems** . 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 exploitative 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**.

Indicator 7.2.15 The *management plan** describes how harvest rate calculations were developed to meet the requirements of Criterion 5.2.

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

Indicator 7.2.16 The *management plan** includes a description of monitoring procedures necessary to address the requirements of Criterion 8.2.

Indicator 7.2.17 The *management plan** includes maps describing the resource base, the characteristics of general management zones, special management areas, *restoration** areas, *conservation zones**, and *protected areas** at a level of detail to achieve *management objectives** and *protect** sensitive sites.

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

Unit.*

Guidance: Depending on the map scale (e.g., *forest**-level vs. *stand**-level) and purpose and *intensity** of management, maps should include:

- property boundaries and ownership;
- roads and trails;
- planned *management activities**, including *forest** product harvest areas;
- *forest** types by *age class**;
- topography, *soils**, water courses, and *water bodies**;
- wetlands and *riparian areas** ;
- archeological and cultural sites and customary use areas;
- locations of unique and sensitive natural communities, *habitats**, and features;
- *rare, threatened, and endangered species**;
- *Representative Sample Areas**; and
- designated *protected areas** and *High Conservation Values** .

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

Indicator 7.2.18 The *management plan** describes the stakeholder consultation process.

Indicator 7.2.19 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 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 *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 The *management plan** is kept up to date. It is reviewed on an ongoing basis and is updated to incorporate results of monitoring or new scientific and technical information or *stakeholder* engagement**, as well as to respond to changing environmental, social, and economic circumstances. 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 *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) 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 While respecting *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 at no charge.

Guidance: See Criterion 8.4 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 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 For *public lands**, *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** addresses public comments and modifies plans to ensure compliance with this Standard.

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

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 *The Organization** seeks and considers in good faith input in management planning from *affected stakeholders** and *affected rights holders**.

Indicator 7.6.2 *Affected stakeholders** and *affected rights holders** are apprised of relevant activities in advance of the action and provided an opportunity to offer input .

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 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 For *public lands** , 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 appeals process to planning decisions is available.

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 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 The Organization* develops and consistently implements a regular and replicable written protocol to monitor its policies associated with *visions and values**, *management objectives**, and achievement of *verifiable targets** relevant to the Standard.

Indicator 8.1.2 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 The Organization* develops and consistently implements a regular 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**.

Indicator 8.2.2 *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.

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 For cultural sites identified per Indicator 3.5.1 that are significant to a *Native American** group and for which the *Native American** group holds *rights**, the opportunity to jointly monitor the sites is offered to *tribal** representatives. Where feasible, the opportunity to jointly monitor other sites and resources of interest to a *Native American** group is also offered to *tribal** representatives.

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 Where monitoring indicates that *management objectives** and *verifiable targets** are not being met, or if changing conditions indicate that a change in management strategy is required for conformance with the Standard , the *management plan* is revised.

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 .

Indicator 8.3.2 If monitoring shows that the *management objectives** and *verifiable targets** are not sufficient to ensure conformance with this Standard, then they 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 .

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 While protecting *confidential information**, either full monitoring results or an up-to-date summary of the most recent monitoring information is readily available (per Criteria 8.1 and 8.2) and is available to the public, 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** to maintain the integrity of certified products within this first link in the supply chain.

Indicator 8.5.1 When *forest** products, including *non-timber forest products**, are being sold as FSC-certified, *The Organization** implements a documented system to track and trace all products sold from the *Management Unit** until the point of ownership transfer .

Intent: This *Indicator** does not require *The Organization** 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.

Indicator 8.5.2 *The Organization** maintains records of forest products that are sold for a minimum of five years. Records adequately ensure that the requirements under Criterion 5.2 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 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 Indicator?

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** are managed to maintain or enhance their identified values.

In some cases, active management is consistent with these attributes, and in other cases (e.g., *primary 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).

The FSC US National *High Conservation Values** Framework (Annex K) may be used as a resource for assessing the presence of *High Conservation Values** on the *Management Unit**, as well as managing and monitoring those that are identified. .

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 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 Annex K. If *The Organization** learns of new applicable information, the assessment is updated to incorporate the information.

Indicator 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 *The Organization** conducts *culturally appropriate* engagement** with affected *rightsholders**, *affected stakeholders**, and *interested stakeholders** and uses the resulting input in the assessment.

Indicator 9.1.4 For *public lands**, *The Organization** conducts a transparent and accessible public review of proposed *High Conservation Values**, *High Conservation Value Areas**, and *management strategies** (per Criterion 9.2). Relevant information from stakeholder consultations and other public review is integrated into *High Conservation Value** 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 *The Organization** identifies the threats to *High Conservation Values** and develops *management strategies** necessary to ensure *High Conservation Value** maintenance and/or enhancement consistent with the *High Conservation Value** Framework in Annex K.

Indicator 9.2.2 *The Organization** holds consultations with affected *rightsholders**, *affected stakeholders**, *interested stakeholders**, and *experts** to confirm that effective *management strategies** for the maintenance and/or enhancement of the *High Conservation Values** and *High Conservation Value Areas** have been adopted.

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

Indicator 9.2.3 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 *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.

Indicator 9.3.2 *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 If the *High Conservation Values** or the *High Conservation Value Areas** on which they rely cross ownership boundaries, and where *High Conservation Values** maintenance would be improved by coordinated management, *The Organization** 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 *The Organization** monitors, or participates in a program to periodically monitor, the status of the specific *High Conservation Values**, including the effectiveness of the *management strategies** for their maintenance or enhancement. The monitoring program is designed and implemented consistent with the *High Conservation Value** Framework in Annex K .

Intent: Except where *High Conservation Values** change rapidly or demonstrate ecological instability, or where site-disturbing *management activities** occur, annual monitoring of all *High Conservation Values** may not be necessary and/or may be combined with other field activities.

Guidance: *High Conservation Values** 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** to be able to evaluate whether the values are being impacted.

Indicator 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 *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**.

Intent: *Management strategies** are adjusted to the extent allowed by law.

Where risks to *High Conservation Values** are beyond the control of *The Organization** (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 Harvested sites are regenerated in a timely manner to maintain environmental values identified per Indicator 6.1.1.

Indicator 10.1.2 Regeneration activities are implemented in a manner that:

- a. 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**;
- b. for harvest of *natural forests** or semi-natural forests*, regenerate to *pre-harvest** or to more *natural conditions**; or
- c. 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, 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 *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.

Indicator 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 species** are controlled and monitored when they are utilized, and includes all *non-native 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 The use of *non-native 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 mixes and *species** used for *erosion** control.

Guidance: State lists of *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** is expected to consult with a state *expert** in *invasive species**.

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 If *non-native species** are used, their provenance and the location of their use are documented, 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 *The Organization** takes timely action to control any adverse impacts resulting from their use of *non-native species**.

Applicability: If *The Organization** is compliant with Indicator 10.3.1 and an outbreak of a *non-native species** occurs, then the outbreak of the *non-native species** does not constitute non-compliance with Indicator 10.3.2 .

Intent: This *Criterion** is specifically for cases that involve the intentional use of *non-native species** —it does not address *invasive species** (this is addressed in Indicator 6.6.4).

C10.4 *The Organization shall not use *genetically modified organisms** in the *Management Unit**. (C6.8 P&C V4)**

Indicator 10.4.1 *Genetically modified organisms (i.e., GMOs) are not used.**

Intent: FSC-POL-30-602 *Genetically Modified Organisms** provides a definition and guidance on the interpretation of Indicator 10.4.1 .

Genetically improved organisms (e.g., Mendelian crossed) are not considered to be *genetically modified organisms** (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 *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 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. 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). .

This *Criterion** and its *Indicators** require that *The Organization** strive to reduce the use of *chemical pesticides** and work toward their eventual phase-out whenever feasible, consistent with the *FSC Pesticides Policy*.

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, larvacides, nematocides, 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 *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: 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: Strategies for controlling vegetation that minimize negative environmental effects 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 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 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.

Indicator 10.7.4 When *pesticides** 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.

Guidance: *The Organization's* Environmental and Social Risk Assessment supports the conditions described in 10.7.4.

Indicator 10.7.5 When *chemical pesticides** are used, the effects are monitored and records are kept of pest occurrences, control measures, and incidences of *worker** exposure to chemicals.

Indicator 10.7.6 *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 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).

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)

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 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 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 The use of *biological control agents** is recorded, including type, quantity, period, location, and reason for use.

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 *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 *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.

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 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, 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 *The Organization** optimizes the use of harvested *forest** products and explores product diversification where appropriate and consistent with *management objectives**.

Indicator 10.11.3 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 *Management activities**, including site preparation, harvest prescriptions, timing, and equipment, are selected and used to protect *soil**, water resources, residual trees, and other *forest** resources.. 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. Residual trees are not significantly damaged to the extent that health, growth, or values are affected.
- i. Damage to non-timber forest products* is minimized.
- j. 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?

Intent: This *Indicator** includes *soil** productivity, function, *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** 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 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**, paints, batteries, fuels and oils, trash, abandoned equipment, etc.

Indicator 10.12.2 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, 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

Term	Definition
Adaptive management	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.]
Administrative requirements	Administrative rules, procedures, or regulations that have been promulgated to carry out laws.
Aesthetics	The (attractive) appearance or sound of something. [Source: Oxford English Dictionary]
Affected stakeholder	<p>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 <i>Management Unit</i>[*]. 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 <i>Management Unit</i>[*]. The following are examples of <i>affected stakeholders</i>[*]:</p> <ul style="list-style-type: none"> • <i>local communities</i>[*] • <i>indigenous peoples</i>[*] • <i>workers</i>[*] • <i>forest</i>[*] dwellers • neighbors • downstream landowners • local processors • local businesses • tenure and use <i>rights holders</i>[*], including landowners, organizations authorized or known to act on behalf of <i>affected stakeholders</i>[*], for example social and environmental NGOs, labor unions, etc. <p>[Source: FSC-STD-01-001 V5-2]</p>
Age class	Intervals into which the age range of a tree crop is divided; also, the trees falling into such an interval.
Alien species	See <i>non-native species</i> [*] .
Applicable law	Means applicable to <i>The Organization</i> [*] as a legal person or business enterprise in or for the benefit of the <i>Management Unit</i> [*] 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]

Aquatic habitat	<i>Habitat*</i> for plants and animals that has surface water essential to an organism's survival, as differentiated from <i>wetland* habitats*</i> characterized by saturated <i>soils*</i> or <i>riparian areas*</i> . Examples include streams, ponds, and <i>vernal ponds*</i> .
Baseline conditions	Ecological, economic, and social conditions at the beginning of a planning or management cycle.
Best Available Information	Data, facts, documents, <i>expert*</i> opinions, and results of field surveys or consultations with <i>stakeholders*</i> that are most credible, accurate, complete, and/or pertinent and that can be obtained through <i>reasonable*</i> effort and cost, subject to the <i>scale*</i> and <i>intensity*</i> of the <i>management activities*</i> and the <i>precautionary approach*</i> . [Source: FSC-STD-60-004 V2-0]
Best management practices (BMPs)	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. <i>Best management practices*</i> are generally identified by states or <i>tribal*</i> entities and, in the case of <i>water quality*</i> , approved by the US EPA.
Binding agreement	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]
Biological control agents	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.]
Biological diversity (biodiversity)	The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic <i>ecosystems*</i> and the ecological complexes of which they are a part; this includes diversity within <i>species*</i> , between <i>species*</i> and of <i>ecosystems*</i> . [Source: Convention on Biological Diversity 1992, Article 2]
Buffer/buffer zones	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 <i>riparian management zones*</i> , <i>conservation* buffers*</i> around rare bird nests, and <i>conservation* buffers*</i> around cultural sites of significance.
Catastrophic natural disturbances	The natural events that significantly alter the <i>forest*</i> at the <i>landscape*</i> level.
Certification Body (CB)	FSC-accredited body that performs third-party auditing services.

Chain of custody (CoC)	The path taken by raw materials, processed materials, finished products, and co-products from the <i>forest*</i> 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]
Chemical pesticides	Synthetically produced <i>pesticides*</i> . [Source: FSC-POL-30-001 V3-0]
Child labor	<p>“Oppressive <i>child labor*</i>” means a condition of employment under which</p> <p>(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</p> <p>(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 <i>child labor*</i> 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 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]</p> <div style="border: 1px solid black; background-color: #e0f0e0; padding: 5px; margin-top: 10px;"> <p>Consultation Question:</p> </div>

	<p>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>
<p>Climate change adaptation strategies</p>	<p><i>Climate change adaptation strategies*</i> associated with <i>ecosystems*</i> and <i>biodiversity*</i> are generally categorized into three types: resistance, <i>resilience*</i>, and facilitated transformation. Resistance strategies maintain the current system for as long as possible even as changes occur. <i>Resilience*</i> 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.</p>
<p>Collective bargaining</p>	<p>A voluntary negotiation process between employers or employers’ organization and <i>workers’ organization*</i>, with a view to the regulation of terms and conditions of employment by means of collective agreements. [Source: ILO Convention 98, Article 4]</p>
<p>Complaint</p>	<p>The expression of dissatisfaction or concern by any person or organization presented to <i>The Organization*</i>, relating to its <i>management activities*</i> 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]</p>
<p>Confidential information</p>	<p>Private facts, data and content that, if made publicly available, might put at risk <i>The Organization*</i>, its business interests or its relationships with stakeholders, clients and competitors. [Source: FSC-STD-60-004 V2-0]</p>
<p>Conflicts between the Principles and Criteria and laws</p>	<p>Situations where it is not possible to comply with the <i>Principles*</i> and <i>Criteria*</i> and a law at the same time. [Source: FSC-STD-01-001 V5-2]</p>
<p>Connectivity</p>	<p>A measure of how connected or spatially continuous a corridor, network, or matrix is. The fewer gaps, the higher the <i>connectivity*</i>. Related to the structural <i>connectivity*</i> concept; functional or behavioral <i>connectivity*</i> refers to how connected an area is for a process, such as an animal moving through different types of <i>landscape*</i> elements. Aquatic <i>connectivity*</i> deals with the accessibility and transport of materials and organisms, through groundwater and surface water, between different patches of aquatic <i>ecosystems*</i> of all kinds. [Source: Based on R.T.T. Forman. 1995. <i>Land Mosaics</i>. The Ecology of Landscapes and Regions. Cambridge University Press, 632pp]</p>

Conservation/ Protection	These words are used interchangeably when referring to <i>management activities*</i> designed to maintain the identified environmental or cultural values in existence <i>long-term*</i> . <i>Management activities*</i> 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]
Conservation Areas Network	Those portions of the <i>Management Unit*</i> for which <i>conservation*</i> is the primary and, in some circumstances, exclusive objective; such areas include <i>Representative Sample Areas*</i> , <i>conservation zones*</i> , protection areas, <i>connectivity*</i> areas, and <i>High Conservation Value Areas*</i> . [Source: FSC-STD-60-004 V2-0]
Conservation zone	Areas designated within which maintenance and/or <i>restoration*</i> of such <i>species*</i> and community type(s) are the highest priority. Harvesting timber, other <i>management activities*</i> , and other uses are allowed within <i>conservation zones*</i> if they do not detract from maintenance or enhancement of the <i>species*</i> or community type(s).
Conversion	The modifications to the structure and dynamics of a <i>forest*</i> as a result of <i>management activities</i> that transform a <i>forest*</i> into a permanently non-forested* area; or the transformation of a <i>natural forest*</i> or <i>semi-natural forest*</i> into a <i>plantation*</i> .
Core area	The portion of each <i>Intact Forest Landscape*</i> designated to contain the most important cultural and ecological values. <i>Core areas*</i> are managed to exclude industrial activity. <i>Core areas*</i> meet or exceed the definition of <i>Intact Forest Landscape*</i> . [Source: FSC-STD-60-004 V2-0]
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 sciences and judged to be relevant to the matter in question. Credible scientific analysis may also include non-peer reviewed studies when conducted by experts 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 judgment of experienced professionals.
Criterion (pl. Criteria)	A means of judging whether or not a <i>Principle*</i> (of <i>forest*</i> stewardship) has been fulfilled. [Source: FSC-STD-01-001 V5-2]
Critical	The concept of criticality or fundamentality in Principal 9 and <i>HCVs*</i> relates to irreplaceability and to cases where loss or major damage to this <i>HCV*</i> would cause serious prejudice or suffering to <i>affected stakeholders*</i> . An <i>ecosystem*</i> service is considered to be critical (<i>HCV 4*</i>) 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 <i>local communities*</i> , on the environment, on <i>HCVs*</i> , 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]
Culmination of mean annual increment	The peak average yearly growth in volume of trees or a <i>forest*</i> stand, calculated by dividing the total volume by the age of the stand.
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. [Source: FSC-STD-60-004 V2-0]
Cumulative effects/impacts	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.
Customary law	Interrelated sets of <i>customary rights*</i> .
Customary rights	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] 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 <i>customary rights*</i> , with the potential exception of <i>customary rights*</i> held by <i>Native American*</i> groups.
Desired future conditions	A description of the <i>forest*</i> and/or resource conditions that are believed necessary if goals and objectives are fully achieved. <i>Desired future condition*</i> typically includes <i>forest*</i> attributes such as <i>forest*</i> structure, <i>age class*</i> distribution, species composition, standing timber quality, and <i>stand*</i> arrangement. For the purposes of this Standard, managing for <i>desired future conditions*</i> 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 <i>workers' organizations*</i> 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 <i>dispute*</i> exists when the parties have exhausted consultative avenues to resolve a <i>complaint*</i> or other differences and the following occurs: a person or persons whose <i>rights*</i> or interests are directly affected by <i>The Organization's*</i> activities gives written notice to <i>The Organization*</i> , indicating that they wish to pursue a <i>dispute*</i> resolution process and specifying which <i>rights*</i> or interests are affected, by which <i>management activities*</i> , in which location, and what modifications are considered appropriate to avoid or mitigate impacts on the <i>rights*</i> or interests; OR, <i>The Organization*</i> gives written notice to the disputant, in order to trigger the <i>dispute*</i> resolution process and bring closure to the disagreement.
Dispute of substantial duration	<i>Dispute*</i> 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 <i>complaint*</i> , based on FSC-STD-20-001). [Source: FSC-STD-60-004 V2-0]
Dispute of substantial magnitude	<p><i>Dispute*</i> that involves one or more of the following:</p> <ul style="list-style-type: none"> ● Where the negative impact of <i>management activities*</i> on <i>local communities* legal* rights</i> or on <i>Native American* groups' legal* rights</i> or <i>customary rights*</i> is of such a scale that it cannot be reversed or mitigated ● Where the negative impact of <i>management activities*</i> 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 <i>workers*</i> and <i>affected stakeholders*</i> ● A <i>dispute*</i> can become of substantial magnitude if it is of <i>substantial duration*</i>, implies a significant number of interests and has a significant negative impact to the <i>forest*</i> resource/value ● A <i>complaint*</i> can immediately become a <i>dispute of substantial magnitude*</i> if it represents a credible, imminent, and irreparable threat to or from any of the above <p><i>Disputes of substantial magnitude*</i> are not common and represent the exception. [Source: Adapted from FSC-STD-60-004 V2-0]</p>
Ecological community	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).

Economic viability	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].
Ecosystem (also Ecological system)	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] NOTE: A given terrestrial <i>ecological system</i> * will typically manifest itself in a <i>landscape</i> * 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 <i>successional</i> * pathways for a given <i>landscape</i> * setting.
Ecosystem services	The benefits people obtain from <i>ecosystems</i> *. These include: <ul style="list-style-type: none"> • provisioning services such as food, <i>forest</i>* products and water; • regulating services such as regulation of floods, drought, land degradation, air quality, climate and disease; • supporting services such as <i>soil</i>* formation and nutrient cycling; and • cultural services and cultural values such as recreational, spiritual, religious and other non-material benefits. <p>[Source: Based on R. Hassan, R. Scholes and N. Ash. 2005. <i>Ecosystems and Human Well-being: Synthesis</i>. The Millennium Ecosystem Assessment Series. Island Press, Washington DC]</p>
Employment and occupation	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]
Endangered species	A <i>species</i> * officially designated by the US Fish and Wildlife Service, the National Marine Fisheries Service, or a state agency as having its continued existence threatened over all or a significant portion of its range.
Endemic species	A <i>species</i> * that is unique to a particular <i>water body</i> *, place, or region.
Engaging/ engagement	The process by which <i>The Organization</i> * communicates, consults and/or provides for the participation of interested and/or <i>affected stakeholders</i> * ensuring that their concerns, desires, expectations, needs, <i>rights</i> * and opportunities are considered in the establishment, implementation and updating of the <i>management plan</i> *. [Source: FSC-STD-01-001 V5-2]
Environmental Impact	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,

Assessment (EIA)	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]
Erosion	The displacement of <i>soil</i> * from one place to another by any means, including water, wind, gravity, logging, and road building.
Even-aged silviculture	<i>Silvicultural</i> * systems in which <i>stands</i> * 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 “regeneration”, 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 <i>age/size class</i> *, or to convert a <i>stand</i> * containing trees having a variety of ages, sizes, or <i>species</i> * to a more uniform <i>stand</i> *. The timing of the regeneration harvest is termed the “rotation age” of the timber stand. Even-aged <i>silvicultural</i> * systems include clearcut, seed-tree, shelterwood, two-age <i>silviculture</i> *, and variable retention systems. Even-aged <i>stands</i> * may contain more than one <i>age/size class</i> * of trees on the site at any one time for <i>silvicultural</i> * 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 <i>stand</i> * during the establishment of the next crop of trees, but these are taken out during a “removal” harvest to leave one <i>age/size class</i> * for future management.
Expert	<p>An expert:</p> <ul style="list-style-type: none"> • 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. <p>[Source: Based on FSC-GUI-60-009 V1-0]</p> <p>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]
Fair compensation	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]
Family forest	A <i>Management Unit</i> * 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 http://www.fscus.org/documents/).
Fertilizer	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]
Forced or compulsory labor	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]
Forest	Generally, an <i>ecosystem</i> * characterized by tree cover; more particularly, a <i>plant community</i> * predominantly of trees and other woody vegetation that is growing closely together.
Forest-dependent	<i>Local communities</i> * for whom <i>forests</i> * 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.
Fragmentation	The process of dividing <i>habitats</i> * into smaller patches, which results in the loss of original <i>habitat</i> *, loss in <i>connectivity</i> *, reduction in patch size, and increasing isolation of patches. <i>Fragmentation</i> * is considered to be one of the single most important factors leading to loss of <i>native species</i> *, especially in <i>forested landscapes</i> *, and one of the primary causes of the present extinction crisis. In reference to <i>Intact Forest Landscapes</i> *, the <i>fragmentation</i> * 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, <i>BioScience</i> (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. <i>Free, prior, and informed consent</i> * 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

	<p>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]</p>
<p>Gap Analysis Project (GAP)/ GAP status</p>	<p>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 <i>protected*</i> areas represented in the database through GAP Status Codes (i.e., GAP status), which are a measure of management intent to conserve <i>biodiversity*</i>, and are defined as:</p> <ul style="list-style-type: none"> • 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 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 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.
<p>Gender equality</p>	<p><i>Gender equality*</i> 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.]</p>

<p>Genetically modified organisms (GMO)</p>	<p>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)]</p> <p>Examples of techniques covered by this definition include:</p> <ul style="list-style-type: none"> • recombinant DNA techniques using viral or bacterial vectors • the direct introduction of DNA into an organism (e.g., by microinjection) • cell fusion or hybridization <p>Clones, hybrids formed by natural pollination processes, or the products of tree selection, grafting, vegetative propagation, or tissue culture are not <i>GMOs*</i>, unless produced by <i>GMO*</i> techniques.</p>
<p>Genotype</p>	<p>The genetic constitution of an organism. [Source: FSC-STD-01-001 V5- 2]</p>
<p>Good faith</p>	<p>The principle of <i>good faith*</i> 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 <i>disputes*</i>. [Source: Adapted from FSC Policy Motion 40/2017]</p>
<p>Habitat</p>	<p>(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.</p>
<p>Harvest unit</p>	<p>A spatial unit of <i>forest*</i> management that defines a single <i>silvicultural*</i> prescription.</p> <p>NOTE: The landing is not a part of the <i>harvest unit*</i>.</p>
<p>Hazardous work (in the context of child labor)</p>	<p>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 <i>child labor*</i> 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 <i>child labor*</i> referred to under (Article 3(d) of the Convention No 182, and in identifying where they exist, consideration should be given, inter alia, to:</p> <ul style="list-style-type: none"> • Work which exposes children to physical, psychological or sexual abuse; • Work underground, under water at dangerous heights or in confined spaces;

	<ul style="list-style-type: none"> • 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. <p>[Source: ILO, 2011: IPEC Mainstreaming Child labour concerns in education sector plans and Programmes, Geneva, 2011& ILO Handbook on Hazardous child labour, 2011]</p>
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 (HCV)	<p>Any of the following values:</p> <ul style="list-style-type: none"> • HCV 1: Species diversity. Concentrations of <i>biological diversity*</i> including <i>endemic species*</i>, and <i>rare, threatened or endangered species*</i>, that are <i>significant*</i> at global, regional or national levels. • HCV 2: <i>Landscape*-level ecosystems*</i> and mosaics. <i>Intact Forest Landscapes*</i>, large <i>landscape*-level ecosystems*</i> and <i>ecosystem* mosaics</i> that are <i>significant*</i> at global, regional or national levels, and that contain viable populations of the great majority of the naturally occurring <i>species*</i> in natural patterns of distribution and abundance. • HCV 3: <i>Ecosystems*</i> and <i>habitats*</i>. Rare, threatened, or endangered <i>ecosystems*</i>, <i>habitats*</i> or <i>refugia*</i>. • HCV 4: <i>Critical* ecosystem services*</i>. Basic <i>ecosystem services*</i> in <i>critical*</i> situations, including protection of water catchments and control of <i>erosion*</i> of vulnerable <i>soils*</i> and slopes. • HCV 5: Community needs. Sites and resources fundamental for satisfying the basic necessities of <i>local communities*</i> or <i>Indigenous Peoples*</i> (for example for livelihoods, health, nutrition, water), identified through <i>engagement*</i> with these communities or <i>Indigenous Peoples*</i>. • HCV 6: Cultural values. Sites, resources, <i>habitats*</i> and <i>landscapes*</i> of global or national cultural, archaeological or historical <i>significance*</i>, and/or of <i>critical*</i> cultural, ecological, economic or religious/sacred importance for the traditional cultures of <i>local communities*</i> or <i>Indigenous Peoples*</i>, identified through <i>engagement*</i> with these <i>local communities*</i> or <i>Indigenous Peoples*</i>. <p>[Source: Based on FSC-STD-01-001 V5-2]</p>

High Conservation Value Areas (HCVA)	Zones and physical spaces which possess and/or are needed for the existence and maintenance of identified <i>High Conservation Values</i> *. [Source: FSC-STD-60-004 V2-0]
Historic conditions	Ecological conditions and processes existing prior to substantial modern human disturbance of the site, based on <i>Best Available Information</i> *.
High grading (high grade logging)	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 <i>forest</i> *. 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]
ILO Core (Fundamental) Conventions	<p>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 <i>child labor</i>*; and the elimination of discrimination in respect of employment and occupation.</p> <p>The eight Fundamental Conventions are:</p> <ul style="list-style-type: none"> • 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) <p>[Source: FSC report on generic criteria and indicators based on ILO Core Conventions principles, 2017]</p>
ILO Declaration on Fundamental Principles and Rights at Work and Its Follow-up, adopted by the International	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:

<p>Labor conference at its Eighty-sixth Session, Geneva, 18th June 1998 (Annex revised 15 June 2010)</p>	<ul style="list-style-type: none"> • Freedom of association and the effective recognition of the right to <i>collective bargaining</i>*; • The elimination of all forms of <i>forced or compulsory labor</i>*; • The effective abolition of <i>child labor</i>*; and • The elimination of discrimination in respect of employment and occupation. <p>[Source: FSC report on generic criteria and indicators based on ILO Core Conventions principles, 2017]</p>
<p>Indicator</p>	<p>A quantitative or qualitative variable which can be measured or described, and which provides a means of judging whether a <i>Management Unit</i>* complies with the requirements of an <i>FSC Criterion</i>*. <i>Indicators</i>* and the associated thresholds thereby define the requirements for responsible <i>forest</i>* management at the level of the <i>Management Unit</i>* and are the primary basis of <i>forest</i>* evaluation. [Source: FSC- STD-01-002, October 2017]</p>
<p>Indigenous Peoples</p>	<p>People and groups of people that can be identified or characterized as follows:</p> <ul style="list-style-type: none"> • The key characteristic or criterion is self-identification as <i>Indigenous Peoples</i>* 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. <p>[Source: Adapted from United Nations Permanent Forum on Indigenous, Factsheet 'Who are Indigenous Peoples' October 2007; United Nations Development Group, 'Guidelines on Indigenous Peoples' Issues' United Nations 2009, United Nations Declaration on the Rights of Indigenous Peoples, 13 September 2007]</p>
<p>Industrial activity</p>	<p>Industrial <i>forest</i>* and resource <i>management activities</i>* such as road building, mining, dams, urban development and timber harvesting. [Source: FSC-STD-60-004 V2-0]</p>
<p>Infrastructure</p>	<p>In the context of <i>forest</i>* management, roads, bridges, culverts, log landings, quarries, impoundments, buildings and other structures required in the course of implementing the <i>management plan</i>*. [Source: FSC-STD-60-004 V2-0]</p>
<p>Intact Forest Landscape</p>	<p>A territory within today's global extent of <i>forest</i>* cover which contains <i>forest</i>* and non-<i>forest</i>* <i>ecosystems</i>* minimally influenced by human</p>

	economic activity, with an area of at least 500 km ² (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]
Integrated pest management (IPM)	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 <i>pesticides</i> * and other interventions to levels that are economically justified and reduce or minimize risks to human and animal health and/or the environment. <i>IPM</i> * emphasizes the growth of a healthy <i>forest</i> * with the least possible disruption to <i>ecosystems</i> * and encourages natural pest control mechanisms. [Source: Based on FAO International Code of Conduct on Pesticide Management]
Intellectual property	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)]
Intensity	A measure of the force, severity, or strength of a <i>management activity</i> * or other occurrence affecting the nature of the activity's impacts. [Source: FSC-STD-01- 001 V5-2]
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 <i>Management Unit</i> *. The following are examples of <i>interested stakeholders</i> *. <ul style="list-style-type: none"> • <i>Conservation</i>* 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 <i>High Conservation Values</i>*. [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.
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	<p>A <i>species</i>* capable of rapid reproduction and spatial expansion, which may displace more specialized <i>native species</i>* and/or is difficult to eradicate. <i>Invasive species</i>* can alter ecological relationships among <i>native species</i>* and can affect <i>ecosystem</i>* function and human health. <i>Invasive species</i>* are of particular ecological concern if they are not native to the area in question.</p>
Lands and territories	<p>For the purposes of the <i>Principles</i>* and <i>Criteria</i>* these are lands or territories that <i>Indigenous Peoples</i>* or <i>local communities</i>* 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]</p> <p>In the context of <i>Native Americans</i>*, this term includes ancestral territory and <i>tribal</i>* territory, and is, therefore, not limited to the lands reserved for the settlement of <i>Native Americans</i>* and/or other currently recognized <i>tribal</i>* lands.</p>
Landscape	<p>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 <i>landscape</i>* for purposes of <i>RSA</i>* 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.</p> <p>In developing the description of “landscape” <i>The Organization</i>* considers the <i>Management Unit’s</i>* ability to influence and impact the surrounding area, as well as the potential for other owners to influence and impact the area that the <i>Management Unit</i>* falls within. Some larger <i>Management Units</i>* may represent the full <i>landscape</i>* that needs to be considered, while other typically smaller <i>Management Units</i>* may occur within a broader <i>landscape</i>* that should be considered.</p>
Landscape values	<p><i>Landscape values</i>* can be visualized as layers of human perceptions overlaid on the physical <i>landscape</i>*. Some <i>landscape values</i>*, like economic, recreation, subsistence value, or visual quality are closely related to physical <i>landscape</i>* attributes. Other <i>landscape values</i>* such as intrinsic or spiritual value are more symbolic in character and are influenced more by individual perception or social construction than physical <i>landscape</i>* attributes. [Source: Based on website of the Landscape Value Institute]</p>

	For the purposes of Criterion 6.8 and Criterion 10.10, these values are focused on how the mosaic of <i>ecosystems*</i> , age structure, <i>species*</i> composition, <i>species*</i> distribution, <i>fragmentation*</i> , and other ecological conditions occur across the <i>landscape*</i> .
Large	When used in reference to an ownership or <i>Management Unit*</i> , it is an area 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 (<i>national laws*</i> or <i>local laws*</i>) or secondary legislation (subsidiary regulations, decrees, orders, etc.). “Legal” also includes rule-based decisions made by <i>legally competent*</i> agencies where such decisions flow directly and logically from the laws and regulations. Decisions made by <i>legally competent*</i> agencies may not be <i>legal*</i> 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 <i>local* legal*</i> license or set of permissions to operate as an enterprise, with <i>rights*</i> 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 <i>rights*</i> to buy and sell products and/or services do not carry the obligation to do so, so legal* registration applies also to <i>Organizations*</i> operating a <i>Management Unit*</i> without sales of products or services; for example, for unpriced recreation or for <i>conservation*</i> of <i>biodiversity*</i> or <i>habitat*</i> . [Source: FSC-STD-01-001 V5-2]
Legal status	The way in which the <i>Management Unit*</i> 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 <i>Management Unit*</i> 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, <i>legal status*</i> 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	<i>National laws*</i> or regulations may permit the employment or work of persons 13 to 15 years of age on <i>light work*</i> 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 <i>Fair compensation*</i> .
Local	In or within reasonable proximity to the <i>Management Unit*</i> to have a significant impact on the economy or the environmental values of the <i>Management Unit*</i> , or to be significantly affected by the <i>management activities*</i> or the biophysical aspects of the <i>Management Unit*</i> . On <i>public lands*</i> , this also includes all citizens of the relevant entity (county, city, state, or nation).
Local communities	Communities of any size that are in or adjacent to the <i>Management Unit*</i> , and also those that are close enough to have a significant impact on the economy or the environmental values of the <i>Management Unit*</i> or to have their economies, <i>rights*</i> or environments significantly affected by the <i>management activities*</i> or the biophysical aspects of the <i>Management Unit*</i> . On <i>public lands*</i> , this also includes all citizens of the relevant entity (county, city, state, or nation). [Source: adapted from FSC-STD-01-001 V5-2]
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. <i>Tribal*</i> 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]
Long-term	The time-scale of the <i>forest*</i> owner or manager as manifested by the objectives of the <i>management plan*</i> , the rate of harvesting, and the commitment to maintain permanent <i>forest*</i> 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 <i>ecosystem*</i> 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)]
Management activity	Any or all operations, processes, or procedures associated with managing a <i>forest*</i> , including but not limited to: planning, consultation, harvesting, access construction and maintenance, <i>silvicultural*</i> activities (planting, site preparation, tending), monitoring, assessment, and reporting. [Source: FSC Canada National Boreal Standard 2004]
Management objective	Specific management goals, practices, outcomes, and approaches established to achieve the requirements of this Standard. [Source: FSC-STD-60-004 V2-0]
Management plan	The collection of documents, reports, records and maps that describe, justify and regulate the activities carried out by any manager, staff, or <i>Organization*</i> within or in relation to the <i>Management Unit*</i> , including statements of objectives and policies. [Source: FSC-STD-01-001 V5-2]
Management strategy	A plan of action for how a <i>management objective*</i> or other desired outcome will be achieved.
Management Unit	A spatial area or areas submitted for FSC certification with clearly defined boundaries managed to a set of explicit <i>long term* management objectives*</i> which are expressed in a <i>management plan*</i> . This area or areas include(s): <ul style="list-style-type: none"> • all facilities and area(s) within or adjacent to this spatial area or areas under <i>legal*</i> title or management control of, or operated by or on behalf of <i>The Organization*</i>, for the purpose of contributing to the <i>management objectives*</i>; and • all facilities and area(s) outside, and not adjacent to this spatial area or areas and operated by or on behalf of <i>The Organization*</i>, solely for the purpose of contributing to the <i>management objectives*</i>. [Source: FSC-STD-01-001 V5-2]
Minimum age (of employment)	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. <i>National laws*</i> may also permit the employment of 13-15-year-olds in <i>light work*</i> which is neither prejudicial to school attendance, nor harmful to a child's health or development. The ages 12-13 can apply for <i>light work*</i> in countries that specify a minimum age of 14. [Source: ILO Convention 138, Article 2]
Medium	When used in reference to an ownership or <i>Management Unit*</i> , it is an area between 2,475 and 50,000 acres in size.

Native American	Of or relating to the <i>Indigenous Peoples*</i> of the conterminous United States (not including Alaska, Hawaii, or any US territories).
National laws	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]
Native species	<i>Species*</i> , 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]
Natural conditions	For the purposes of the <i>Principles*</i> and <i>Criteria*</i> and any applications of restoration techniques, the term “more natural conditions” provides for managing sites to favor or <i>restore* native species*</i> and associations of <i>native species*</i> that are typical of the locality, and for managing these associations and other environmental values so that they form <i>ecosystems*</i> typical of the locality. [Source: Adapted from FSC-STD-01-001 V5-2]
Natural disturbance regime	Disturbance processes such as wind, fire, insects, and pathogens that are characteristic of the <i>forest* ecosystem*</i> , 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, <i>non-catastrophic natural disturbance*</i> should be the focus of analyzing for natural disturbance.
Natural forest	<i>Natural forests*</i> include <i>old growth*</i> and <i>primary forests*</i> as well as managed <i>forests*</i> where most of the principal characteristics and key elements of native <i>ecosystems*</i> , such as complexity, structure, wildlife, and <i>biological diversity*</i> , are present. See also <i>semi-natural forest*</i> .
Natural hazards	Disturbances that can present risks to social and environmental values* in the <i>Management Unit*</i> but that may also comprise important <i>ecosystem*</i> functions; examples include drought, flood, fire, landslide, storm, avalanche, etc. [Source: FSC-STD-60-004 V2-0]
Non-native species	A <i>species*</i> , subspecies or lower taxon, introduced outside its natural past or present distribution; includes any part, gametes, seeds, eggs, or propagules of such <i>species*</i> that might survive and subsequently reproduce. [Source: Convention on Biological Diversity (CBD), Invasive Alien Species Programme definition for ‘alien species.’ Glossary of Terms as provided on CBD website]

Non-timber forest products (NTFP)	All forest products other than timber derived from the <i>Management Unit*</i> , 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]
Objective	The basic purpose laid down by <i>The Organization*</i> for the <i>forest*</i> enterprise, including the decision of policy and the choice of means for attaining the purpose. [Source: Based on F.C. Osmaston. 1968. <i>The Management of Forests</i> . Hafner, New York; and D.R. Johnston, A.J. Grayson and R.T. Bradley. 1967. <i>Forest Planning</i> . Faber & Faber, London]
Obligatory code of practice	A manual or handbook or other source of technical instruction which <i>The Organization*</i> 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 <i>plant community*</i> is capable of existing on a site, given the frequency of natural disturbance events, or (2) a very old example of a <i>stand*</i> dominated by long-lived early- or mid-seral <i>species*</i> . The onset of <i>old growth*</i> varies by <i>forest*</i> community and region. Depending on the frequency and intensity of disturbances, and site conditions, <i>old-growth*</i> forests will have different structures, <i>species*</i> compositions, age distributions, and functional capacities than younger forests. <i>Old-growth* stands*</i> and <i>forests*</i> include: Type 1 Old Growth: 3 acres or more that have never been logged and that display <i>old-growth*</i> characteristics. Type 2 Old Growth: 20 acres or more that have been logged, but which retain significant <i>old-growth*</i> structure and functions.
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]
Pathogen	Any agent that causes disease, especially microorganisms, such as bacteria or fungi.
Perennial stream	A mapped or unmapped stream with a defined channel, banks, and bed that 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.

Pesticide	<p>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]</p> <p>NOTE: This definition includes insecticides, rodenticides, acaricides, molluscicides, larvaecides, nematocides, fungicides, and herbicides.</p>
Planning unit	<p>The specific geographic area for which a <i>sustained yield harvest level*</i> is being calculated. Planning units should generally be composed of land that contains similar or commonly associated <i>forest*</i> types. Depending upon the scale of ownership, planning units may range in size from a single <i>stand*</i> (for example, <i>small*</i>, private landowners) to entire watersheds. A planning unit may include the entire <i>Management Unit*</i> if not larger than watersheds.</p>
Plant community (plant community type)	<p>See <i>ecological community*</i>.</p>
Plantation	<p>A <i>forest*</i> area established by planting or sowing with, using either <i>native species*</i> or <i>non-native species*</i>, often with one or few <i>species*</i>, regular spacing, and even ages, and which lacks most of the principal characteristics and key elements of native <i>forest* ecosystems*</i>. The use of establishment or subsequent management practices in planted <i>forest* stands*</i> that perpetuate the <i>stand*</i>-level absence of most principle characteristics and key elements of native <i>forest* ecosystems*</i> will result in a stand being classified as a <i>plantation*</i>. The details addressing ecological conditions used in <i>stand*</i>-level classification are outlined in related guidance. Except for highly extenuating circumstances, the following are classified as <i>plantations*</i>:</p> <ul style="list-style-type: none"> • cultivation of exotic species <i>non-native species*</i> or recognized exotic non-native sub-<i>species*</i>, except when used in conformance with Indicator 10.2.2; • block plantings of cloned trees resulting in a major reduction of within-<i>stand*</i> genetic diversity compared to what would be found in a natural <i>stand*</i> of the same <i>species*</i>; and • cultivation of any tree <i>species*</i> in areas that were naturally non-forested <i>ecosystems*</i>. <p>[Source: adapted from FSC-STD-01-001 V5-2]</p> <p>NOTE: Guidance for differentiating between <i>natural forest*</i> or <i>semi-natural forest*</i> and <i>plantation*</i> is provided in Annex I.</p>

Pre-harvest	The diversity, composition, and structure of the <i>forest*</i> or <i>plantation*</i> prior to felling timber and appurtenant activities such as road building. [Source: FSC-STD-60-004 V2-0]
Precautionary principle/ approach	An approach requiring that when the available information indicates that <i>management activities*</i> pose a threat of severe or irreversible damage to the environment or a threat to human welfare, <i>The Organization*</i> will take explicit and effective measures to prevent the damage and avoid the <i>risks*</i> 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]
Primary forest	<i>Forest* ecosystems*</i> that have retained the principal characteristics and key elements of native <i>ecosystems*</i> , such as complexity, structure, and diversity, and have remained relatively undisturbed by human activity (i.e., lack visible indications of human economic activity). Human impacts in such <i>forest*</i> areas have normally been limited to low levels of hunting, fishing, and very limited, non-commercial harvesting of <i>forest*</i> products. NOTE: In fire- or other disturbance-dominated <i>ecosystems*</i> , <i>primary forest*</i> may not always be dominated by mature trees, or any trees at all, but instead may present as a mosaic of older and younger <i>stands*</i> .
Principle	An essential rule or element; in FSC’s case, of <i>forest*</i> stewardship. [Source: FSC-STD-01-001 V5-2]
Protected areas	Portions of the <i>forest*</i> of special biological, cultural, or historical significance that are designated, mapped, and managed principally to protect their biological, cultural, or historic attributes. Only <i>management activities*</i> (including logging) implemented to achieve ecological improvements are allowed in <i>protected areas*</i> .
Protection	See <i>Conservation*</i> .
Public land	Land 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”, <i>tribal*</i> lands are excluded from this definition, even though the US federal government has a trust responsibility to tribes for the management of <i>tribal*</i> lands.
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 <i>ecological communities</i> * that have been identified by state or federal agencies or natural heritage databases to be rare, consistent with the parameters for determining <i>rare, threatened, and endangered species</i> *.
Rare species	See <i>rare, threatened, and endangered species</i> *
Rare, threatened, and endangered species (RTE species)	<i>Species</i> * (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 per Indicator 6.1.1 .
Ratified	The process by which an international law, convention or agreement (including multilateral environmental agreement) is <i>legally</i> * approved by a national legislature or equivalent legal mechanism, such that the international law, convention, or agreement becomes automatically part of <i>national law</i> * or sets in motion the development of <i>national law</i> * to give the same <i>legal</i> * 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) <i>Habitat</i> * in which a population can persist and from which it can disperse when the surrounding <i>habitat</i> * becomes suitable for it to live in; locations and <i>habitats</i> * 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 <i>Management Unit</i> * delineated for the purpose of <i>conserving</i> * or <i>restoring</i> * <i>viable</i> * examples of an <i>ecosystem</i> * that would naturally occur in that ecological region. <i>RSA</i> * may also: <ul style="list-style-type: none"> a. serve to <i>conserve</i>* or <i>restore</i>* an under-represented ecological condition (i.e., <i>forest</i>* <i>successional</i>* phases, ecological communities); and/or b. serve as a set of <i>conservation zones</i>* or <i>refugia</i>* for <i>species</i>*, communities, and/or community types not addressed in other <i>Criteria</i>* of this Standard. [Source: adapted from FSC-STD-60-004 V2-0]

Resilience	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. <i>Resilience*</i> can be applied to both <i>ecological systems*</i> 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.]
Restore (Restoration)	The process of modifying or repairing a <i>habitat*</i> or <i>ecosystem*</i> to introduce or reintroduce composition, structures, and functions that are native to the site.
Retention	Living vegetation, including trees, shrubs, and herbaceous <i>species*</i> , that is retained during even-aged and two-aged regeneration harvests.
Rights	In the context of access rights and <i>use rights*</i> , “rights” is used to reference <i>legal*</i> rights and <i>customary rights*</i> held by <i>Native American*</i> groups, and <i>legal*</i> rights held by all other <i>rights holders*</i> .
Rights holder	Persons and groups, including <i>Native American groups*</i> , <i>traditional peoples*</i> , and <i>local communities*</i> , with <i>legal*</i> rights or, in the case of <i>Native American*</i> groups, with <i>legal*</i> or <i>customary rights*</i> , including treaty rights, to land and/or resources within the <i>Management Unit*</i> . For <i>rights*</i> held by <i>Native American groups*</i> , <i>traditional peoples*</i> , and <i>forest-dependent* local communities*</i> , <i>free, prior, and informed consent*</i> is required to determine management decisions. [Source: Adapted from FSC-STD-60-004 V2-0]
Riparian area	Interface between upland communities and a <i>water body*</i> often delineated and managed to conserve the plant and wildlife <i>habitat*</i> characteristics of the area and to <i>protect*</i> adjacent aquatic <i>habitats*</i> and <i>ecosystems*</i> . <i>Riparian areas*</i> vary in width according to biotic and abiotic characteristics and may be wider than a <i>riparian management zone*</i> (RMZ), which is designed to <i>protect* water quality*</i> and <i>aquatic habitat*</i> .
Riparian management zone (RMZ)	Areas next to rivers, streams, <i>wetlands*</i> , <i>vernal pools*</i> , seeps and springs, lake and pond shorelines, karst, and other hydrologically sensitive areas where management practices are modified to <i>protect* water quality*</i> and <i>aquatic habitats*</i> by minimizing non-point source pollution to surface waters. In addition to their primary purpose of <i>protecting* water quality*</i> , these areas also provide similar ecological functions to <i>riparian areas*</i> .
Riparian zone	See <i>riparian area*</i> .
Risk	The probability of an unacceptable negative impact arising from any activity in the <i>Management Unit*</i> combined with its seriousness in terms of consequences. [Source: FSC-STD-01-001 V5-2]

Rutting	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.
Scale	A measure of the extent to which a <i>management activity</i> * or event affects an environmental value or a <i>Management Unit</i> *, in time or space. An activity with a small or low spatial <i>scale</i> * affects only a small proportion of the <i>forest</i> * each year, an activity with a small or low temporal <i>scale</i> * occurs only at long intervals. [Source: FSC-STD- 01-001 V5-2]
Scale, intensity, and risk	See individual definitions for <i>scale</i> *, <i>intensity</i> *, and <i>risk</i> *.
Semi-natural forest	A <i>forest</i> * <i>ecosystem</i> * with many of the characteristics of native <i>ecosystems</i> * present. <i>Semi-natural forests</i> * exhibit a history of human disturbance (e.g., harvesting or other <i>silvicultural</i> * activities), are very common in the United States, and include a considerable amount of unmanaged, and most of the managed, <i>forest</i> * land other than <i>plantations</i> *.
Significant	<p>For the purposes of Principle 9, <i>HCVs 1, 2 and 6</i>* there are three main forms of recognizing <i>significance</i>*.</p> <ul style="list-style-type: none"> • A designation, classification or recognized <i>conservation</i>* status, assigned by an international agency such as IUCN or Birdlife International; • A designation by national or regional authorities, or by a responsible national <i>conservation</i>* organization, on the basis of its concentration of <i>biodiversity</i>*; • A voluntary recognition by the manager, owner or <i>Organization</i>*, on the basis of available information, or of the known or suspected presence of a <i>significant</i>* <i>biodiversity</i>* concentration, even when not officially designated by other agencies. <p>Any one of these forms will justify designation as <i>HCVs 1, 2 and 6</i>*. Many regions of the world have received recognition for their <i>biodiversity</i>* importance, measured in many different ways. Existing maps and classifications of priority areas for <i>biodiversity</i>* <i>conservation</i>* play an essential role in identifying the potential presence of <i>HCVs 1, 2*</i> and <i>6*</i>. [Source: FSC-STD-01-001 V5-2]</p>
Silviculture (Silvicultural)	The art and science of controlling the establishment, growth, composition, health and quality of <i>forests</i> * 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]

Slope	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.
Small	When used in reference to an ownership or <i>Management Unit*</i> , see <i>Family Forest*</i> .
Snag	A standing dead tree.
Soil	Earth material (rock) so modified by physical, chemical, and biological agents that it will support rooted plants. <i>Soil*</i> also includes organic material, biotic communities, and <i>species*</i> that live in the ground and that contribute to ecological productivity.
Species	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.
Species composition	The <i>species*</i> that occur on a site or within an <i>ecosystem*</i> at any point in time.
Stakeholder	See <i>affected stakeholder*</i> and <i>interested stakeholder*</i> .
Stand	<i>Plant communities*</i> , particularly of trees, sufficiently uniform in composition, constitution, age, spatial arrangement, or condition to be distinguished from adjacent communities; also, may delineate a <i>silvicultural*</i> or management entity.
Streamside management zone (SMZs)	See <i>riparian management zone*</i> .
Structural diversity	The diversity in a <i>plant community*</i> 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).
Succession	Progressive changes in <i>species*</i> composition and <i>forest*</i> community structures caused by natural processes (non-human) over time.
Sustained yield harvest levels	Harvest levels and rates that do not exceed growth over successive harvests, that contribute directly to achieving <i>desired future conditions*</i> , and that do not diminish the <i>long-term*</i> ecological integrity and productivity of the site.
Tenure (also long-term tenure, legal tenure, tenure claim)	Socially-defined agreements held by individuals or groups, recognized by <i>legal*</i> statutes or customary practice, regarding the “bundle of <i>rights*</i> 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

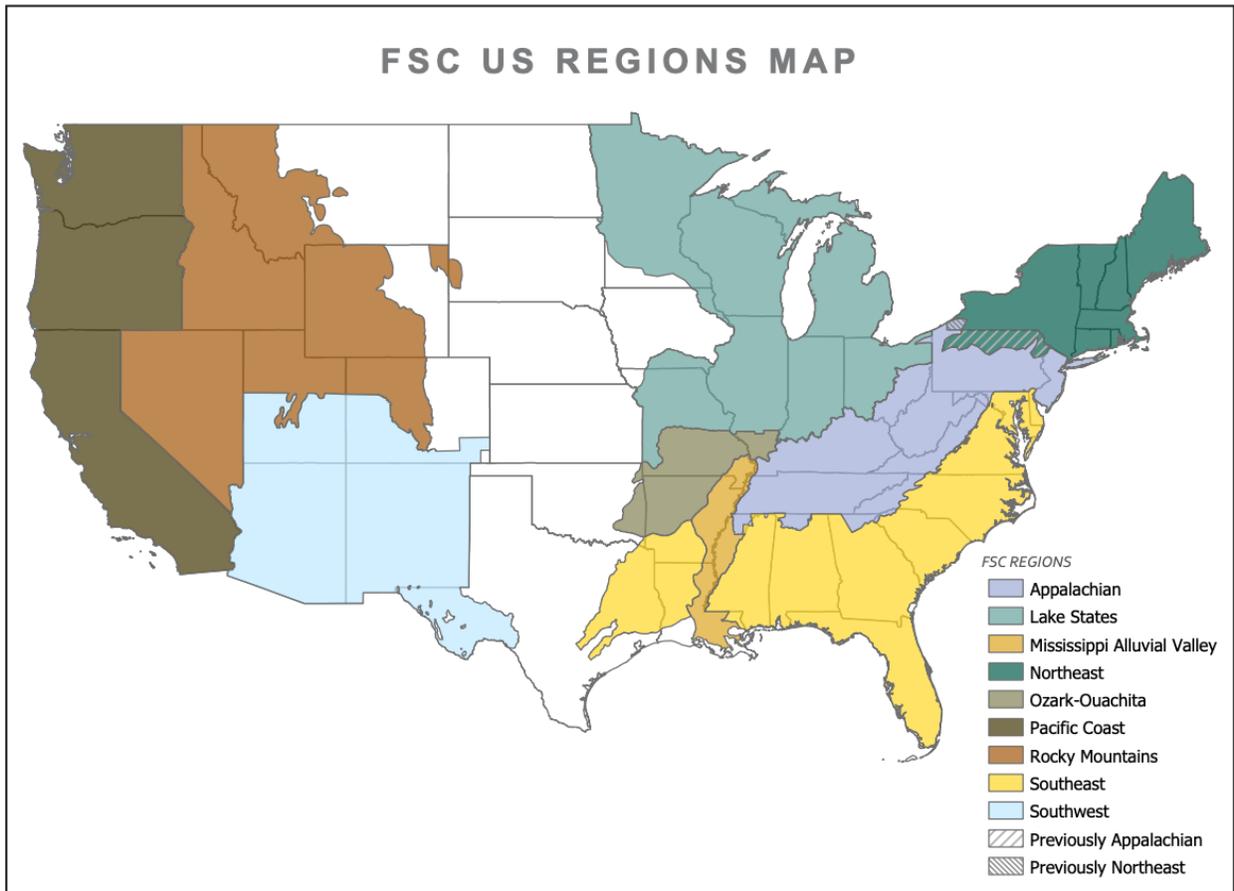
	<i>species*</i> , water, minerals, etc.). [Source: Adapted from World Conservation Union (IUCN). Glossary definitions provided on IUCN website]
Threat	An indication or warning of impending or likely damage or negative impacts. [Source: Based on Oxford English Dictionary]
Threatened species	Any <i>species*</i> officially designated by a state or federal agency that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range.
Timber harvesting level	The actual harvest quantity executed on the <i>Management Unit*</i> , 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) <i>sustained yield harvest level*</i> . [Source: Adapted from FSC-STD-60-004 V2-0]
Traditional knowledge	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]
Traditional peoples	Social groups or peoples who do not self-identify as indigenous and who affirm <i>rights*</i> to their lands, <i>forests*</i> and other resources based on long established custom or traditional occupation and use. [Source: Forest Peoples Programme (Marcus Colchester, 7 October 2009)]
Transportation system	Permanent and temporary haul roads, skid trails, and recreational trails.
Tribal	Of or relating to the <i>Native Americans*</i> of a particular land base.
Type 1 old growth	See <i>old growth*</i> .
Type 2 old growth	See <i>old growth*</i> .
Uphold	To acknowledge, respect, sustain and support. [Source: FSC-STD-01-001 V5-2]
Use rights	<i>Rights*</i> for the use of resources of the <i>Management Unit*</i> 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]

Vast majority	80% of the total area of <i>Intact Forest Landscapes*</i> within the <i>Management Unit*</i> as of January 1, 2017. The <i>vast majority*</i> also meets or exceeds the minimum definition of <i>Intact Forest Landscape*</i> . [Source: FSC-STD-60-004 V2-0]
Verifiable targets	Specific goals, such as <i>desired future forest conditions*</i> , established to measure progress towards the achievement of each of the <i>management objectives*</i> . These goals are expressed as clear outcomes, such that their attainment can be verified and it is possible to determine whether they have been accomplished or not. [Source: FSC-STD-60-004 V2-0]
Vernal pool (vernal pond)	A seasonal body of water, typically a self-contained depression, that contains species not normally found in perennial <i>water bodies*</i> . <i>Vernal pool*</i> types, <i>species*</i> , and identification will vary by region. <i>Vernal pools*</i> that occur in eastern and midwestern <i>forests*</i> are characterized by a unique suite of amphibian and invertebrate <i>species*</i> . 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 <i>species*</i> not found in other <i>wetland*</i> types.
Very limited portion	The area affected shall not exceed 0.5% of the area of the <i>Management Unit*</i> in any one year, nor affect a total of more than 5% of the area of the <i>Management Unit*</i> . [Source: FSC-STD-01-002]
Very limited portion of core area	The area affected shall not exceed 0.5% of the area of the <i>core area*</i> in any one year, nor affect a total of more than 5% of the area of the <i>core area*</i> . [Source: FSC-STD-60-004 V2-0]
Viable	In the context of <i>Representative Sample Areas*</i> , 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.
Visions and values	Policies of <i>The Organization*</i> that together provide a clear, specific, compelling picture of what <i>The Organization*</i> will look like at a specific time in the future (i.e., vision) and the boundaries within which <i>The Organization*</i> will operate in pursuit of its vision (i.e., values).
Waste materials	Unusable or unwanted substances or by-products, such as: <ul style="list-style-type: none"> • 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. <i>Water bodies*</i> include riparian or <i>wetland*</i> 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	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 <i>soil*</i> conditions. <i>Wetlands*</i> 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 <i>forest*</i> floor, where it provides important microhabitats and performs various functions of nutrient cycling. <i>Woody debris*</i> is commonly categorized as large and/or coarse, or fine, and both provide important but different ecological values.
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]
Workers’ organization	Any organization of <i>workers*</i> for furthering and defending the interest of <i>workers*</i> (adapted from ILO Convention 87, Article 10). It is important to note that rules and guidance on composition of <i>workers’ organization*</i> 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”. <i>Workers’ organizations*</i> 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]
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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)
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (Washington DC, 1973)
- 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**.

Category	Name of Law/Legislation
1. Legal rights to harvest	
1.1 Land <i>tenure*</i> and management rights	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Knutson-Vandenberg (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	<i>Sales tax is assessed at the state level</i>
2.3 Income and profit taxes	<ul style="list-style-type: none"> • Internal Revenue Code of 1986 • Relevant state taxes
3. Timber harvesting activities	
3.1 Timber harvesting regulations	<ul style="list-style-type: none"> • 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 <i>species</i> *	<ul style="list-style-type: none"> • Lacey Act (1900) • Endangered Species Act (1973) • National Historic Preservation Act (1966)

<p>3.3 Environmental requirements</p>	<ul style="list-style-type: none"> ● 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
<p>3.4 Health and safety</p>	<ul style="list-style-type: none"> ● 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)
<p>3.5 <i>Legal*</i> employment</p>	<ul style="list-style-type: none"> ● Relevant US federal and state labor and employment laws, including but not limited to: <ul style="list-style-type: none"> ○ Fair Labor Standards Act (FLSA) ○ Immigration and Nationality Act (INA)
<p>4. Third parties' rights</p>	
<p>4.1 <i>Customary rights*</i></p>	<ul style="list-style-type: none"> ● 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.
<p>4.2 <i>Free, Prior, and Informed Consent*</i></p>	<ul style="list-style-type: none"> ● <i>Free, prior, and informed consent (FPIC)*</i> is established in international law (UN Declaration on the Rights of Indigenous Peoples), to which the US is a signatory. However, <i>FPIC*</i> is not addressed explicitly in the US Code. ● U.S. court cases may clarify the standing of <i>FPIC*</i> in the US. The Supreme Court case <i>Montana v. United States</i> 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 <i>Indigenous Peoples* rights*</i>	<ul style="list-style-type: none"> • 25 USC §1–17, establishing the Bureau of Indian Affairs • Cooperative Forestry Assistance Act of 1978 and Food, Agriculture, Conservation, and Trade Act of 1990 • Healthy Forest Restoration Act (2003)
5. Trade and transport	
5.1 Classification of <i>species*</i> , quantities, qualities	<i>Classification systems are assessed at the regional USFS level</i>
5.2 Trade and transport	<ul style="list-style-type: none"> • Lacey Act (1900) and 2008 amendment • Endangered Species Act (1973) • 15 CFR: Commerce and Foreign Trade
5.3 Offshore trading and transfer pricing	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Homeland Security Act of 2002 and establishment of Customs and Border Protection • 15 CFR: Commerce and Foreign Trade
5.5 CITES	<ul style="list-style-type: none"> • Lacey Act (1900) and 2008 amendment • Endangered Species Act (1973)
6. Due diligence/due care	
6.1 Due diligence/due care procedures	<ul style="list-style-type: none"> • 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*	

	<ul style="list-style-type: none">● 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
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[1] Riddle, A. (2019): Timber Harvesting on Federal Lands. *Congressional Research Service*

[2] Fredericks, C.F. (2017): Operationalizing Free, Prior, and Informed Consent. *Albany Law Review* 80 (pp. 429–482)

[3] <https://www.illegal-logging.info/topics/us-lacey-act>

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

Complaint	The expression of dissatisfaction or concern by any person or organization presented to <i>The Organization*</i> , relating to its <i>management activities*</i> or its conformity with the FSC Principles and Criteria, where a response is expected.
Dispute	A <i>dispute*</i> exists when the parties have exhausted consultative avenues to resolve a <i>complaint*</i> or other differences and the following occurs: a person or persons whose <i>rights*</i> or interests are directly affected by <i>The Organization's*</i> activities gives written notice to <i>The Organization*</i> , indicating that they wish to pursue a <i>dispute*</i> resolution process and specifying which <i>rights*</i> or interests are affected, by which <i>management activities*</i> , in which location, and what modifications are considered appropriate to avoid or mitigate impacts on the <i>rights*</i> or interests; OR, <i>The Organization*</i> gives written notice to the disputant, in order to trigger the <i>dispute*</i> resolution process and bring closure to the disagreement.
Dispute of substantial duration	<i>Dispute*</i> 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).
Dispute of substantial magnitude	<p><i>Dispute*</i> that involves one or more of the following:</p> <ul style="list-style-type: none"> ● Where the negative impact of <i>management activities*</i> on <i>local communities' legal* rights</i> or on <i>Native American* groups' legal* rights</i> or <i>customary rights*</i> is of such a scale that it cannot be reversed or mitigated ● Where the negative impact of <i>management activities*</i> 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 <i>workers*</i> and <i>affected stakeholders*</i> ● A <i>dispute*</i> can become of substantial magnitude if it is of <i>substantial duration*</i>, implies a significant number of interests and has a significant negative impact to the <i>forest*</i> resource/value ● A <i>complaint*</i> can immediately become a <i>dispute of substantial magnitude*</i> if it represents a credible, imminent, and irreparable threat to or from any of the above <p><i>Disputes of substantial magnitude*</i> are not common and represent the exception.</p>
Engaging/ engagement	The process by which <i>The Organization*</i> communicates, consults, and/or provides for the participation of <i>interested</i> and/or <i>affected stakeholders*</i> , ensuring that their concerns, desires, expectations, needs, rights, and

	opportunities are considered in the establishment, implementation and updating of the <i>management plan</i> *.
Good faith	The principle of <i>good faith</i> * 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 <i>disputes</i> *.
Management Activity	Any or all operations, processes, or procedures associated with managing a <i>forest</i> *, including but not limited to: planning, consultation, harvesting, access construction and maintenance, <i>silvicultural</i> * 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:
 - attempt to understand the *legal** and social background of the group in question; and
 - 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:

Federally Recognized Tribes	<i>FPIC*</i> needed, should be easily verifiable if a federally recognized <i>tribal*</i> government exists.
State-Recognized Tribes	<i>FPIC*</i> needed, should be easily verifiable if a state-recognized <i>tribal*</i> government exists. <i>Tribal*</i> government requires more examination than with federally recognized tribe to confirm protection of <i>rights*</i> of <i>tribal*</i> members.
Non-Recognized Tribes	Rights accorded to such groups by federal, state, or <i>local*</i> government should be assessed against the proposed FSC accreditation or proposed <i>management activities*</i> . If rights exist, seek <i>FPIC*</i> to the degree legally required by the state, etc. If <i>legal*</i> rights do not exist, no <i>FPIC*</i> required.
<i>Local Communities*</i>	Rights accorded to such groups by federal, state, or local government should be assessed against proposed FSC accreditation or management. If <i>legal*</i> rights exist, seek <i>FPIC*</i> to the degree legally required by the state, etc. If <i>legal*</i> rights do not exist, no <i>FPIC*</i> required.
<i>Traditional Peoples*</i> (potentially Appalachian Whites, Acadians (“Cajuns”), African American communities, Basque communities, Descendants of Original Spanish colonizers in the Southwest, etc.)	Rights accorded to such groups by federal, state, or local government should be assessed against proposed FSC accreditation or management. If <i>legal*</i> rights exist, seek <i>FPIC*</i> to the degree legally required by the state, etc. If <i>legal*</i> rights do not exist, no <i>FPIC*</i> required.

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:
 - the scope of the *FPIC** process (i.e., which *rights** and *management activities** will be addressed)
 - preferred communication pathways
 - 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-gtr-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.

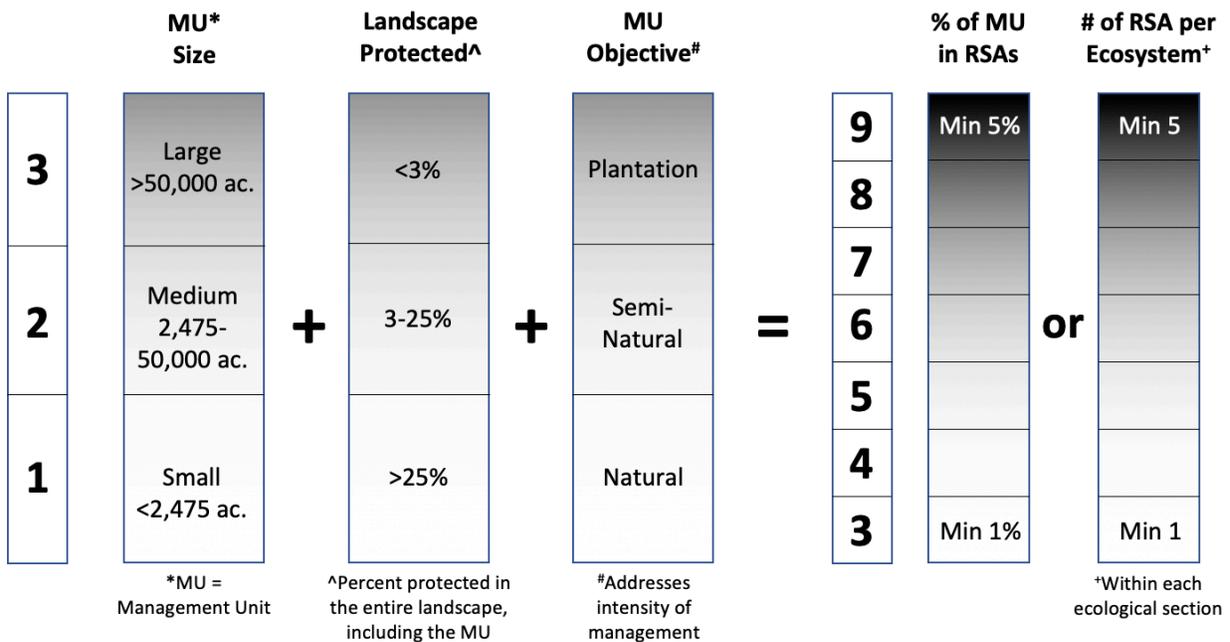
Per Indicator 6.5.3, *Management Units** that are larger, occur in *landscapes** with less *protection** for native *ecosystems** (all *ecosystems** combined), and/or have more intensive management are expected to make greater contributions to *conservation** and/or *restoration** of native *ecosystems**. 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.

Figure 1. Suggestions for determining an appropriate extent of RSA*



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:

- Whether or not any examples of the *ecosystem** currently occur within the *landscape**
- The percentage of the *ecosystem** examples that occur within the *landscape** that are permanently *protected**
- The percentage (estimated) of the historical extent of the *ecosystem** that currently remains within the *landscape**
- 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

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/>)
 - iv. State Wildlife Action Plans (<https://www.fishwildlife.org/afwa-informs/state-wildlife-action-plans>)
 - v. Tribal natural resources departments
 - vi. State wildlife agencies

- vii. 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:

Code	INT-STD-01-001_09 (See also INT-STD-20-007_45)
Requirement (s)	FSC Principles and Criteria for Forest Stewardship V5-2, Criterion 6.5
Publication date	03. June 2015; amended on 14. March 2016; clarification note added on 14. July 2017; wording in question a) modified on 24. January 2018, replacing 'Management Unit' by 'the group' to clarify the original intent of the interpretation; Update on 23. July 2020 to add the question and answer on forest landscape and to remove the reference to P&C V4.
<p>a) Can a SLIMF owner or group scheme meet set-aside requirements outside the group?</p> <p>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?</p> <p>c) How is the forest landscape defined?</p> <p>a) Yes, if there are insufficient or no representative samples areas within the Management Unit (MU), and under the following conditions:</p> <ul style="list-style-type: none"> • 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:
 - Protect the area in its natural stage;
 - Mark the boundaries of the area in the field and on maps;
 - 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)

<i>Conservation Areas Network</i>* Inclusions	<i>Criterion</i>*/ <i>Indicator</i>*
Areas managed primarily to <i>conserve</i> * <i>rights</i> * held by others	C1.2
Areas managed primarily to <i>conserve</i> * <i>rights</i> * held by <i>Native American</i> * groups	C3.2
Areas managed primarily to <i>conserve</i> * sites of significance for <i>Native American</i> * groups	C3.5
Areas managed primarily to <i>conserve</i> * <i>rights</i> * held by <i>local communities</i> *	C4.2
Areas managed primarily to <i>conserve</i> * sites of significance for <i>local communities</i> *	C4.7
Areas managed primarily to avoid negative cultural impacts on <i>local communities</i> *	C4.5
Areas managed primarily to <i>conserve</i> * <i>ecosystem services</i> *	C5.1 & C6.3
Areas managed primarily to prevent negative impacts of <i>management activities</i> * on environmental values and thereby <i>conserve</i> * those values	C6.3
Areas managed primarily to <i>protect</i> * <i>rare, threatened and endangered species</i> * and their <i>habitats</i> *	C6.4
Areas established as <i>Representative Sample Areas (RSAs)</i> *, including both <i>RSAs</i> * with <i>conservation</i> * and with <i>restoration</i> * objectives	C6.5
Areas managed primarily to <i>conserve</i> * rare ecological communities	Indicator 6.6.7
Areas managed primarily to <i>protect</i> * natural watercourses, <i>water bodies</i> * and <i>riparian areas</i> * NOTE: Following FSC Interpretation INT-STD-60-004_01, riparian zones "created" or planted for purely functional roles (e.g., <i>erosion</i> * control) should be excluded from the <i>CAN</i> *. In a US context, this exclusion will likely be limited and would only apply to <i>RMZs</i> * that are not concurrently being managed for <i>conservation</i> * of <i>riparian areas</i> * or ecological <i>connectivity</i> *, etc. (e.g., created <i>erosion</i> * control <i>buffers</i> * established in land reclamation areas previously used for strip mining).	C6.7

Areas managed primarily to <i>conserve*</i> ecological <i>connectivity*</i>	C6.4 & C6.7
Areas managed primarily to <i>restore*</i> under-represented <i>species*</i> or <i>successional*</i> stages	C6.8
Areas managed primarily to <i>conserve*</i> <i>old growth*</i>	Indicator 6.8.2
Areas managed primarily for monitoring and/or research that supports <i>conservation*</i> of environmental and cultural values	P8
Areas identified as <i>High Conservation Value Areas*</i>	P9

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** FSC® NATIONAL FOREST STEWARDSHIP STANDARD OF THE UNITED STATES (V2-0 D1-0)

*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 *natural 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 viewscapes 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)
 - *Common Guidance for the Identification of High Conservation Values: A Good Practice Guide for Identifying HCVs Across Different Ecosystems and Production Systems. HCV Network. September 2017*
 - *High Conservation Value Guidance for Forest Managers (FSC-GUI-30-009). Forest Stewardship Council. 2020. <https://fsc.org/en/document-centre/documents/resource/422>*

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
- *Common Guidance for the Management & Monitoring of High Conservation Values: A Good Practice Guide for Adaptive Management of HCVs. HCV Network. April 2018*
- *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

- Monitoring conducted by the *Native American** groups and/or *local communities**
- Consultation with *experts**
- *Common Guidance for the Management & Monitoring of High Conservation Values: A Good Practice Guide for Adaptive Management of HCVs*. HCV Network. April 2018
- *High Conservation Value Guidance for Forest Managers (FSC-GUI-30-009)*

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

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.³ 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.

³ In the PNW, 200 Mg/ha (metric tonnes) represents the lower range of biomass for old growth forests, per Krankina et al (2014), High biomass forests of the Pacific Northwest: who manages them and how much is protected? Environmental Management 54:112-121. Krankina et al (2014) used data from: NBCD (2000) National Biomass and Carbon Dataset for the Year 2000, Woods Hole Research Center Map 2011, <http://www.whrc.org/mapping/nbcd/index.html>. The NBCD 2000 dataset/map is also at: <https://databasin.org/datasets/b8f0aab08198484a81f42cc0d98e62ad>. An updated version specific to the Northeast is at: <https://databasin.org/datasets/e41f3f04b51041acb37fadd2d73c8e3b>.

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 ‘la’ (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>
 - <http://www.cec.org/tools-and-resources/map-files/north-american-protected-areas-2017>
- NatureServe Maps of Biodiversity Hotspots & Biodiversity Importance
 - <https://www.natureserve.org/conservation-tools/natureserve-hotspots-map>
 - <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>

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
 - <http://www.unesco.org/new/en/natural-sciences/environment/ecological->

- Data sources: State Natural Heritage Programs, NatureServe, Federal and state wildlife agencies, surveys and assessments of the *Management Unit**
- Regionally *significant** occurrences of an *endemic species** that is listed as “vulnerable,” “endangered,” or “critically endangered” by IUCN or national or state lists, that represent a substantial proportion of the regional, national or global population and where the occurrence is needed to maintain the *species** as a whole
 - Data sources: State Natural Heritage Programs, NatureServe, Federal and state wildlife agencies, surveys and assessments of the *Management Unit**
- Regionally *significant** migratory staging areas, seasonal breeding sites, migratory corridors, or other seasonal concentrations of an *rare, threatened and endangered species** or *endemic species** where a substantial proportion of the regional, national or global population of the *species** is concentrated for a period of time and that are therefore critical for survival of the *species**
 - <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

A more rigorous assessment may entail additional efforts to acquire more detailed or finer-scale data regarding *species** occurrences and or presence of particular *ecosystems**, more extensive consultation with *experts** and/or regional *conservation** organizations, and/or conducting field surveys.

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*
 - EnviroAtlas: <https://catalog.data.gov/dataset/enviroatlas-rare-ecosystems-in-the-conterminous-united-states>
 - 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/conservation-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

<p>Critical</p>	<p>The concept of criticality or fundamentality in Principal 9 and <i>HCVs*</i> relates to irreplaceability and to cases where loss or major damage to this <i>HCV*</i> would cause serious prejudice or suffering to <i>affected stakeholders*</i>. An <i>ecosystem*</i> service is considered to be critical (<i>HCV 4*</i>) 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 <i>local communities*</i>, on the environment, on <i>HCVs*</i>, or on the functioning of significant infrastructure (roads, dams, buildings etc.). The notion of criticality here refers to the importance and <i>risk*</i> for natural resources and environmental and socio-economic values. [Source: FSC-STD-01-001 V5-2]</p>
<p>High Conservation Value (HCV)</p>	<p>Any of the following values:</p> <ul style="list-style-type: none"> • HCV 1: Species diversity. Concentrations of <i>biological diversity*</i> including <i>endemic species*</i>, and <i>rare, threatened or endangered species*</i>, that are <i>significant*</i> at global, regional or national levels. • HCV 2: <i>Landscape*-level ecosystems*</i> and mosaics. <i>Intact Forest Landscapes*</i>, large <i>landscape*-level ecosystems*</i> and <i>ecosystem*</i> mosaics that are <i>significant*</i> at global, regional or national levels, and that contain viable populations of the great majority of the naturally occurring <i>species*</i> in natural patterns of distribution and abundance. • HCV 3: <i>Ecosystems*</i> and <i>habitats*</i>. Rare, threatened, or endangered <i>ecosystems*</i>, <i>habitats*</i> or <i>refugia*</i>. • HCV 4: <i>Critical* ecosystem services*</i>. Basic <i>ecosystem services*</i> in <i>critical*</i> situations, including protection of water catchments and control of <i>erosion*</i> of vulnerable <i>soils*</i> and slopes. • HCV 5: Community needs. Sites and resources fundamental for satisfying the basic necessities of <i>local communities*</i> or <i>Indigenous Peoples*</i> (for example for livelihoods, health, nutrition, water), identified through <i>engagement*</i> with these communities or <i>Indigenous Peoples*</i>. • HCV 6: Cultural values. Sites, resources, <i>habitats*</i> and <i>landscapes*</i> of global or national cultural, archaeological or historical <i>significance*</i>, and/or of <i>critical*</i> cultural, ecological, economic or religious/sacred importance for the traditional cultures of <i>local communities*</i> or <i>Indigenous Peoples*</i>, identified through <i>engagement*</i> with these <i>local communities*</i> or <i>Indigenous Peoples*</i>. <p>[Source: Based on FSC-STD-01-001 V5-2]</p>
<p>High Conservation Value Areas (HCVA)</p>	<p>Zones and physical spaces which possess and/or are needed for the existence and maintenance of identified <i>High Conservation Values*</i>. [Source: FSC-STD-60-004 V2-0]</p>

Landscape	<p>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 <i>landscape*</i> for purposes of <i>RSA*</i> establishment and assessment. For many other purposes, “landscapes” will often occur at smaller <i>scales*</i> than ecological sections. In some contexts, “landscape” as used in this Standard simply refers to consideration of the area surrounding a particular site.</p> <p>In developing the description of “landscape” <i>The Organization*</i> considers the <i>Management Unit’s*</i> ability to influence and impact the surrounding area, as well as the potential for other owners to influence and impact the area that the <i>Management Unit*</i> falls within. Some larger <i>Management Units*</i> may represent the full <i>landscape*</i> that needs to be considered, while other typically smaller <i>Management Units*</i> may occur within a broader <i>landscape*</i> that should be considered.</p>
Precautionary principle/ approach	<p>An approach requiring that when the available information indicates that <i>management activities*</i> pose a threat of severe or irreversible damage to the environment or a threat to human welfare, <i>The Organization*</i> will take explicit and effective measures to prevent the damage and avoid the <i>risks*</i> 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]</p>
Significant	<p>For the purposes of Principle 9, <i>HCVs 1, 2 and 6*</i> there are three main forms of recognizing <i>significance*</i>.</p> <ul style="list-style-type: none"> • A designation, classification or recognized <i>conservation*</i> status, assigned by an international agency such as IUCN or Birdlife International; • A designation by national or regional authorities, or by a responsible national <i>conservation*</i> organization, on the basis of its concentration of <i>biodiversity*</i>; • A voluntary recognition by the manager, owner or <i>Organization*</i>, on the basis of available information, or of the known or suspected presence of a <i>significant* biodiversity*</i> concentration, even when not officially designated by other agencies. <p>Any one of these forms will justify designation as <i>HCVs 1, 2 and 6*</i>. Many regions of the world have received recognition for their <i>biodiversity*</i> importance, measured in many different ways. Existing maps and classifications of priority areas for <i>biodiversity* conservation*</i> play an essential role in identifying the potential presence of <i>HCVs 1, 2* and 6*</i>. [Source: FSC-STD-01-001 V5-2]</p>

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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 marshal 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),

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

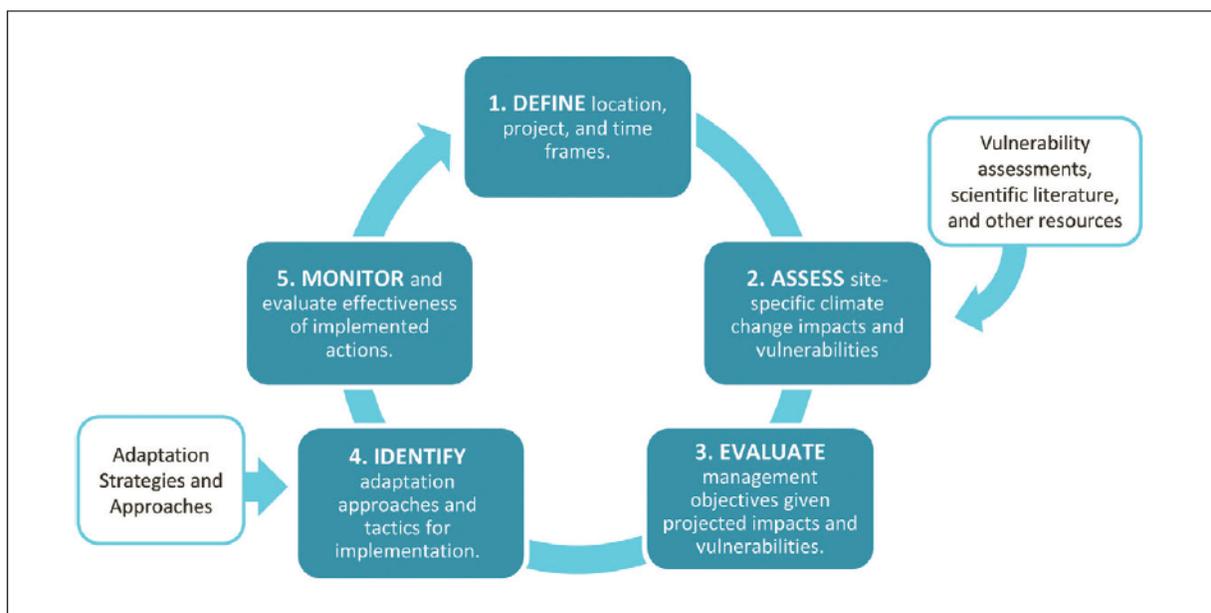


Figure 1. Adaptation Workbook Process. Source: Forest Adaptation Resources: Climate Change Tools and Approaches for Land Managers, 2nd Edition (Swanston et al. Ch. 5, page 75, 2016).

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

Step 1: Define area of interest, goals, and objectives	
Principle 7	Indicator 7.1.2
Step 2: Assess climate change impacts and vulnerabilities	
Principle 6	Indicator 6.1.1
Step 3: Evaluate management objectives given impacts and vulnerabilities	
Principle 7	Indicator 7.2.4
Step 4: Identify adaptation approaches and tactics for implementation	
Principle 7	Indicator 7.2.4
Principle 10	Indicator 10.2.2
Principle 10	Indicator 10.9.2
Step 5: Monitor and evaluate effectiveness	
Principle 8	Indicator 8.1.2

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/>
 - USDA Regional Climate Hubs:
<https://www.climatehubs.usda.gov/commodity/forests-woodlands>
 - National Climate Assessment reports:
<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%20bringing%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>
- Climate Change Topics list at <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**. Secondly, *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 (Swanston 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
 - Improve the ability of *forests** to resist pests and pathogens
 - Address new and existing *invasive species**
- Maintain or create *refugia**
 - Prioritize and maintain sensitive or at-risk *species** or *ecological communities**, especially those at the edge of their historic range
 - Establish artificial reserves for at-risk and displaced *species**

Resilience*:

- Increase *ecosystem** redundancy across the *landscape**
 - Expand the boundary of reserve areas to increase diversity
 - Manage *habitats** over a range of sites and conditions
- Promote *landscape* connectivity**
 - Reduce and avoid *landscape* fragmentation**
 - Maintain and create *habitat** corridors
- Maintain and enhance genetic diversity
 - Use seeds, germplasm, and other genetic material from across a greater geographic range
 - Favor existing *genotypes** that are better adapted to projected future conditions

Facilitated Transition:

- Facilitate community adjustments through *species** transitions
 - Favor or *restore* native species** that are expected to be adapted to future conditions
 - Guide changes in *species** composition at early stages of *stand** development
 - Manage for *species** and *genotypes** with wide moisture and temperature tolerances
- Maintain and enhance genetic diversity
 - Use seeds, germplasm, and other genetic material from across a greater geographic range
 - 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**
 - [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 adaptation actions, 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)
- 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
 - Regional Information (click on your region): <https://www.fs.usda.gov/ccrc/>
 - 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 (Swanston et. al., 2016)

- Identify an adaptation monitoring variable that is measurable and that will be useful to evaluate achievement. Examples include
 - Seedling survival rate
 - Overstory mortality rate
 - Diameter or basal area growth
- Identify a measurable criterion for evaluation. This is usually a meaningful value or threshold for success. Examples include
 - 70% seedling survival after 5 years
 - 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 (Swanston 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 (Swanston 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)

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