Annex A: Glossary

Term	Definition
Adaptive management	A systematic process of continually improving management policies and practices by learning from the outcomes of existing measures. [Source: Based on World Conservation Union (IUCN). Glossary definitions as provided on IUCN website.]
Administrative requirements	Administrative rules, procedures, or regulations that have been promulgated to carry out laws.
Aesthetics	The (attractive) appearance or sound of something. [Source: Oxford English Dictionary]
Affected stakeholder	Any person, group of persons or entity that is or has a high probability of being subject to the effects of the activities of a *Management Unit**. Examples include but are not restricted to (for example in the case of downstream landowners), persons, groups of persons or entities located in the neighborhood of the *Management Unit**. The following are examples of *affected stakeholders**: • *local communities** • *indigenous peoples** • *workers** • *forest** dwellers • neighbors • downstream landowners • local processors • local businesses • tenure and use *rights holders**, including landowners, organizations authorized or known to act on behalf of *affected stakeholders**, for example social and environmental NGOs, labor unions, etc. [Source: FSC-STD-01-001 V5-2]
Age class	Intervals into which the age range of a tree crop is divided; also, the trees falling into such an interval.
Alien species	See *non-native species*.*
Applicable law	Means applicable to *The Organization** as a legal person or business enterprise in or for the benefit of the *Management Unit** and those laws which affect the implementation of the FSC Principles and Criteria. This includes any combination of statutory law (Parliamentary-approved) and case law (court interpretations), subsidiary regulations, associated administrative procedures, and the national constitution (if present) which invariably takes legal precedence over all other legal instruments. [Source: FSC-STD-01-001 V5-2]

Aquatic habitat	*Habitat** for plants and animals that has surface water essential to an organism's survival, as differentiated from *wetland** *habitats** characterized by saturated *soils** or *riparian areas**. Examples include streams, ponds, and *vernal ponds**.
Baseline conditions	Ecological, economic, and social conditions at the beginning of a planning or management cycle.
Best Available Information	Data, facts, documents, *expert** opinions, and results of field surveys or consultations with *stakeholders** that are most credible, accurate, complete, and/or pertinent and that can be obtained through *reasonable** effort and cost, subject to the *scale** and *intensity** of the *management activities** and the *precautionary approach**. [Source: FSC-STD-60-004 V2-0]
Best management practices (BMPs)	A practice considered by the state or authorized tribe to be the most effective means (technological, economic, and institutional) of preventing or reducing environmental or social impacts, including for water, roads, runoff, etc. *Best management practices** are generally identified by states or *tribal** entities and, in the case of *water quality**, approved by the US EPA.
Binding agreement	A deal or pact, written or not, which is compulsory to its signatories and enforceable by law. Parties involved in the agreement do so freely and accept it voluntarily. [Source: FSC-STD-60-004 V2-0]
Biological control agents	Living organisms used to eliminate or regulate the population of other living organisms. [Source: Based on FSC-STD-01-001 V4-0 and World Conservation Union (IUCN). Glossary definitions as provided on IUCN website.]
Biological diversity (biodiversity)	The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic *ecosystems** and the ecological complexes of which they are a part; this includes diversity within *species**, between *species** and of *ecosystems**. [Source: Convention on Biological Diversity 1992, Article 2]
Buffer/buffer zones	A strip of vegetation that is left or managed to reduce the impact of a treatment or action of one area on another. Examples include *riparian management zones**, *conservation** *buffers** around rare bird nests, and *conservation** *buffers** around cultural sites of significance.
Catastrophic natural disturbances	The natural events that significantly alter the *forest** at the *landscape** level.
Certification Body (CB)	FSC-accredited body that performs third-party auditing services.

Chain of custody (CoC)	The path taken by raw materials, processed materials, finished products, and co-products from the *forest** to the consumer or (in the case of reclaimed/recycled materials or products containing them) from the reclamation site to the consumer, including each stage of processing, transformation, manufacturing, storage and transport where progress to the next stage of the supply chain involves a change of ownership (independent custodianship) of the materials or the product. [Source: FSC-STD-40-004 V2-1]
Chemical pesticides	Synthetically produced *pesticides**. [Source: FSC-POL-30-001 V3-0]
Child labor	"Oppressive *child labor**" means a condition of employment under which (1) any employee under the age of sixteen years is employed by an employer (other than a parent or a person standing in place of a parent employing his own child or a child in his custody under the age of sixteen years in an occupation other than manufacturing or mining or an occupation found by the Secretary of Labor to be particularly hazardous for the employment of children between the ages of sixteen and eighteen years or detrimental to their health or well-being in any occupation, or (2) any employee between the ages of sixteen and eighteen years is employed by an employer in any occupation which the Secretary of Labor shall find and by order declare to be particularly hazardous for the employment of children between such ages or detrimental to their health or well-being; but oppressive *child labor** shall not be deemed to exist by virtue of the employment in any occupation of any person with respect to whom the employer shall have on file an unexpired certificate issued and held pursuant to regulations of the Secretary of Labor certifying that such person is above the oppressive child-labor age. The Secretary of Labor shall provide by regulation or by order that the employment of employees between the ages of fourteen and sixteen years in occupations other than manufacturing and mining shall not be deemed to constitute oppressive child labor if and to the extent that the Secretary of Labor determines that such employment is confined to periods which will not interfere with their schooling and to conditions which will not interfere with their health and well-being. [Source: The Fair Labor Standards Act of 1938, as amended; 29 U.S.C. 201] **Consultation Question:**

	Are there any inherent conflicts between this US legislative definition of 'child labor' and the associated definitions of 'hazardous work,' 'heavy work,' 'light work,' 'minimum age,' and 'worst forms of child labor,' which are all derived from International Labour Organization materials?
Climate change adaptation strategies	*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.
Collective bargaining	A voluntary negotiation process between employers or employers' organization and *workers' organization**, with a view to the regulation of terms and conditions of employment by means of collective agreements. [Source: ILO Convention 98, Article 4]
Complaint	The expression of dissatisfaction or concern by any person or organization presented to *The Organization**, relating to its *management activities** or its conformity with the FSC Principles and Criteria, where a response is expected. [Source: Adapted from FSC-STD-60-004 V1-0 definition of dispute and Merriam-Webster]
Confidential information	Private facts, data and content that, if made publicly available, might put at risk *The Organization**, its business interests or its relationships with stakeholders, clients and competitors. [Source: FSC-STD-60-004 V2-0]
Conflicts between the Principles and Criteria and laws	Situations where it is not possible to comply with the *Principles** and *Criteria** and a law at the same time. [Source: FSC-STD-01-001 V5-2]
Connectivity	A measure of how connected or spatially continuous a corridor, network, or matrix is. The fewer gaps, the higher the *connectivity**. Related to the structural *connectivity** concept; functional or behavioral *connectivity** refers to how connected an area is for a process, such as an animal moving through different types of *landscape** elements. Aquatic *connectivity** deals with the accessibility and transport of materials and organisms, through groundwater and surface water, between different patches of aquatic *ecosystems** of all kinds. [Source: Based on R.T.T. Forman. 1995. *Land Mosaics*. The Ecology of Landscapes and Regions. Cambridge University Press, 632pp]

Conservation/ Protection	These words are used interchangeably when referring to *management activities** designed to maintain the identified environmental or cultural values in existence *long-term**. *Management activities** may range from zero or minimal interventions to a specified range of appropriate interventions and activities designed to maintain, or compatible with maintaining, these identified values. [Source: FSC-STD-01-001 V5-2]
Conservation Areas Network	Those portions of the *Management Unit** for which *conservation** is the primary and, in some circumstances, exclusive objective; such areas include *Representative Sample Areas**, *conservation zones**, protection areas, *connectivity** areas, and *High Conservation Value Areas**. [Source: FSC-STD-60-004 V2-0]
Conservation zone	Areas designated within which maintenance and/or *restoration** of such *species** and community type(s) are the highest priority. Harvesting timber, other *management activities**, and other uses are allowed within *conservation zones** if they do not detract from maintenance or enhancement of the *species** or community type(s).
Conversion	The modifications to the structure and dynamics of a *forest** as a result of *management activities* that transform a *forest** into a permanently non-*forested** area; or the transformation of a *natural forest** or *semi-natural forest** into a *plantation**.
Core area	The portion of each *Intact Forest Landscape** designated to contain the most important cultural and ecological values. *Core areas** are managed to exclude industrial activity. *Core areas** meet or exceed the definition of *Intact Forest Landscape**. [Source: FSC-STD-60-004 V2-0]
Credible scientific analysis	Scientific opinions supported by data and explanations in articles published by peer-reviewed professional journals that deal with the natural or social sciences and judged to be relevant to the matter in question. Credible scientific analysis may also include non-peer reviewed studies when conducted by experts in accordance with accepted scientific methods. Scientific credibility, as it applies to this Standard, is based on a body of scientific work and on the judgment of experienced professionals.
Criterion (pl. Criteria)	A means of judging whether or not a *Principle** (of *forest** stewardship) has been fulfilled. [Source: FSC-STD-01-001 V5-2]
Critical	The concept of criticality or fundamentality in Principal 9 and *HCVs** relates to irreplaceability and to cases where loss or major damage to this *HCV** would cause serious prejudice or suffering to *affected stakeholders**. An *ecosystem** service is considered to be critical (*HCV 4**) where a disruption of that service is likely to cause, or poses a threat of, severe negative impacts on the welfare, health or survival of *local communities**, on the environment, on *HCVs**, or on the functioning of significant infrastructure (roads, dams, buildings etc.). The notion of criticality here refers to the

	importance and risk for natural resources and environmental and socio-economic values. [Source: FSC-STD-01-001 V5-2]
Culmination of mean annual increment	The peak average yearly growth in volume of trees or a *forest** stand, calculated by dividing the total volume by the age of the stand.
Culturally appropriate	Means/approaches for outreach to target groups that are in harmony with the customs, values, sensitivities, and ways of life of the target audience. [Source: FSC-STD-60-004 V2-0]
Cumulative effects/impacts	Individual consequences of an action or repeated actions, which may or may not be observable, that reinforce one another as they occur over time until they cross a threshold and manifest as a stronger outcome than any of the individual consequences would be by themselves.
Customary law	Interrelated sets of *customary rights**.
Customary rights	Rights which result from a long series of habitual or customary actions, constantly repeated, which have, by such repetition and by uninterrupted acquiescence, acquired the force of a law within a geographical or sociological unit. [Source: FSC-STD-01-001 V5-2] NOTE: Due to the well-established legal structure in the United States for property rights, the rights of individuals and communities are established within the legal system, including any *customary rights**, with the potential exception of *customary rights** held by *Native American** groups.
Desired future conditions	A description of the *forest** and/or resource conditions that are believed necessary if goals and objectives are fully achieved. *Desired future condition** typically includes *forest** attributes such as *forest** structure, *age class** distribution, species composition, standing timber quality, and *stand** arrangement. For the purposes of this Standard, managing for *desired future conditions** implies that all other requirements in this Standard have been fully met.
Discrimination	Includes- a) any distinction, exclusion or preference made on the basis of race, color, sex, religion, political opinion, national extraction, social origin, sexual orientation, gender identity, which has the effect of nullifying or impairing equality of opportunity or treatment in employment or occupation; b) such other distinction, exclusion or preference which has the effect of nullifying or impairing equality of opportunity or treatment in employment or occupation as may be determined by the Member concerned after consultation with representative employers' and *workers' organization**s* where such exist, and with other appropriate bodies. [Source: Adapted from ILO Convention 111, Article1). "Sexual orientation" and "gender identity" were added to the definition provided in Convention 111, as they

	have been identified as an additional type of discrimination which may occur]
Dispute	A *dispute** exists when the parties have exhausted consultative avenues to resolve a *complaint** or other differences and the following occurs: a person or persons whose *rights** or interests are directly affected by *The Organization's** activities gives written notice to *The Organization**, indicating that they wish to pursue a *dispute** resolution process and specifying which *rights** or interests are affected, by which *management activities**, in which location, and what modifications are considered appropriate to avoid or mitigate impacts on the *rights** or interests; OR, *The Organization** gives written notice to the disputant, in order to trigger the *dispute** resolution process and bring closure to the disagreement.
Dispute of substantial duration	*Dispute** that continues for more than twice as long as the predefined timelines in the FSC System (this is, for more than 6 months after receiving the *complaint**, based on FSC-STD-20-001). [Source: FSC-STD-60-004 V2-0]
Dispute of substantial magnitude	*Dispute** that involves one or more of the following: ● Where the negative impact of *management activities** on *local communities** *legal** rights or on *Native American** groups' *legal** rights or *customary rights** is of such a scale that it cannot be reversed or mitigated ● Where the negative impact of *management activities** to the environment or social welfare is of such a scale and context that it cannot be reversed or mitigated ● Physical violence ● Significant destruction of property ● Presence of law enforcement or armed security contractors; ● Acts of intimidation against *workers** and *affected stakeholders** ● A *dispute** can become of substantial magnitude if it is of *substantial duration**, implies a significant number of interests and has a significant negative impact to the *forest** resource/value ● A *complaint** can immediately become a *dispute of substantial magnitude** if it represents a credible, imminent, and irreparable threat to or from any of the above *Disputes of substantial magnitude** are not common and represent the exception. [Source: Adapted from FSC-STD-60-004 V2-0]
Ecological community	An area defined by its dominant vegetation using the International Classification of Ecological Communities; an Association or Alliance as used by NatureServe, or a Natural Community as used by some state "Natural Heritage Programs" (actual organization or agency name may vary by state).

Economic viability	The capability of developing and surviving as a relatively independent social, economic or political unit. Economic viability may require but is not synonymous with profitability [Source: Based on the definition provided on the website of the European Environment Agency].
Ecosystem (also Ecological system)	A dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit. [Source: Convention on Biological Diversity 1992, Article 2] NOTE: A given terrestrial *ecological system** will typically manifest itself in a *landscape** at intermediate geographic scales of tens to thousands of acres and persist for 50 or more years. Therefore, these units are intended to encompass common *successional** pathways for a given *landscape** setting.
Ecosystem services	The benefits people obtain from *ecosystems**. These include: • provisioning services such as food, *forest** products and water; • regulating services such as regulation of floods, drought, land degradation, air quality, climate and disease; • supporting services such as *soil** formation and nutrient cycling; and • cultural services and cultural values such as recreational, spiritual, religious and other non-material benefits. [Source: Based on R. Hassan, R. Scholes and N. Ash. 2005. *Ecosystems and Human Well-being: Synthesis*. The Millennium Ecosystem Assessment Series. Island Press, Washington DC]
Employment and occupation	Includes access to vocational training, access to employment and to particular occupations, and terms and conditions of employment. [Source: ILO Convention 111, Article 1.3]
Endangered species	A *species** officially designated by the US Fish and Wildlife Service, the National Marine Fisheries Service, or a state agency as having its continued existence threatened over all or a significant portion of its range.
Endemic species	A *species** that is unique to a particular *water body**, place, or region.
Engaging/ engagement	The process by which *The Organization** communicates, consults and/or provides for the participation of interested and/or *affected stakeholders** ensuring that their concerns, desires, expectations, needs, *rights** and opportunities are considered in the establishment, implementation and updating of the *management plan**. [Source: FSC-STD-01-001 V5-2]
Environmental Impact	Systematic process used to identify potential environmental and social impacts of proposed projects, to evaluate alternative approaches, and to design and incorporate appropriate prevention, mitigation, management,

Assessment (EIA)	and monitoring measures. [Source: Based on Environmental impact assessment, guidelines for FAO field projects. Food and agriculture organization of the United Nations (FAO). Rome, FSC-STD-01-001 V5-2]
Erosion	The displacement of *soil** from one place to another by any means, including water, wind, gravity, logging, and road building.
Even-aged silviculture	*Silvicultural** systems in which *stands** of trees of roughly the same age and size are grown and harvested simultaneously. Even-aged systems may involve intermediate entries that remove some trees before the final, or "regeneration", harvest, when a new even-aged class of trees is established. A regeneration harvest is designed to remove all or most of the trees within a defined *age*/size *class**, or to convert a *stand** containing trees having a variety of ages, sizes, or *species** to a more uniform *stand**. The timing of the regeneration harvest is termed the "rotation age" of the timber stand. Even-aged *silvicultural** systems include clearcut, seed-tree, shelterwood, two-age *silviculture**, and variable retention systems. Even-aged *stands** may contain more than one *age*/size *class** of trees on the site at any one time for *silvicultural** reasons or environmental enhancement. For instance, a variable retention system typically retains 10%–25% of the vegetative cover present before harvest on-site and intermixed with the new even-aged stand, to maintain structures and functions important for wildlife. Classic shelterwood and seed-tree cuts retain mature trees from the harvested *stand** during the establishment of the next crop of trees, but these are taken out during a "removal" harvest to leave one *age*/size *class** for future management.
Expert	An expert: • has knowledge or skill that is specialized and profound as the result of substantial practical or academic experience; and/or • is a recognized authority on a topic by virtue of published material on this topic, their stature within the professional community, and the broadly recognized related experience; and/or • possesses a wealth of experience on a topic, possibly through practical means including the accumulation of traditional knowledge. [Source: Based on FSC-GUI-60-009 V1-0] NOTE: Some requirements for consultation with experts may be fulfilled through use of experts employed by the Organization. Some requirements specifically indicate the need for the expert to be independent of the Organization.
Externalities	The positive and negative impacts of activities on stakeholders that are not directly involved in those activities, or on a natural resource or the environment, which do not usually enter standard cost accounting systems,

	such that the market prices of the products of those activities do not reflect the full costs or benefits. [Source: FSC-STD-01-001 V5-2]
Fair compensation	Remuneration that is proportionate to the magnitude and type of services rendered by another party or of the harm that is attributable to the first party. [Source: FSC-STD-01-001 V5-2]
Family forest	A *Management Unit** up to 2,470 acres in size, as defined by the FSC US's Family Forest Program (SLIMF) Streamlined Certification Procedures (FSC-POL-20-101 at http://www.fscus.org/documents/).
Fertilizer	Mineral or organic substances, most commonly N, P2O5 and K20, which are applied to soil for the purpose of enhancing plant growth. [Source: FSC-STD-60-004 V2-0]
Forced or compulsory labor	Work or service exacted from any person under the menace of any penalty and for which the said person has not offered himself/herself voluntarily. [Source: ILO Convention 29, Article 2.1]
Forest	Generally, an *ecosystem** characterized by tree cover; more particularly, a *plant community** predominantly of trees and other woody vegetation that is growing closely together.
Forest-dependent	*Local communities** for whom *forests** provide sites and/or resources that are fundamental for satisfying their basic necessities (i.e., livelihoods, health, nutrition, water); that is, the sites and/or resources provided are irreplaceable (i.e., alternatives are not readily accessible or affordable), and loss of or damage to them would cause serious suffering of, or prejudice to, the community as a whole.
Fragmentation	The process of dividing *habitats** into smaller patches, which results in the loss of original *habitat**, loss in *connectivity**, reduction in patch size, and increasing isolation of patches. *Fragmentation** is considered to be one of the single most important factors leading to loss of *native species**, especially in *forested** *landscapes**, and one of the primary causes of the present extinction crisis. In reference to *Intact Forest Landscapes**, the *fragmentation** of concern is understood to be that caused by human industrial activities. [Source: Adapted from: Gerald E. Heilman, Jr. James R. Strittholt Nicholas C. Slosser Dominick A. Dellasala, *BioScience* (2002) 52 (5): 411-422]
Free, Prior, and Informed Consent (FPIC)	A legal condition whereby a person or community can be said to have given consent to an action prior to its commencement, based upon a clear appreciation and understanding of the facts, implications and future consequences of that action, and the possession of all relevant facts at the time when consent is given. *Free, prior, and informed consent** includes the right to grant, modify, withhold or withdraw approval. [Source: Based on the Preliminary working paper on the principle of Free, Prior and Informed

	Consent of Indigenous Peoples (...) (E/CN.4/Sub.2/AC.4/2004/4 8 July 2004) of the 22nd Session of the United Nations Commission on Human Rights, Sub-commission on the Promotion and Protection of Human Rights, Working Group on Indigenous Populations, 19–23 July 2004]
Gap Analysis Project (GAP)/ GAP status	The US Geological Survey's Gap Analysis Project (GAP) develops data and tools to support the science of determining how well are we protecting common plants and animals. One of these tools is the Protected Areas Database of the United States (PAD-US), which identifies the status of *protected** areas represented in the database through GAP Status Codes (i.e., GAP status), which are a measure of management intent to conserve *biodiversity**, and are defined as: • **GAP Status 1:** An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a natural state within which disturbance events (of natural type, frequency, ~~and~~ intensity, and legacy) are permitted to proceed without interference or are mimicked through management. • **GAP Status 2:** An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a primarily natural state, but which may receive uses or management practices that degrade the quality of existing natural communities, including suppression of natural disturbance. • **GAP Status 3:** An area having permanent protection from conversion of natural land cover for most of the area, but subject to extractive uses of either a broad, low-intensity type (e.g., logging, Off Highway Vehicle recreation) or localized intense type (e.g., mining). It also confers protection to federally listed endangered and threatened species throughout the area. • **GAP Status 4**: There are no known public or private institutional mandates or legally recognized easements or deed restrictions held by the managing entity to prevent conversion of natural habitat types to anthropogenic habitat types. The area generally allows conversion to unnatural land cover throughout or management intent is unknown.
Gender equality	*Gender equality** or gender equity means that people of all gender identities have equal conditions for realizing their full human rights and for contributing to, and benefiting from, economic, social, cultural and political development. [Source: Adapted from FAO, IFAD and ILO workshop on 'Gaps, trends and current research in gender dimensions of agricultural and rural employment: differentiated pathways out of poverty', Rome, 31 March to 2 April 2009.]

Genetically modified organisms (GMO)	Biological organisms that have had their genetic material artificially altered in a way that does not occur naturally by mating or natural recombination or both. [Source: Based on FSC-POL-30-602 FSC Interpretation on GMO (Genetically Modified Organisms)] Examples of techniques covered by this definition include: • recombinant DNA techniques using viral or bacterial vectors • the direct introduction of DNA into an organism (e.g., by microinjection) • cell fusion or hybridization Clones, hybrids formed by natural pollination processes, or the products of tree selection, grafting, vegetative propagation, or tissue culture are not *GMOs**, unless produced by *GMO** techniques.
Genotype	The genetic constitution of an organism. [Source: FSC-STD-01-001 V5- 2]
Good faith	The principle of *good faith** implies that the parties make every effort to reach an agreement, conduct genuine and constructive negotiations, avoid delays in negotiations, respect concluded agreements, and give sufficient time to discuss and settle *disputes**. [Source: Adapted from FSC Policy Motion 40/2017]
Habitat	(1) Those parts of the environment (aquatic, terrestrial, and atmospheric) often typified by a dominant plant form or physical characteristic, on which an organism depends, directly or indirectly, in order to carry out its life processes. (2) The specific environmental conditions in which organisms thrive in the wild.
Harvest unit	A spatial unit of *forest** management that defines a single *silvicultural** prescription. NOTE: The landing is not a part of the *harvest unit**.
Hazardous work (in the context of child labor)	Any work which is likely to jeopardize children's physical, mental or moral health, should not be undertaken by anyone under the age of 18 years. Hazardous *child labor** is work in dangerous, or unhealthy conditions that could result in a child being killed or injured/maimed (often permanently) and/or made ill (often permanently) as a consequence of poor safety and health standards and working arrangements. In determining the type of hazard *child labor** referred to under (Article 3(d) of the Convention No 182, and in identifying where they exist, consideration should be given, inter alia, to: • Work which exposes children to physical, psychological or sexual abuse; • Work underground, under water at dangerous heights or in confined spaces;

	• Work with dangerous machinery, equipment and tools, or which involves the manual handling or transport of heavy loads; • Work in unhealthy environment which may, for example, expose children to hazardous substances, agents or processes, or to temperatures, noise levels, or vibrations damaging to their health; • Work under particularly difficult conditions such as work for long hours or during the night or work where the child is unreasonably confined to the premises of the employer. [Source: ILO, 2011: IPEC Mainstreaming Child labour concerns in education sector plans and Programmes, Geneva, 2011& ILO Handbook on Hazardous child labour, 2011]
Heavy work (in the context of child labor)	Refers to work that is likely to be harmful or dangerous to children's health. [Source: FSC report on generic criteria and indicators based on ILO Core Conventions principles, 2017]
High Conservation Value (HCV)	Any of the following 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**, 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 example for livelihoods, health, nutrition, water), 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**. [Source: Based on FSC-STD-01-001 V5-2]

High Conservation Value Areas (HCVA)	Zones and physical spaces which possess and/or are needed for the existence and maintenance of identified *High Conservation Values**. [Source: FSC-STD-60-004 V2-0]
Historic conditions	Ecological conditions and processes existing prior to substantial modern human disturbance of the site, based on *Best Available Information**.
High grading (high grade logging)	A tree-removal practice in which only the best quality, most valuable timber trees are removed, often without regenerating new tree seedlings or removing the remaining poor quality and suppressed understory trees and, in doing so, degrading the ecological health and commercial value of the *forest**. High grading stands as a counterpoint to sustainable resource management. [Source: Based on Glossary of Forest Management Terms. North Carolina Division of Forest Resources. March 2009]
ILO Core (Fundamental) Conventions	These are labor standards that cover fundamental principles and rights at work: freedom of association and the effective recognition of the right to collective bargaining; the elimination of all forms of forced or compulsory labor; the effective abolition of *child labor**; and the elimination of discrimination in respect of employment and occupation. The eight Fundamental Conventions are: • Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87); • Right to Organise and Collective Bargaining Convention, 1949 (No. 98); • Forced Labour Convention, 1930 (No. 29); • Abolition of Forced Labour Convention, 1957 (No. 105); • Minimum Age Convention, 1973 (No. 138); • Worst Forms of Child Labour Convention, 1999 (No. 182); • Equal Remuneration Convention, 1951 (No. 100); • Discrimination (Employment and Occupation) Convention, 1958 (No. 111) [Source: FSC report on generic criteria and indicators based on ILO Core Conventions principles, 2017]
ILO Declaration on Fundamental Principles and Rights at Work and Its Follow-up, adopted by the International	A resolute reaffirmation of ILO principles (art 2) which declares that all Members, even if they have not ratified the Conventions in question, have an obligation, arising from the very fact of membership in the organization, to respect, to promote and to realize, in good faith and in accordance with the Constitution, the principles concerning the fundamental rights which are the subject of those Conventions, namely:

Labor conference at its Eighty-sixth Session, Geneva, 18th June 1998 (Annex revised 15 June 2010)	• Freedom of association and the effective recognition of the right to *collective bargaining**; • The elimination of all forms of *forced or compulsory labor**; • The effective abolition of *child labor**; and • The elimination of discrimination in respect of employment and occupation. [Source: FSC report on generic criteria and indicators based on ILO Core Conventions principles, 2017]
Indicator	A quantitative or qualitative variable which can be measured or described, and which provides a means of judging whether a *Management Unit** complies with the requirements of an FSC *Criterion**. *Indicators** and the associated thresholds thereby define the requirements for responsible *forest** management at the level of the *Management Unit** and are the primary basis of *forest** evaluation. [Source: FSC- STD-01-002, October 2017]
Indigenous Peoples	People and groups of people that can be identified or characterized as follows: • The key characteristic or criterion is self-identification as *Indigenous Peoples** at the individual level and acceptance by the community as their member; • Historical continuity with pre-colonial and/or pre-settler societies; • Strong link to territories and surrounding natural resources; • Distinct social, economic or political systems; • Distinct language, culture and beliefs; • Form non-dominant groups of society; • Resolve to maintain and reproduce their ancestral environments and systems as distinctive peoples and communities. [Source: Adapted from United Nations Permanent Forum on Indigenous, Factsheet 'Who are Indigenous Peoples' October 2007; United Nations Development Group, 'Guidelines on Indigenous Peoples' Issues' United Nations 2009, United Nations Declaration on the Rights of Indigenous Peoples, 13 September 2007]
Industrial activity	Industrial *forest** and resource *management activities** such as road building, mining, dams, urban development and timber harvesting. [Source: FSC-STD-60-004 V2-0]
Infrastructure	In the context of *forest** management, roads, bridges, culverts, log landings, quarries, impoundments, buildings and other structures required in the course of implementing the *management plan**. [Source: FSC-STD-60-004 V2-0]
Intact Forest Landscape	A territory within today's global extent of *forest** cover which contains *forest** and non-*forest** *ecosystems** minimally influenced by human

	economic activity, with an area of at least 500 km2 (50,000 ha) and a minimal width of 10 km (measured as the diameter of a circle that is entirely inscribed within the boundaries of the territory). [Source: Intact Forests / Global Forest Watch. Glossary definition as provided on Intact Forest website. 2006-2014]
Integrated pest management (IPM)	Careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations, encourage beneficial populations and keep *pesticides** and other interventions to levels that are economically justified and reduce or minimize risks to human and animal health and/or the environment. *IPM** emphasizes the growth of a healthy *forest** with the least possible disruption to *ecosystems** and encourages natural pest control mechanisms. [Source: Based on FAO International Code of Conduct on Pesticide Management]
Intellectual property	Practices as well as knowledge, innovations, and other creations of the mind. [Source: Based on the Convention on Biological Diversity, Article 8(j); and World Intellectual Property Organization. What is Intellectual Property? WIPO Publication No. 450(E)]
Intensity	A measure of the force, severity, or strength of a *management activity** or other occurrence affecting the nature of the activity's impacts. [Source: FSC-STD-01- 001 V5-2]
Interested stakeholder	Any person, group of persons, or entity that has shown an interest, or is known to have an interest, in the activities of a *Management Unit**. The following are examples of *interested stakeholders**. • *Conservation** organizations, for example environmental NGOs; • Labor (rights) organizations, for example labor unions; • Human rights organizations, for example social NGOs; • Local development projects; • Local governments; • National government departments functioning in the region; • FSC National Offices; • Experts on particular issues, for example *High Conservation Values**. [Source: FSC-STD-01-001 V5-2]
Intermittent stream	A mapped or unmapped stream with a defined channel, banks, and bed that typically flows for less than 12 months of the year.
Internationally accepted scientific protocol	A predefined science-based procedure which is either published by an international scientific network or union or referenced frequently in the international scientific literature. [Source: FSC-STD-01- 001 V5-2]

Invasive species	A *species** capable of rapid reproduction and spatial expansion, which may displace more specialized *native species** and/or is difficult to eradicate. *Invasive species** can alter ecological relationships among *native species** and can affect *ecosystem** function and human health. *Invasive species** are of particular ecological concern if they are not native to the area in question.
Lands and territories	For the purposes of the *Principles** and *Criteria** these are lands or territories that *Indigenous Peoples** or *local communities** have traditionally owned, or customarily used or occupied, and where access to natural resources is currently vital to the sustainability of their cultures and livelihoods. [Source: Based on World Bank safeguard OP 4.10 Indigenous Peoples, section 16 (a). July 2005] In the context of *Native Americans**, this term includes ancestral territory and *tribal** territory, and is, therefore, not limited to the lands reserved for the settlement of *Native Americans** and/or other currently recognized *tribal** lands.
Landscape	For the purposes of this Standard, the term "landscape" refers to a delineation of land area that captures similar environmental and ecological conditions including climate, geology, soils, water, and biology. USFS-defined Ecological Sections (Cleland 2005, update of Bailey/USFS) or smaller units are recommended for use to define *landscape** for purposes of *RSA** establishment and assessment . For many other purposes, "landscapes" will often occur at smaller scales than ecological sections. In some contexts, "landscape" as used in this Standard simply refers to consideration of the area surrounding a particular site. In developing the description of "landscape" *The Organization** considers the *Management Unit's** ability to influence and impact the surrounding area, as well as the potential for other owners to influence and impact the area that the *Management Unit** falls within. Some larger *Management Units** may represent the full *landscape** that needs to be considered, while other typically smaller *Management Units** may occur within a broader *landscape** that should be considered.
Landscape values	*Landscape values** can be visualized as layers of human perceptions overlaid on the physical *landscape**. Some *landscape values**, like economic, recreation, subsistence value, or visual quality are closely related to physical *landscape** attributes. Other *landscape values** such as intrinsic or spiritual value are more symbolic in character and are influenced more by individual perception or social construction than physical *landscape** attributes. [Source: Based on website of the Landscape Value Institute]

	For the purposes of Criterion 6.8 and Criterion 10.10, these values are focused on how the mosaic of *ecosystems**, age structure, *species** composition, *species** distribution, *fragmentation**, and other ecological conditions occur across the *landscape**.
Large	When used in reference to an ownership or *Management Unit**, it is an area greater than 50,000 acres in size.
Late successional	Forest in old-growth or mature seral stages.
Legacy tree	A tree, usually mature or remnant of growth, that provides a biological legacy. For the purposes of this Standard, it is an individual old tree that functions as a refuge or provides other important structural habitat values.
Legal	In accordance with primary legislation (*national laws** or *local laws**) or secondary legislation (subsidiary regulations, decrees, orders, etc.). "Legal" also includes rule-based decisions made by *legally competent** agencies where such decisions flow directly and logically from the laws and regulations. Decisions made by *legally competent** agencies may not be *legal** if they do not flow directly and logically from the laws and regulations and if they are not rule-based but use administrative discretion. [Source: FSC-STD-01-001 V5-2] NOTE: In the United States, treaties and reserved treaty rights are legally binding.
Legal registration	National or *local** *legal** license or set of permissions to operate as an enterprise, with *rights** to buy and sell products and/or services commercially. The license or permissions can apply to an individual, a privately-owned enterprise, or a publicly owned corporate entity. The *rights** to buy and sell products and/or services do not carry the obligation to do so, so legal* registration applies also to *Organizations** operating a *Management Unit** without sales of products or services; for example, for unpriced recreation or for *conservation** of *biodiversity** or *habitat**. [Source: FSC-STD-01-001 V5-2]
Legal status	The way in which the *Management Unit** is classified according to law. In terms of tenure, it means the category of tenure, such as communal land or leasehold or freehold or State land or government land, etc. If the *Management Unit** is being converted from one category to another (for example, from State land to communal indigenous land) the status includes the current position in the transition process. In terms of administration, *legal status** could mean that the land is owned by the nation as a whole, is administered on behalf of the nation by a government department and is

	leased by a government Ministry to a private sector operator through a concession. [Source: FSC-STD-01-001 V5-2]
Legally competent	Mandated in law to perform a certain function. [Source: FSC-STD-01-001 V5-2]
Light work	*National laws** or regulations may permit the employment or work of persons 13 to 15 years of age on *light work** which is a) not likely to be harmful to their health or development; and b) not such as to prejudice their attendance at school, their participation in vocational orientation, or training programs approved by the competent authority or their capacity to benefit from the instruction received. [Source: ILO Convention 138, Article 7]
Living wage	See *Fair compensation**.
Local	In or within reasonable proximity to the *Management Unit** to have a significant impact on the economy or the environmental values of the *Management Unit**, or to be significantly affected by the *management activities** or the biophysical aspects of the *Management Unit**. On *public lands**, this also includes all citizens of the relevant entity (county, city, state, or nation).
Local communities	Communities of any size that are in or adjacent to the *Management Unit**, and also those that are close enough to have a significant impact on the economy or the environmental values of the *Management Unit** or to have their economies, *rights** or environments significantly affected by the *management activities** or the biophysical aspects of the *Management Unit**. On *public lands**, this also includes all citizens of the relevant entity (county, city, state, or nation). [Source: adapted from FSC-STD-01-001 V5-2]
Local laws	The whole suite of primary and secondary laws (acts, ordinances, statutes, decrees) which is limited in application to a particular geographic district within a national territory, as well as secondary regulations, and tertiary administrative procedures (rules/requirements) that derive their authority directly and explicitly from these primary and secondary laws. *Tribal** laws are included within this definition of local laws. Laws derive authority ultimately from the Westphalian concept of sovereignty of the Nation State. [Source: FSC-STD-01-001 V5-2]
Long-term	The time-scale of the *forest** owner or manager as manifested by the objectives of the *management plan**, the rate of harvesting, and the commitment to maintain permanent *forest** cover. The length of time involved will vary according to the context and ecological conditions, and will be a function of how long it takes a given *ecosystem** to recover its natural structure and composition following harvesting or disturbance or to produce mature or primary conditions. This may extend beyond the

	duration of a certificate. [Source: Adapted from FSC-STD-01-002 V1-0 FSC Glossary of Terms (2009)]
Management activity	Any or all operations, processes, or procedures associated with managing a *forest**, including but not limited to: planning, consultation, harvesting, access construction and maintenance, *silvicultural** activities (planting, site preparation, tending), monitoring, assessment, and reporting. [Source: FSC Canada National Boreal Standard 2004]
Management objective	Specific management goals, practices, outcomes, and approaches established to achieve the requirements of this Standard. [Source: FSC-STD-60-004 V2-0]
Management plan	The collection of documents, reports, records and maps that describe, justify and regulate the activities carried out by any manager, staff, or *Organization** within or in relation to the *Management Unit**, including statements of objectives and policies. [Source: FSC-STD-01-001 V5-2]
Management strategy	A plan of action for how a *management objective** or other desired outcome will be achieved.
Management Unit	A spatial area or areas submitted for FSC certification with clearly defined boundaries managed to a set of explicit *long term* management objectives** which are expressed in a *management plan**. This area or areas include(s): • all facilities and area(s) within or adjacent to this spatial area or areas under *legal** title or management control of, or operated by or on behalf of *The Organization**, for the purpose of contributing to the *management objectives**; and • all facilities and area(s) outside, and not adjacent to this spatial area or areas and operated by or on behalf of *The Organization**, solely for the purpose of contributing to the *management objectives**. [Source: FSC-STD-01-001 V5-2]
Minimum age (of employment)	Is not less than the age of finishing compulsory education, and which in any case, should not be less than 15 years. However, a country, whose economy and educational facilities are insufficiently developed, may initially specify a minimum age of 14 years. *National laws** may also permit the employment of 13-15-year-olds in *light work** which is neither prejudicial to school attendance, nor harmful to a child's health or development. The ages 12-13 can apply for *light work** in countries that specify a minimum age of 14. [Source: ILO Convention 138, Article 2]
Medium	When used in reference to an ownership or *Management Unit**, it is an area between 2,475 and 50,000 acres in size.

Native American	Of or relating to the *Indigenous Peoples** of the conterminous United States (not including Alaska, Hawaii, or any US territories).
National laws	The whole suite of primary and secondary laws (acts, ordinances, statutes, decrees), which is applicable to a national territory, as well as secondary regulations, and tertiary administrative procedures (rules/requirements) that derive their authority directly and explicitly from these primary and secondary laws. [Source: FSC-STD-01-001 V5-2]
Native species	*Species**, subspecies, or lower taxon, occurring within its natural range (past or present) and dispersal potential (that is, within the range it occupies naturally or could occupy without direct or indirect introduction or care by humans). [Source: Convention on Biological Diversity (CBD). Invasive Alien Species Programme. Glossary of Terms as provided on CBD website]
Natural conditions	For the purposes of the *Principles** and *Criteria** and any applications of restoration techniques, the term “more natural conditions” provides for managing sites to favor or *restore** *native species** and associations of *native species** that are typical of the locality, and for managing these associations and other environmental values so that they form *ecosystems** typical of the locality. [Source: Adapted from FSC-STD-01-001 V5-2]
Natural disturbance regime	Disturbance processes such as wind, fire, insects, and pathogens that are characteristic of the *forest** *ecosystem**, site, and region. Disturbance regimes are typically characterized by the range of extent, intensity, and return interval of a similar event expected for a given site. For the purposes of this Standard, non-*catastrophic natural disturbance** should be the focus of analyzing for natural disturbance.
Natural forest	*Natural forests** include *old growth** and *primary forests** as well as managed *forests** where most of the principal characteristics and key elements of native *ecosystems*,* such as complexity, structure, wildlife, and *biological diversity*,* are present. See also *semi-natural forest**.
Natural hazards	Disturbances that can present risks to social and environmental values* in the *Management Unit** but that may also comprise important *ecosystem** functions; examples include drought, flood, fire, landslide, storm, avalanche, etc. [Source: FSC-STD-60-004 V2-0]
Non-native species	A *species**, subspecies or lower taxon, introduced outside its natural past or present distribution; includes any part, gametes, seeds, eggs, or propagules of such *species** that might survive and subsequently reproduce. [Source: Convention on Biological Diversity (CBD), Invasive Alien Species Programme definition for ‘alien species.’ Glossary of Terms as provided on CBD website]

Non-timber forest products (NTFP)	All forest products other than timber derived from the *Management Unit**, including other materials obtained from trees such as resins and leaves, as well as any other plant and animal products. [Source: adapted from FSC-STD-01-001 V5-2]
Objective	The basic purpose laid down by *The Organization** for the *forest** enterprise, including the decision of policy and the choice of means for attaining the purpose. [Source: Based on F.C. Osmaston. 1968. *The Management of Forests*. Hafner, New York; and D.R. Johnston, A.J. Grayson and R.T. Bradley. 1967. Forest Planning. Faber & Faber, London]
Obligatory code of practice	A manual or handbook or other source of technical instruction which *The Organization** must implement by law. [Source: FSC-STD-01- 001 V5-2]
Occupational disease	Any disease contracted as a result of an exposure to risk factors arising from work activity. [Source: International Labour Organization (ILO). Bureau of Library and Information Services. ILO Thesaurus as provided on ILO website]
Occupational injuries	Any personal injury, disease or death resulting from an occupational accident. [Source: International Labour Organization (ILO). Bureau of Library and Information Services. ILO Thesaurus as provided on ILO website]
Old growth	(1) The oldest seral stage in which a *plant community** is capable of existing on a site, given the frequency of natural disturbance events, or (2) a very old example of a *stand** dominated by long-lived early- or mid-seral *species**. The onset of *old growth** varies by *forest** community and region. Depending on the frequency and intensity of disturbances, and site conditions, *old-growth** forests will have different structures, *species** compositions, age distributions, and functional capacities than younger forests. *Old-growth** *stands** and *forests** include: **Type 1 Old Growth:** 3 acres or more that have never been logged and that display *old-growth** characteristics. **Type 2 Old Growth:** 20 acres or more that have been logged, but which retain significant *old-growth** structure and functions.
The Organization	The person or entity holding or applying for certification and therefore responsible for demonstrating compliance with the requirements upon which FSC certification is based. [Source: FSC-STD-01-001 V5-2]
Pathogen	Any agent that causes disease, especially microorganisms, such as bacteria or fungi.
Perennial stream	A mapped or unmapped stream with a defined channel, banks, and bed that flows year-round. Sub-surface reaches located downstream of the upper most point of perennial flow (i.e., perennial initiation point) shall be treated as perennial.

Pesticide	Any substance, or mixture of substances of chemical or biological ingredients intended for repelling, destroying or controlling any pest, or regulating plant growth. [Source: FAO International Code of Conduct on Pesticide Management] NOTE: This definition includes insecticides, rodenticides, acaricides, molluscicides, larvaecides, nematicides, fungicides, and herbicides.
Planning unit	The specific geographic area for which a *sustained yield harvest level** is being calculated. Planning units should generally be composed of land that contains similar or commonly associated *forest** types. Depending upon the scale of ownership, planning units may range in size from a single *stand** (for example, *small**, private landowners) to entire watersheds. A planning unit may include the entire *Management Unit** if not larger than watersheds.
Plant community (plant community type)	See *ecological community**.
Plantation	A *forest** area established by planting or sowing with, using either *native species** or *non-native species**, often with one or few *species**, regular spacing, and even ages, and which lacks most of the principal characteristics and key elements of native *forest** *ecosystems**. The use of establishment or subsequent management practices in planted *forest** *stands** that perpetuate the *stand**-level absence of most principle characteristics and key elements of native *forest** *ecosystems** will result in a stand being classified as a *plantation**. The details addressing ecological conditions used in *stand**-level classification are outlined in related guidance. Except for highly extenuating circumstances, the following are classified as *plantations**: • cultivation of ~~exotic species~~ *non-native species** or recognized ~~exotic~~ non-native sub-*species**, except when used in conformance with Indicator 10.2.2; • block plantings of cloned trees resulting in a major reduction of within-*stand** genetic diversity compared to what would be found in a natural *stand** of the same *species**; and • cultivation of any tree *species** in areas that were naturally non-*forested** *ecosystems**. [Source: adapted from FSC-STD-01-001 V5-2] NOTE: Guidance for differentiating between *natural forest** or *semi-natural forest** and *plantation** is provided in Annex I.

Pre-harvest	The diversity, composition, and structure of the *forest** or *plantation** prior to felling timber and appurtenant activities such as road building. [Source: FSC-STD-60-004 V2-0]
Precautionary principle/ approach	An approach requiring that when the available information indicates that *management activities** pose a threat of severe or irreversible damage to the environment or a threat to human welfare, *The Organization** will take explicit and effective measures to prevent the damage and avoid the *risks** to welfare, even when the scientific information is incomplete or inconclusive, and when the vulnerability and sensitivity of environmental values are uncertain. [Source: Based on Principle 15 of Rio Declaration on Environment and Development, 1992, and Wingspread Statement on the Precautionary Principle of the Wingspread Conference, 23–25 January 1998]
Primary forest	*Forest** *ecosystems** that have retained the principal characteristics and key elements of native *ecosystems**, such as complexity, structure, and diversity, and have remained relatively undisturbed by human activity (i.e., lack visible indications of human economic activity). Human impacts in such *forest** areas have normally been limited to low levels of hunting, fishing, and very limited, non-commercial harvesting of *forest** products. NOTE: In fire- or other disturbance-dominated *ecosystems**, *primary forest** may not always be dominated by mature trees, or any trees at all, but instead may present as a mosaic of older and younger *stands**.
Principle	An essential rule or element; in FSC's case, of *forest** stewardship. [Source: FSC-STD-01-001 V5-2]
Protected areas	Portions of the *forest** of special biological, cultural, or historical significance that are designated, mapped, and managed principally to protect their biological, cultural, or historic attributes. Only *management activities** (including logging) implemented to achieve ecological improvements are allowed in *protected areas**.
Protection	See *Conservation**.
Public land	Land held in government ownership in trust for the citizens of a city, county or parish, state, or nation. For the purpose of requirements that are specific to "public lands", *tribal** lands are excluded from this definition, even though the US federal government has a trust responsibility to tribes for the management of *tribal** lands.
Publicly available	In a manner accessible to or observable by people generally. [Source: Collins English Dictionary, 2003 Edition]

Rare ecological community (including plant community)	Those *ecological communities** that have been identified by state or federal agencies or natural heritage databases to be rare, consistent with the parameters for determining *rare, threatened, and endangered species**.
Rare species	See *rare, threatened, and endangered species**
Rare, threatened, and endangered species (RTE species)	*Species** (including plants, animals, and other organisms) that are federally-listed (i.e., by the US Fish and Wildlife Service or National Marine Fisheries Service) or state-listed (i.e., by state natural heritage or other state agencies) as threatened, endangered, or sensitive; and species that are listed by the Natural Heritage Database or NatureServe as critically imperiled, imperiled, or vulnerable. This includes all G1–-G3 and S1–-S2 species. Some S3-ranked species, including all S3 species that are listed as candidates for federal or state listing, will also be considered rare. Other S3 species may be considered rare based on the assessment by the landowner or manager conducted per Indicator 6.1.1 .
Ratified	The process by which an international law, convention or agreement (including multilateral environmental agreement) is *legally** approved by a national legislature or equivalent legal mechanism, such that the international law, convention, or agreement becomes automatically part of *national law** or sets in motion the development of *national law** to give the same *legal** effect. [Source: FSC-STD-01-001 V5-2]
Reasonable	Judged to be fair or appropriate to the circumstances or purposes, based on general experience. [Source: Shorter Oxford English Dictionary]
Refugia	(plural) *Habitat** in which a population can persist and from which it can disperse when the surrounding *habitat** becomes suitable for it to live in; locations and *habitats** that support populations of organisms that are limited to a small fragment of their previous geographic range.
Regeneration harvest	Any removal of trees intended to assist regeneration already present or to make regeneration possible.
Representative Sample Areas (RSAs)	Portions of the *Management Unit** delineated for the purpose of *conserving** or *restoring** *viable** examples of an *ecosystem** that would naturally occur in that ecological region. *RSA** may also: a. serve to *conserve** or *restore** an under-represented ecological condition (i.e., *forest** *successional** phases, ecological communities); and/or b. serve as a set of *conservation zones** or *refugia** for *species**, communities, and/or community types not addressed in other *Criteria** of this Standard. [Source: adapted from FSC-STD-60-004 V2-0]

Resilience	The ability of a system to maintain key functions and processes in the face of stresses or pressures by either resisting or adapting to change. *Resilience** can be applied to both *ecological systems** and social systems. [Source: IUCN World Commission on Protected Areas (IUCN-WCPA). 2008. Establishing Marine Protected Area Networks – Making it Happen. Washington D.C.: IUCN-WCPA National Oceanic and Atmospheric Administration and The Nature Conservancy.]
Restore (Restoration)	The process of modifying or repairing a *habitat** or *ecosystem** to introduce or reintroduce composition, structures, and functions that are native to the site.
Retention	Living vegetation, including trees, shrubs, and herbaceous *species**, that is retained during even-aged and two-aged regeneration harvests.
Rights	In the context of access rights and *use rights**, "rights" is used to reference *legal** rights and *customary rights** held by *Native American** groups, and *legal** rights held by all other *rights holders**.
Rights holder	Persons and groups, including *Native American groups**, *traditional peoples**, and *local communities**, with *legal** rights or, in the case of *Native American** groups, with *legal** or *customary rights**, including treaty rights, to land and/or resources within the *Management Unit**. For *rights** held by *Native American groups**, *traditional peoples**, and *forest-dependent** *local communities**, *free, prior, and informed consent** is required to determine management decisions. [Source: Adapted from FSC-STD-60-004 V2-0]
Riparian area	Interface between upland communities and a *water body** often delineated and managed to conserve the plant and wildlife *habitat** characteristics of the area and to *protect** adjacent aquatic *habitats** and *ecosystems**. *Riparian areas** vary in width according to biotic and abiotic characteristics and may be wider than a *riparian management zone** (RMZ), which is designed to *protect** *water quality** and *aquatic habitat**.
Riparian management zone (RMZ)	Areas next to rivers, streams, *wetlands**, *vernal pools**, seeps and springs, lake and pond shorelines, karst, and other hydrologically sensitive areas where management practices are modified to *protect** *water quality** and *aquatic habitats** by minimizing non-point source pollution to surface waters. In addition to their primary purpose of *protecting** *water quality**, these areas also provide similar ecological functions to *riparian areas**.
Riparian zone	See *riparian area**.
Risk	The probability of an unacceptable negative impact arising from any activity in the *Management Unit** combined with its seriousness in terms of consequences. [Source: FSC-STD-01-001 V5-2]

Rutting	The creation of depressions made by tires and treads of mechanical equipment such as trucks, skidders, tractors, all-terrain vehicles (ATV), and other equipment. Rutting may occur in the general harvest area and on facilities such as roads and skid trails. Ruts may result from harvest operations or other uses such as recreational ATV use.
Scale	A measure of the extent to which a *management activity** or event affects an environmental value or a *Management Unit**, in time or space. An activity with a small or low spatial *scale** affects only a small proportion of the *forest** each year, an activity with a small or low temporal *scale** occurs only at long intervals. [Source: FSC-STD- 01-001 V5-2]
Scale, intensity, and risk	See individual definitions for *scale**, *intensity**, and *risk**.
Semi-natural forest	A *forest** *ecosystem** with many of the characteristics of native *ecosystems** present. *Semi-natural forests** exhibit a history of human disturbance (e.g., harvesting or other *silvicultural** activities), are very common in the United States, and include a considerable amount of unmanaged, and most of the managed, *forest** land other than *plantations**.
Significant	For the purposes of Principle 9, *HCVs 1, 2* and *6** there are three main forms of recognizing *significance**. • A designation, classification or recognized *conservation** status, assigned by an international agency such as IUCN or Birdlife International; • A designation by national or regional authorities, or by a responsible national *conservation** organization, on the basis of its concentration of *biodiversity**; • A voluntary recognition by the manager, owner or *Organization**, on the basis of available information, or of the known or suspected presence of a *significant** *biodiversity** concentration, even when not officially designated by other agencies. Any one of these forms will justify designation as *HCVs 1, 2* and *6**. Many regions of the world have received recognition for their *biodiversity** importance, measured in many different ways. Existing maps and classifications of priority areas for *biodiversity** *conservation** play an essential role in identifying the potential presence of *HCVs 1, 2** and *6**. [Source: FSC-STD-01-001 V5-2]
Silviculture (Silvicultural)	The art and science of controlling the establishment, growth, composition, health and quality of *forests** and woodlands to meet the targeted diverse needs and values of landowners and society on a sustainable basis. [Source: Nieuwenhuis, M. 2000. Terminology of Forest Management. IUFRO World Series Vol. 9. IUFRO 4.04.07 SilvaPlan and SilvaVoc]

Slope	The incline of the land surface measured in degrees from the horizontal or in percent as determined by the number of units change in elevation per 100 of the same measurement units; also characterized by the compass direction in which it faces.
Small	When used in reference to an ownership or *Management Unit**, see *Family Forest**.
Snag	A standing dead tree.
Soil	Earth material (rock) so modified by physical, chemical, and biological agents that it will support rooted plants. *Soil** also includes organic material, biotic communities, and *species** that live in the ground and that contribute to ecological productivity.
Species	The main category of taxonomic classification into which genera are subdivided, comprising a group of similar interbreeding individuals sharing a common morphology, physiology, and reproductive process.
Species composition	The *species** that occur on a site or within an *ecosystem** at any point in time.
Stakeholder	See *affected stakeholder** and *interested stakeholder**.
Stand	*Plant communities**, particularly of trees, sufficiently uniform in composition, constitution, age, spatial arrangement, or condition to be distinguished from adjacent communities; also, may delineate a *silvicultural** or management entity.
Streamside management zone (SMZs)	See *riparian management zone**.
Structural diversity	The diversity in a *plant community** that results from the variety of physical forms of the plants within the community (such as the layering of vegetation into groundcover, shrub layer, as well as understory, mid-story, and overstory trees).
Succession	Progressive changes in *species** composition and *forest** community structures caused by natural processes (non-human) over time.
Sustained yield harvest levels	Harvest levels and rates that do not exceed growth over successive harvests, that contribute directly to achieving *desired future conditions**, and that do not diminish the *long-term** ecological integrity and productivity of the site.
Tenure (also long-term tenure, legal tenure, tenure claim)	Socially-defined agreements held by individuals or groups, recognized by *legal** statutes or customary practice, regarding the "bundle of *rights** and duties" of ownership, holding, access and/or usage of a particular unit of land or the associated resources therein (such as individual trees, plant

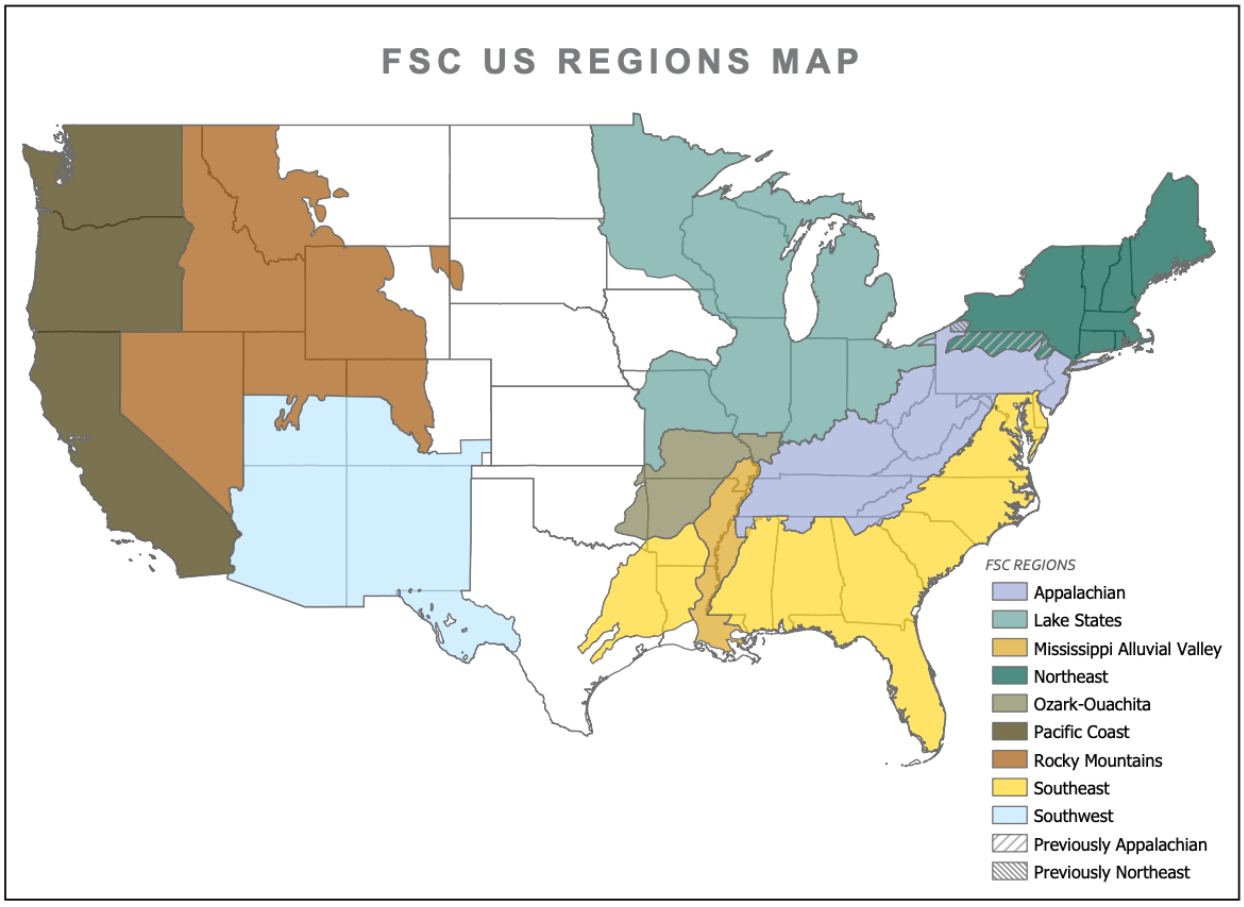
	*species**, water, minerals, etc.). [Source: Adapted from World Conservation Union (IUCN). Glossary definitions provided on IUCN website]
Threat	An indication or warning of impending or likely damage or negative impacts. [Source: Based on Oxford English Dictionary]
Threatened species	Any *species** officially designated by a state or federal agency that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range.
Timber harvesting level	The actual harvest quantity executed on the *Management Unit**, tracked by either volume (e.g., cubic meters or board feet) or area (e.g., hectares or acres) metrics for the purpose of comparison with calculated (maximum) *sustained yield harvest level**. [Source: Adapted from FSC-STD-60-004 V2-0]
Traditional knowledge	Information, know-how, skills and practices that are developed, sustained and passed on from generation to generation within a community, often forming part of its cultural or spiritual identity. [Source: Based on the definition by the World Intellectual Property Organization (WIPO). Glossary definition as provided under Policy/Traditional Knowledge on the WIPO website]
Traditional peoples	Social groups or peoples who do not self-identify as indigenous and who affirm *rights** to their lands, *forests** and other resources based on long established custom or traditional occupation and use. [Source: Forest Peoples Programme (Marcus Colchester, 7 October 2009)]
Transportation system	Permanent and temporary haul roads, skid trails, and recreational trails.
Tribal	Of or relating to the *Native Americans** of a particular land base.
Type 1 old growth	See *old growth**.
Type 2 old growth	See *old growth**.
Uphold	To acknowledge, respect, sustain and support. [Source: FSC-STD-01-001 V5-2]
Use rights	*Rights** for the use of resources of the *Management Unit** that can be defined by local custom or mutual agreements, or be prescribed by other entities holding access rights. These rights may restrict the use of particular resources to specific levels of consumption or particular harvesting techniques. [Source: FSC-STD-01-001 V5-2]

Vast majority	80% of the total area of *Intact Forest Landscapes** within the *Management Unit** as of January 1, 2017. The *vast majority** also meets or exceeds the minimum definition of *Intact Forest Landscape**. [Source: FSC-STD-60-004 V2-0]
Verifiable targets	Specific goals, such as *desired future forest conditions**, established to measure progress towards the achievement of each of the *management objectives**. These goals are expressed as clear outcomes, such that their attainment can be verified and it is possible to determine whether they have been accomplished or not. [Source: FSC-STD-60-004 V2-0]
Vernal pool (vernal pond)	A seasonal body of water, typically a self-contained depression, that contains species not normally found in perennial *water bodies**. *Vernal pool** types, *species**, and identification will vary by region. *Vernal pools** that occur in eastern and midwestern *forests** are characterized by a unique suite of amphibian and invertebrate *species**. In Mediterranean-type climates (i.e., wet winters and dry summers), especially on coastal terraces in southwestern California, the central valley of California, and areas west of the Sierra Mountains, the term “vernal pool” applies to shallow, seasonally flooded wet meadows with emergent hydrophytic vegetation and invertebrate *species** not found in other *wetland** types.
Very limited portion	The area affected shall not exceed 0.5% of the area of the *Management Unit** in any one year, nor affect a total of more than 5% of the area of the *Management Unit**. [Source: FSC-STD-01-002]
Very limited portion of core area	The area affected shall not exceed 0.5% of the area of the *core area** in any one year, nor affect a total of more than 5% of the area of the *core area**. [Source: FSC-STD-60-004 V2-0]
Viable	In the context of *Representative Sample Areas**, viability means that the critical components and functions of a dynamic, stochastic system at any time remain in a domain where the future existence of these components and functions is highly probable.
Visions and values	Policies of *The Organization** that together provide a clear, specific, compelling picture of what *The Organization** will look like at a specific time in the future (i.e., vision) and the boundaries within which *The Organization** will operate in pursuit of its vision (i.e., values).
Waste materials	Unusable or unwanted substances or by-products, such as: • Hazardous waste, including chemical waste and batteries; • Containers; • Motor and other fuels and oils; • Rubbish including metals, plastics and paper; and • Abandoned buildings, machinery and equipment. [Source: FSC-STD-60-004 V2-0]

Water bodies	Seasonal, temporary, and permanent brooks, creeks, streams, rivers, ponds, and lakes. *Water bodies** include riparian or *wetland** systems, lakes, swamps, bogs and springs. [Source: FSC-STD-60-004 V2-0]
Water quality	Timing and volume of water flow and the purity of water determined by a series of standard physio-chemical parameters (e.g., turbidity, temperature, bacterial count, pH, and dissolved oxygen), or by biological parameters (e.g., community composition and functionality), as well as the incidence of disease.
Wetland	Areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated *soil** conditions. *Wetlands** generally include swamps, marshes, bogs and similar areas. [Source: US Environmental Protection Agency]
Woody debris	All woody material, from whatever source, that is dead and lying on the *forest** floor, where it provides important microhabitats and performs various functions of nutrient cycling. *Woody debris** is commonly categorized as large and/or coarse, or fine, and both provide important but different ecological values.
Workers	All employed persons including public employees as well as "self-employed" persons. This includes part-time and seasonal employees, of all ranks and categories, including laborers, administrators, supervisors, executives, contractor employees as well as self-employed contractors and sub-contractors. [Source: ILO Convention 155, Occupational Safety and Health Convention, 1981]
Workers' organization	Any organization of *workers** for furthering and defending the interest of *workers** (adapted from ILO Convention 87, Article 10). It is important to note that rules and guidance on composition of *workers' organization** vary from country to country, especially in relation to those who are considered as rank and file members, as well those who are deemed to have power to "hire and fire". *Workers' organizations** tend to separate association between those who can "hire and fire" and those who cannot. [Source: FSC report on generic criteria and indicators based on ILO Core Conventions principles, 2017]
Worst forms of child labor	Comprises a) all forms of slavery or practices similar to slavery, such as the sale and trafficking of children, debt bondage and serfdom, and forced labor, including forced or compulsory recruitment of children for use in armed conflict; b) the use, procuring, or offering of a child for prostitution, for the production of pornography, or for pornographic performance; c) the use, procuring, or offering of a child for illicit activities, in particular for production and trafficking of drugs as defined in the relevant international

	treaties; d) work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety, or morals of children. [Source: ILO Convention 182, Article 3]

ANNEX B: FSC US Regions Map



ANNEX C: Applicable Laws, Regulations and Nationally Ratified Agreements

Relevant international treaties/agreements to which the United States is a signatory:

- Convention on Nature Protection and Wild Life Preservation in the Western Hemisphere (1940)
- The Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat (1971)
- United Nations Conference on the Human Environment
- Convention Concerning the Protection of the World Cultural and Natural Heritage (Paris, France, 16 Nov 1972)
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (Washington DC, 1973)
- International Plant Protection Convention (IPPC) (1979 Revised Text) (Rome, Italy, 1979)
- Convention on the Conservation of Migratory Species of Wild Animals (Bonn, Germany, 23 Jun 1979)
- UN Declaration on the Rights of Indigenous Peoples (UNDRIP, 2007)

The below is a federal overview; state laws also play an important role in governing *forest** management, permitting, *species** classification, and other aspects of forestry. Please also see 36 CFR—Parks, Forests, and Public Property, which is the US Forest Service's official and complete text of agency regulations. Additionally, Title 16 of the US Code is the *legal** basis governing *conservation** and national parks and *forests**.

Category	**Name of Law/Legislation**
1. Legal rights to harvest	
1.1 Land *tenure** and management rights	● Forest Reserve Act of 1891 ● Organic Act (1897) ● Bankhead-Jones Farm Tenant Act of 1937 ● Multiple-Use Sustained-Yield Act (1960) ● National Forest Management Act (1976) ● Cooperative Forestry Assistance Act of 1978
1.2 Concession licenses	● 36 CFR §223: Sale and disposal of national forest system timber ● This is also largely regulated at the state level

1.3 Management and harvesting planning	● Wilderness Act (1964) ● Bankhead-Jones Farm Tenant Act of 1937 ● National Forest Management Act (1976) ● Cooperative Forestry Assistance Act of 1978 ● Multiple-Use-Sustained-Yield Act of 1960 (MUSYA) ● Federal Land Policy and Management Act of 1976 ● 2012 USFS Planning Rule (36 CFR §219) ● Forest Service Directives: Forest Service Manuals (FSM) and Forest Service Handbooks (FSH) ● Food, Agriculture, Conservation, and Trade Act of 1990 ● Forest Stewardship Act of 1990
1.4 Harvesting permits	● USDA Regulations: 36 CFR §251 and 36 CFR §223 ● See relevant state laws governing harvesting permits
2. Taxes and fees	
2.1 Payment of royalties and harvesting fees	● Knutson-Vandenberg (K-V) Act of 1930 ● The USFS is authorized to charge fees for many uses and services on NFS lands[1]
2.2 Value-added taxes and other sales taxes	*Sales tax is assessed at the state level*
2.3 Income and profit taxes	● Internal Revenue Code of 1986 ● Relevant state taxes
3. Timber harvesting activities	
3.1 Timber harvesting regulations	● Lacey Act (1900) and 2008 amendment ● Multiple-Use-Sustained-Yield Act of 1960 (MUSYA) ● Federal Land Policy and Management Act of 1976 ● National Forest Management Act (1976) ● Cooperative Forestry Assistance Act of 1978 ● Food, Conservation, and Energy Act of 2008 ● 2012 USFS Planning Rule (36 CFR §219) ● USDA Regulations (36 CFR §251)
3.2 Protected sites and *species**	● Lacey Act (1900) ● Endangered Species Act (1973) ● National Historic Preservation Act (1966)

3.3 Environmental requirements	● Lacey Act (1900: 16 USC Ch. 53 §3371–3378) ● Bankhead-Jones Farm Tenant Act of 1937 ● Clean Air Act (1970; 42 USC Ch. 85) ● National Environmental Policy Act (NEPA; 1970; 42 USC Ch. 55) ● Clean Water Act (1972) ● Endangered Species Act (1973) ● Resource Conservation and Recovery Act (1976) ● Cooperative Forestry Assistance Act of 1978 ● Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ● 2012 USFS Planning Rule (36 CFR §219) ● Food, Agriculture, Conservation, and Trade Act of 1990 ● Forest Stewardship Act of 1990
3.4 Health and safety	● Occupational Safety and Health (OSH) Act ● EPA Toxic Substances Control Act (TSCA) Title VI (EPA formaldehyde emission regulation) ● US Housing and Urban Development (HUD) Manufactured Home Construction and Safety Standards (24 CFR §3280) ● 49 CFR Parts 300–399: Regulations of the Federal Motor Carrier Safety Administration (FMCSA)
3.5 *Legal** employment	● Relevant US federal and state labor and employment laws, including but not limited to: ○ Fair Labor Standards Act (FLSA) ○ Immigration and Nationality Act (INA)
4. Third parties' rights	
4.1 *Customary rights**	● Although not explicitly addressed in US regulations, the US is a signatory to the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), which addresses indigenous peoples and customary land rights.
4.2 *Free, Prior, and Informed Consent**	● *Free, prior, and informed consent (FPIC)** is established in international law (UN Declaration on the Rights of Indigenous Peoples), to which the US is a signatory. However, *FPIC** is not addressed explicitly in the US Code. ● U.S. court cases may clarify the standing of *FPIC** in the US. The Supreme Court case *Montana v. United States* held "that tribes have civil jurisdiction over 'nonmembers who enter [into] consensual relationships with [a] tribe or its members' and over nonmembers who threaten or '[have] some direct effect on the

	political integrity, the economic security, or the health or welfare of [a] tribe.'"[2]
4.3 *Indigenous Peoples'* rights**	● 25 USC §1–17, establishing the Bureau of Indian Affairs ● Cooperative Forestry Assistance Act of 1978 and Food, Agriculture, Conservation, and Trade Act of 1990 ● Healthy Forest Restoration Act (2003)
5. Trade and transport	
5.1 Classification of *species**, quantities, qualities	*Classification systems are assessed at the regional USFS level*
5.2 Trade and transport	● Lacey Act (1900) and 2008 amendment ● Endangered Species Act (1973) ● 15 CFR: Commerce and Foreign Trade
5.3 Offshore trading and transfer pricing	● Internal Revenue Code of 1982 ● Countries with transfer pricing regulations generally follow guidelines from the Organisation for Economic Cooperation and Development (OECD) guidelines ● Although the IRS provides rules for transfer pricing, offshore trading is often difficult to regulate by national governments
5.4 Custom regulations	● Homeland Security Act of 2002 and establishment of Customs and Border Protection ● 15 CFR: Commerce and Foreign Trade
5.5 CITES	● Lacey Act (1900) and 2008 amendment ● Endangered Species Act (1973)
6. Due diligence/due care	
6.1 Due diligence/due care procedures	● The Lacey Act (1900) does not contain specific due diligence requirements but requires "due care," which has been used in cases of Lacey Act infringement[3] (i.e., it is the responsibility of those in the timber/forestry industries to ensure practices and trade do not violate the Lacey Act). ● Penalties for violation of the Lacey Act are financial penalties and possible imprisonment.
7. *Ecosystem services**	

	● Food Security Act of 1985 ● Food, Conservation, and Energy Act of 2008 ● Food, Agriculture, Conservation, and Trade Act of 1990 ● National Forest-Dependent Rural Communities Economic Diversification Act of 1990

[1] Riddle, A. (2019): Timber Harvesting on Federal Lands. *Congressional Research Service*
[2] Fredericks, C.F. (2017): Operationalizing Free, Prior, and Informed Consent. *Albany Law Review* 80 (pp. 429–482)
[3] https://www.illegal-logging.info/topics/us-lacey-act

ANNEX D: Dispute Management System Framework

Background on the Structure of the Dispute Resolution *Criteria**

This Standard requires *The Organization** to have a system in place to identify, prevent, and resolve *disputes** related to:

- *Applicable law** (Criterion 1.6);
- Working conditions while working for *The Organization** (Criterion 2.6); and
- Impacts of *management activities** on affected *local communities**, other *affected stakeholders**, and *Native American** groups (Criteria 4.6 and 3.2).

FSC has developed a consistent, standardized framework to address the application of a system for managing (i.e., receiving, managing, and resolving) disputes amongst various parties and aspects of *forest** management. The framework for addressing *disputes** throughout the Standard is provided in the *Indicators** of Criterion 1.6 and is designed to address the various types of *disputes** raised by individuals, communities, and/or *Native American** groups. It is intended to ensure the appropriate level of response and action required is taken by *The Organization**.

FSC has applied this framework to each applicable *Criterion** (1.6, 2.6, 3.2, and 4.6) and supports the use of the same framework to meet the requirements of the *Indicators** in different *Criteria**. The general framework steps identified in Criterion 1.6 and applied in Criteria 2.6, 3.2, and 4.6 are:

1.) A system is in place whereby people can make their *disputes** known to *The Organization** (Criterion 1.6.1).

2.) A general dispute resolution process (see guidance, below) is in place and needs to be adapted through *culturally appropriate** *engagement** prior to implementation. *Disputes** are resolved in a *timely manner** via this process (Criterion 1.6.2).

3.) For Principles 1, 3, and 4 only: If the *dispute** is elevated to a *dispute of substantial magnitude**, then the value or right at *risk** must be maintained/*protected** while the *dispute** is being resolved (Criterion 1.6.2).

4.) Records of *disputes** are kept, as well as outcomes of actions taken (Criterion 1.6.3).

5.) *The Organization** manages and resolves *disputes** in a manner consistent with this Annex (Criterion 1.6.4).

Where *applicable laws** exist for resolving grievances and/or compensation out of court, implementation of these *legal** provisions might suffice to conform with relevant *Indicators** in Criteria 1.6, 2.6, 3.2, and/or 4.6.

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

seek resolution through the court system (if the *dispute** pertains to a *legal** issue). Parties with a *dispute** are always encouraged to first bring the issue forward to *The Organization** for resolution prior to enacting the *Certification Body's** *dispute** resolution system or a *legal** procedure.

Pertinent Definitions

Complaint	The expression of dissatisfaction or concern by any person or organization presented to *The Organization**, relating to its *management activities** or its conformity with the FSC Principles and Criteria, where a response is expected.
Dispute	A *dispute** exists when the parties have exhausted consultative avenues to resolve a *complaint** or other differences and the following occurs: a person or persons whose *rights** or interests are directly affected by *The Organization's** activities gives written notice to *The Organization**, indicating that they wish to pursue a *dispute** resolution process and specifying which *rights** or interests are affected, by which *management activities**, in which location, and what modifications are considered appropriate to avoid or mitigate impacts on the *rights** or interests; OR, *The Organization** gives written notice to the disputant, in order to trigger the *dispute** resolution process and bring closure to the disagreement.
Dispute of substantial duration	*Dispute** that continues for more than twice as long as the predefined timelines in the FSC System (i.e., for more than 6 months after receiving the complaint, based on FSC-STD-20-001).
Dispute of substantial magnitude	*Dispute** that involves one or more of the following: ● Where the negative impact of *management activities** on *local communities'** *legal** rights or on *Native American** groups' *legal** rights or *customary rights** is of such a scale that it cannot be reversed or mitigated ● Where the negative impact of *management activities** to the environment or social welfare is of such a scale and context that it cannot be reversed or mitigated ● Physical violence ● Significant destruction of property ● Presence of law enforcement or armed security contractors ● Acts of intimidation against *workers** and *affected stakeholders** ● A *dispute** can become of substantial magnitude if it is of *substantial duration**, implies a significant number of interests and has a significant negative impact to the *forest** resource/value ● A *complaint** can immediately become a *dispute of substantial magnitude** if it represents a credible, imminent, and irreparable threat to or from any of the above *Disputes of substantial magnitude** are not common and represent the exception.
Engaging/ engagement	The process by which *The Organization** communicates, consults, and/or provides for the participation of *interested* and/or *affected stakeholders**, ensuring that their concerns, desires, expectations, needs, rights, and

	opportunities are considered in the establishment, implementation and updating of the *management plan**.
Good faith	The principle of *good faith** implies that the parties make every effort to reach an agreement, conduct genuine and constructive negotiations, avoid delays in negotiations, respect concluded agreements, and give sufficient time to discuss and settle *disputes**.
Management Activity	Any or all operations, processes, or procedures associated with managing a *forest**, including but not limited to: planning, consultation, harvesting, access construction and maintenance, *silvicultural** activities (planting, site preparation, tending), monitoring, assessment, and reporting.

Guidance for *Organizations**

The following sections provide additional guidance for implementing the *dispute** management framework. For instance, information is provided on *dispute** management as it relates to *Native American** groups, guidance is provided for developing the *dispute** resolution process component of the broader *dispute** management framework, and several rare situations involving *disputes** are clarified.

*Dispute** Management Processes and *Native American** Groups

*Disputes** from *Native American** groups are normally dealt with using the structure as described above. However, when *disputes** from *Native American** groups are related to the implementation of agreements they have with *The Organization*,* these are addressed by the other *Indicators** in Principle 3.

*Dispute** Resolution Process

The design of the *dispute** resolution processes and the related resolution mechanisms should consider the following:

- Account for a wide range of situations, including addressing cases of *disputes of substantial magnitude**.
- The use of different approaches to resolving the *dispute**, which may include a neutral third party to facilitate mediation, negotiation, or other conciliatory processes. These should match the level and nature of the *dispute**.
- Consensual or restorative processes such as mediation, negotiation, or other conciliatory processes where the goal is for the parties to reach agreement are preferred;
- *Disputes** are best dealt with by those closest to the situation and with the relevant parties involved. If there is a *dispute of substantial magnitude**, the response should be tied to the specific area that is under *dispute**.
- In the case of *disputes** arising from the infringement of *Native American** groups' *rights**, an immediate cessation of operations should be part of the resolution mechanism, for as long as is required to establish an appropriate *dispute** resolution process. The intention here is to require that the parties engage in dialogue to properly

identify the nature and scope of the *dispute** and appropriate mechanisms for resolving such a *dispute**.

- Cessation of operations via *disputes of substantial magnitude**: If the *dispute** is or becomes a *dispute of substantial magnitude**, operations may be required to be suspended in the area directly related to where the *dispute** exists. For example, suspending operations may be used as a last resort when the previous actions have failed to resolve the issues, or may be necessary while *The Organization** is working with their *Certification Body** to determine whether planned activities would or would not be in conformance with the Standard. It is then required that the *dispute** resolution process includes mechanisms to address *disputes of substantial magnitude**.

If a *dispute** occurs, *The Organization** is expected to follow the steps required in their *dispute** resolution process, to respond in a timely manner, to document the *dispute** and the process used, and to justify unresolved *disputes**. It is also expected that all parties involved in the *dispute** are working in *good faith** and in a *reasonable** manner, and that all parties can demonstrate the efforts deployed to resolve the *dispute**.

The Standard also requires that *The Organization's** *dispute** resolution processes be *publicly available** to inform parties, at least, of the general process. The Standard does not necessarily require the specific aspects of the *dispute** resolution process implemented with a specific party to be *publicly available**.

For *interested stakeholders**, no *dispute** resolution process is formally required to be put in place. However, the Standard requires *The Organization** to provide opportunities for *engagement** in the planning process of *management activities** upon request. *Interested stakeholders** may also address *complaints** regarding *The Organization's** conformance with FSC standards through *The Organization's** *Certification Body** and *complaints** regarding the FSC system through FSC's *Dispute** Resolution Framework (see FSC-PRO-01-008, *Processing Complaints in the FSC Certification Scheme*).

ANNEX E: Training for *workers

Proportionate to the *scale*, intensity*,* and *risk** of the *forest** operation, *workers** receive training that ensures they are able to:

1.) understand their rights per *Criterion** 2.1; and

2.) recognize instances of sexual harassment and *discrimination** and are aware of the mechanisms available to report such cases (*Criterion** 2.2).

Proportionate to the *scale*, intensity*,* and *risk** of the *forest** operation, *workers** receive training, as applicable to their specific job responsibilities, that ensures they are able to:

3.) implement *forest** *management plans** and operations that comply with *applicable laws** (*Criterion** 1.5);

4.) safely handle and dispose of hazardous substances to ensure that use does not pose health *risks** (*Criterion** 2.3);

5.) safely carry out their respective components of the *management plan** (*Criterion** 2.5);

6.) identify where *Native American** groups have *legal** and *customary rights** related to *management activities** per Indicator 3.1.2;

7.) identify sites of special cultural, ecological, economic, religious, or spiritual significance to *Native American** groups and implement the necessary measures to *protect** them before the start of *forest** *management activities** to avoid negative impacts (*Criterion** 3.5 and *Criterion** 4.7);

8.) identify where *local communities** have *legal** and *customary rights** related to *management activities** (*Criterion** 4.2);

9.) assess potential social, economic, and environmental impacts per Indicator 4.5.1 and develop appropriate mitigation measures per Indicator 4.5.2;

10.) implement activities related to the maintenance and/or enhancement of *ecosystem services**, when FSC Ecosystem Services Claims are used per Indicator 5.1.3;

11.) appropriately handle, apply, and store *pesticides** in accordance with *The Organization's** procedures (*Criterion** 10.7); and

12.) implement *The Organization's** procedures for cleaning up spills of *waste materials** (*Criterion** 10.12).

ANNEX F: Culturally Appropriate Communication and Free, Prior, and Informed Consent (FPIC)

Scope: The following guidance focuses on communication and *FPIC** processes with *Native American** groups that hold *legal** or *customary rights** that may be affected by *forest** *management activitie*s*. The *FPIC** guidance provided would also apply in any circumstances where there are non-*tribal** *traditional peoples** or *forest-dependent** *local communities** that hold *legal** rights which may be affected by *management activities**. Due to the well-established *legal** structure in the United States for property rights, the *rights** of non-*tribal** *traditional peoples** or *local communities** are established within the *legal** system, including any *customary rights**; therefore, for these non-*tribal** groups, *customary rights** do not need to be considered separately. Additionally, while *The Organization** must assess the existence of *rights** held by non-*tribal** *traditional peoples** or *local communities**, there is very limited occurrence in the US of these kinds of *rights** and most *Organizations** will not need to consider *FPIC** with non-*tribal** groups.

NOTE: The below guidance is based on materials developed by a consultant working on behalf of FSC US, following direct in-person interactions with Native American* *groups.*

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PERTINENT DEFINITIONS

Culturally appropriate: Means/approaches for outreach to target groups that are in harmony with the customs, values, sensitivities, and ways of life of the target audience.

Customary rights: Rights that result from a long series of habitual or customary actions, constantly repeated, which have, by such repetition and by uninterrupted acquiescence, acquired the force of a law within a geographical or sociological unit

Forest-dependent: Local communities for whom *forests** provide sites and/or resources that are fundamental for satisfying their basic necessities (i.e., livelihoods, health, nutrition, water); that is, the sites and/or resources provided are irreplaceable (i.e., alternatives are not readily accessible or affordable), and loss of or damage to them would cause serious suffering of, or prejudice to, the community as a whole.

Free, Prior, and Informed Consent (FPIC): A *legal** condition whereby a person or community can be said to have given consent to an action prior to its commencement, based upon a clear appreciation and understanding of the facts, implications, and future consequences of that action, and the possession of all relevant facts at the time when consent is given. *Free, Prior, and Informed Consent** includes the right to grant, modify, withhold, or withdraw approval

Legal: In accordance with primary legislation (*national laws** or *local laws**) or secondary legislation (subsidiary regulations, decrees, orders, etc.). "Legal" also includes rule-based decisions made by *legally competent** agencies where such decisions flow directly and logically from the laws and regulations. Decisions made by *legally competent** agencies may not be *legal** if they do not flow directly and logically from the laws and regulations and if they are not rule-based but use administrative discretion. NOTE: In the United States, treaties and reserved treaty rights are legally binding.

Local communities: Communities of any size that are in or adjacent to the *Management Unit**, and also those that are close enough to have a significant impact on the economy or the environmental values of the *Management Unit** or to have their economies, *rights**, or environments significantly affected by the *management activities** or the biophysical aspects of the *Management Unit**. On *public lands**, this also includes all citizens of the relevant entity (nation, county, city, or state).

Traditional peoples: *Traditional peoples** are social groups or peoples who do not self-identify as indigenous and who affirm *rights** to their lands, *forests**, and other resources based on long-established custom or traditional occupation and use.

***CULTURALLY APPROPRIATE** COMMUNICATION

***Culturally Appropriate** Communication with ***Native American** Groups

Given that each *Native American** group has its own individual culture, government, and associated internal processes, what is *culturally appropriate** for one group may not be for another. The key components of achieving *culturally appropriate** communication include:

1. Gathering information about the group in advance of initiating communication (i.e., some understanding of the group's history, governance, etc.)
2. Learning about and getting to know the group as part of on-going communication
3. Adapting communication practices to make it more *culturally appropriate** for the individual group, based on what is learned
4. Developing and sustaining the relationships built through the communication

When initiating contact and communication with a *Native American** group, the following suggestions may be considered, but should not be interpreted as a comprehensive checklist of actions to be completed:

- Review the group's official online materials (if available).
- Review other resources that provide further understanding of the culture, history, language, and *rights** of the group that are not available from the group's own materials.
- Always use the full correct name of the group as represented by the group in its materials.
- While the group's Chairperson's office is an essential first contact for formal communication, the office may not be responsive to unfamiliar sources and may not have the capacity to respond to all inquiries; therefore, communication channels may need to be established with staff who are interested in the pertinent subject matter (e.g.,

Cultural Resource personnel, *forest** managers) and they may help to facilitate interactions with the group's government officials when applicable.

- *Native American** groups may suggest meeting with cultural leaders in addition to staff or the group's government officials, in order to understand the cultural context of land management on a particular reservation. A Tribal Council may assist in locating cultural leaders.
- Generally, interactions with groups are best conducted as they are with any other government or organization; however, understanding their individual context will be valuable for building a relationship with the group. Individuals interested in engaging with a *Native American** group are encouraged to:
    - attempt to understand the *legal** and social background of the group in question; and
    - attempt to understand the cultural and social background of the reservation and the group's membership (such information is often readily available by searching the Web).
- Remember that while much of the interaction with staff may be with non-*tribal** members, all official decisions must eventually be ratified by the Council.
- Oversight of the Bureau of Indian Affairs/Department of the Interior is important to keep in mind if engagement is related to *forest** *management activities** on *tribal** lands; land *management activities**, and funding for such, are often provided by the federal government.
- Genuine interest in developing a relationship may be demonstrated by in-person communication efforts vs. phone or email.
- For governmental entities that are initiating communications, an important first step is to determine whether there are previously established government-to-government lines of communication or processes that should be observed; this kind of engagement is considered more formal in nature.

Guidance for Addressing a Lack of Response from a *Native American** group to Initial Outreach:

- Remember that the ability of *Native American** groups to respond can be limited by lack of staff or adequate funding.
- Be persistent.
- Be clear regarding expectations or needs.
- If possible, work with staff as well as the group's government office. This may include repeated phone messages, emails (if an address can be obtained), and in-person communication. Once established, a relationship with an employee in the pertinent field (e.g., natural resources, cultural resources) can help to maintain proper communication and connection with the upper-level power structure of the group.
- Attempt to contact and interact with persons of interest in venues with which they are familiar, such as meetings, introductions by third parties, or conventions.
- Obtain advice from others who have previously established relationships with the individuals with whom contact is desired.

- Document contact attempts made and maintain a timeline to prove due diligence has been attempted. If no further communication is planned (due to lack of response), notify the individuals that have been the target of that communication regarding the decision and the potential implications of moving ahead without their feedback. This kind of communication may generate a response.

Culturally Appropriate **Communication with Non-*Tribal* *Traditional Peoples*** **and *Local Communities****

Similar to the above guidance regarding communication with *Native American** groups, the key components of achieving *culturally appropriate** communication include:

1. Gathering information about the *Traditional People** or *Forest-dependent* Local Community** in advance
2. Learning about and getting to know the group as part of on-going communication
3. Adapting communication practices to make it more *culturally appropriate** for the community, based on what is learned
4. Developing and sustaining the relationships built through the communication

When initiating contact and communication with a *Traditional People** or *Forest-dependent* Local Community**, efforts should focus on identifying representatives who have delegated authority from the community, such as a mayor, commissioner, or other elected representative. If this is not possible, other individuals who can represent the community as a whole are preferred, such as community elders or other civic leaders.

FREE, PRIOR, AND INFORMED CONSENT*

Background: The notion of *Free, Prior, and Informed Consent (FPIC)** is drawn from policy recommendations outlined in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and ILO Convention 169. *FPIC** is one of the key recommended policies for interactions with *Indigenous People** in these policy documents. FSC, in its role as the primary standards developer for management of *forests** owned or customarily used by *Indigenous Peoples**, considers *FPIC** "…a right, a principle, and a process to be applied in relations with *Indigenous Peoples** and those who have competing interests for their land and resources." Therefore, the FSC *FPIC** policy strives to provide *Indigenous People** "…the right to participate in decision-making and to give, modify, withhold, or withdraw consent to an activity affecting the holder of this right." FSC also applies *FPIC** policy to other non-tribal *traditional peoples** and *local communities** in certain contexts.

Scope: *FPIC** is required when *The Organization's* management activities** may overlap with or affect a *Native American** group's *legal** rights or *customary rights**, including *rights** of tenure and *rights** of access to resources and *ecosystem services**, both within and external to *Native American* lands and territories**. While very uncommon in the US, *FPIC** is also required if other non-tribal *Traditional Peoples** or forest-dependent *local communities** hold *legal** rights.

STEP 1. Assess the historical and/or current presence of *Native American** groups, *Traditional Peoples*,* and *Local Communities** (see below) within or near the *Management Unit** (MU).

- If none are identified, no *FPIC** is required

- If presence is indicated, clearly identify the *Native American** groups, *Traditional Peoples**, or *Local Communities**, and go to Step 2.

Step 1 Guidance:

- There are essentially no locations in the United States without historical *tribal** presence.
- An internet search that looks for *Native American** groups that now exist or that once existed in a particular locale is likely to turn up several possible qualifying entities. The US Forest Service maintains a comprehensive source of information on current *tribal** lands and lands that were ceded to the US government (https://usfs.maps.arcgis.com/apps/webappviewer/index.html?id=fe311f69cb1d43558227d73bc34f3a32). State Historic Preservation Offices, Native American Heritage Commissions, or the equivalent exist in all states, and their websites and personnel are excellent resources for confirming or identifying such *Native American** groups.
- Groups identified can include a variety of classifications, as described below with guidance regarding subsequent actions:

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

STEP 2. Identify representatives of the *Native American** groups or other groups identified; decide whom to contact and how to vet various contacts.

Step 2 Guidance:

- If neither the official governmental representatives of the group nor the group's government structure can be determined, further investigation may be needed to determine the validity of the group as a potential *rights holder**. Once vetted, *engagement** is best conducted through *tribal** representatives.
- Federally and State-Recognized Tribes should have a *tribal** government in place that is democratically chosen and recognized by the federal or state government. Normally the contact person for the tribe is the Chair or President of the Tribal Council, and in all cases an attempt must be made to contact the Chair or someone in their office. However, the Chairperson's office is typically overwhelmed with requests of all sorts, and often only the most urgent are answered. Practically speaking it is often efficacious to also contact someone in the cultural resource, forestry, or natural resource department of the tribe (see above guidance for *culturally appropriate** communication). It's important that the *tribal** governmental structure be respected by making sure that the Chairperson's office is informed about all communication, but this may be handled by *tribal** staff members once communication is established with them.
- Non-recognized *Native American** groups require more investigation and validation to determine, for instance, if any state or *local** governments acknowledge and validate the *tribal** designation, even if these groups aren't formally recognized by state or federal governments. See the table following the Step 1 Guidance for further considerations about how to determine the validity of a potential *rights holder**.

STEP 3. Do the *Native American** groups claim *legal** and/or *customary rights**, or do other identified groups claim *legal** rights, within or near the *Management Unit** that could be affected by *management activities**?

- If No, no *FPIC** required but the group should be treated as an *interested stakeholder**.
- If Yes, inform the group of proposed *management activities**.

Step 3 Guidance:

- Contact with legally recognized tribes is best conducted through their *tribal** government offices, as described above. It is also helpful to make contact with staff managing *tribal** resources (in addition to any "letters to the Chair"). If contact with a tribe by phone, email, or mail does not receive a response, attempt to make personal contacts and to build personal relationships with *tribal** staff or leaders before proceeding (see guidance for *culturally appropriate** communication above).
- As per FSC procedure, add any non-responsive group to the list of *interested stakeholders** and continue to advise them of proposed activities during stakeholder outreach. As personnel and resources change, *Native American** groups may choose to *engage** even if they have not in the past, thus even if there is no response initially, it is important to continue to include the group in outreach.

STEP 4. Verify claims of *legal** and *customary rights** by *Native American** groups and other identified groups.

- If *legal** or *customary rights** are verified for a *Native American** group, or if *legal** rights are verified for another identified group, go to Step 5.
- If a *Native American** group or other identified group asserts its identity but no *rights** can be verified, add them to the list of *interested stakeholders** and inform the group of

such, but also inform them that only verified *rights** can be considered in terms of *FPIC** and decisions about certification or *management activities** that may affect *rights**.

Step 4 Guidance:

- Even if a *Native American** group does not hold any *legal** rights or *customary rights** they are still an important stakeholder.
- *Traditional People's** groups and forest-dependent *local communities** must demonstrate *legal** rights to resources to be considered for *FPIC**. *Legal** rights can be identified and demonstrated through a title search and examination of historical rights to resources. The State Historic Preservation Office is often the most likely avenue to such research.

STEP 5. Does the *rights holder** wish to engage with *The Organization** regarding the proposed *management activity*(*ies*)*?

- If No, no *FPIC** process at this time.
- If Not Now: a) determine why the *rights holders** are not willing to enter the process; and b) ensure that *management activities** will not violate verified *rights**. *The Organization** should consider approaching the group again if barriers can be overcome.
- If Yes, go to Step 6.

Step 5 Guidance:

- Typically, the intent to obtain *FPIC** is demonstrated through policy and procedures, work plans, and records of communication (or attempted communication) with *rights holders**, when an agreed-upon *FPIC** process is not (or not yet) in place.
- Even if the *rights holder** does not wish to *engage** in an *FPIC** process, it is the responsibility of *The Organization** to ensure that the *rights** in question are not violated.
- If the *rights holder** indicates a desire to *engage** with *The Organization** regarding the proposed *management activity*(*ies*)*, the *management activity*(*ies*)* may not be implemented without the *rights holder's** consent (or consent with conditions).

STEP 6. Through active and *culturally appropriate** *engagement**, move toward a decision regarding the *management activity*(*ies*)*.

Step 6 Guidance:

- The final and distinguishing element of *FPIC** is the "consent" decision. It refers to the decision made by affected *rights holders** and reached through a process of dialogue, deliberation, and community decision-making (by consensus, majority, etc.). The decision involves saying yes, no, or not at this time to a proposed *management activity**. It may include options to apply conditions that, if met, would lead to consent being granted.
- Before beginning the *FPIC** process, certificate holders and *rights holders** may wish to clarify certain elements of the process, such as agreement on:
    - the scope of the *FPIC** process (i.e., which *rights** and *management activities** will be addressed)
    - preferred communication pathways
    - a decision-making format and the decision makers or individuals who will speak for the *rights holder**

    - a coarse timeline for completion
    - what conflict-resolving mechanisms will be used if needed
    - how consent (and any conditions) will be documented
    - what monitoring of the *management activity*(*ies*)* will be implemented, and how the *rights holder** will be *engaged** in the monitoring
- When *FPIC** has not been obtained, it is the responsibility of *The Organization** to demonstrate their best efforts to support a *culturally appropriate* engagement** process with affected *rights holders** that is advancing in *good faith** with the intent of reaching an agreement regarding the proposed *management activities**.
- *FPIC** should be viewed as a process that results in a sustained relationship with the *rights holder** that does not end at the point that a decision regarding the *management activity*(*ies*)* is made.
- It may not be appropriate to ask a *rights holder** in the United States to participate in such a process and then sign a *binding agreement**, as *Native American** groups, in particular, may have already signed treaties and other *binding agreements**.

ANNEX G: Representative Sample Area Methodology

The following guidance provides a methodology for identifying *Representative Sample Areas** (RSA) for *conservation** (i.e., maintaining or enhancing) or *restoration** of *viable** examples of *ecosystems** that would naturally occur within the *Management Unit**. If followed, this guidance will help to ensure conformance with Criterion 6.5. Documentation of the methodology used to establish *RSAs**, and its outcomes, is required per Indicator 6.5.1. If *The Organization** chooses to use a different methodology, documentation of rationale for the equivalency of that methodology will also be needed. Use of *Best Available Information** for *RSA** assessments is also required per Indicator 6.5.1.

This methodology (or an equivalent) is required for each *Management Unit**, with the possible exception of those *Management Units** smaller than 124 acres (50 hectares) when the conditions detailed in Interpretation #9 on the FSC Principles and Criteria (INT-STD-01-001_09) apply (see end of this guidance document).

If the *Management Unit** extends into multiple USFS-defined ecological Sections (Cleland 2007, https://www.fs.fed.us/research/publications/misc/73326-wo-gtr-76d-cleland2007.pdf), completion of this methodology (or an equivalent) is recommended for each Section individually.

If *The Organization** is able to demonstrate that either of the following scenarios are true, the associated *conservation** areas may be considered in combination with the *Management Unit** in Step 2 (*Management Unit** *ecosystem** assessment) and in Step 4 (*RSA** establishment):

a. *The Organization** intentionally scoped *conservation zones** or *protected areas** out of the FSC certificate, but continues to manage them with *long-term** *conservation** objectives; or
b. *The Organization** intentionally transferred ownership of *conservation zones** or *protected areas** previously associated with the *Management Unit** with the purpose of *long-term** *conservation** of those lands.

With the exception of the above-mentioned interpretation, this is the only scenario in which *RSAs** may be established outside of the *Management Unit**.

Notes on terminology:

a. While an "ecosystem" as an ecological concept may be considered at many different scales, for the purposes of this guidance "ecosystem" is defined as "A dynamic complex of plant, animal, and micro-organism communities and their non-living environment interacting as a functional unit." A given terrestrial *ecological system** will typically manifest itself in a landscape at intermediate geographic scales of tens to thousands of acres and persist for 50 or more years. Therefore, these units are intended to encompass common successional pathways for a given *landscape** setting. For the purposes of *Representative Sample Areas**, this scale of representation is a mid-level classification, roughly equivalent to the "Group" level in the National Vegetation Classification (http://usnvc.org/explore-classification/)
b. "Restoration" does not require the creation of a particular pre-existing *ecosystem** when this would be infeasible due to situations such as the following:
    i. Climate or other abiotic changes (e.g., hydrology, loss of substrate) have occurred that make it infeasible to *restore** a particular community type
    ii. Presence of an *invasive species**, pest, or disease that makes *restoration** infeasible

iii. It is cost prohibitive to *restore** that *ecosystem**

iv. Successful *restoration** would require the collaboration of other/adjacent landowners who are unwilling to partner

v. *Restoration** of a *viable** *ecosystem** is dependent on ecological functions that are not possible to *restore**, create, or mimic

NOTE: Regardless of the feasibility of *restoration** of a particular *ecosystem**, conformance with the Standard requires *The Organization** to take reasonable measures to mitigate and control ongoing, and prevent future, environmental degradation in the *Management Unit** that results from a previous owner's or *Organization's** activities.

c. "Viable" or "viability" means that the critical components and functions of a dynamic, stochastic system at any time remain in a domain where the future existence of these components and functions is highly probable.

d. "Permanent protection" refers to *protection** levels that are equivalent to *GAP Status** 1 and *GAP Status** 2, and sometimes *GAP Status** 3. Where *GAP Status** 3 lands are under management goals and *management activities** that support *conservation** and/or *restoration** of native *ecosystems**, these lands may be considered. For *GAP Status** 3, *The Organization** must demonstrate how the land is being protected to meet its *conservation** and/or *restoration** objectives at present and in the *long term**.

Step 1. Extent of *RSA within the *Management Unit****

Determine the appropriate extent of *RSA within the *Management Unit**, based on the characteristics of the *Management Unit** and the *landscape** in which it occurs.**

Per Indicator 6.5.3, *Management Units** that are larger, occur in *landscapes** with less *protection** for native *ecosystems** (all *ecosystems** combined), and/or have more intensive management are expected to make greater contributions to *conservation** and/or *restoration** of native *ecosystems**. Figure 1 provides two suggested pathways for conformance with Indicator 6.5.3—one based on the percent of the *Management Unit** on which *RSA** are established, and the other based on the number of *RSA** established within the *Management Unit** (i.e., the number of *RSA** per native *ecosystem** per ecological section).

Following Figure 1:

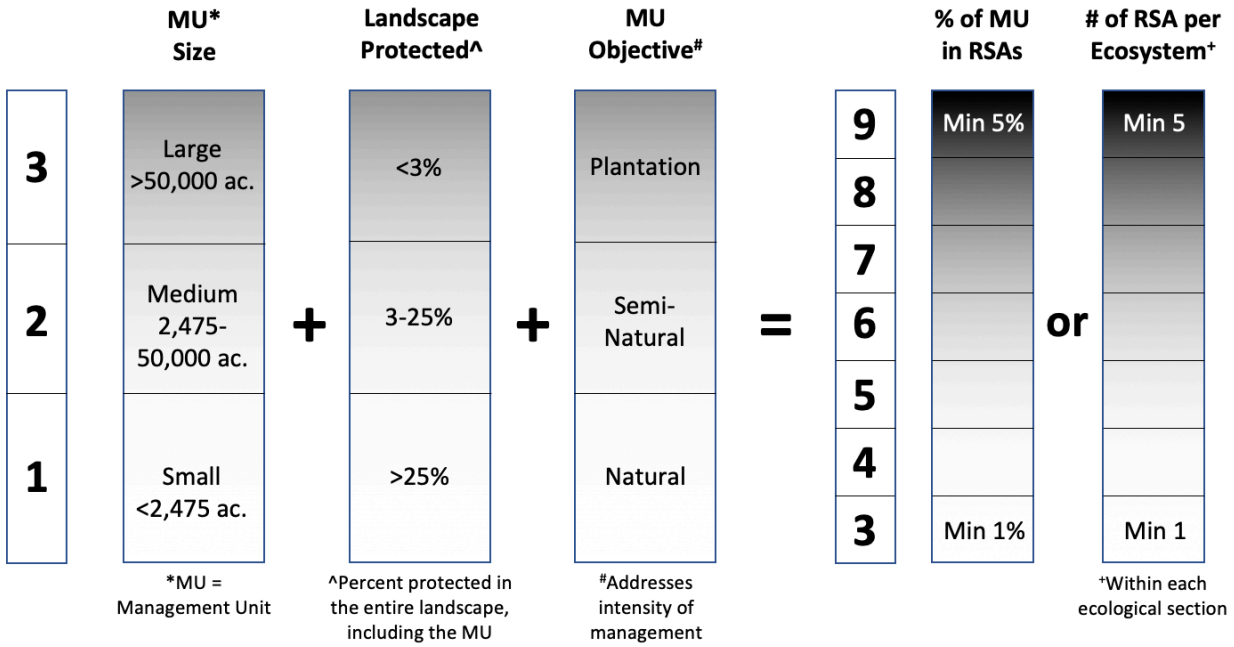
a. For each of the left three columns, determine which cell best represents the *Management Unit**.

b. Add together the associated values (1, 2, or 3) of the selected cells in each column.

c. Reference the right-most two columns to estimate the appropriate extent of RSA in the *Management Unit**.

While Figure 1 suggests a minimum extent of *RSA**, if additional areas qualify as *RSA** (above this minimum), *The Organization** is expected to assess those additional areas as *RSA**, within the context of Step 4.

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



Step 2. *Management Unit* Ecosystem* Assessment

Determine which native *ecosystems (forested and non-forested, rare and common) would naturally occur within the *Management Unit*.**

Consider which native *ecosystems** currently occur, which occurred historically, and which could potentially occur within the *Management Unit** given current and future conditions. This includes both those *ecosystems** that already occur as *viable** examples and those that could be *restored** to such a status (considering the guidance on *restoration** in the "Notes on Terminology" above).

Step 3. *Landscape* Ecosystem* Assessment

For each of the *ecosystems identified in Step 2, gather information about the *ecosystem's** occurrences in the *landscape** within which the *Management Unit** exists.**

Note that the *Management Unit** itself is part of the *landscape** and therefore should be considered as part of this assessment. Information that will inform Step 4 includes:

a. Whether or not any examples of the *ecosystem** currently occur within the *landscape**
b. The percentage of the *ecosystem** examples that occur within the *landscape** that are permanently *protected**
c. The percentage (estimated) of the historical extent of the *ecosystem** that currently remains within the *landscape**
d. Whether there are any under-represented ecological conditions (e.g., *successional** stages, plant community types) for the *ecosystem**

Note: Links to example sources of *Best Available Information** are provided below.

Step 4. *Representative Sample Area Establishment**

Within the *Management Unit, identify and delineate (i.e., map) *RSA** for *conserving** or *restoring** *viable** examples of *ecosystems** identified in Step 2, given the outcomes from Step 1 regarding the appropriate extent of *RSA** in the *Management Unit**, and the information gathered in Step 3.**

Overall, within *The Organization's** established *RSA**, the expectation is for a greater emphasis on *ecosystems** and ecological conditions that are in greater need of *conservation** assistance. Regardless of the pathway taken to estimate the appropriate extent of *RSA** in Step 1, this means emphasizing (i.e., larger examples and/or a greater number of examples) *ecosystems** and ecological conditions where the *Management Unit** may provide the greatest *conservation** value, even if this means smaller and/or fewer examples of other *ecosystems** identified in Step 2.

Considerations for which ecosystems to emphasize:

a. *Ecosystems** with lower levels of *protection** in the *landscape** are expected to be emphasized over *ecosystems** with higher levels of *protection** in the *landscape**.

b. *Ecosystems** with a smaller extent remaining in the *landscape** are expected to be emphasized over *ecosystems** with greater extent remaining in the *landscape**.

c. Establishment of *RSA** for an *ecosystem** identified in Step 2 is not essential if:

    i. More than 25% of the examples within the *landscape** (including the *Management Unit**) are permanently *protected**; AND

    ii. Excluding the *ecosystem** from *RSA** establishment will allow for greater *conservation** or *restoration** of less protected *ecosystems**, or of *ecosystems** with a smaller extent remaining in the *landscape**.

d. Establishment of *RSA** for an *ecosystem** that is very common within the *landscape**, even if not well *protected**, is not essential.

e. For *ecosystems** where *restoration** is infeasible (per the guidance in "Notes on Terminology" above), establishment of *RSA** for restoring the *ecosystem** is not expected.

f. If using a percentage of the *Management Unit** as the basis for appropriate extent of *RSA** (per Step 1), and establishment of *viable** examples of all *ecosystems** is not possible within that percentage, the above bulleted considerations will guide which *ecosystems** should be priorities for *RSA** establishment.

g. If using a numerical count of *RSA** as the basis for appropriate extent of *RSA** (per Step 1), this is the ideal number of *RSA** per native *ecosystem** per ecological section that would be established within the *Management Unit**, but the above bulleted considerations may suggest that some *ecosystems** should be emphasized over others (i.e., resulting in an even greater number of examples than the ideal for these *ecosystems**, and possibly a lower number of examples for the others).

Considerations for each *RSA**:

a. For *ecosystems** that have multiple ecological conditions (e.g., *successional** stages, plant community types), *RSAs** are expected to focus more on under-represented conditions (Step 3).

b. There is no set appropriate acreage for an *RSA**; the size may range from a few acres to hundreds of acres depending on the *ecosystem**. Generally the size should be large enough to be *viable**.

c. A single larger *RSA** is generally preferable to multiple smaller *RSAs**.

d. For *ecosystems** that would naturally occur in mosaics, identifying *RSAs** that are adjacent to other *RSAs** is preferable to establishing *RSAs** in isolation.

Step 5. *Representative Sample Area Management**

The primary purpose of an *RSA is to *conserve** (i.e., maintain or enhance) or *restore** a particular native *ecosystem**, as an ecological reference area.**

*RSAs** may also serve to *conserve** or *restore** an under-represented ecological condition, and/or serve as a set of *protected areas** or *refugia** for *species**, ecological communities, and community types not captured in other parts of this Standard (as identified in the definition of *RSA**). Management of *RSAs** to achieve all of these purposes may range from a more "hands-off" scenario to a more intensive management scenario (such as when *restoring** barrens or savanna), depending on the *ecosystem** and the characteristics of that *RSA**. Generally, activities that do not detract from the purpose(s) of the *RSA** are allowable.

When *management activities** (including timber harvest) create and maintain conditions that emulate a mature *forest** or other *successional** phases that may be under-represented in the *landscape**, the *management strategies** that created those conditions may be used to maintain them, and the area may be considered as a representative sample for the purposes of conformance with Criterion 6.5. *RSA** serving as ecological reference areas will generally not be managed for timber harvest, unless it is a part of the conservation strategy to maintain or enhance the *ecosystem**. Threats such as wildfire, natural pests, or pathogens may also warrant *management activities** as a means to conserve the *ecosystem**.

Sources of *Best Available Information**:

a. Gap Analysis Project (GAP)
(online access via https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap)

b. PAD-US, the Protected Areas Database
(online access via https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap)

c. State Heritage Programs
find state-specific contact information online via
https://www.natureserve.org/natureserve-network/directory#node-landing-page-directory-group-tabs-organizations)

d. NatureServe and NatureServe Explorer (online access via https://www.natureserve.org)

e. Federal, State, Tribal, and local agencies, such as the following (among many others):

   i. USFWS Environmental Conservation Online System (https://ecos.fws.gov/ecp/)

   ii. USFS Forest Inventory and Analysis program (https://www.fia.fs.fed.us)

   iii. USFS Regional Research Stations (https://www.fs.fed.us/research/)

   iv. State Wildlife Action Plans (https://www.fishwildlife.org/afwa-informs/state-wildlife-action-plans)

   v. Tribal natural resources departments

   vi. State wildlife agencies

vii. Landscape Conservation Cooperatives (https://lccnetwork.org)

f. Global, national, regional, state, and local conservation organizations, such as the following (among many others):
   i. The Nature Conservancy, including state chapters (https://www.nature.org/en-us/)
   ii. World Wildlife Fund (https://www.worldwildlife.org)
   iii. National Wildlife Federation, including regional centers and state affiliates (https://www.nwf.org)
   iv. Regional and local land conservancies (https://www.landtrustalliance.org)
   v. Conservation Districts (https://www.nacdnet.org)
g. Regional planning efforts (e.g., watershed planning organizations/coalitions)
h. Universities

Relevant Interpretation:

Code	INT-STD-01-001_09 (See also INT-STD-20-007_45)
Requirement (s)	FSC Principles and Criteria for Forest Stewardship V5-2, Criterion 6.5
Publication date	03. June 2015; amended on 14. March 2016; clarification note added on 14. July 2017; wording in question a) modified on 24.January 2018, replacing 'Management Unit' by 'the group' to clarify the original intent of the interpretation; Update on 23. July 2020 to add the question and answer on forest landscape and to remove the reference to P&C V4.

a) Can a SLIMF owner or group scheme meet set-aside requirements outside the group?

b) If so, does a SLIMF owner or group scheme providing financial and other assistance to existing conservation areas within the forest landscape, constitute compliance with criterion 6.4?

c) How is the forest landscape defined?

a) Yes, if there are insufficient or no representative samples areas within the Management Unit (MU), and under the following conditions:

- The MU is smaller than 50 ha;
- The Organization shall identify rare and threatened species and their habitats in the MU. When they exist although are insufficient in size, measures for their survival and viability shall be identified and put in place.
- The outside area is in the same forest landscape.
- Sites to be conserved outside of the MU are representative samples of existing ecosystems.

- The outside area is not commercially harvested and is under a legal protection status, OR there is a binding contract between the Organization and the owner of the outside area to:
    - Protect the area in its natural stage;
    - Mark the boundaries of the area in the field and on maps;
    - Allow certification bodies to access area for inspection.

b) Financial assistance alone does not constitute compliance with the requirements of criterion 6.5. Some conservation efforts have to be demonstrated within the MU. Other examples of conservation efforts may be presented to PSU for evaluation on a case by case basis.

c) For the purpose of this interpretation, the forest landscape is defined as the quaternary water catchment area. If defining the boundaries of a quaternary water catchment area is not feasible, other delineations for defining the forest landscape may be used, based on vegetation zones or other biophysical characteristics reflecting the natural conditions in the country.

Note: This interpretation does not eliminate the option for SLIMF owners to meet the requirement of min. 10% Conservation Area Network at the level of the group entity within a group certification (see: FSC-STD-20-007, clause 5.3.6).

ANNEX H: Conservation Areas Network

The *Conservation Areas Network** (CAN) is a new concept first identified in the International Generic Indicators (IGIs; FSC-STD-60-004) for FSC Principles and Criteria Version 5 (P&C V5). Generally, the *CAN** is a set of areas within *The Organization's** *Management Unit** that are managed primarily to *conserve** environmental or cultural values for the *long term**, (i.e., they are specifically designated for reaching objectives other than timber production). The *CAN** does not require additional *conservation** outcomes so much as it puts together a complete picture of *conservation**-oriented objectives, composed of various *conservation zones** and/or *protected areas** recognized and required by specific elements of the Standard. However, per Indicator 6.5.5, the *CAN** is to comprise at minimum 10% of the *Management Unit** and therefore *The Organization** will need to establish additional areas if below this minimum threshold. While termed a "network," the areas that make up the *CAN** do not need to be spatially connected.

Areas designated as part of the *CAN** should be identified in a single section of the *management plan**.

Table 1 identifies the areas that may be designated as part of the *CAN** and their associated *Criteria**. Unlisted areas may be included in the *CAN** if aligned with the *CAN** definition; determination of alignment will be the responsibility of the *Certification Body**.

Small and/or Low Intensity Managed Forest (SLIMF) operations that are part of a group certification scheme may meet the minimum 10% requirement at the level of the group entity (per FSC-STD-20-007, clause 5.3.6).

If *The Organization** is able to demonstrate either of the following scenarios are true, the associated *conservation** areas may be considered in combination with the *Management Unit** for the purpose of designating areas to be part of the *CAN**.

a. *The Organization** intentionally scoped *conservation zones** or *protected areas** out of the FSC certificate because they were already adequately protected; or
b. *The Organization** intentionally transferred ownership of *conservation zones** or *protected areas** previously associated with the *Management Unit** with the purpose of *long-term** *conservation** of those lands.

The acreage of the scoped-out or transferred lands must also be added to the acreage of the *Management Unit** for the calculation of what is needed to achieve the minimum 10% requirement per Indicator 6.5.5.

Definitions:

> **Conservation/Protection**: These words are used interchangeably when referring to *management activities** designed to maintain the identified environmental or cultural values in existence *long-term**. *Management activities** may range from zero or minimal interventions to a specified range of appropriate interventions and activities designed to maintain, or compatible with maintaining, these identified values.
>
> **Conservation Areas Network:** Those portions of the *Management Unit** for which *conservation** is the primary and, in some circumstances, exclusive objective; such areas include *Representative Sample Areas**, *conservation zones**, *protection areas**, *connectivity** areas, and *High Conservation Value Areas**.

Conservation Zone: Areas designated within which maintenance and/or *restoration** of such *species** and community type(s) are the highest priority. Harvesting timber, other *management activities**, and other uses are allowed within *conservation zones** if they do not detract from maintenance or enhancement of the *species** or community type(s).

Protected Areas: A portion of the forest of special biological, cultural, or historical significance that is designated, mapped, and managed principally to *protect** its biological, cultural, or historic attributes. Only *management activities** (including logging) implemented to achieve ecological improvements are allowed in *protected areas**.

Table 1. Summary of potential *Conservation Areas Network** inclusions based on the FSC US National Forest Stewardship Standard (V2-0)

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

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

ANNEX I: Plantation vs. Natural and Semi-Natural Forest

Background

FSC supports the responsible management of existing *plantations** and the products derived from harvesting activities in these areas as a strategy to complement *conservation** and the sustainable use of native *forests**. As global consumption of *forest** products continues to grow, responsibly managed *plantations** certified by FSC can play a crucial role in ensuring their supply is sustainably sourced. While *plantations** cannot replace the richness, stability, and beauty of native *forests** or the complexity of the services they provide, applying the FSC standards to them ensures their management is defined by transparency and fairness, and minimizes negative environmental and social effects. Since 1994, FSC has prohibited *conversions** of *forests** to *plantation**. Therefore, any *plantations** converted after 1994 are ineligible for FSC certification (with very limited exceptions, as indicated per Criterion 6.10).

Purpose of Annex

This annex represents an update of the Plantation Classification guidance provided in the 2010 FSC US Forest Management Standard (Appendix G). It is not the intention of this update to change how *plantations** are defined in the US, nor to move the threshold between *plantation** and *semi-natural forest**. The purpose of the update is to provide greater assistance and greater clarity for *The Organization** and *Certification Bodies** as questions arise regarding FSC-certified lands, or lands being assessed for certification.

It is not the expectation that existing FSC-certified *Management Units** will be re-evaluated for *plantations** based on this new guidance. It is also not expected that once a *forest** is determined to be *plantation** or *natural forest*/semi-natural forest** that it will be reviewed again, unless there is a significant change in *management objectives** or *management activities**.

Guidance on the Classification of *Plantations**

The presence of most of the principal characteristics and key elements of native *forest** *ecosystems** is primary to discerning *natural forests** or *semi-natural forests** from *plantations**. Therefore, a "planted *forest**" is not necessarily a "*plantation**" since it may have most of the principal characteristics and key elements of native *forest** *ecosystems** endemic to an area. Additionally, given that the *intensity** of *management activities** may influence the presence of these characteristics/elements, classification of a *forest** as a *plantation** should be based on the presence or absence of these characteristics/elements.

As stated in the "plantation" definition, there are three situations which, except for highly extenuating circumstances, will always indicate that the *forest** in question is a *plantation**. In all other cases, a *forest** is determined to be either a *natural forest** or *semi-natural forest**, or a *plantation**. This determination is made by evaluating the degree to which it provides the principal characteristics and key elements of native *forest** *ecosystems**, as compared to a natural *stand** of similar *forest** type and *successional** stage. If a particular *forest** does NOT hold these attributes, it must be clear that the absence of the attributes is a result of *silvicultural** treatments for it to be determined to be a *plantation**. Absence of these attributes could also be due to pests/disease, *catastrophic natural disturbances**, or other situations out of the control of *The Organization**. *Silvicultural** treatments that could contribute to the absence of native *forest**

*ecosystem** attributes (and therefore to the characterization of a *stand** as a *plantation**) are listed later in this annex under the section “Management Practices Related to *Plantations**.”

Therefore, a *plantation** is identified when a *stand** does not provide most of the principal characteristics and key elements of native *forest** *ecosystems** relative to a *natural forest** *stand** AND it is clear that the absence of these attributes is a result of *silvicultural** treatments, such as those *plantation** management practices listed below.

Since almost all of the noted characteristics/elements are very difficult to measure directly, especially in the short time frame of an audit, *The Organization** and *Certification Bodies** must use professional judgment to evaluate sites for these characteristics/elements as well as keep abreast of research that is designed to specifically measure the effects of various *silvicultual** treatments on them.

Pertinent definitions

Plantation: A *forest** area established by planting or sowing with using either *native species** or *non-native species**, often with one or few *species**, regular spacing, and even ages, and which lacks most of the principal characteristics and key elements of native *forest** *ecosystems**. The use of establishment or subsequent management practices in planted *forest** *stands** that perpetuate the *stand**-level absence of most principle characteristics and key elements of native *forest** *ecosystems** will result in a *stand** being classified as a *plantation**. Except for highly extenuating circumstances the following are classified as *plantations**:

- cultivation of *non-native species** or recognized non-native sub-species, except when used in conformance with Indicator 10.2.2;
- block plantings of cloned trees resulting in a major reduction of within-*stand** genetic diversity compared to what would be found in a natural *stand** of the same *species**; and
- cultivation of any tree *species** in areas that were naturally non-forested *ecosystems**.

Semi-natural forest: A *forest** *ecosystem** with many of the characteristics of native *ecosystems** present. *Semi-natural forests** exhibit a history of human disturbance (e.g., harvesting or other *silvicultural** activities), are very common in the United States, and include a considerable amount of unmanaged, and most of the managed, *forest** land other than *plantations**.

Natural Forest: *Natural forests** include *old growth** and *primary forests** as well as managed *forests** where most of the principal characteristics and key elements of native *ecosystems** such as complexity, structure, wildlife, and *biological diversity** are present.

Principal Characteristics and Key Elements of Native *Forest** *Ecosystems**

The term “principal characteristics and key elements of native *forest** *ecosystems**” refers to the suite of characteristics that are typically found in *natural forests** and *semi-natural forests**, but not in *plantations** (as defined in this Standard). These characteristics/elements will differ by *forest** type, *successional** stage, and the past management history of the site. Note that some of these characteristics/elements are not seen until the mid-development (understory re-initiation) stage, given allowances for historic range of natural variation.

Assessment of the presence or absence of the principal characteristics and key elements of native *forest* ecosystems** should be done at the *stand** level, focusing on a representative sample of *stands** of varying stages of *succession** within the *Management Unit**. The degree of presence or absence of the characteristics/elements in the sampled *stands** should be assessed relative to a *natural forest* stand** of the same *forest** type, *succession** stage, and site class. Some factors need to be assessed at the *Management Unit** spatial *scale*.* There may be exceptions when the particular characteristic/element is not possible due to the size of the *Management Unit**.

The following provides attributes and practices that are associated with each of the five 'principal characteristics and key elements of native *forest* ecosystems**' (PCKE) to be assessed, along with guidance for determining if the characteristic/element is effectively present. If all five of the characteristics/elements are present, then the *stands** in question are *natural forest** or *semi-natural forest** and not *plantation**. If all five are not present, then the cause for their absence must be determined before making a final determination. If due to *silvicultural** treatments (such as those provided in the next section below), then the stands are *plantations**; if due to other reasons, then the stands may still be classified as *natural** or *semi-natural forest*.*

1. **PCKE: Within-*Stand* Species** Diversity**
   If three (3) of the following practices and/or attributes are present, this PCKE may be considered present.
   a. *Species** Diversity: Monoculture is avoided in planting, thinning, or other *management activities** in *forest** areas where single-*species* forest* stands** are not found naturally. Multiple *species** are maintained as the primary *forest** type on sites normally occupied by multiple-*species* forests**. Number of tree *species**, and their relative distribution, is similar to what would be found in a natural *stand** of the same *forest** type and of the same *successional** stage.
   b. *Native Species**: *Natural forests** are composed of *native species**. Regardless of the number of tree *species** present, a *natural forest** is characterized by a predominance of *species** that are naturally occurring on the site, and a corresponding absence or scarcity of non-*native species**.
   c. Relative *Species** Composition: *Silvicultural** systems purposefully result in *stands** with dominant tree *species** consistent with dominant *species** associated with *natural forest* ecosystems** occurring on similar sites with a similar *successional** stage.
   d. *Silvicultural** systems maintain or achieve tree *species** composition (relative abundance of *species**) consistent with the corresponding native *forest** types occurring on similar sites.
   e. Understory *plant community* species** richness, abundance, and distribution are similar to what would be found in a natural *stand** of the same stage of *stand* succession** and on a similar site.

2. **PCKE: Within-*Stand* Structural Diversity****:**
   If four (4) of the following practices and/or attributes are present, this PCKE may be considered present.
   a. Variability in tree density and age of trees is similar to what would be found in natural *stands** of the same *successional** stage and site class.
   b. The physical characteristics (i.e., size and shape) of trees are similar to *natural forest** conditions of the same *successional** stage and site class.

c. Understory plant community structure and density is similar to natural *stand** conditions of the same *successional** stage and site class.
d. Size and distribution of *snags*,* den trees, and downed, coarse, and fine *woody debris** are consistent with the stage of *stand** *succession** and disturbance regimes for native *forest** types occurring on similar sites.
e. *Stands** contain small patch openings (e.g., occupied by meadows, vernal pools, non-commercial trees, *wetlands**), that provide *structural diversity** consistent with native *forest** types occurring on similar sites.
f. *Even-aged silviculture** is only employed on *forest** types that typically or regularly regenerate as even-aged *stands** naturally through *stand**-replacing events.
g. *Stand** management regimes provide for tree *retention*,* and are characteristic of *natural disturbance regimes** referred to in Criterion 6.3.

3. **PCKE: Natural Ecological *Succession**
If three (3) of the following practices and/or attributes are present, this PCKE may be considered present.
a. *Stand** management regimes allow for natural *successional** pathways.
b. *Stands** are managed at least to the understory tree re-initiation stage prior to the *regeneration (final) harvest*,* unless early harvest is being implemented for the purposes of achieving PCKE 4.
c. *Stand** management precludes reliance upon systematic intensive use of *chemical pesticides** and/or *fertilizers** to achieve *management objectives*.*
d. *Stand** management regimes exclude intensive mechanical site preparation.

4. **PCKE: *Landscape** Level Diversity**
If one (1) of the following practices and/or attributes is present, this PCKE may be considered present.
a. *Stands** (including planted *stands**) within the *Management Unit** collectively provide diversity in the stages of *succession** between *stands** ranging from the *stand** initiation stage to at least the understory re-initiation stage.
b. Representative variation in the *intensity** and *scale** of *silvicultural** practices is consistent with disturbances in native *forest** types on similar sites (e.g., fire, windthrow, disease, insects)

5. **PCKE: Genetic Diversity**
If one (1) of the following practices and/or attributes is present, this PCKE may be considered present.
a. *Native species** suited to the site are selected for planting. A *reasonable** investment is made to source *local** seeds of known provenance for planting stock. The use of non-local seed sources is justified.
b. *Non-native species** are only used when ecologically beneficial and on a limited *scale*.* In the context of non-SLIMF *Management Units*,* "limited" is consistent with a "very limited portion" as defined in the glossary.

Collectively, these characteristics are considered definitive for native *forest** *ecosystems** throughout the US. However, the quantitative representations of each of these characteristics on a given site exist along a spatial and temporal continuum ranging from abundant to marginally present depending on the *forest** type, stage of *succession**, the range of natural variation associated with the *forest** type, and the past management history.

Management Practices Related to *Plantations**

Management practices that could contribute to the absence of native *forest** *ecosystem** attributes and to the characterization of a *stand** as a *plantation** include:

a. Alteration of site hydrology or *soil** structure to establish tree *species** that would not establish in the absence of this alteration (e.g., deep *soil** disturbance during site preparation such as bedding, ripping, and other alterations of site hydrology or *soil** structure). This does not include *restoration** activities
b. Application of *fertilizers** more than one time during a single rotation
c. Systematic use of, and reliance on, *chemical pesticides**
d. *Silvicultural** practices that result in less than 50% of naturally occurring tree *species** maintained (or recruited and maintained) and well-distributed throughout the *stand**
e. *Silvicultural** practices that purposefully exclude dominant tree *species** representative of *native ecosystems** historically occurring on the site
f. A single tree *species** is maintained as the primary *forest** type on sites normally occupied by multiple-*species** *forests**
g. *Silvicultural** practices that purposely eliminate native understory *species** prior to crown closure or commercial harvest
h. Use of non-native tree *species** for regeneration
i. Cultivation of trees, of any *species**, in areas that were naturally non-forested (where trees otherwise would not exist)
j. Monoculture plantings of cloned trees that result in significant reductions of within-*stand** genetic diversity relative to *natural forest** conditions
k. Rotation lengths short enough to prevent *stands** from development into understory reinitiation stages

Annex J: Monitoring Impacts on Social and Environmental Values

Indicators 6.6.4, 9.4.1, 10.2.2, 10.3.2, 10.7.5, and 10.8.1 explicitly require monitoring and therefore must be addressed in the monitoring protocol. While the other elements of this annex are not explicitly required in any *Indicator**, monitoring at some level (for applicable elements) will most likely be needed for conformance with and/or demonstration of conformance with the rest of the Standard. Therefore, this annex provides a structure to assist *The Organization** with developing its monitoring protocol per Indicator 8.2.1.

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

1) Monitoring per Indicator 8.2.1 is sufficient to identify and describe social impacts of *management activities**, including, where applicable:
    i. Evidence of illegal or unauthorized activities (Criterion 1.4) and compliance with *applicable laws**, *local laws**, *ratified** international conventions, and *obligatory codes of practice** (Criterion 1.5);
    ii. Outcomes of *disputes** (Criterion 1.6, Criterion 2.6, Criterion 4.6);
    iii. Programs and activities regarding *workers'** rights (Criterion 2.1), occupational health and safety (Criterion 2.3), payment of wages (Criterion 2.4), and *workers'** training (Criterion 2.5);
    iv. *Gender equality**, sexual harassment, and gender *discrimination** (Criterion 2.2);
    v. When *pesticides** are used, the health of *workers** exposed to *pesticides**, consistent with *The Organization's** Environmental and Social Risk Assessments for the *pesticides** used (Criterion 2.5 and Criterion 10.7);
    vi. Identification of *Native American** groups and *local communities** that hold *rights** applicable to the *Management Unit** (Criterion 3.1 and Criterion 4.1), engagement with *rights holders** to achieve consent for *management activities** that affect their *rights** (Criterion 3.2 and Criterion* 4.2), and relations with (Criterion 3.2, Criterion 3.3 and Criterion 4.2) *Native American** groups and/or *local communities**;
    vii. *Protection** of sites of special cultural, ecological, economic, religious, or spiritual significance to *Native American** groups and *local communities** (Criterion 3.5 and Criterion 4.7), and persistence of areas of special significance and associated values of significance to *Native American** groups (Criterion 3.1 and Criterion 3.5);
    viii. Use of *traditional knowledge** and *intellectual property** (Criterion 3.6);
    ix. *Local** economic and social development (Criterion 4.2, Criterion 4.3, Criterion 4.4, Criterion 4.5) and use of *local** processing, *local** services, and *local** value-added manufacturing (Criterion 5.4);
    x. Production of diversified benefits and/or products (Criterion 5.1), including an inventory system that documents: a) *species**, b) volumes, c) stocking, d)

regeneration, e) *stand** and *forest** composition and structure, and f) timber quality;

xi. Actual vs. projected annual harvests of timber and *non-timber forest products** (Criterion 5.2) and *long-term* economic viability** (Criterion 5.5); and

xii. Maintenance and/or enhancement of *ecosystem services** (Criterion 5.1) and *High Conservation Values** 5 and 6 (identified in Criterion 9.1).

2) Monitoring per Indicator 8.2.1 is sufficient to identify and describe the environmental impacts of *management activities**, including, where applicable:

i. Results of regeneration activities (Criterion 10.1) and *silvicultural** activities (Criterion 10.5);

ii. Use of ecologically well-adapted *species** and *non-native species** for regeneration (Criterion 10.2), and any adverse impacts associated with the use of *non-native species** (for regeneration or other purposes) including, when applicable, impacts outside the *Management Unit** resulting from use of *non-native species** within the *Management Unit** (Criterion 10.3);

iii. Confirmation that *genetically modified organisms** are not being used (Criterion 10.4);

iv. Impacts from use of *fertilizers** (Criterion 10.6), *pesticides** (Criterion 10.7), and/or *biological control agents** (Criterion 10.8);

v. Impacts of infrastructural development, transport activities, and *silviculture** on *rare, threatened and endangered species**, *habitats**, *ecosystems**, *landscape values**, water, and *soils** (Criterion 6.7 and Criterion 10.10);

vi. Impacts of harvesting and extraction of timber on *non-timber forest products**, environmental values identified per Indicator 6.1.1, merchantable wood waste, and other products and services (Criterion 10.11); and

vii. Environmentally appropriate disposal of *waste materials** (Criterion 10.12).

3) Monitoring per Indicator 8.2.1 is sufficient to identify and describe changes in environmental conditions, including, where applicable:

i. Environmental values, ecosystem functions and *ecosystem services** identified per Indicator 6.1.1, including carbon sequestration and storage (Criterion 6.1) and including the effectiveness of actions identified and implemented to prevent, mitigate, and repair negative impacts to these environmental values (Criterion 6.3);

ii. *Rare, threatened, and endangered species** and their *habitats** (Criterion 6.4), *representative sample areas** and components of the *conservation areas network** (Criterion 6.5), naturally occurring *native species** and *biological diversity** (Criterion 6.6), water courses, *water bodies**, water quantity and water quality (Criterion 6.7), and the effectiveness of actions implemented to *conserve** and/or *restore** these values;

iii. *Landscape values** (Criterion 6.8) and *High Conservation Values** 1 to 4 (identified in Criterion 9.1) and the effectiveness of actions implemented to maintain and/or *restore** them;

iv. Conversion of *natural forest** or *semi-natural forest** to *plantations** or to *non-forest** (Criterion 6.9) and the status of *plantations** established after 1994 (Criterion 6.10);

v. Location, presence, and abundance of *invasive species** and the effectiveness of actions implemented to address them (Criterion 6.6); and

vi. Occurrence and impacts from *natural hazards** (Criterion 10.9) and any other significant, unanticipated removal or loss or increased vulnerability of *forest** resources, including, at a minimum, documentation of quantitative and qualitative information regarding: a) date and location of occurrence, b) description of disturbance, and c) extent and severity of loss.

Annex K: High Conservation Value Framework

Preface

The Forest Stewardship Council® (FSC) Principles and Criteria for Forest Stewardship (P&C; FSC-STD-01-001) give special attention to biological, ecological, social, or cultural values of outstanding significance. These values, referred to as *High Conservation Values (HCV)**, and the areas needed for their existence and maintenance, are subject to the requirements of Principle 9 of the P&C.

Many of the resources that receive *HCV** designation, such as concentrations of rare *species**, are also addressed under Principle 6, *Environmental Values and Impacts*, of the P&C. The challenge for landowners seeking FSC certification is distinguishing between those resources that are adequately covered under Principle 6 (or other Principles) from those that rise to the level of needing to be considered under Principle 9.

As part of the FSC's standards development process, FSC-US is required to periodically update the FSC US National Forest Stewardship Standard (NFSS). The High Conservation Value Framework must also be updated as part of the revision process, consistent with the current P&C, International Generic Indicators (FSC-STD-60-004), and FSC's *Guidance for Standards Development Groups: Developing National High Conservation Value Frameworks* (FSC-GUI-60-009). The scope of this Framework is the conterminous United States (i.e., excluding Alaska, Hawaii and US Territories).

Annex Table of Contents

1. Introduction

The Forest Stewardship Council® (FSC) Principles and Criteria for Forest Stewardship (P&C; FSC-STD-01-001) give special attention to biological, ecological, social, or cultural values of outstanding significance. These values, referred to as *High Conservation Values* (*HCV*)*, and the areas needed for their existence and maintenance, are subject to the requirements of Principle 9 of the P&C. Many of the resources that receive *HCV** designation, such as concentrations of rare *species**, are also addressed under Principle 6 (Environmental Values and Impacts), or other *Principles** of the P&C. The challenge for landowners seeking FSC certification is distinguishing between values that are adequately covered under other *Principles** from values that rise to the level of needing to be considered under Principle 9. Due to the threshold of significance, importance, and/or rarity required for *HCV** status, not every *Management Unit** will have an *HCV**. The following guidance is intended to assist certified landowners and those seeking certification with identifying, managing, and monitoring *HCVs** and thereby achieving conformance with Principle 9.

1.a. High Conservation Values

*HCVs** demand a greater degree of *protection** to ensure their *long-term** maintenance or enhancement, particularly if they may be negatively affected by *management activities**. This involves greater efforts to identify them (per Criterion 9.1), greater attention to determining (per Criterion 9.2) and implementing (per Criterion 9.3) appropriate management measures, and through monitoring both implementation and effectiveness of these measures (per Criterion 9.4). FSC recognizes six types of *HCVs**:

- **HCV 1 – Species Diversity.** Concentrations of biological diversity, including *endemic species**, and *rare, threatened or endangered species**, that are *significant** at global, national, or regional levels.
- **HCV 2 – Landscape-Level Ecosystems and Mosaics.** *Intact Forest Landscapes** and large landscape-level *ecosystems** and *ecosystem** mosaics that are *significant** at global, national, or regional levels, and that contain viable populations of the great majority of the naturally occurring *species** in natural patterns of distribution and abundance.
- **HCV 3 – Ecosystems and Habitats.** Rare, threatened or endangered *ecosystems**, *habitats**, or *refugia**.
- **HCV 4 – Critical Ecosystem Services.** Basic *ecosystem services** in *critical** situations, including *protection** of water catchments and control of *erosion** of vulnerable *soils** and slopes.
- **HCV 5 – Community Needs.** Sites and resources fundamental for satisfying the basic necessities of *local communities* or *Indigenous Peoples* (for livelihoods, health, nutrition, water, etc.), identified through engagement with these communities or Indigenous Peoples.
- **HCV 6 – Cultural Values.** Sites, resources, habitats and *landscapes** of global or national cultural, archaeological or historical *significance**, and/or of *critical** cultural, ecological, economic or religious/sacred importance for the traditional cultures of *local communities** or *Indigenous Peoples**, identified through *engagement** with these *local communities** or *Indigenous Peoples**.

1.b. Normative Aspects of this HCV Framework*

Unless clearly indicated otherwise, this Framework is considered guidance and, by definition, informative and not normative. However, *The Organization** shall consider this *HCV** Framework as they identify, manage and monitor *HCVs** associated with the *Management Unit**, per Indicators 9.1.1., 9.2.1, and 9.4.1. When this Framework references normative requirements, the applicable *Criterion** or *Indicator** is noted.

Any FSC Policy, Standard or Procedure referenced or quoted in this guidance document retains its normative status.

2. Terminology

For consistency, it is important that *The Organization** and *Certification Bodies** are working with a common set of terminology when addressing *HCVs**. While not comprehensive, the following addresses some terms that have or may present particular difficulties. Note that Section 12 provides definitions for additional terms.

2.a. HCV vs. HCV Attribute vs. HCVA vs. HCVF

The first national *forest** management standard in the US (V1.1) was developed under P&C Version 4, and used the terms “HCV Forest” (HCVF) and “HCV attributes”. “Attributes” referred to the values to be maintained or enhanced, and HCVF to the *forests** in which the attributes occurred. For the US NFSS (V2.0) developed under P&C Version 5, values are now simply termed “*HCV**” and the *forested** and non-*forested** areas that “possess and/or are needed for the existence and maintenance of identified *HCVs**” are termed *High Conservation Value Areas* (*HCVA*)*. This expands the identification of *HCV** to non-*forested** areas.

2.b. Conservation Areas vs. HCVA

While all *HCVA** should be considered *conservation zones** or *protected areas** (and included in the *Conservation Areas Network**, per Criterion 6.5), not all *conservation** areas will be *HCVA**. Principle 9 addresses a fraction of the values addressed in other *Principles**, and also addresses a small number of important environmental and social values that are not addressed elsewhere in the US NFSS. Examples of values within *conservation** areas that would generally not rise to the level of *HCV** within *HCVA**, include riparian corridors where management is adapted to *restore**, maintain, or enhance the riparian habitat, *buffer zones** around nest sites of *rare, threatened and endangered* bird *species**, and *long-term** *retention** areas that preserve viewscapes important to the economy of a *local community**. Examples of *HCVA** could include a regionally *significant** breeding area for a number of critically imperiled herptile *species** and the *buffer** around it, in which *management activities** are limited or modified to *protect** the breeding area, a rare *ecosystem** and the *stands** around it that are managed to help control and exclude *invasive species** from the rare *ecosystem**, or the last nesting area of a nearly extinct bird *species** that is highly sensitive to disturbance, and the area around it in which *management activities** are prohibited during the nesting season.

2.c. Landscape

The US NFSS definition of "*Landscape**" provides a specific *scale** for purposes associated with *Representative Sample Area (RSA)** establishment and assessment, but recognizes that different scales are appropriate for consideration of "*landscape**" in other contexts associated with the Standard. For *HCV** assessments and management, the "*landscape**" considered should be as defined in the second paragraph of the definition, i.e., the area within and around the *Management Unit** that could be affected by the *management activities** occurring within the *Management Unit**, and also where activities occurring external to the *Management Unit** could affect the ability of *The Organization** to maintain *significant** environmental and social values within the *Management Unit**. Typically, a smaller *management unit** will have a smaller *landscape**, and a *larger** *management unit** a larger *landscape**. However, this 'rule' will not apply in some situations, such as a smaller *management unit** that occurs at the headwaters of an important waterway where the *management activities** could have critical downstream impacts, or a larger *management unit** that occurs in isolation within a developed environment.

2.d. Management Unit vs. Contiguous Lands

The *Management Unit** consists of the defined lands that are managed together under "a set of explicit *long-term** *management objectives** which are expressed in a *management plan**". These lands may occur as a single contiguous block of land, or may occur as detached and separate blocks of land that are managed in concert.

Some types of *HCV** require consideration of contiguous *forest** or lands of a certain size. Identification of this kind of value should be completed initially without consideration of the *Management Unit** boundaries—does such a value exist in the landscape within which any portion of the *Management Unit** occurs? If so, the *HCV** assessment should consider whether there are any portions of the *Management Unit** that should be considered *HCVA** due to their importance for maintaining the *HCV**.

2.e. FSC US Regions vs. Regionally Significant

FSC US has defined a set of regions that represent differences that are important for conformance with particular *Indicators** in Principle 6. For the purposes of assessing and identifying *HCV 1** and *HCV 2** (i.e., values that are significant at global, national, or regional levels), the "regional" context should be ecological only. Ecological Provinces defined by Cleland 2007 should be used for this purpose. If data for the region are limited, or in the cases of very small ecological provinces, a larger area may be justified. Where justified, using *Best Available Information**, a comparable classification system (e.g., TNC's Ecoregion Map) may be used instead. Therefore, as used in this *HCV** Framework, regional considerations will always be at a sub-national scale.

Consultation Question:

Are Ecological Provinces (as defined by Cleland 2007) the appropriate scale for consideration of the regional significance of HCV 1 and HCV 2?

2.f. Precautionary Principle/Approach

Per Criterion 9.3, when the available information indicates that *management activities** pose a threat of severe or irreversible damage to the environment or a threat to human welfare, *The Organization** is required to take explicit and effective measures to prevent the damage and avoid the *risks** to welfare, even when the scientific information is incomplete or inconclusive, and/or when the vulnerability and sensitivity of environmental values are uncertain, i.e., in a manner consistent with the *precautionary approach**. Avoiding *risks** when scientific information is incomplete or inconclusive is appropriate for Principle 9, given the vulnerability and sensitivity of the values in question. When implementing the *precautionary approach**, *HCVs** are understood to be *critical**, fundamental, or *significant** and therefore any threat to a *HCV** is considered to be a threat of severe or irreversible damage.

2.g. Management

*Management activities** may range from zero or minimal interventions to a specified range of appropriate interventions and activities designed to maintain or enhance identified *HCV**. Maintenance or enhancement of *HCVs** does not necessarily prohibit other uses of, or activities within, an *HCVA**, including *silvicultural** uses, as long as (per Indicator 9.3.1) any *management activities** implemented in *HCVAs** maintain or enhance the *HCVs** and the extent of the *HCVA**.

3. Information and Data Sources

*3.a. Overarching Best Available Information**

The purpose of listing the below overarching *Best Available Information** is to avoid having to list it repetitively for each *HCV** in the following sections.

*The Organization** is required to use *Best Available Information** (per Indicator 9.1.1) and consult with *rights holders** and *stakeholders** (per Indicator 9.1.3) when completing their assessment and identification of *HCVs**, and are also required to consult with *rights holders**, *stakeholders** and *experts** when developing management strategies for *HCVs** (per Indicator 9.2.2) and as part of their monitoring program (per Indicator 9.4.2). Finally, per Indicator 9.1.1 (through the reference to the types of *HCV** defined in Criterion 9.1), *The Organization** is required to identify *HCV 5** and *HCV 6** through *engagement** with particular *stakeholders** - *local communities** and *Indigenous Peoples** (i.e., *Native American** groups). These four sources of information (i.e., *Best Available Information**, *rights holders**, *stakeholders** and *experts**) will be overlapping in many cases, and are presented all together in the following lists, as well as in other lists of information sources later in this document.

***3.a.i. Best Available Information** for Identifying and Assessing HCVs**

- Data gathered to address rare or important ecological features associated with Criteria 6.1, 6.2, 6.3, and 6.4
- *High Conservation Value** surveys of the *Management Unit**
- Relevant databases and maps

- *Culturally appropriate** engagement with *Native American** groups, affected *rights holders**, *affected stakeholders** and *interested stakeholders**, per the FSC US Guidance on *Free Prior and Informed Consent** (US NFSS, Annex F)
- Existing assessments of environmental and social values undertaken by public agencies and/or other *conservation** groups, including State Wildlife Action Plans and NatureServe
- Existing assessments of environmental and social values undertaken on adjacent land ownerships
  NOTE: If the *Management Unit** has not been surveyed for social or environmental values, but is adjacent to an area with known *significant** values, then consultation with an expert may be critical for determining if the values also occur on the *Management Unit** and should be considered *HCVs**.
- Initial consultation for *HCV 1*, HCV 2* and HCV 3** is generally with state Natural Heritage Programs, state wildlife agencies, the US Fish and Wildlife Service (USFWS), and National Marine Fisheries Service (NMFS)
- On *large** *Management Units**, for *HCV 1, HCV 2, HCV 3 and HCV 4**, an *Management Unit**-specific assessment including on-site review may be appropriate if the *Management Unit** has not been assessed by an *expert** and evidence suggests that *HCVs** may be present
- For relevant elements of *HCV 5** and *HCV 6**, *engagement** with *local communities** and *Native Americans** (per Criterion 9.1)
- *Common Guidance for the Identification of High Conservation Values: A Good Practice Guide for Identifying HCVs Across Different Ecosystems and Production Systems. HCV Network. September 2017*
- *High Conservation Value Guidance for Forest Managers (FSC-GUI-30-009). Forest Stewardship Council. 2020. https://fsc.org/en/document-centre/documents/resource/422*

3.a.ii. Best Available Information** for Developing Management Strategies for HCVs*

- *Culturally appropriate** *engagement** with *Native American** groups, affected *rights holders**, *affected stakeholders** and *interested stakeholders**, per the FSC US Guidance on *Culturally Appropriate Communication & Free Prior and Informed Consent* (US NFSS, Annex F)
- Consultation with *experts**
- Existing *conservation** planning undertaken by public agencies and/or other *conservation** groups, including State Wildlife Action Plans and NatureServe
- *Common Guidance for the Management & Monitoring of High Conservation Values: A Good Practice Guide for Adaptive Management of HCVs. HCV Network. April 2018*
- *High Conservation Value Guidance for Forest Managers (FSC-GUI-30-009)*

***3.a.iii. Best Available Information** for Monitoring Methodologies*

- *Engagement** with *rights holders**, consistent with Criteria 3.5, 4.5 and 4.7
- *Culturally appropriate** *engagement** with *Native American** groups, *affected stakeholders** and *interested stakeholders**, per the FSC US Guidance on *Culturally Appropriate Communication & Free Prior and Informed Consen*t (US NFSS, Annex F).
- Existing *conservation** planning undertaken by public agencies and/or other *conservation** groups, including State Wildlife Action Plans and NatureServe

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

3.b. Documenting HCV Assessments*

Per Indicator 9.1.1, *The Organization** is required to document their *HCV** assessment. This should be done in a transparent manner that can be reviewed by auditors and *interested stakeholders**. The documentation may be in the form of an *HCV** assessment report, or (similar to the *management plan**) may be a collection of documents, reports, records, maps and other materials as applicable. However, if the second approach is taken, *The Organization** should prepare a summary that identifies the various materials within the collection, and summarizes the assessment process and its conclusions.

Documentation should include:

- Who conducted the assessment (e.g., name, qualifications, affiliation)
- *Rights holders**, *experts** and *stakeholders** consulted (e.g., name, affiliation, *rights** held)
- Records demonstrating when and how *culturally appropriate** consultations were implemented (e.g., records of phone calls, lists of meeting attendees, copies of email correspondence)
- What additional sources of *Best Available Information** were used
- *HCV** identified and associated areas designated as *HCVA**, including detailed maps of *HCV** and *HCVA** (digital or paper-based)
- Status of identified *HCV** (e.g., short-term and *long-term** threats, overall viability)

*Engagement** with *experts** may include primary consultation (i.e., direct *engagement** with the *expert**) and/or secondary consultation. An example of *secondary consultation* is when a state empanels a committee of *expert** botanists to determine which plants are rare, threatened, or endangered within a state or region (i.e., the landowner can rely on the committee's work without engaging in independent consultation).

3.c. Culturally Appropriate Stakeholder Consultation

The primary source of *Best Available Information** for *HCV 5** and *HCV 6** is direct consultation with *local communities** and *Native American** groups that have a connection to the *Management Unit** or the *landscape** in which it occurs. The US NFSS Annex F, Guidance for *Culturally Appropriate Communication & Free, Prior and Informed Consent (FPIC)*, will assist *The Organization** in determining the best *engagement** approach and also with *FPIC**, if required per Criterion 3.2 and/or Criterion 4.2. For *engagement** with *local communities** that are not explicitly addressed in the US NFSS Annex F, a variety of consultation approaches may be considered depending on the context and situation. Some *local communities**, for example, may be approached through public notices and solicitations for information, whereas others may be better served through public meetings or face-to-face *engagement** with stakeholder representatives (e.g., Town Managers, Board of Supervisors, County Planners, Water District Managers, or other government officials).

In some cases resources are of such importance to a *Native American** group that *tribal** representatives are unwilling to share the location of these resources with outside parties. In some cases, the location of particularly important sites are known to only a few *tribal** members. In such situations, one potential approach is to periodically share maps of proposed *management activities** with *tribal** representatives and then leave it to their discretion as to whether to share information regarding potential *HCVs** that might be affected by the *management activities**.

3.d. When New Information Becomes Available

Per Indicator 9.1.1, if *The Organization** learns of new applicable information, it needs to update the assessment to incorporate the information. New information may become available following research completed by *The Organization** or others, as a result of *HCV** monitoring *The Organization** conducts, through the observations of staff or *stakeholders** or through other means. If this information suggests that there may be an *HCV** that was not previously identified, or that there has been a change in the status of a known *HCV**, the assessment needs to be updated to reflect this information, and both management and monitoring adjusted as appropriate.

4. HCV Identification and Assessments

Per Indicator 9.1.1, it is primarily the responsibility of *The Organization**, or the landowner seeking certification, to conduct *HCV** assessments that are appropriate to the *Management Unit**, its *landscape** context, and the FSC US region in which it occurs, and that include identification of *HCV** and *HCVA**, status assessment of *HCVs**, and *engagement** with *stakeholders** and *rights holders**. Due to the unique context of each *Management Unit**, this will generally result in a unique set of *HCVs** and *HCVA** for each *Management Unit** that has *HCVs**. It is important to note that one possible assessment finding is that a *Management Unit** does not have any *HCVs** present.

The rigor of the assessment, including *engagement**, should increase in situations where, due to the context of the *Management Unit** and its *management activities**, there is a particularly high number of *HCVs** and/or the *risk** of negative impacts on the *HCVs** is particularly high. Specific expectations for identification and assessment of *HCV** within *Family Forests** are provided in Section 11 of this Framework document.

If initial evaluations determine that there is a high potential for one or more *HCVs**, *The Organization** may choose to designate an *HCVA** without further study (and then take appropriate steps to manage and monitor the area), instead of undertaking additional studies to determine if the area in question actually harbors the *HCV(s)**.

4.a. National HCV for All Organizations

If any portion of an *Intact Forest Landscape (IFL)** occurs within the *Management Unit**, it will always be *HCV 2** (per Indicator 9.1.2). The other National *HCV** described below are considered *HCV** except in very rare situations (for which *The Organization** has very well developed and documented rationale). *The Organization's** *HCV** assessment must consider

these National *HCV** and also regionally and more *locally** *significant** environmental and social values—additional guidance on identifying these values follows.

4.a.i. *Intact Forest Landscapes.** Per Principle 9, *Intact Forest Landscapes* (*IFL*)* shall be considered *HCV** (*HCV 2**). Being the last remaining large unfragmented *forested** areas in the world, *IFLs** are valued for their environmental, social, and intrinsic worth and are considered globally *significant**.

Identifying *IFLS**: Global Forest Watch (http://www.intactforests.org) and/or other data that are more recent, accurate and/or refined than those provided by Global Forest Watch, shall be used to identify *IFL** that existed within the *Management Unit** as of January 1, 2017. Areas identified by Global Forest Watch shall be considered *IFL** unless evidence-based assessments determine that the area does not meet the definition of *IFL** (i.e., the methodology used is more recent, accurate and/or refined than the Global Forest Watch methodology[1]). Areas that have been or continue to be disturbed by commercial or *industrial activities**, developed areas, and areas with *infrastructure** associated with the aforementioned activities and development, should not be included in *IFLs**. Areas with evidence of old disturbances and low-intensity disturbances, such as selective logging for non-commercial purposes and hunting, should be included in *IFLs**.

Managing *IFLs**: Per Indicator 9.2.3, certificate holders for non-federal *Management Units** are required to designate and manage at least 80% of the total area of *IFL** identified within the *Management Unit** and not less than 123,500 acres (50,000 ha) as core area, while the entirety of *IFLs** on federal lands are to be designated and managed as *core areas** (per USFS Supplement to Indicator 9.2.3). *Core areas** are to include the most important cultural and ecological values and be managed to exclude *industrial activity**. *Core area** management strategies should maintain the extent and intactness of the *forest** *ecosystems** and the viability of their *biodiversity** concentrations, including plant and animal indicator *species**, keystone *species**, and/or guilds associated with large intact *natural forest** *ecosystems**. Maintenance of *IFL** *core areas** will require identifying and addressing potential threats.

Limited *industrial activity** within *IFL** *core areas** is allowed only if all effects of *industrial activity**:

- Are restricted to a *very limited portion** of the *core area**, not to exceed 0.5% of the *core area** in any one year, nor to affect a total of more than 5% of the *core area**
- Do not reduce the *core area** below 50,000 ha
- Will produce clear, substantial, additional, *long-term** *conservation** and social benefits consistent with Criterion 9.2

Portions of *IFLs** that are not designated as *core areas** are still *HCV 2** and therefore must be managed to maintain or enhance their *HCV 2** values. This includes maintaining the viability of their *biodiversity** concentrations, including plant and animal indicator *species**, keystone *species**, and/or guilds associated with large intact *natural forest** *ecosystems**.

Monitoring *IFLs**: *The Organization** is expected to monitor trends, impacts of *management activities**, and threats. The baseline condition of any variable is key, as trends and effectiveness may change over time. Annual monitoring of extent and intactness of the *IFL** is

[1] https://data.globalforestwatch.org/datasets/intact-forest-landscapes-2016

recommended so that new threats may be quickly identified. Both *engagement** and ecological *protection** strategies are fundamental to a working monitoring program.

4.a.ii. *Old Growth *Forest**.** All *old growth** *forest** (*Type 1** and *Type 2**) is *HCV** (*HCV 3**), and subject to the requirements of Principle 9. Additionally, per Indicator 6.8.2, *Type 1** and *Type 2** *old growth** are to be *protected**, including from timber *management activities**, except as needed to maintain the ecological values associated with the *stand**. Individual *old growth** trees or *stands** with *old growth** trees that don't meet the definition of *old growth** (*Type 1** or *Type 2**) are addressed as *legacy trees** (per Indicator 6.6.3). *Old growth** *forest**, as defined, is always associated with pre-European remnant *forests**. *Type 1 Old Growth** may also represent *primary forest**.

4.a.iii. *Primary Forest.** All *primary forest** is *HCV** (*HCV 3**), subject to the requirements of Principle 9, due to the rarity of *forest** *ecosystems** that have retained the principal characteristics and key elements of native *ecosystems** and have remained relatively undisturbed by human economic activity. Any evidence or documentation that *forest** *management activities** have occurred in an area, even if it is not readily visible, would exclude the area from being *primary forest**. In fire- or other disturbance-dominated *ecosystems**, *primary forest** may not always be dominated by mature trees, or any trees at all, but instead may present as a mosaic of older and younger *stands**. Maintenance of this *HCV** will focus on *conserving** the principal characteristics and key elements of the native *forest**, and limiting human economic activities.

4.a.iv. Wilderness Areas. Wilderness areas enrolled in the National Wilderness Preservation System (https://www.wilderness.net/) or a similar state-level system, meet the definition for HCV 6 and may also, in their entirety or within a portion of the area, meet the definition for HCV 2. Maintenance of this kind of HCV will preclude forest management activities and use of equipment that do not maintain or enhance the areas' wilderness characteristics, taking into consideration the attributes associated with the designation of the specific Wilderness Area. Designated wilderness areas are found throughout the United States but are more common in the western regions (i.e., Pacific Coast, Rocky Mountains, and Southwest).

4.a.v. Drinking Water Supply Management Zones. Some communities have designated areas that are *critical** for *protection** of the community's drinking water supplies. With rare exception, these meet the definition of *HCV 4** and are subject to the requirements of Principle 9. This includes public water drinking systems that are regulated by the US Environmental Protection Agency[2], but not smaller systems with more limited numbers of users. Maintenance of these areas does not necessarily preclude logging or other *forest** *management activities** so long as they are compatible with laws and regulations (Principle 1) and maintain or enhance the *ecosystem service** (i.e., drinking water) provided to the community.

Additionally, any designated public drinking water surface supply (i.e., reservoir, lake, pond, or river), will meet the definition of *HCV 4**. Areas within 250 feet of those surface supplies that

[2] https://www.epa.gov/compliance/safe-drinking-water-act-sdwa-compliance-monitoring
A public water system provides water for human consumption through pipes or other constructed conveyances to at least 15 service connections or serves an average of at least 25 people for at least 60 days a year. A public water system may be publicly or privately owned.

have *soils** rated as prone to *erosion**, slopes rated as high hazard for failure, and areas within the 100-year flood zone, should be included within the *HCVA** for these *HCV**.

4.a.vi. National Register of Historic Places. Authorized by the National Historic Preservation Act of 1966, the National Park Service's National Register of Historic Places is part of a national program to coordinate and support public and private efforts to identify, evaluate, and *protect** America's historic and archeological resources. While occurrence of these registered historic places is likely rare within FSC certified lands, any that do occur are *HCV 6** and subject to the requirements of Principle 9. *Management activities** that maintain or enhance the *HCV** are acceptable.

4.a.vii. UNESCO World Heritage Sites. The United Nations Educational, Scientific and Cultural Organization (UNESCO) seeks to encourage the identification, *protection** and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity. This is embodied in an international treaty called the 'Convention concerning the Protection of the World Cultural and Natural Heritage,' adopted by UNESCO in 1972. Any sites that are included in the World Heritage List automatically meet the definition of *HCV 6**. *Management activities** that maintain or enhance the *HCV** are acceptable.

4.b. National HCV for Federal Lands Only

Consistent with the expectation that *ecosystem services** and other public benefits are given priority on federal lands, when the following occur on federal lands, they are considered *HCV**.

4.b.i. Roadless Areas on Federal Lands. Large areas without any evidence of roads (including no evidence of skid trails) are extremely rare in the conterminous US and provide unique *habitat**, with a higher likelihood of intact natural functions and *ecosystem** processes. When they occur on federal lands, the following are considered *HCV 3**:

- Undeveloped areas that are at least 1,000 acres in size and that meet the minimum criteria for wilderness consideration under the Wilderness Act—in regions with very little undeveloped land, the size of the area that should be considered may be smaller
- Any area that meets the definition of 'roadless' as provided in the Roadless Rule

Typically, maintenance of this kind of *HCV** will preclude commercial *forest** management, unless they can be achieved without the construction of new roads and maintain or enhance the wilderness characteristics.

4.b.ii. High Carbon *Forests on Federal Lands.** Regulation of climate is a crucial *ecosystem service**, and in turn, climate change can affect other *ecosystem services** such as regulation of floods and drought. *Forest** *stands** that store relatively high amounts of carbon in their trees, *soils**, and other components thus represent both an important value, and a potential threat if intensive harvests or other management significantly reduces their carbon stores. High carbon *forests** are most likely to be found in publicly owned *forests**, especially federally-administered *forests**, where they are normally to be considered *HCV 4**. While *old growth** and other *late successional** *forests** are more likely to have higher carbon levels, stand age alone does not determine carbon levels. Definitions and information on the presence of such *forests** are evolving. In the Pacific Northwest, sites on *public lands** that have >200 Mg/ha of above-ground biomass, or are capable of easily reaching that threshold should generally be considered high

carbon, pending new information.[3] Comparable thresholds for other regions are being developed by the Woods Hole Institute & Geos Institute. Peatlands in *forested** *landscapes** are also likely to have high carbon storage levels, and should also be assessed for their carbon storage function. Management strategies to maintain or enhance this *HCV** (per Indicator 9.2.1) should maintain high carbon stands' natural ability to store and sequester carbon. Harvests should be limited to operations that maintain that natural ability, and not reduce on-site carbon levels at any time, except in cases where necessary to *protect** lives and property (e.g., thinning of smaller trees in urban interface zones) or to *restore** *stands** and *ecosystems** to *natural conditions** that are more resilient to fire or other disturbances (e.g., thinning of smaller trees in previously fire-suppressed areas).

4.c. HCVs Identified in the FSC US Controlled Wood National Risk Assessment

The US National Risk Assessment (US NRA) is the primary source of information used by FSC *Chain of Custody** certificate holders that have Controlled Wood within the scope of their certificate to determine whether they have a risk of receiving materials from *forests** in the conterminous US where certain undesirable activities are occurring. One category of risks assessed is the risk of receiving materials from *forests** where the *forest** *management activities** threaten *HCVs**. However, the scale of the assessment completed for the NRA was much more coarse than the assessment that is needed by a FSC Forest Management certificate holder. The US NRA is based on the existing *Draft High Conservation Value Forest Assessment Framework* for the conterminous US. Future revisions of the US NRA will need to be aligned with this *HCV** Framework.

*4.d. Additional Considerations for Identifying HCV**

Non-native *ecosystems* will never be *HCV 1**, *HCV 2**, or *HCV 3**

Not all *wetlands* are *HCV***; not all *riparian areas*** are *HCV***—only those that: 1) have *significant** concentrations of *biodiversity** (including *endemic** or *rare, threatened and endangered species**) compared to other *wetlands**/*riparian areas** globally, nationally, or regionally; 2) are *landscape** *scale** in nature, intact, and *significant** compared to other *wetlands** globally, nationally, or regionally (such as a particularly large, intact peatland); 3) are representative of a rare *ecosystem** or *habitat**, or serve as a *refugia**; 4) provide a *critical** *ecosystem service**, such as water filtration or storage, the loss of which would directly cause suffering to recipients of the service; 5) provide a resource that is fundamental to satisfying a basic necessity of survival for a *local community**; or 6) have *significant** cultural, archaeological or historical value compared to other sites globally, nationally, or regionally, or are of *critical** importance for *Native American** groups.

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

Not all *rare, threatened and endangered species are *HCV**; not all listed species are *HCV**—the focus of *HCV 1** is that these *HCV** represent concentrations of *biodiversity**, typically areas that have a high number of *endemic species** or *rare, threatened and endangered species**, when compared to other areas globally, nationally, or regionally. Typically, an *HCV 1** will not be identified for a single *species**, with the exception being in situations where the *species** is highly imperiled and is found in a population large enough to be considered a concentration or *significant**, or where survival of the *species** is critically dependent on the area in question (typically because there is so little *habitat** remaining), or where *Best Available Information** indicates that every surviving individual of the *species** is critical to the viability of the *species**, or where there is a particularly important genetic variant, subspecies, or variety.

No *HCV is defined only by the presence of big trees**—other characteristics indicative of a particular *HCV** type must also be present.

Not all fish-bearing streams are *HCV**—similar to the *wetlands** and *rare, threatened and endangered species** considerations above, there would need to be additional characteristics, beyond simply presence of fish, for the stream to be considered an *HCV**.

5. HCV 1 – Species Diversity

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

*5.a. Assessment and Identification of HCV 1**

*Significant** concentrations of *biodiversity** include areas that contain concentrations of *rare, threatened, and endangered species**, *endemic species**, natural communities, or other *biodiversity** values that occur in numbers, frequency, quality, and/or density that are sufficiently outstanding to be considered unique or highly important in comparison with other areas within the ecoregion within which the *Management Unit** is located. Identification and assessment of *HCV 1** should begin with the national considerations provided in Sections 4.a and 4.b, and then follow the guidance below to determine if there are additional *HCV**.

Assessing concentrations of *biological diversity** that are *significant** at global, national, or regional levels requires differentiating between resources that are addressed primarily by the requirements of Principle 6 versus those that rise to the level of being considered under Principle 9. All *endemic species** and *rare, threatened and endagnered species** must be considered under Principle 6, but not all such occurrences result in *HCV** designation and the requirements of Principle 9.

While *HCV 1** focuses primarily on concentrations of *biodiversity** with multiple *endemic species** and/or *rare, threatened and endangered species**, a concentration of a single *species** may also rise to the level of *HCV 1**. This is possible under two scenarios:

1. Important populations (e.g., particularly important genetic variants, subspecies or varieties), or a great abundance of an individual *endemic** or *rare, threatened and*

*endangered species** representing a substantial proportion of the regional, national or global population, which are needed to maintain the *species** as a whole

2. Small populations of individual *endemic** or *rare, threatened and endangered species**, in cases where the regional, national, or global survival of that *species** is critically dependent on the area in question (such *species** are likely to be restricted to a few remaining areas of *habitat**)—in these cases, there is often a consensus (among many *stakeholders**) that every surviving individual is globally *significant**

Concentrations of *biodiversity** that occur temporally may also be *HCV 1**. Examples could include regionally *significant** hibernacula for bats, stop-over sites for migratory birds, or breeding areas (i.e., where an *rare, threatened and endangered species** or *endemic species** is temporarily concentrated).

5.a.i. Resources & Guidance for *HCV 1*:

The below datasets are focused on areas likely to have concentrations of *biodiversity** that are *HCV 1**. Additional consultation with *stakeholders** and/or *experts** may be appropriate if the *Management Unit** is adjacent to an identified area with regionally *significant** concentrations of *biodiversity** values, or if the *Management Unit** contains *ecosystems** and site conditions that are similar to such areas.

- International Union for the Conservation of Nature (IUCN) Management Category 'Ia' (when assigned to protected areas for inclusion in the United Nations Environment World Conservation Monitoring Center (WCMC) World Database for Protected Areas (WDPA) and the Commission for Environmental Cooperation (CEC) North American Terrestrial Protected Areas Database)
    - https://www.unep-wcmc.org/resources-and-data/wdpa
    - http://www.cec.org/tools-and-resources/map-files/north-american-protected-areas-2017
- NatureServe Maps of Biodiversity Hotspots & Biodiversity Importance
    - https://www.natureserve.org/conservation-tools/natureserve-hotspots-map
    - https://www.natureserve.org/conservation-tools/projects/map-biodiversity-importance
- Areas identified through The Nature Conservancy's (TNC) Ecoregional Assessments as having *significant** concentrations of *biodiversity**
    - https://www.conservationgateway.org/ConservationPlanning/SettingPriorities/EcoregionalReports/Pages/EastData.aspx

As not all areas with *significant* *concentrations of *biodiversity** have been identified through the above datasets, the following considerations suggest contexts with a higher likelihood of *HCV 1** occurrence. If any of the following exist within or adjacent to the *Management Unit**, the *HCV** assessment should be more rigorous in its evaluation of whether concentrations of *biodiversity** that are *significant** at global, national or regional *scales** are, in fact, present within the *Management Unit**.

Concentrations with Multiple *Species**:

- UNESCO Biosphere Reserves
    - http://www.unesco.org/new/en/natural-sciences/environment/ecological-

    - sciences/biosphere-reserves/europe-north-america/
    - https://www.nature.nps.gov/biology/globalconservation/biosphere.cfm
- Areas placed in the federal Protected Areas Database (PAD) as GAP Status 1 or GAP Status 2
    - https://gapanalysis.usgs.gov/padus/data/download/
    - https://gapanalysis.usgs.gov/padus/
    - https://gapanalysis.usgs.gov/padus/viewer/
- Areas with a number of *species** that are included on the IUCN Red List and are classified by IUCN as Critically Endangered, Endangered, or Vulnerable
    - https://www.iucnredlist.org/search/map
- *Management Units** with federally-designated "critical habitat" for a number of *species** that are federally listed as threatened or endangered
    - https://ecos.fws.gov/ecp/report/table/critical-habitat.html
    - https://ecos.fws.gov/ipac/
- A county or watershed identified by NatureServe as having a large number of *species** of *conservation** concern
    - http://www.natureserve.org/conservation-tools/listed-and-imperiled-species-county-and-watershed/county-map
    - http://www.natureserve.org/watershed-map
- Areas with a number of viable populations of *rare, threatened and endangered species** associated with the same *ecosystem** type or *ecosystem** mosaic. NOTE: Accessing data for this scale of assessment may be more difficult for some *Organizations**, but these kinds of places can be identified using the following resources
    - Consultation with state Natural Heritage Program or similar state agency
    - State and federal *threatened species** and *endangered species** assessments
    - US Fish and Wildlife Service Information for Planning and Consultation (IPaC) web tool (https://ecos.fws.gov/ipac/)
- Regionally *significant** migratory staging areas, seasonal breeding sites, migratory corridors, and other seasonal concentrations of *species**
    - https://www.audubon.org/important-bird-areas
    - Other data sources: State Natural Heritage Programs, Federal and state wildlife agencies, surveys and assessments of the *Management Unit**, local or regional *conservation** organizations
- *Management Units** with known occurrences of natural communities or *habitats** identified as critically imperiled or critically rare, or endemic *habitats** that are severely limited in distribution and/or occurrence
    - Data sources: State Natural Heritage Programs, State Wildlife Action Plans, surveys and assessments of the *Management Unit**, *local** or regional *conservation** organizations
- Roadless areas (i.e., areas without evidence of roads or skid trails) greater than 500 acres

Concentrations with a Single *Species**:

- *Management Units** with federally-designated "critical habitat" or known occurrences of a *species** listed as "critically endangered" by IUCN or "critically imperiled" by NatureServe, where only a very small population of the *species** remains extant and survival of the *species** is dependent on maintenance of the *habitat**/occurrence

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

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

5.b. Strategies for Managing HCV 1

In addition to the *Best Available Information** identified in Section 3.a, the following resources may provide strategies for maintaining or enhancing *HCV 1** identified through the above assessment:

- US Fish and Wildlife Service *species** recovery plans
- Landscape Conservation Cooperative Network
- State Natural Heritage Program, or *conservation** organization, *species** assessments
- State fish and wildlife department, or similar state agency, *species** assessments and management plans
- State Wildlife Action Plans
- Regional or local *conservation** organization *landscape** *conservation** plans
- In addition, per C9.2 of the Standard, affected *rights holders**, *affected stakeholders** and *interested stakeholders**, and *experts** shall be engaged in the development of strategies for maintaining or enhancing *HCV 1**. Appropriate *experts** may include agency staff, academics, and qualified ecologists

Strategies to maintain *HCV 1** occurrences should consider: *Conservation zones**, *protected areas**, harvest prescriptions, and/or other strategies to *protect** threatened, endangered, *endemic species**, or other concentrations of *biological diversity** and the ecological communities and *habitats** upon which they depend, sufficient to prevent reductions in the extent, integrity, quality, and viability of the *habitats** and *species** occurrences. Where

strategies are intended to enhance *HCV 1** occurrences, they should consider: measures to develop, expand, and/or *restore** *habitats** for such *species**.

*5.c. Monitoring HCV 1**

In addition to the *Best Available Information** identified in Section 3.a, the following resources may provide strategies and/or data for monitoring *HCV 1** identified through the above assessment:

- Consultation with the agency, or agencies, with regulatory authority over the elements (e.g., *rare, threatened, or endangered species**; federally-designated "critical habitat") that result in designation of the area as a concentration of *biological diversity** that is *significant** at global, national, or regional levels
- Review of *species** assessments, management plans, and recovery plans, where available
- Site-specific field surveys if warranted

Monitoring programs for *HCV 1** should have sufficient scope, detail and frequency to detect changes in the *HCVs**, relative to the initial assessment and status identified for each *HCV**.

6. HCV 2 – Landscape-Level Ecosystems and Mosaics

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

6.a. Assessment and Identification of HCV 2

Identification and assessment of *HCV 2** should begin with the national considerations provided in Sections 4.a and 4.b, and then follow the guidance below to determine if there are additional *HCV**. Assessing *landscape**-level *ecosystems** and mosaics requires identifying *IFLs** and other large *forested** and non-*forested** areas that are *significant** at global, national, or regional levels. Using much of the same *Best Available Information** from *HCV 1**, the assessment must distinguish between those ecological features that are addressed only as part of Principle 6 from those that rise to the level of *HCV** under Principle 9.

While *Intact Forest Landscapes* (*IFL*)* are defined as being minimally influenced by human economic activity and globally *significant** (see Section 4.a.i), other *HCV 2** are not required to be as undisturbed or pristine, and assessment of *significance** at an ecoregion or coarser scale is needed.

The term "large" is challenging to define and can vary by region. A 1,000-acre *forest** in the Pacific Northwest, for example, might not be considered notably large, but a *forest** of the same size in the Midwest or Southeast might be relatively large. The focus of *HCV 2** is on *forests** of a such as size as to make them *significant** at a regional scale. Assessments for *HCV 2**

features, therefore, must consider regional contexts. Generally, “large” should be related to the area needed to maintain viable populations, especially of large or wide-ranging *species**.

For the purposes of this Framework “…contain viable populations of the great majority of naturally occurring species in natural patterns of distribution and abundance” can be understood as the presence and relatively natural distribution of the majority of the *species** expected to occur in a specific *landscape** or *ecosystem** mosaic, with recognition that some *species** may be locally extirpated or missing. Therefore, an area will not qualify as *HCV 2** if it has lost many of the *species** typical of such *ecosystems** in their natural state, or been so heavily disturbed that the relative abundance, spatial distribution, and/or regeneration has been seriously and permanently altered. Man-made, converted, heavily degraded or *fragmented** *ecosystems** typically do not qualify, such as those with a dominance of *invasive species**, disrupted size/*age class** distributions of populations, and a loss of significant *ecosystem** processes (e.g. fruit masting, dispersal of key *species**).

6.a.i. Guidance & Resources for Non-*IFL *HCV 2*:**

In addition to the overarching information sources provided in Section 3.a and those identified for *HCV 1**, large *landscape** level *ecosystems** or mosaics may also be assessed and identified using the following resources:

- Aerial photography, LiDAR data, and/or satellite imagery
- Aerial surveys and/or ground visits if the weight-of-evidence suggests that potential for *forest** *fragmentation** that might not be visible on remote-sensing imagery
- Reports and analyses from Natural Heritage Programs, NatureServe, IUCN Red List, USFWS, The Nature Conservancy, Global Forest Watch, WWF, and others
- Forests recognized as being *significant** at the region or coarser scale in formally recognized reports or peer-reviewed journals, due to the unusual *landscape**-scale *biodiversity** values provided by size and condition of the *forest** relative to regional *forest** land cover and land use trends
- Consultation with topic area *experts**

Additionally, the following considerations suggest contexts with a higher likelihood of *HCV 2** occurrence. If any of the following contexts exist within or encompassing the *Management Unit**, the *HCV** assessment should evaluate more closely whether the *landscape**-scale *forest** is *significant** at global, national or regional scales:

- *Natural forests** that have experienced lesser levels of past human disturbance (e.g., minimal timber harvesting) or other management (e.g. fire suppression), or areas within such *forests** (e.g., part or all of ownerships or *Management Units**)
- Managed native *forests** with *successional** stages, *forest** structures, and *species** composition that are similar in distribution and abundance to native *forests** that have experienced minimal human disturbance, excluding traditional Indigenous management regimes
- Native *forests** or *ecosystem** mosaics recognized as being *significant** to *biodiversity** *conservation** because they contain *landscape**-scale *biodiversity** values that are not present on other *forests** due to *landscape**-scale *habitat** modifications on surrounding lands, (such as land use *conversion** or *forest* *management practices that have significantly altered *forest** *biodiversity** values)

- Native *forests**, where if the characteristics of the *landscape**-scale *forest** or *ecosystem** mosaic (e.g., *age class** structure or relative *species** abundance) were significantly altered, it would significantly affect regional *biodiversity**
- *Forests** that provide important *habitat** *connectivity** between and/or buffering of larger *forest** areas and/or *refugia**; and wilderness areas, *forests** that are roadless, and/or have not been affected by *management activities**

6.b. Strategies for Managing Non-IFL HCV 2

In addition to the *Best Available Information** identified in Section 3.a, the following resources may provide strategies for maintaining or enhancing *HCV 2** identified through the above assessment:

- Reports and analyses from Natural Heritage Programs, NatureServe, IUCN Red List, USFWS, The Nature Conservancy, Global Forest Watch, WWF, and others
- Regional and *local** *conservation** organization *landscape** *conservation** plans
- If the *HCV 2** is the result of a particular management system, the continuation of that system will likely be the most effective management strategy
- Appropriate *experts** may include agency staff, academics, and qualified ecologists

Strategies to maintain *HCV 2** occurrences should consider: Strategies that fully maintain the extent and intactness of the *forest** *ecosystems** and the viability of their *biodiversity** concentrations, including plant and animal indicator *species**, keystone *species**, and/or guilds associated with large intact *natural forest** *ecosystems**. Examples include *conservation zones** and *protected areas**, with any commercial activity in areas that are not protected being limited to low-intensity operations that fully maintain *forest** structure, composition, regeneration, and disturbance patterns at all times. Where strategies are intended to enhance *HCV 2** occurrences, they should consider: measures to *restore** and reconnect *forest** *ecosystems**, their intactness, and *habitats** that support natural *biological diversity**, and measures to *restore** *species** and *ecosystem** function in areas where roads have been abandoned.

6.c. Monitoring Non-IFL HCV 2

In addition to the *Best Available Information** identified in Section 3.a, the following resources may provide strategies and data for monitoring *HCV 2** identified through the above assessment:

- Periodic evaluation of aerial photographs, LiDAR data, or satellite imagery to determine if *forest** *fragmentation** is occurring within the *HCV 2**, if recent/current images are available
- Aerial surveys and/or ground visits if the weight-of-evidence suggests that potential for *forest** *fragmentation** that might not be visible on remote-sensing imagery
- Monitoring of road usage and other access points to *HCV 2**

7. HCV 3 – Ecosystems and Habitats

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

7.a. Assessment and Identification of HCV 3

Identification and assessment of *HCV 3** should begin with the national *HCVs** in Section 4.a and 4.b, and then follow the guidance below to determine if there are additional *HCV 3**. In determining whether an *ecosystem** or *habitat** should be considered rare, consideration should be given to rarity at an ecoregion scale, the level of threat that it faces or its rare or unique *species** composition or other rare or unique characteristics, such as distinctiveness in terms of size, quality (particularly lack of human disturbance), or location within the *ecosystem's** geographic range (e.g., northern-most example of a particular *ecosystem**).

When assessing the potential for *HCV 3** specifically associated with *refugia**, there are two types which may have an *HCV** (in addition to seasonal refuges considered under *HCV 1**):

- Ecological *refugia**: Isolated areas which are sheltered from current changes (e.g. human threats or climatic events), and where plants and animals typical of a region may survive
- Evolutionary *refugia**: areas where certain types or suites of organisms persisted during a period when climatic events (e.g. glaciations) greatly reduced habitable areas elsewhere. Such *refugia** often support high overall *species** richness and significant numbers of *endemic species**

7.a.i. Guidance & Resources for *HCV 3:**

In addition to the above overarching information sources identified in Section 3.a and those identified for *HCV 1**, rare *ecosystems**, *habitats** and *refugia** may also be assessed and identified using the following resources:

- Databases for rare, threatened, and endangered *ecosystems**
  - EnviroAtlas: https://catalog.data.gov/dataset/enviroatlas-rare-ecosystems-in-the-conterminous-united-states
  - NatureServe: http://explorer.natureserve.org/ (*ecosystems** listed as "imperiled" or "critically imperiled" at global, national and/or state scales)
  - IUCN Red List of Ecosystems: https://www.iucn.org/resources/conservation-tools/iucn-red-list-ecosystems
- Landscape Conservation Cooperative Network
- State Wildlife Action Plans
- Regional or *local** *conservation** organization *landscape** *conservation** plans
- *Experts** and *stakeholders**
  - State and federal natural resource agencies, including Natural Heritage Programs, or similar state agencies
  - Academic *experts**
  - Appropriate *local**, state, and regional professional organizations
  - NGOs with knowledge regarding rare, threatened, or endangered *ecosystems** (e.g., The Nature Conservancy; World Wildlife Fund)

Additionally, the following considerations suggest contexts with a higher likelihood of *HCV 3** occurrence. If any of the following contexts exist within or adjacent to the *Management Unit**, the *HCV** assessment should be more rigorous in its evaluation of whether rare *ecosystems**, *habitats** or *refugia** are, in fact, present within the *Management Unit**:

- *Ecosystems** or *habitats** that depend on highly localized *soil** types, locations, hydrology or other climatic or physical features, such as some types of limestone karst *ecosystems**, alpine *ecosystems**, or riverine *forests** in arid zones
- Roadless areas that are non-linear in configuration, and >500 acres in size or with unique characteristics
- *Ecosystems** or *habitats** that have been greatly reduced by human activities compared to their historic extent

A more rigorous assessment may entail additional efforts to acquire more detailed or finer-*scale** data regarding *ecosystem** occurrences and or presence of particular indicator *species**, more extensive consultation with *experts** and/or regional *conservation** organizations, and/or conducting field surveys (i.e., by state Natural Heritage programs or other plant community *experts**).

7.b. Managing and Monitoring HCV 3

In addition to the *Best Available Information** identified in Section 3.a, the best resources to provide strategies for maintaining or enhancing *HCV 3** identified through the above assessment will likely be those already identified for *HCV 1** and *HCV 2**. The best resources to provide strategies and data for monitoring *HCV 3** identified through the above assessment will likely be those already identified for *HCV 2**.

Strategies to maintain *HCV 3** occurrences should consider: Strategies that fully maintain the extent and integrity of rare or threatened *ecosystems**, *habitats**, or *refugia**. Where strategies are intended to enhance *HCV 3** occurrences, they should consider: Measures to *restore** and/or develop rare or threatened *ecosystems**, *habitats**, or *refugia**.

8. HCV 4 – Critical Ecosystem Services

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

8.a. Assessment, Identification, Management, and Monitoring of HCV 4

Assessing areas for *HCV 4** requires distinguishing those areas where the *ecosystem services** rise above the level of Principle 6 and warrant additional consideration under Principle 9. For the purposes of this *HCV** Framework, *critical** *ecosystem services** include, at a minimum, watersheds surrounding surface sources of public drinking water, floodplains, and steep *slopes** rated high hazard for *slope** failure. *HCV 4** is focused on basic services of nature for human needs but may also include basic services of nature that protect other *HCVs**.

An *ecosystem service** is critical where a disruption of that service poses a threat of severe, catastrophic or cumulative negative impacts on the welfare, health or survival of *local*

*communities**, on the functioning of important infrastructure (roads, dams, reservoirs, hydroelectric schemes, irrigation systems, buildings, etc.), or on other *HCVs**. The focus of this *HCV** is on provision of a *critical** service to the entirety, or a substantial portion, of the *local community**, not to individuals within that community. For example, an area that is important to the irrigation system of a single or limited number of farmers or ranchers would not reach the level of *HCV 4**, but if the system supplies irrigation for a substantial portion of a farming/ranching-dependent community, it would.

Identification and assessment of *HCV 4** should begin with the national considerations provided in Section 4.a and 4.b, and then follow the guidance below to determine if there are additional *HCV**.

8.a.i. Guidance & Resources for *HCV 4*:

In addition to the above overarching information sources provided in Section 3.a and those identified for *HCV 1**, *critical* ecosystem services** may also be assessed and identified, and management and monitoring strategies developed using the following resources.

Watersheds surrounding surface waters used for public drinking water

Identification & Assessment:

- Consultation with municipal, county, and regional water supply agencies or water districts
- Review of available maps and databases of public drinking water supplies. These are typically available from county or state government agencies
- Maps and databases related to *soil* erosion** potential or the potential for *slope** failure

Developing Management Strategies:

- Review of management plans prepared by municipal, county, regional, and state agencies, where available
- Adherence to *best management practices** for road construction and *forest** management to prevent *soil* erosion**

Monitoring:

- Monitoring for *soil* erosion** or *slope** failure through aerial surveys or ground visits
- Monitoring for *erosion** and sedimentation resulting in the discharge of sediment into public drinking water supplies

Slopes rated as high-hazard for slope* failure*

Identification & Assessment:

- Review of available maps and databases
- Consultation with appropriate municipal, county, regional, and state agencies

Developing Management Strategies:

- Review of management plans prepared by municipal, county, regional, and state agencies, where available
- Review of academic studies related to *forest** management on high-hazard *slopes**
- Adherence to *best management practices**, where available, for *forest** management and road construction on high-hazard *slopes**

Monitoring:

- Monitoring for culvert and road washouts
- Monitoring channel stability downstream of culvert installations
- Monitoring for minor *slope** failure that could cascade into major *slope** failure
- Monitoring for areas of exposed *soil** that are subject to *erosion**

Soils vulnerable to erosion**

Identification & Assessment:

- County *soil** surveys (https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm).
- Consultation with county and state *soil** scientists

Developing Management Strategies & Monitoring:

- Similar to high-hazard *slopes**

Other ecosystem services, including flood control and attenuation*

Identification & Assessment:

- Review of available maps and databases, including FEMA flood maps
- Consultation with appropriate municipal, county, regional, and state agencies
- Special attention to extensive floodplain or *wetland** *ecosystems** that are *critical** to mediating flooding or in controlling stream flow regulation and *water quality**

Developing Management Strategies & Monitoring:

- All of the above

Strategies to maintain *HCV 4** occurrences should consider: Strategies to protect any water catchments of importance to *local communities** located within or downstream of the *Management Unit**, and areas within the unit that are particularly unstable or susceptible to *erosion**. Examples may include *conservation zones**, *protected areas**, harvest prescriptions, chemical use restrictions, and/or prescriptions for road construction and maintenance, to *protect** water catchments and upstream and upslope areas. Where strategies are intended to enhance *HCV 4**, they should consider: *Management strategies** to *restore** *water quality** and quantity, and to maintain or enhance carbon sequestration and storage.

9. HCV 5 – Community Needs

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

9.a. Assessment, Identification, Management, and Monitoring of HCV 5

Identification of areas with *HCV 5** requires (per Criterion 9.1) engaging with *Native American** groups and *local communities** to determine if there are sites and/or resources fundamental for satisfying their basic necessities. This *HCV** Framework does not identify specific *HCV 5** at a national scale.

A site or resource is fundamental for satisfying basic necessities if the services it provides are irreplaceable (i.e. if alternatives are not readily accessible or affordable), and if its loss or damage would cause serious suffering or prejudice to *affected stakeholders**. Determinations of whether a resource is "fundamental" should be made through *engagement** with the communities or *Native Americans**. Basic necessities in the context of *HCV 5** may cover any or all of the provisioning services of the environment, including tangible materials that can be consumed, exchanged or used directly in manufacture, and which form the basis of daily life. The presence of this *HCV** is assessed at the scale of a community, whether *local** or *Native American**, not at the scale of an individual (i.e., whether any portion of the *Management Unit** provides resources that are essential for significant portions of a community, not just for one or a few individuals within a community).

In the United States, it is less common for a *Management Unit** to be fundamental for satisfying the basic necessities of *local communities**. Regardless, managers must engage with *local communities** to consider the potential for such situations. It is more likely that a *Management Unit**, or portion of a *Management Unit**, would be fundamental for satisfying the basic necessities of *Native American** groups, such as livelihoods, health, nutrition, water and other medicines.

The information provided by *local communities** and/or *Native American** groups through *culturally appropriate** communication should be considered the *Best Available Information** for the *HCV** assessment and identification, as well as for developing management and monitoring approaches. This is particularly true for determining the 'fundamentality' of the resource. Where possible, management strategies should be developed collaboratively with representatives of the *local communities** and/or *Native American** groups. A *Free, Prior and Informed Consent** process is required (per Criterion 4.2) when *Traditional Peoples** or a *forest-dependent** *local community** has *legal** rights associated with the *HCV**, or (per Criterion 3.2) when a *Native American** group has *legal** or *customary rights** associated with the *HCV**. See the FSC US Guidance on *Culturally Appropriate Communication and Free Prior and Informed Consent* (US NFSS, Annex F).

10. HCV 6 – Cultural Values

HCV 6 – Cultural Values. Sites, resources, *habitats and *landscapes** of global or national cultural, archaeological or historical *significance**, and/or of *critical** cultural, ecological, economic or religious/sacred importance for the traditional cultures of *local communities** or *Indigenous Peoples**, identified through *engagement** with these *local communities** or *Indigenous Peoples**.**

10.a. Assessment, Identification, Management, and Monitoring of HCV 6

Determining areas to be considered as having *HCV 6** attributes includes identifying: a) places of *significant** cultural, archaeological or historical importance; and b) sites of *critical** importance to *local communities** and/or *Native American** groups. Information about the first will most likely be available through existing databases and appropriate agencies. The second is required to be identified through consultation with appropriate parties (per Criterion 9.1). While *engagement** with *local communities** and *Native Americans** for the purposes of *HCV 6** (and

also *HCV 5**) can be combined with *engagement** with communities and *Native Americans** for the purposes of Criterion 2.2, Principle 3, and Criterion 4, *HCV 6** values are not limited to situations where communities or *Native American** groups have *legal** or *customary rights**.

Identification and assessment of *HCV 6** should begin with the national *HCVs** identified in Section 4.a and 4.b, and then follow the guidance below to determine if there are additional *HCV**.

The *Best Available Information** for assessment and identification of *HCV 6** for places that are globally or nationally *significant** cultural, archaeological or historical importance will likely be held in federal, state, and regional databases. Consultation with the State Historic Preservation Office, or similar agency, is also a valuable source of information, for assessment and identification, and also for developing strategies for management and monitoring. Additionally, many *Native American** groups have *Tribal** Historic Preservation Officers, and when available, these individuals should also be consulted.

The information provided by *local communities** and/or *Native American** groups through *culturally appropriate** communication is the *Best Available Information** for the *HCV** assessment and identification of sites of *critical** importance to these communities, as well as for developing management and monitoring approaches. This is particularly true for determining the "*criticality**" of the value. The assessment should consider:

- If the *Management Unit** includes sites that are critical to the cultural identity of a *local community** or *Native American** group, and/or that include cultural features created intentionally by humans, and/or
- If the *Management Unit** includes or occurs within an outstanding natural *landscape** that has evolved as a result of social, economic, administrative, and/or religious imperative

Where possible, management strategies should be developed collaboratively with representatives of the *local communities** and/or *Native American** groups.

A *Free, Prior and Informed Consent** process is required (per Criterion 4.2) when *Traditional Peoples** or a *forest-dependent** *local community** have *legal** rights of access or *use rights** associated with the *HCV**, or (per Criterion 3.2) when a *Native American** group has *legal** or *customary rights** associated with the *HCV**. See the FSC US Guidance on *Culturally Appropriate Communication and Free Prior and Informed Consent* (US NFSS, Annex F).

Consultation Question:

Would it be helpful to include examples for some or all of the HCV types? If yes, for which HCV types?

11. Small-Scale Management Units and HCV

To be completed in alignment with the Family Forest alternate indicators.

12. Pertinent Definitions

Critical	The concept of criticality or fundamentality in Principal 9 and *HCVs** relates to irreplaceability and to cases where loss or major damage to this *HCV** would cause serious prejudice or suffering to *affected stakeholders**. An *ecosystem** service is considered to be critical (*HCV 4**) where a disruption of that service is likely to cause, or poses a threat of, severe negative impacts on the welfare, health or survival of *local communities**, on the environment, on *HCVs**, or on the functioning of significant infrastructure (roads, dams, buildings etc.). The notion of criticality here refers to the importance and *risk** for natural resources and environmental and socio-economic values. [Source: FSC-STD-01-001 V5-2]
High Conservation Value (HCV)	Any of the following 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**, 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 example for livelihoods, health, nutrition, water), 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**. [Source: Based on FSC-STD-01-001 V5-2]
High Conservation Value Areas (HCVA)	Zones and physical spaces which possess and/or are needed for the existence and maintenance of identified *High Conservation Values**. [Source: FSC-STD-60-004 V2-0]

Landscape	For the purposes of this Standard, the term "landscape" refers to a delineation of land area that captures similar environmental and ecological conditions including climate, geology, soils, water, and biology. USFS- defined Ecological Sections (Cleland 2005, update of Bailey/USFS) or smaller units are recommended for use to define *landscape** for purposes of *RSA** establishment and assessment. For many other purposes, "landscapes" will often occur at smaller *scales** than ecological sections. In some contexts, "landscape" as used in this Standard simply refers to consideration of the area surrounding a particular site. In developing the description of "landscape" *The Organization** considers the *Management Unit's** ability to influence and impact the surrounding area, as well as the potential for other owners to influence and impact the area that the *Management Unit** falls within. Some larger *Management Units** may represent the full *landscape** that needs to be considered, while other typically smaller *Management Units** may occur within a broader *landscape** that should be considered.
Precautionary principle/ approach	An approach requiring that when the available information indicates that *management activities** pose a threat of severe or irreversible damage to the environment or a threat to human welfare, *The Organization** will take explicit and effective measures to prevent the damage and avoid the *risks** to welfare, even when the scientific information is incomplete or inconclusive, and when the vulnerability and sensitivity of environmental values are uncertain. [Source: Based on Principle 15 of Rio Declaration on Environment and Development, 1992, and Wingspread Statement on the Precautionary Principle of the Wingspread Conference, 23–25 January 1998]
Significant	For the purposes of Principle 9, *HCVs 1, 2* and *6** there are three main forms of recognizing *significance**. • A designation, classification or recognized *conservation** status, assigned by an international agency such as IUCN or Birdlife International; • A designation by national or regional authorities, or by a responsible national *conservation** organization, on the basis of its concentration of *biodiversity**; • A voluntary recognition by the manager, owner or *Organization**, on the basis of available information, or of the known or suspected presence of a *significant** *biodiversity** concentration, even when not officially designated by other agencies. Any one of these forms will justify designation as *HCVs 1, 2* and *6**. Many regions of the world have received recognition for their *biodiversity** importance, measured in many different ways. Existing maps and classifications of priority areas for *biodiversity** *conservation** play an essential role in identifying the potential presence of *HCVs 1, 2** and *6**. [Source: FSC-STD-01-001 V5-2]

13. Literature Cited

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ANNEX L: Climate Change Toolkit

Table of Contents

Toolkit Introduction

Draft 1 of the US National Forest Stewardship Standard (NFSS) incorporates planning for a changing climate, specifically in Principles, 6, 7, 8, and 10. The FSC US Standard Development Group recognizes that planning for climate change should evolve as scientific understanding of potential impacts improves. As the body of scientific literature grows, so does our ability to conceptualize *forest** management planning frameworks and processes that incorporate climate change considerations.

This toolkit is designed to help certificate holders martial the *Best Available Information** and apply it to the context of their *Management Unit** and the NFSS. Much work has already been conducted to project the likely effects of climate change at regional and national scales. *The Organization** can use this toolkit to identify those projections, relate them to their *management objectives** and *Management Unit*, and consider *management strategies** that are likely to be the most successful.

To help *The Organization** be successful in this process, this toolkit provides 1) a commonly accepted conceptual framework for managing *forests** to adapt to climate change, 2) expectations for climate change assessments and documentation, and 3) guidance to interpret the climate change related requirements of the NFSS as well as related web-based sources for *Best Available Information**.

Conceptual Framework for Managing *Forests** to Adapt to a Changing Climate

The structure for managing *forests** for a changing climate in the NFSS is modeled after *forest** management concepts developed by the Northern Institute of Applied Climate Science (NIACS),

a collaborative partnership among the United States Forest Service (USFS), universities, *conservation** organizations, and *forest** industry. NIACS developed a framework for climate - informed *forest** management known as the Adaptation Workbook. *The Organization** can use this framework to contextualize how managing for a changing climate can be integrated into *forest** management. Many of the following concepts are addressed by indicators in the NFSS.

The Adaptation Workbook process provides "structured flexibility" as managers work through a sequence of the following five broad steps (Swanston et. al., 2016).

1. Define area of interest, goals, and objectives
2. Assess climate change impacts and vulnerabilities
3. Evaluate *management objectives** given impacts and vulnerabilities
4. Identify adaptation options and tactics for implementation; options often include one or more of the following:
   - Resistance
   - Resilience
   - Transition
5. Monitor and evaluate effectiveness

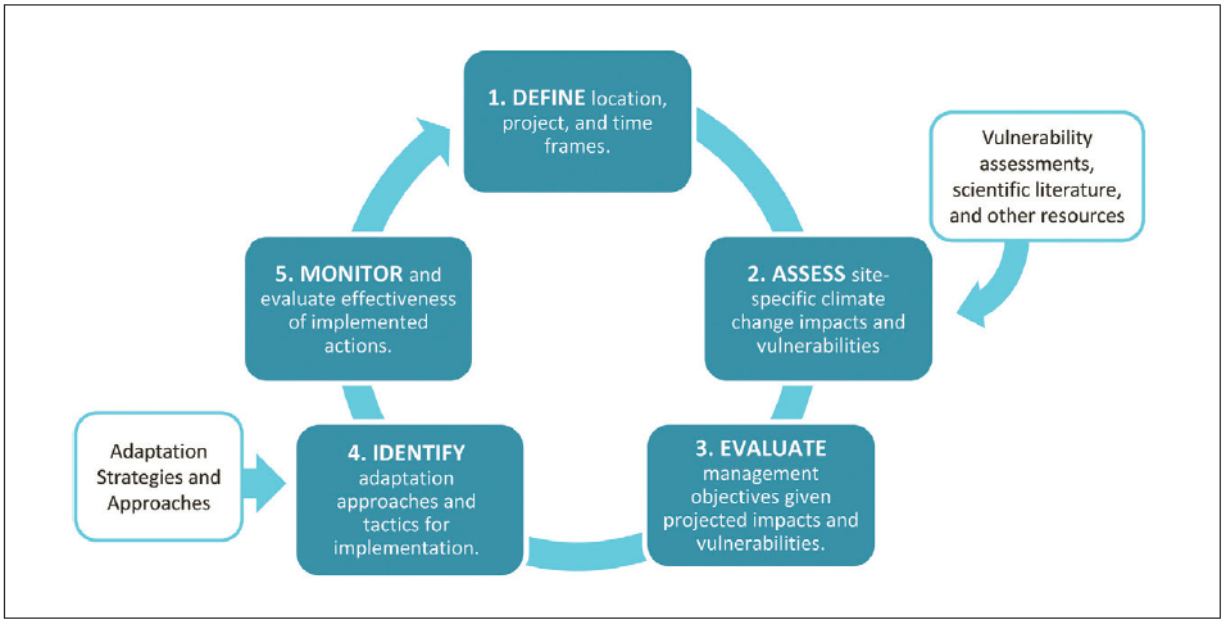

Figure 1. Adaptation Workbook Process. Source: Forest Adaptation Resources: Climate Change Tools and Approaches for Land Managers, 2nd Edition (Swanston et al. Ch. 5, page 75, 2016).

Below, the specific requirements in NFSS *Indicators** are cross-walked to the steps in the Adaptation Workbook process. This is shown for visualization purposes only. However, many of the *climate change adaptation strategies** cited in this toolkit are either based on or were born out of similar conceptual frameworks.

Table 1. FSC US NFSS and Adaptation Planning Steps Crosswalk

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

Additional Resources for Conceptualizing Management Frameworks that Address Climate Change

The Climate Change Resource Center website (CCRC) is a national-level resource for *forest** landowners and managers. The CCRC provides credible, targeted information for *forest** adaptation including original content, summaries of tools, adaptation frameworks and examples, links to relevant scientific literature, and a compendium of adaptation approaches. The Adaptation Workbook is also available as a smartphone app, and was developed through a broad collaborative framework that is an effective approach for integrating Adaptation Planning into *The Organization's** management planning process.

The Climate Smart Conservation guide is a collaboration led by the National Wildlife Federation. The guide breaks adaptation planning into discrete, manageable steps that help conservationists and land managers incorporate climate change considerations into their work.

The Adaptation for Conservation Targets (ACT) Framework is another tool for incorporating climate change into natural resource management. This tool considers the effects of climate change in the development of management actions. Management actions can be in support of specific *species**, *ecosystems**, or ecological functions. The premise of this framework is that development of management for climate change can rely on *local** knowledge and does not necessarily need to rely on detailed projections of climate change or its effects.

Additional background and educational media on climate change and natural resource management can be found at the following outlets:

- CCRC Education: Three education modules that cover Climate Change Science and Modeling, Climate Change Effects on Forests and Grasslands, and Responses to Climate Change. Many other educational resources related to climate change topics and adaptation planning are also available.
- NIACS YouTube: Adaptation Planning and Practices Course playlist, an adaptation concepts presentation, and short videos.

Expectations for Climate Change Assessments and Documentation

Climate change is addressed within several *Principles** in the NFSS (see Table 1, above). Of these instances, evaluations and assessments are necessary to achieve conformance with Indicators 6.1.1 and 7.2.4 (see in-depth descriptions to help *The Organization** comply with each *Indicator**, below). In both *Indicators**, the NFSS is not explicit about the methods, format, or documentation of the evaluations and assessments. Consideration of the following guidance will help *The Organization** successfully comply with the expectations for these evaluations and assessments.

When completing climate change evaluations and assessments, *The Organization** should rely on the *Best Available Information** from national, regional, and *local** scales. They are not expected to develop their own scientific projections of climate change impacts. Rather, they should use *Best Available Information** to assess their own *Management Unit**.

Evaluations and assessments related to climate change should be accomplished in a transparent manner that can be reviewed by the *Certification Body**. The documentation may be in the form of an assessment report, or (similar to the *management plan**) may be a collection of documents, reports, records, maps and other materials as applicable. However, if the second approach is taken, *The Organization** should prepare a summary that identifies the various materials within the collection and that summarizes the assessment process and its conclusions.

Documentation should include:

- Any *experts** consulted (e.g., name and affiliation)
- What additional sources of *Best Available Information** were used
- Findings from the evaluations or assessments
- When appropriate, the activities implemented on the *Management Unit**

Guidance to Interpret the Climate Change Related Requirements of the NFSS as well as Outlets for *Best Available Information**

Climate Change in Principle 6

Indicator 6.1.1 requires an assessment of conditions that identify environmental values that may be affected by *management activities**, and this assessment must include potential future impacts of climate change and *catastrophic natural disturbances**.

The effects that climate change will have on *ecosystems** is not completely known, but some projections are likely more reliable than others. In order to make informed, productive decisions regarding adapting *forest** management to a changing climate, managers need to be acquainted with the *Best Available Information** and able to apply it to their *Management Unit**. In particular, this means considering on which topics and projections there exists scientific consensus, for which topics expectations are less certain, and how expectations may vary depending on spatial and temporal scales.

For instance, the impacts of climate change are expected to vary spatially as well as temporally. Depending on region, the ability of *forests** to provide environmental values may be influenced, for instance, by future trends in temperature, precipitation regime, or frequency of natural

disturbance events,. Most environmental trends related to climate change are expected to be exacerbated over time (e.g., in 100 years, some regions will be more drought prone than they are 25 years from the present).

Changes in environmental conditions, consequently, will have varying effects on *forest** and non-*forest** *ecosystems**. For this assessment, it is pertinent for *The Organization** to explore the vulnerability of *ecosystems** associated with the *Management Unit** and the most probable effect the environmental changes will have on those *ecosystems**. The following assessment steps provide a framework for exploring vulnerabilities and potential impacts.

When managers consider the ability of the *Management Unit** to continue to provide environmental values, they should document the regional and temporal predicted changes in environmental conditions associated with their *Management Unit**. The most comprehensive approach will involve an assessment at the regional, state, and *local** (i.e., *Management Unit**) level. The assessment should provide answers to the following questions and should access the listed types of information.

1) **How are climatic conditions expected to change in my region, state, and on my *Management Unit**?**

   Best Available Information* **includes**

   - Information on regional projected climate change effects on *ecosystems** such as *ecosystem**, regional, and other vulnerability and impact assessments for climate change
     - Regional Information (click on your region): https://www.fs.usda.gov/ccrc/
     - USDA Regional Climate Hubs: https://www.climatehubs.usda.gov/commodity/forests-woodlands
     - National Climate Assessment reports: https://nca2018.globalchange.gov/
     - Climate Change Vulnerability Assessments Across the Nation: https://www.fs.usda.gov/managing-land/sc/vulnerability-assessments#:~:text=Climate%20change%20assessments%20bring%20together,expected%20impacts%20of%20climate%20change.&text=They%20can%20vary%20greatly%20in,a%20specific%20location%20or%20resource.

       https://usfs.maps.arcgis.com/apps/Cascade/index.html?appid=f09164baef5d47d3ad728deaa1a28e7b

   - Climate Change Topics list at https://www.fs.usda.gov/ccrc/topics including, for example, climate change *refugia** and *ecosystem services**

   - Regional, state, and *local** natural resource management organizations and *experts** (if the above resources are not available or adequate)

2) **How are the *forest** (and non-*forest**) *ecosystems** in my region, state, and on my *Management Unit** likely to respond to the expected changes in climatic conditions?**

Best Available Information* **includes**

- See #1, above.
- Maps, future desired conditions and *management objectives**, and information on past and future management from the *management plan** that help answer this question for your *Management Unit**.

3) **What environmental values, especially those on the *Management Unit**, will likely be affected by the changes?**

Best Available Information* **includes**

- See #1 and #2, above
- Other environmental values identified associated with the Indicator 6.1.1 assessment.

Climate Change in Principle 7

Indicator 7.2.4 requires that the *management plan**: a) consider potential impacts of climate change related risks and vulnerabilities on achievement of *management objectives** and *desired future conditions*,* and b) describe any *climate change adaptation strategies** that are implemented.

This *Indicator** is intended to address and evaluate risks, vulnerabilities, challenges, and opportunities associated with climate change as they relate to *management objectives** and *desired future conditions**. Secondarily, *The Organization** is also required to describe the *management strategies**, also known as *climate change adaptation strategies**, that they have implemented to address risks and opportunities, if any.

Depending on expected future changes in climatic conditions (see Indicator 6.1.1), current or past *management objectives** may no longer be pragmatic. For instance, warmer winters or decreases in winter snowpack could lead to increased large herbivore populations (e.g., white-tailed deer) that play key roles in the success or failure of *forest** regeneration activities. Increased variability in precipitation trends could lead to increased drought or increased probability of flooding in depressions and lower areas on the *landscape**, each coming with their own *silvicultural** complications depending on the desired *ecosystem** type. Finally, some changes in future climatic conditions may benefit certain *ecosystem** types or *species**, and these should be addressed, too—for instance, longer growing seasons may make it possible to favor more southern *species**, or higher concentrations of atmospheric carbon dioxide could increase tree growth rates.

When disparities are identified between *The Organization's** current or past *management objectives** and objectives that are likely to be successful in a changed future climate, *The Organization** may choose to implement *climate change adaptation strategies** to address these disparities. Per Indicator 7.2.4 Guidance, these strategies may be categorized as resistance, *resilience**, and facilitated transition (see also, assisted migration). Examples of each strategy are provided, below (Swanston et. al., 2016). Note that overlap exists between these strategy categories:

Resistance:

- Sustaining fundamental ecological functions
    - Reduce competition for moisture, nutrients, and light

    - Restore or maintain fire in fire-adapted ecosystems
- Reduce the impact of biological stressors
    - Improve the ability of *forests** to resist pests and pathogens
    - Address new and existing *invasive species**
- Maintain or create *refugia**
    - Prioritize and maintain sensitive or at-risk *species** or *ecological communities**, especially those at the edge of their historic range
    - Establish artificial reserves for at-risk and displaced *species**

***Resilience**:*

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

Facilitated Transition:

- Facilitate community adjustments through *species** transitions
    - Favor or *restore** *native species** that are expected to be adapted to future conditions
    - Guide changes in *species** composition at early stages of *stand** development
    - Manage for *species** and *genotypes** with wide moisture and temperature tolerances
- Maintain and enhance genetic diversity
    - Use seeds, germplasm, and other genetic material from across a greater geographic range
    - Favor existing *genotypes** that are better adapted to projected future conditions

In addition to the Guidance provided with Indicator 7.2.4 in the main body of the Standard, this overall evaluation should result in an indication of the feasibility of meeting current *management objectives** (e.g., business as usual) and, subsequently, an overview of resulting changes in *management objectives** and/or implemented *climate change adaptation strategies**. <u>This process is intended to be informal</u> but should provide answers to the following questions and should access the listed types of information.

1) **What are the risks, vulnerabilities, challenges, and opportunities associated with achieving the *Management Unit's** current *management objectives** in a climate changed future?**

    Best Available Information* **includes**

    - *Soils**, hydrology, *habitat** type, or past management influences from the *management plan**

- Current *management objectives** and timelines for achievement from the *management plan**
- *Ecosystem** responses to projected future climate conditions identified per Indicator 6.1.1
- Managing for Change: https://www.fs.usda.gov/ccrc/education/managing-change

2.) What *climate change adaptation strategies, if any, are being implemented?**

***Best Available Information** includes**

- A list of potential adaptation approaches that may be suitable for your *ecosystem**
  - *Forest Adaptation Resources: climate change tools and approaches for land managers, 2nd edition* (Adaptation Strategies and Approaches in Chapters 3 and 4; figures on page 31 and 32; Box 10 on page 34)
  - Other lists of adaptation actions, such as this list specifically for the western United States www.adaptationpartners.org/library.php
  - Compendium of Adaptation Approaches: https://www.fs.usda.gov/ccrc/climate-projects/adaptation-approaches
- Regional, state, and *local** natural resource management organizations and *experts** (if the above resources are not available or adequate)
- Actual *climate change adaptation strategies** in the *management plan**

Climate Change in Principle 8

Indicator 8.1.2 requires that *The Organization's** monitoring protocol include specific procedures to evaluate: a) how changes in the assessed potential impact of climate change related risks and vulnerabilities may affect achievement of *management objectives** and *desired future conditions**, and b) the effectiveness of *climate change adaptation strategies** implemented to address identified impacts (per Indicator 7.2.4).

This *Indicator** is intended to ensure alignment of *management objectives** with climate change related risks and vulnerabilities identified per Indicator 7.2.4. It is also intended to elicit a methodology to evaluate (i.e., including information collection and evaluation of that information) the effectiveness of *climate change adaptation strategies** that have been implemented. This process should be geared toward developing a monitoring procedure that can help inform adjustments to future management to account for new information, conditions, and observations as they relate to a changing climate. The process should address the following concepts:

1) Ongoing collection of new *Best Available Information by periodically accessing sources of *Best Available Information****

- Information on regional projected climate change effects on *ecosystems** such as *ecosystem**, regional, and other vulnerability and impact assessments for climate change
  - Regional Information (click on your region): https://www.fs.usda.gov/ccrc/
  - USDA Regional Climate Hubs: https://www.climatehubs.usda.gov/commodity/forests-woodlands

- Regional, state, and *local** natural resource management organizations and *experts** (if the above resources are not available or adequate)

2) **Ongoing assessment of the implication of new *Best Available Information** for *The Organization's** achievement of current *management objectives****

   Best Available Information* **includes**
   - Use of insights gained from #1, above
   - See also #1 at 7.2.4, above

3) **Ongoing collection of data associated with specific *climate change adaptation strategies**** **that are being implemented—this data is used to assess the effectiveness of *climate change adaptation strategies**** **(#4, below)**

   Best practices include consideration of the following factors to help improve the usefulness of monitoring (Swanston et. al., 2016)
   - Identify an adaptation monitoring variable that is measurable and that will be useful to evaluate achievement. Examples include
     - Seedling survival rate
     - Overstory mortality rate
     - Diameter or basal area growth
   - Identify a measurable criterion for evaluation. This is usually a meaningful value or threshold for success. Examples include
     - 70% seedling survival after 5 years
     - 3 square feet/acre average annual basal area growth over five years
   - Describe the details of monitoring (e.g., data collected, frequency, and duration of monitoring)

4) **Ongoing assessment of the effectiveness of *climate change adaptation strategies**** **using the data collected in #3, above**. **Are the implemented *climate change adaptation strategies**** **working, or should you consider new ones?**
   NOTE: depending on the specific activities associated with the *climate change adaptation strategy, effectiveness may not be determined except after extended periods of time (i.e., decades).**

Climate Change in Principle 10

Indicator 10.2.2 introduces flexibility by allowing *The Organization** to develop a plan for the use of *non-native species** of North American origin for regeneration. This flexibility applies when: a) non-local *genotypes** of *native species** are either not adequate for maintaining or enhancing local diversity as part of *climate change adaptation strategies*,* or b) when *native species** are not an option due to disease or pest vulnerabilities.

In the context of *climate change adaptation strategies**, Indicator 10.2.2 is likely most relevant to *Organizations** that have implemented a facilitated transformation (see also, assisted migration) strategy (see *Climate Change in Principle 7*, above).

Indicator 10.9.2 requires that *management activities** are implemented to increase the *resilience** to *catastrophic natural disturbances** identified per Indicator 6.1.1.

Climate change is expected to increase the potential for natural disturbance events such as wildfire, extreme wind, and ice storms (Swanston et. al., 2016). The intent of this *Indicator** is to require that the *Organization** act proactively to make their *forest** more robust to disturbance events, particularly those that are likely to increase in severity and/or frequency in their region. Examples of *climate change adaptation strategies** that can be used to increase *resilience** to natural disturbance include establishing fuel breaks to slow the spread of fire, altering *forest** structure or composition to reduce risk or severity of wildfire, and altering *forest** structure to reduce severity or extent of wind and ice damage (Swanston et. al., 2016). Best practices for achieving conformance with Indicator 10.9.2 include:

1) **Accessing *Best Available Information** at the region, state, and *local** level to determine how climate change is expected to change climatic conditions and how *forest** types and other *ecosystems** are expected to react

   ***Best Available Information** includes**
   - See #1-#3 at Indictor 6.1.1, above
   - Focus is on information that addresses changes in expected natural disturbance severity and frequency

2) **Identification of *ecosystem** risks and vulnerabilities as they relate to natural disturbance events using information collected in #1, above**

   ***Best Available Information** includes**
   - See #1 at Indicator 7.2.4, above

3) **Identification and implementation of *climate change adaptation strategies** that are focused on increasing the *resilience** of *ecosystems** at risk to natural disturbance events**

   ***Best Available Information** includes**
   - A list of potential *climate change adaptation strategies** that may be suitable for your *ecosystem**
     - *Forest Adaptation Resources: climate change tools and approaches for land managers, 2nd edition* (Adaptation Strategies and Approaches in Chapters 3 and 4; figures on page 31 and 32; Box 10 on page 34)
     - Other lists of *climate change adaptation strategies**, such as this list specifically for the western United States www.adaptationpartners.org/library.php
     - Compendium of Adaptation Approaches: https://www.fs.usda.gov/ccrc/climate-projects/adaptation-approaches
   - Regional, state, and *local** natural resource management organizations and *experts** (if the above resources are not available or adequate)

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