Forest Stewardship Council
United States
National Forest Stewardship Standard

Draft 1.0-V2-2020

Principles 1–10 Plantation Indicators

– WITH TRACKED CHANGES –

Prepared for the First Consultation
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Approved for Consultation by the FSC US Board of Directors,
Serving as the Standard Development Group

NOTE: The following proposed Plantation Indicators are presented in context with the Draft 1 base indicators. However, this is for the purposes of this public consultation, to assist with review and commenting. ***Please note that the Draft 1 base indicators are out of scope for this consultation***.

CONSULTATION QUESTIONS:

- Do any of the proposed Plantation Indicators fail to adequately address the increased risk of negative impacts on environmental or social values associated with the more intensive management within plantation stands?
- Are there any additional base indicators where there the more intensive management within plantation stands may result in a high risk of negative impacts on environmental or social values?
- Are there any base indicators that do not currently have proposed Plantation Indicators that are not feasible for management units with plantations?

INTRODUCTION

PLANTATIONS

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).

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. 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. Annex I provides additional guidance for discerning *natural forests** or *semi-natural forests** from *plantations**.

Applicability of Plantation Indicators

Plantation Indicators represent a variance of a base *Indicator** that is intended to reflect and address the increased *risk** of negative impacts on environmental or social values associated with the more intensive management that occurs within *plantation** stands.

If a Plantation Indicator is, or multiple Plantation Indicators are, included with a base *Indicator**, any portions of the *Management Unit** that are identified as *plantation** are to be assessed for conformance with the Plantation Indicator(s) instead of the base *Indicator** (i.e., they are to be treated as mandatory alternate *Indicators** to the base *Indicators**). If no Plantation Indicators are included, then the *plantation** portions of the *Management Unit** are to be assessed for conformance with the base *Indicator**.

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)**

NOTE: No plantation indicators proposed in Principle 1

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)

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**.

PRINCIPLE 2: *WORKERS RIGHTS AND EMPLOYMENT CONDITIONS**
***The Organization** shall maintain or enhance the social and economic wellbeing of **workers**. (new)**

NOTE: No plantation indicators proposed in Principle 2. There may be an increased risk to health and safety of workers is associated with increased use of pesticides on plantations, but the SDG believes that it is adequately addressed via the existing base indicators.

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."

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**.

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).

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.

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)**

NOTE: No plantation indicators proposed in Principle 3. There may be an increased risk for disturbance of important sites on plantations due to increased site-prep activities, but the SDG believes that it is adequately addressed via the existing base indicators.

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.*

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)**

NOTE: No plantation indicators proposed in Principle 4.

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.

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

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*.*

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).

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)**

NOTE: No plantation indicators proposed in Principle 5. For management units that are not just plantation, but include both plantation and semi-natural and/or natural forest, there may be an increased risk related to the requirements for production of diversified benefits/products, but the SDG believes that it is adequately addressed by the base indicators.

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**.

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).

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.

~~*(Existing US Indicator 10.3.a)* Plantation management alone or in combination with natural forest management contributes to the economic stability of the local community, or helps the owner maintain the property as a working forest.~~

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)**

NOTE: Alternate plantation indicators with associated intent, applicability, and/or guidance language are proposed for Indicators 6.6.1, 6.6.2, 6.6.3, 6.6.5, and 6.8.1.

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**.

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.

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).

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'** 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'** 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.

PL Indicator 6.6.1.1 (*Existing US Indicator 10.2.b*) New *plantation** establishment does not replace, endanger, or otherwise diminish the ecological integrity of any existing natural *ecosystems** on the *Management Unit** ~~FMU, including *primary*, *natural*, or *semi-natural forests** on the FMU~~. ~~Note that *restoration plantations* may be established on *degraded, semi-natural forests* (see Criterion 6.10). Plantations can be established on the following sites: former plantations; agricultural lands; and non-forested lands that were historically naturally forested but have been used for non-forest purposes since before 1994 (see additional conditions in Criterion 10.9). New plantations are not established on rare or threatened non-forest habitats or ecosystems.~~

Applicability: This indicator addresses situations where establishment and certification of new plantations is allowable per Criterion 6.9 and Criterion 6.10.

~~Guidance: Refer to Criterion 6.10 for all restrictions regarding conversion of FSC-certified lands. Conversion of natural and semi-natural forests to plantations is prohibited in all regions of the US. Conversion of *degraded, semi-natural stands* to *restoration plantings* is acceptable.~~

CONSULTATION QUESTION: As drafted, PL Indicator 6.6.1.2 and PL Indicator 6.6.1.3 would apply to Family Forest management units that include plantations. **Do you agree that these plantation indicators should apply in this way? If not, what change would you recommend?**

PL Indicator 6.6.1.2 (*Existing US Indicator 10.5.f*) If greater than 5% of the *Management Unit** includes lands w~~W~~here natural *ecosystems** were ~~previously~~ converted to *plantations** prior to 1994, at least 15% ~~a percentage~~ of the total area of the ~~FMU~~ *Management Unit** is ~~must be~~ maintained in ~~and/~~or *restored** to a natural or semi-natural state ~~cover~~. ~~The minimum percentage area that is maintained and/or *restored** in natural or semi-natural state is:~~

- ~~For 100 acres or less, at least 10 percent~~
- ~~For 101-1,000 acres, at least 15 percent~~
- ~~For 1,001-10,000 acres, at least 20 percent~~
- ~~For > 10,000 acres, at least 25 percent~~

~~In the Pacific Coast, the area being maintained or restored to natural cover must be managed for late seral conditions.~~

~~In limited situations where restoration on an FMU is not ecologically achievable (e.g. cases of irreversibly altered geophysical conditions such as former flood plains where rivers have been dammed), restoration efforts may be allocated to areas outside the FMU. Forest managers may secure cooperative conservation agreements for those areas, and count them towards the~~

~~requirements of 10.5.f. To be eligible, the areas outside the FMU must be of equal or higher priority for conservation and/or restoration than are areas within the FMU.~~

Applicability: If less than 5% of the *Management Unit** includes lands where natural *ecosystems** were converted to *plantations** prior to 1994, the base Indicator 6.6.1 applies.

PL Indicator 6.6.1.2 applies to *Management Units** where natural *ecosystems** were converted directly to *plantations**. However, if the natural *ecosystems** were first converted to some other land use (e.g., agriculture) and then *plantations** were established at a later point, this *Indicator** is not applicable.

Forest lands converted to plantations after 1994 are addressed per Criterion 6.9 (i.e., conversion of lands that are currently FSC-certified) and Criterion 6.10 (i.e., FSC certification of *Management Units** with plantations on lands converted after 1994).

Intent: Areas established within the *Management Unit** to maintain or *restore** to a natural or semi-natural state are to be managed in conformance with the base *Indicators** of this standard (including base Indicator 6.6.1).

Guidance: Any areas within the *Management Unit** that are considered part of the *Conservation Areas Network** (per Indicator 6.5.6), including *Representative Sample Areas**, may also be considered areas "maintained in or *restored** to a natural or semi-natural state" for conformance with PL Indicator 6.6.1.2.

Any areas established within the *Management Unit** as areas "maintained in or *restored** to a natural or semi-natural state" (per PL Indicator 6.6.1.2), may also be considered part of the *Conservation Areas Network** for conformance with Indicator 6.5.6.

~~Regarding off-FMU *restoration**, examples of eligible *conservation** agreements include:~~

- ~~purchase of conservation easements~~
- ~~purchase of fee title.~~

CONSULTATION QUESTION: The SDG believes that FSC-certification of plantations in the US results in improved management of those plantations and on-the-ground benefits to environmental and social values, including the above requirement to maintain or restore a portion of the management unit in a semi-natural or natural state. The existing Indicator 10.5.f is viewed as a barrier to certification of plantations and a primary reason for why there are only three management units with plantations currently FSC-certified. The rationale for the changes to this Indicator (now Plantation Indicator 6.6.1.2) is that it will result in more certified lands, and specifically more certified plantations. As FSC currently does not allow certification of plantations that were created post-1994, this change will not result in any of the existing certificate holders with plantations converting a portion of their existing semi-natural or natural state lands to plantation. Therefore, even though each newly certified management unit will have a lower requirement than is currently in place, if new management units with plantations are certified due to this change, it will result in an overall net positive increase in lands that are designated to be maintained as or restored to a semi-natural or natural state. **Do you have a suggestion for a different way to bring more US plantations into the FSC system and thereby increase the associated benefits?**

PL Indicator 6.6.1.3 (*Based on existing US Indicators 10.5.a & 10.5.b*) Areas established within the *Management Unit** to *restore** a natural or semi-natural state per PL Indicator 6.6.1.2 are chosen through a *landscape** analysis which prioritizes areas with the greatest *conservation** gain and long-term *restoration** objectives.

Applicability: While the areas established per PL Indicator 6.6.1.2 include areas to maintain or *restore** to a natural or semi-natural state, PL Indicator 6.6.1.3 applies only to the portion of those areas that have *restoration** objectives.

Guidance: Areas to be *restored** to a natural or semi-natural state ~~*natural conditions**~~ are selected with the priority of achieving the greatest *conservation** gain but may include considerations of economic feasibility. Greatest *conservation** gain includes:

- providing mature *forest** conditions and other ecological attributes that may be under-represented across the *forest** *landscape**;
- implementing regional, state, and *landscape**-level *forest** *ecosystem** and native fish and wildlife *habitat** *conservation** and *restoration** plans and objectives;
- creating *conservation zones** that provide adequate interior *forest** *habitat** for native *species**;
- *restoring** *riparian areas**, migration corridors among areas of existing *natural forest** or *semi-natural forest***, and unstable slopes;
- providing social and cultural values associated with *restoration** to more *natural conditions**.

~~(*Existing US Indicator 10.5.d*) Areas of forest and/or plantation to be restored or maintained as natural forests are managed to provide a diversity of community types, wildlife habitats, and ecological functions native to the site.~~

~~(*Existing US Indicator 10.5.e*) The ratio and spatial distribution of *plantations**, with respect to *natural* and *semi-natural forests**, maintains and/or *restores** the *landscape** diversity of community types, wildlife *habitats**, and ecological functions similar to a mosaic of *natural forests**.~~

NOTE: The SDG believes that maintenance of species across the landscape is adequately addressed by PL Indicator 6.6.2.2 and maintenance of forest diversity across the landscape is adequately addressed by PL Indicator 6.8.1. Further, the capacity of certificate holders to change the spatial distribution of plantations is very limited, as plantations that may be certified were almost all established prior to 1994. Additionally, the ability for management units that are predominantly plantation to achieve the kinds of diversity suggested by existing Indicator 10.5.e would be very limited.

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.

PL Indicator 6.6.2.1 (*Existing US Indicator 10.5.g*) All *plantations** on *forest** *soils** on *public lands** are managed to *restore** and maintain *natural forest** or semi-natural forest* vegetation, structure, function, and *habitats**~~, and fully meet, at the earliest possible time, all aspects of Principles and Criteria 1-9 that are relevant to natural forests for the area~~.

PL Indicator 6.6.2.2 *(New)* For *plantations** on *forest** *soils** on private lands, management results in continuous improvement of *species** composition, distribution, and frequency of occurrence toward those that would occur in *natural forests**.

PL Indicator 6.6.2.3 *(New)* Plantations* on non-forest soils are exempt from this indicator.

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.

~~PL Indicator Applicability: this *Indicator** is only applicable to *public lands**.~~

PL Indicator 6.6.2.2 Guidance *(Based on existing US Indicator 10.3.b Guidance)*:
Potential approaches to for improving *species** composition, distribution, and frequency of occurrence*:

- Thinning to provide light to the forest floor and enhance the diversity of understory *species**.
- Retention and/or recruitment of coarse *woody debris** and *snags** for wildlife *habitat**.
- Retention of islands of vegetation and advanced regeneration that are spatially arranged to provide *refugia** for wildlife and plant *species**.
- Retention of an herbaceous layer, shrub layer, and mid-story in selected areas that is allowed to develop.

~~*(Existing US Indicator 10.2.a)* For plantations established on soils capable of supporting natural forests, harvest units shall be arranged to provide or maintain areas of vegetative cover that allows populations of mid to late successional and sedentary native plant and animal species to survive or be reestablished within the plantation.~~

NOTE: The SDG believes that maintenance of species across the landscape has already been addressed by PL Indicator 6.6.2.2.

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.

PL Indicator 6.6.3 (*Existing US Indicator 10.6.e*) ~~Sufficient *w*~~*Woody debris** and other organic matter is retained within *plantation** *stands** to ensure ~~adequate~~ *soil** structure and nutrient recycling.

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.

PL Indicator Applicability: This Plantation *Indicator** does not apply to *plantations** that use fire to achieve natural understory and *soil** conditions.

PL Guidance: Wherever possible, slash should be scattered back over exposed soil on skid trails and evenly dispersed across logging sets.

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**.

~~(*Existing US Indicator 10.7.c*) The forest owner implements a strategy to prevent or control invasive species, as noted in Indicator 6.3.h~~

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.

PL Applicability: Plantation Indicators for FSC US Regions that have Regional Supplementary Requirements are provided along with the Regional Supplementary Requirements. Because Plantation Indicators replace the base indicator, in these regions the Plantation Indicators replace both Indicator 6.6.5 and the Regional Supplementary Requirements.

The Plantation Indicators that follow immediately are applicable to FSC US Regions that do not have Regional Supplementary Requirements and replace Indicator 6.6.5 for these regions.

PL Indicator 6.6.5.1 (*Existing US Indicator 10.2.c*) ~~In all regions except the Pacific Coast, o~~Openings lacking within-*stand** *retention** are limited to a 40 acre average and an 80 acre maximum. Harvest openings larger than 80 acres are justified using *best available information** ~~must have *retention** as required in Indicator 10.2.d and be justified by *credible scientific analysis**~~. The average for all openings (with and without *retention**) does not exceed 100 acres. Departures from these limits for *restoration** purposes are permissible per Indicator 6.6.6 ~~but also must be justified by *credible scientific analysis**~~.

~~In the Pacific Coast region, on *plantations** established on *soils** capable of supporting *natural forests**, a minimum average of four dominant and/or co-dominant trees and two *snags** per acre are retained in all openings. Where sufficient *snags** do not exist, they are recruited. Harvest openings larger than 80 acres must have *retention** as required in Indicator 10.2.d and be justified by *credible scientific analysis**. The average for all openings (with and without *retention**) does not exceed 100 acres. Departures from these limits for *restoration** purposes are permissible but also must be justified by *credible scientific analysis**.~~

~~Applicability: The entire first paragraph applies to all regions except the Pacific Coast region and the entire second paragraph applies only to the Pacific Coast region.~~

Intent: the goal of the language pertaining to *restoration** is to allow *silvicultural** treatments, including openings greater than the limits described above, that are important to *forest** health and *restoration** as long as they are justified ~~by *credible scientific analysis**~~. The existence of plant pests and pathogens as well as other *restoration** efforts may lead to conditions that warrant departures from these limits.

Guidance: The average opening size should be calculated over the 5 year time period between full re-assessments (or over the last 5 years for new assessments).

PL Indicator 6.6.5.2 (*Existing US Indicator 10.2.d*) On openings larger than 80 acres that are justified per PL Indicator 6.6.5.1 ~~by *credible scientific analysis**~~, live trees and native vegetation are retained in a proportion and configuration that are consistent with the characteristic *natural disturbance regime** in each community type, unless *retention** at a lower level is necessary for *restoration** purposes.

Guidance: *Retention** for *protecting** present ecological values, such as streams is of primary importance. *Retention** for wildlife purposes is based on the needs of *species** native to and naturally present at the site. The levels of green-tree *retention** depend on such factors as *habitat** *connectivity** and needs of representative plant and animal *species**. *Retention** is distributed as clumps, strips, and dispersed individuals, appropriate to site conditions. Retained trees comprise a diversity of *species** and size classes, which includes large and old trees, when available.

PL Indicator 6.6.5.3 (*Existing US Indicator 10.2.e*) ~~In all regions except the Southeast, b~~Before a regeneration harvest is conducted ~~an area is harvested~~, regeneration in adjacent forested areas (*natural forest**, *semi-natural forest** or *plantation**) on the ~~FMU~~ *Management Unit** must be of the subsequent advanced successional habitat stage, or exceed ten feet in height, or achieve canopy closure along at least 50% of its perimeter.

~~In the Southeast Region, *harvest units** are arranged to support viable populations of *native species** of flora and fauna. For hardwood *ecosystems**, regeneration in previously harvested areas reaches a mean height of at least ten feet or achieves canopy closure before adjacent areas are harvested. For southern pine *ecosystems**, (e.g. upland pine forests, pine flatwoods forests, sand pine scrub), harvest areas are located, if possible, adjacent to the next youngest stand to enable early *successional** or groundcover-adapted *species** to migrate across the early *successional** continuum.~~

Applicability: This requirement applies to *harvest units** within an ownership (harvests on adjacent ownerships need not be accounted for). An area adjacent to a *regeneration harvest** may be harvested prior to these green-up conditions providing that the sum area of the opening is not greater than the opening size restrictions stated in Plantation Indicator 6.6.5.1 ~~10.2.c~~ (e.g., 80 acres). The first paragraph of Plantation Indicator 6.6.5.3 ~~10.2.d~~ applies to all

regions except the Southeast, and the second paragraph only applies to the Southeast Region.

Intent: The goal is to create or enhance a mosaic of *habitat** types and ages. In the Southeast, the goal is to provide suitable *habitat** for early *successional** species.

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.

PL Indicator 6.6.5.1 (*Existing US Indicator 10.2.c*) ~~In all regions except the Pacific Coast, o~~Openings lacking within-*stand* retention** are limited to a 40 acre average and an 80 acre maximum. Harvest openings larger than 80 acres are justified using *best available information** ~~must have *retention** as required in Indicator 10.2.d and be justified by *credible scientific analysis**~~. The average for all openings (with and without *retention**) does not exceed 100 acres. Departures from these limits for *restoration** purposes are permissible per Indicator 6.6.6 ~~but also must be justified by *credible scientific analysis**~~.

PL Indicator 6.6.5.2 (*Existing US Indicator 10.2.d*) On openings larger than 80 acres that are justified per PL Indicator 6.6.5.1 ~~by *credible scientific analysis**,~~ live trees and native vegetation are retained in a proportion and configuration that are consistent with the characteristic *natural disturbance regime** in each community type, unless *retention** at a lower level is necessary for *restoration** purposes.

PL Indicator 6.6.5.3 (*Existing US Indicator 10.2.e*) ~~In all regions except the Southeast, b~~Before a regeneration harvest is conducted ~~an area is harvested~~, regeneration in adjacent forested areas (*natural forest*, semi-natural forest** or *plantation**) on the ~~FMU~~ *Management Unit** must be of the subsequent advanced successional habitat stage, or exceed ten feet in height, or achieve canopy closure along at least 50% of its perimeter.

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.

PL Intent Applicability & Guidance: See notes associated with PL Indicators 6.6.5.1, 6.6.5.2 and 6.6.5.3 that precede the Regional Supplementary Requirements for Indicator 6.6.5.

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.

PL Indicator 6.6.5.1 (*Existing US Indicator 10.2.c*) ~~In all regions except the Pacific Coast, o~~Openings lacking within-*stand** *retention** are limited to a 40 acre average and an 80 acre maximum. Harvest openings larger than 80 acres are justified using *best available information** ~~must have *retention** as required in Indicator 10.2.d and be justified by *credible scientific analysis**~~. The average for all openings (with and without *retention**) does not exceed 100 acres. Departures from these limits for *restoration** purposes are permissible per Indicator 6.6.6 ~~but also must be justified by *credible scientific analysis**~~.

PL Indicator 6.6.5.2 (*Existing US Indicator 10.2.d*) On openings larger than 80 acres that are justified per PL Indicator 6.6.5.1 ~~by *credible scientific analysis**,~~ live trees and native vegetation are retained in a proportion and configuration that are consistent with the characteristic *natural disturbance regime** in each community type, unless *retention** at a lower level is necessary for *restoration** purposes.

PL Indicator 6.6.5.3 (*Existing US Indicator 10.2.e*) ~~In all regions except the Southeast, b~~Before a regeneration harvest is conducted ~~an area is harvested~~, regeneration in adjacent forested areas (*natural forest**, *semi-natural forest** or *plantation**) on the ~~FMU~~ *Management Unit** must be of the subsequent advanced successional habitat stage, or exceed ten feet in height, or achieve canopy closure along at least 50% of its perimeter.

PL Intent Applicability & Guidance: See notes associated with PL Indicators 6.6.5.1, 6.6.5.2 and 6.6.5.3 that precede the Regional Supplementary Requirements for Indicator 6.6.5.

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.

PL Indicator 6.6.5.4 (*Existing US Indicator 10.2.c*) ~~In the Pacific Coast region, o~~On *plantations** established on *soils** capable of supporting *natural forests**, a minimum average of four dominant and/or co-dominant trees and two *snags** per acre are retained in all openings. Where sufficient *snags** do not exist, they are recruited. Harvest openings larger than 80 acres are justified using *best available information** ~~must have *retention** as required in Indicator 10.2.d and be justified by *credible scientific analysis**~~. The average for all openings (with and without *retention**) does not exceed 100 acres. Departures from these limits for *restoration** purposes are permissible per Indicator 6.6.6 ~~but also must be justified by *credible scientific analysis**~~.

PL Indicator 6.6.5.2 (*Existing US Indicator 10.2.d*) On openings larger than 80 acres that are justified per PL Indicator 6.6.5.1 ~~by *credible scientific analysis**,~~ live trees and native vegetation are retained in a proportion and configuration that are consistent with the characteristic *natural disturbance regime** in each community type, unless *retention** at a lower level is necessary for *restoration** purposes.

PL Indicator 6.6.5.3 (*Existing US Indicator 10.2.e*) ~~In all regions except the Southeast, b~~Before a regeneration harvest is conducted ~~an area is harvested~~, regeneration in adjacent forested areas (*natural forest**, *semi-natural forest** or *plantation**) on the ~~FMU~~ *Management Unit** must be of the subsequent advanced successional habitat stage, or exceed ten feet in height, or achieve canopy closure along at least 50% of its perimeter.

PL Intent Applicability & Guidance: See notes associated with PL Indicators 6.6.5.1, 6.6.5.2 and 6.6.5.3 that precede the Regional Supplementary Requirements for Indicator 6.6.5.

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**.

PL Indicator 6.6.5.1 (*Existing US Indicator 10.2.c*) ~~In all regions except the Pacific Coast, o~~Openings lacking within-*stand** *retention** are limited to a 40 acre average and an 80 acre maximum. Harvest openings larger than 80 acres are justified using *best available information** ~~must have *retention** as required in Indicator 10.2.d and be justified by *credible scientific analysis**~~. The average for all openings (with and without *retention**) does not exceed 100 acres. Departures from these limits for *restoration** purposes are permissible per Indicator 6.6.6 ~~but also must be justified by *credible scientific analysis**~~.

PL Indicator 6.6.5.2 (*Existing US Indicator 10.2.d*) On openings larger than 80 acres that are justified per PL Indicator 6.6.5.1 ~~by *credible scientific analysis**,~~ live trees and native vegetation are retained in a proportion and configuration that are consistent with the characteristic *natural disturbance regime** in each community type, unless *retention** at a lower level is necessary for *restoration** purposes.

PL Indicator 6.6.5.3 (*Existing US Indicator 10.2.e*) ~~In all regions except the Southeast, b~~Before a regeneration harvest is conducted ~~an area is harvested~~, regeneration in adjacent forested areas (*natural forest**, *semi-natural forest** or *plantation**) on the ~~FMU~~ *Management Unit** must be of the subsequent advanced successional habitat stage, or exceed ten feet in height, or achieve canopy closure along at least 50% of its perimeter.

PL Intent Applicability & Guidance: See notes associated with PL Indicators 6.6.5.1, 6.6.5.2 and 6.6.5.3 that precede the Regional Supplementary Requirements for

Indicator 6.6.5.

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.

PL Indicator 6.6.5.1 (*Existing US Indicator 10.2.c*) ~~In all regions except the Pacific Coast, o~~Openings lacking within-*stand* retention** are limited to a 40 acre average and an 80 acre maximum. Harvest openings larger than 80 acres are justified using *best available information** ~~must have *retention** as required in Indicator 10.2.d and be justified by *credible scientific analysis**~~. The average for all openings (with and without *retention**) does not exceed 100 acres. Departures from these limits for *restoration** purposes are permissible per Indicator 6.6.6 ~~but also must be justified by *credible scientific analysis**~~.

PL Indicator 6.6.5.2 (*Existing US Indicator 10.2.d*) On openings larger than 80 acres that are justified per PL Indicator 6.6.5.1 ~~by *credible scientific analysis**,~~ live trees and native vegetation are retained in a proportion and configuration that are consistent with the characteristic *natural disturbance regime** in each community type, unless *retention** at a lower level is necessary for *restoration** purposes.

PL Indicator 6.6.5.3 (*Existing US Indicator 10.2.e*) ~~In all regions except the Southeast, b~~Before a regeneration harvest is conducted ~~an area is harvested~~, regeneration in adjacent forested areas (*natural forest**, *semi-natural forest** or *plantation**) on the ~~FMU~~ *Management Unit** must be of the subsequent advanced successional habitat stage, or exceed ten feet in height, or achieve canopy closure along at least 50% of its perimeter.

PL Intent Applicability & Guidance: See notes associated with PL Indicators 6.6.5.1, 6.6.5.2 and 6.6.5.3 that precede the Regional Supplementary Requirements for Indicator 6.6.5.

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).

PL Indicator 6.6.5.1 (*Existing US Indicator 10.2.c*) ~~In all regions except the Pacific Coast, o~~Openings lacking within-*stand* retention** are limited to a 40 acre average and an 80 acre maximum. Harvest openings larger than 80 acres are justified using *best available information** ~~must have *retention** as required in Indicator 10.2.d and be~~

~~justified by *credible scientific analysis**~~. The average for all openings (with and without *retention**) does not exceed 100 acres. Departures from these limits for *restoration** purposes are permissible per Indicator 6.6.6 ~~but also must be justified by *credible scientific analysis**~~.

PL Indicator 6.6.5.2 (*Existing US Indicator 10.2.d*) On openings larger than 80 acres that are justified per PL Indicator 6.6.5.1 ~~by *credible scientific analysis**,~~ live trees and native vegetation are retained in a proportion and configuration that are consistent with the characteristic *natural disturbance regime** in each community type, unless *retention** at a lower level is necessary for *restoration** purposes.

PL Indicator 6.6.5.3 (*Existing US Indicator 10.2.e*) ~~In all regions except the Southeast, b~~Before a regeneration harvest is conducted ~~an area is harvested~~, regeneration in adjacent forested areas (*natural forest**, *semi-natural forest** or *plantation**) on the ~~FMU~~ *Management Unit** must be of the subsequent advanced successional habitat stage, or exceed ten feet in height, or achieve canopy closure along at least 50% of its perimeter.

PL Intent Applicability & Guidance: See notes associated with PL Indicators 6.6.5.1, 6.6.5.2 and 6.6.5.3 that precede the Regional Supplementary Requirements for Indicator 6.6.5.

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.

PL Indicator 6.6.5.1 (*Existing US Indicator 10.2.c*) ~~In all regions except the Pacific Coast, o~~Openings lacking within-*stand** *retention** are limited to a 40 acre average and an 80 acre maximum. Harvest openings larger than 80 acres are justified using *best available information** ~~must have *retention** as required in Indicator 10.2.d and be justified by *credible scientific analysis**~~. The average for all openings (with and without *retention**) does not exceed 100 acres. Departures from these limits for *restoration** purposes are permissible per Indicator 6.6.6 ~~but also must be justified by *credible scientific analysis**~~.

PL Indicator 6.6.5.2 (*Existing US Indicator 10.2.d*) On openings larger than 80 acres that are justified per PL Indicator 6.6.5.1 ~~by *credible scientific analysis**,~~ live trees and native vegetation are retained in a proportion and configuration that are consistent with

the characteristic *natural disturbance regime** in each community type, unless *retention** at a lower level is necessary for *restoration** purposes.

PL Indicator 6.6.5.5 (*Existing US Indicator 10.2.e*) ~~In the Southeast Region, *h*~~*Harvest units** are arranged to support viable populations of *native species** of flora and fauna. For hardwood *ecosystems**, regeneration in previously harvested areas reaches a mean height of at least ten feet or achieves canopy closure before adjacent areas are harvested. For southern pine *ecosystems**, (e.g. upland pine forests, pine flatwoods forests, sand pine scrub), harvest areas are located, if possible, adjacent to the next youngest stand to enable early *successional** or groundcover-adapted *species** to migrate across the early *successional** continuum.

PL Intent Applicability & Guidance: See notes associated with PL Indicators 6.6.5.1, 6.6.5.2 and 6.6.5.3 that precede the Regional Supplementary Requirements for Indicator 6.6.5.

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)**

NOTE: There may be an increased risk associated with plantations, related to water quality in general and more specifically to soil erosion and oil movement, the SDG believes that it is adequately addressed by the base indicators here in Criterion 6.7 and those of Criterion 10.11.

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 widths[1]**					
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

[1]All 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. *Riparian management zone 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 Widths[1]**

		Slope					
Stream Class	**Soil erosion susceptibility[2]**	0%	10%	20%	30%	40%	50%
		Total RMZ width (ft) per side[3]					
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**s, *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.

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.

PL Indicator 6.8.1 (*Based on existing US Indicator 10.3.b*) ~~On~~ Within Management Units that contain *plantations** established on *soils** capable of supporting *natural forests**, *The Organization** ~~forest owner or manager~~ maintains or restores a diversity of *forest** community types, wildlife habitats and ecological functions, including ~~maintains, *conserves**, and/or *restores* forest** health and diversity, including wildlife *habitat** and *soil** productivity, by ~~maintaining appropriate~~ a diversity of size, structures, age classes, species and genetics across the *Management Unit** ~~plantation FMU~~.

PL Indicator Applicability: ~~This only applies to plantations established on soils capable of supporting natural forests.~~ This PL Indicator does not apply to Management Units that only contain plantations where the plantations were established only on soils not capable of supporting natural forests. In these situations, the base indicator is applicable to the non-plantation portions of the Management Unit.

PL Indicator Intent: The goal of the *Indicator** is, in part, to create and maintain structural and *species** diversity within portions of the Management Unit that are *natural forest**, *semi-natural forest** and/or *plantation** that results in high quality ~~early- and mid-successional~~ wildlife *habitat** for species associated with early-, mid- and late-successional stages. This indicator is not intended to require restoration of plantation lands to natural conditions beyond what is required per Criterion 6.6.

~~PL Indicator Guidance:~~

- ~~Thinnings provide light to the forest floor to enhance the diversity of understory species.~~
- ~~Coarse woody debris and snags are retained and/or recruited for wildlife habitat.~~
- ~~Islands of vegetation and advanced regeneration are retained, and are spatially arranged to provide refugia for wildlife and plant species.~~
- ~~An herbaceous layer, shrub layer, and mid-story is retained in selected areas and allowed to develop.~~
- ~~Genetic diversity is maintained as justified by credible scientific analysis to buffer against pests and extreme environmental conditions.~~

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** *stand*s* 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.

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)**

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**.

~~*(Existing US Indicator 10.9.a)* For plantations established in areas converted after 1994, the forest owner or manager demonstrates to the CB that the manager/owner was not directly or indirectly responsible for the conversion of the natural forest to the plantation.~~

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.

~~*(Existing US Indicator 10.9.b)* For plantations established in areas converted after 1994, the forest owner or manager develops and implements a plan to restore the plantation stands to conditions characteristic of natural forests and to manage those stands in compliance with all Indicators of Principles 1-9 as quickly as 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)**

NOTE: No plantation indicators proposed in Principle 7.

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 trials, 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**.

~~(*Existing US Indicator 10.1.a*) Consistent with all the indicators within Principle 10 and requirements of Principle 7, the management plan contains clear descriptions of the management goals and prescriptions for plantations on the FMU, of the rationale for plantation management within the FMU, and the relationship between the plantations and natural forest conservation and restoration objectives within the 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.

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

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).

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 plan*s*, 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)**

NOTE: No plantation indicators proposed in Principle 8. While there may be a need for more intensive monitoring efforts than for regular management units, the SDG believes that it is adequately addressed through the base indicators and particularly the guidance associated

with Indicator 8.2.1. The Principle 10 indicators (i.e., plantation indicators) in the existing standard call for monitoring to be conducted in the same manner as the monitoring of natural forests – this approach has been maintained.

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.

~~(*Existing US Indicator 10.1.b*) The forest owner or manager demonstrates clear progress in implementation of the components of the management plan addressing natural forest conservation and restoration objectives as they pertain to plantation management.~~

~~*(Existing US Indicator 10.8.a)* Monitoring of the impacts of plantations, both on and off-site, is conducted in the same manner as the monitoring of natural forests, in accordance with Principles 4, 6, and 8.~~

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)**

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.

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)**

NOTE: No plantation indicators proposed in Principle 9, however a plantation-specific guidance note has been added in the box immediately below.

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.

PL Guidance: As with all other forest operations, plantations must adequately meet the intent of this Criterion, though the likelihood of presence may be decreased for some types of *High Conservation Values**.

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)**

NOTE: Alternate plantation indicator with guidance language proposed for Indicator 10.2.1, plus plantation-specific guidance for Indicator 10.9.1.

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**.

PL Indicator 10.2.1 (*Based on existing US Indicators 10.4.a and 10.4.b*) *Species** ~~shall be~~ used for planting ~~that~~ are suitable and appropriate to the site and are consistent with maintaining management unit* ~~FMU~~ health and productivity. ~~*Species** native to the region and of local provenance are preferred to other *species** (not native to the region).~~

Specific to the Pacific Coast Region

PL Regional Supplement1 ~~In the Pacific Coast region, o~~On *soils** capable of supporting *natural forests**, only *species** native to the site are planted.

Specific to the Mississippi Alluvial Valley, Appalachian, and Southeast Regions

PL Regional Supplement2 ~~In the Mississippi Alluvial Valley Appalachian, and Southeast regions, t~~The planting of *non-native* ~~exotic~~ *species** is used only for site ~~remediation~~ *restoration**. ~~Justification for such plantings is provided. The species in question shall be non-invasive, shall not create significant risk to forest health, and shall perform better than native species. Their provenance and the location of their use are documented and their ecological effects are monitored.~~

Intent: The goal of this *Indicator** is to maintain *local** genetic diversity.

~~PL Applicability: The first paragraph applies to all regions except for the Mississippi Alluvial Valley, Appalachian and Southeast regions. The second paragraph of Indicator 10.4.b applies only to the Pacific Coast; the third paragraph applies only to the Mississippi Alluvial Valley, Appalachian, and Southeast regions.~~

PL Indicator Guidance: See additional conditions under ~~Indicator 10.2.b and~~ Criterion 6.9~~10.9~~ addressing where *plantations** may be established or re-established and still be considered for certification.

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)**

NOTE: While there may be an increased risk in plantations for environmental damage from fertilizer use, the SDG believes that it is adequately addressed through the base indicator.

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**.

~~*(Existing US Indicator 10.6.d)* Fertilizer is applied only when all the following conditions are met:~~

- ~~Soil classification or foliar analysis indicates one or more nutrients are a limiting factor for forest productivity.~~
- ~~Data and/or scientific literature suggest that the response to fertilization is economically justified.~~
- ~~Where necessary due to topography, soils, or other conditions, measures are taken to 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.~~

- ~~Fertilizer application maintains or enhances soil condition and site productivity.~~

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)**

NOTE: While there may be an increased risk in plantations for environmental and/or social damage from pesticide use, the SDG believes that it is adequately addressed through the base indicators.

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, larvaecides, nematicides, fungicides, and herbicides. A *chemical pesticide** is any synthetically produced *pesticide**.

Per the FSC Pesticides Policy, *The Organization** is required to use *integrated pest management** to consider the different control techniques available to them and look for non-*pesticide** options, and more specifically non-*chemical pesticide** options, when they are economically feasible and will reduce *risks** to human and environmental health. If the *integrated pest management** indicates that use of a *chemical pesticide** is the best control technique, the FSC Pesticides Policy requires a comparison of different potential *chemical pesticides** to determine which will provide the best outcomes with the least *risk**, and then documentation of *risks** and mitigation associated with any *chemical pesticides** selected for use. These different components of an overall pest management approach are addressed by a number of *Indicators** in this *Criterion**, but may be addressed by *The Organization** in either a single document, or a collection of documents and documented information.

Indicator 10.7.1 *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. PL Guidance *(From existing US Indicator 10.7.a)*: ~~In the absence of biological controls, the use of pesticides to control pests is allowed.~~ Methods ~~for controlling outbreaks~~ could include: • maintaining a diversity of tree *species** genetic stock ~~or clones is maintained~~ within and among *stands**; • maintaining a diversity of *age classes** ~~is maintained~~ across the *landscape**; and/or • maintaining sufficient *habitat** across the *landscape** for *native species** that are predators of *plantation** pests ~~is maintained within or adjacent to the *stand**~~.

~~(*Existing US Indicator 10.7.a*) Outbreaks of pests and disease are controlled by maintaining plantation vigor. Management regimes in plantation areas are designed to minimize forest damage from fire, pests, diseases, wind and other factors. Where applicable:~~

~~a. Periodic thinnings are scheduled and conducted to reduce competition for light, water, and nutrients.~~

~~b. The forest owner or manager is aware of potential pest problems associated with the tree species in the plantation and region, and has some knowledge of control procedures.~~

~~c. Habitat for predators of plantation pests is maintained within or adjacent to the plantation.~~
~~d. Diversity of tree species is encouraged in the stand.~~
~~e. Management techniques are used that minimize reliance on chemicals.~~

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.

~~*(Existing US Indicator 10.7.b)* A strategy is in place to control fire damage. Where applicable, prescribed burns are conducted according to *best management practices** and with adequate planning, equipment, training and weather conditions to maintain control of the burn within the burn plan area.~~

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.

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.

~~*(Existing US Indicator 10.6.a)* Forest operations do not result in long-term adverse impacts to soil productivity, water resources, and hydrology. Soil disturbance is minimized during road/trail work and site preparation, and site preparation is done in accordance with BMPs.~~

~~(*Existing US Indicator 10.6.b*) Tree seedlings are planted in a way that minimizes damage to the soil, while facilitating seedling survival. Tree seedling species are selected appropriate for maintaining long-term site productivity.~~

~~(*Existing US Indicator10.6.c*) Thinning is implemented in a manner that minimizes site disturbance and damage to the residual stand of crop trees and other desired vegetation (See Criterion 6.5).~~

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.