Jurisdictional & Nested REDD+

JNR Requirements

Scenario 1

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ABOUT VERRA

Verra supports climate action and sustainable development through the development and management of standards, tools and programs that credibly, transparently and robustly assess environmental and social impacts, and drive funding for sustaining and scaling up these benefits. As a mission-driven, non-profit (NGO) organization, Verra works in any arena where we see a need for clear standards, a role for market-driven mechanisms and an opportunity to achieve environmental and social good.

Verra manages a number of global standards frameworks designed to drive finance towards activities that mitigate climate change and promote sustainable development, including the Verified Carbon Standard (VCS) Program and its Jurisdictional and Nested REDD+ framework (JNR), the Verra California Offset Project Registry (OPR), the Climate, Community & Biodiversity (CCB) Standards, the Sustainable Development Verified Impact Standard (SD VISta) and the Plastic Waste Reduction Program (Plastic Program). Verra is also developing new standards frameworks, including LandScale, which will promote and measure sustainability outcomes across landscapes. Finally, Verra was a founding member of the Initiative for Climate Action Transparency (ICAT), which helps countries assess the impacts of their climate actions and supports greater transparency, effectiveness, trust and ambition in climate policies worldwide. Today Verra remains engaged with the ICAT in an advisory role.

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1 INTRODUCTION

The *JNR Scenario 1 Requirements* provide the VCS Program requirements for developing jurisdictional forest reference emission levels (FRELs) and the rules to be used by projects and lower-level (i.e., subnational) jurisdictional programs for nesting into them. They include requirements for jurisdictional boundaries, eligible activities, GHG sources and carbon pools, FREL determination, allocation of the FREL to project and lower-level jurisdictional program baselines, validation, monitoring, and verification. The *JNR Scenario 1 Requirements* are intended to assist governments, private entities, civil society organizations, local stakeholders, and validation/verification bodies in developing and auditing jurisdictional FRELs that include nested projects and/or lower-level jurisdictional programs.

The *Jurisdictional and Nested REDD+ (JNR) Requirements* (comprised of the *Jurisdictional and Nested REDD+ Guide* and the three scenario modules, including this document, *the JNR Scenario 1 Requirements*) are the overarching program documents for the VCS JNR Program and establish the rules and requirements for all jurisdictional and nested carbon accounting and crediting options. In addition to the requirements set out in this document and the *Jurisdictional and Nested REDD+ (JNR) Guide*, jurisdictional programs and nested projects shall adhere to all applicable VCS Program requirements and rules set out in the VCS Program documents. Readers are referred to the *VCS Program Guide*, the *VCS Standard*, *the VCS Methodology Requirements,* and the *Jurisdictional and Nested REDD+ (JNR) Non-Permanence Risk Tool*. Such rules and requirements apply *mutatis mutandis* (e.g., where the *VCS Standard* uses the term "project proponent," it may be appropriate to read this as "jurisdictional proponent") unless otherwise noted in this document. Where this document references the *VCS Methodology Requirements* and it requires specific criteria or procedures to be set out in a methodology, such requirements should be read as requirements to be fulfilled in the jurisdictional program or FREL description.

Nested lower-level jurisdictional program proponents shall follow the requirements set out in this document as well as those established in the *JNR Scenario 2 Requirements* where they allow for project nesting within their program boundaries*, or the JNR Scenario 3 Requirements* where nesting is not allowed. Nested project proponents must follow the rules and requirements set out in this document and must also follow the *VCS Standard* and the applied methodology, except where the requirements set out in this document conflict with the *VCS Standard* or applied methodology, in which case this document takes precedence. Where certain requirements apply to both projects and jurisdictional programs, such requirements apply *mutatis mutandis* (e.g., where the term "project" is used it shall be understood as "jurisdictional program"), unless otherwise noted.

1.1 Version

All information about version control under the VCS Program is contained in the *VCS Program Guide*.

This document will be updated from time-to-time and readers shall ensure that they are using the most recent version of the document. Where external documents are referenced, such as the *IPCC 2006 Guidelines for National GHG Inventories*, and such documents are updated periodically, the most recent version of the document shall be used.

Previous versions of the *JNR Requirements* may have included different rules and requirements than those set out in this version. Previous versions of the *JNR Requirements* and other VCS Program documents are archived and available on the Verra website.

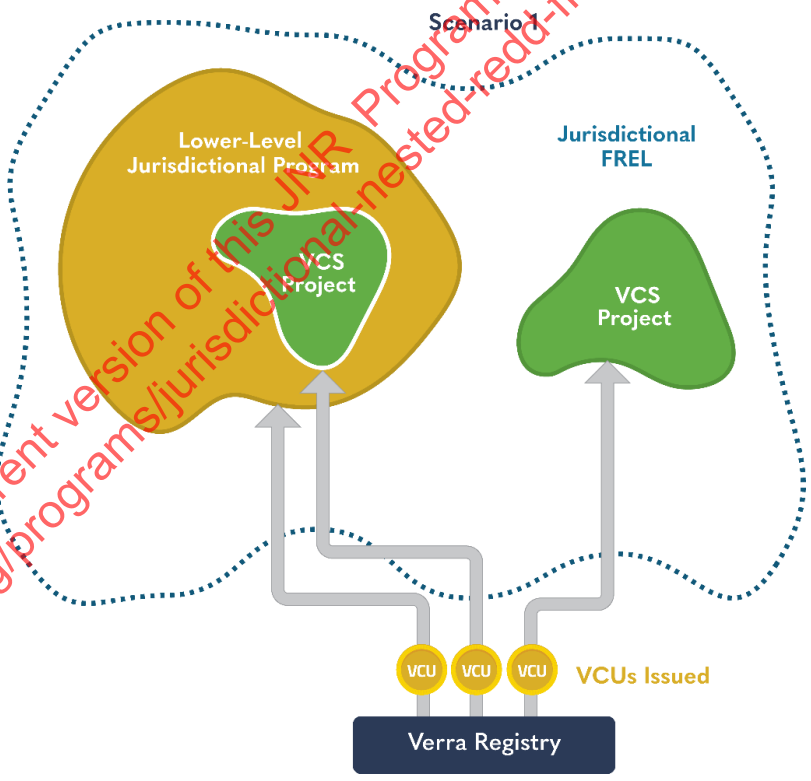
2 OVERVIEW OF SCENARIO 1

2.1 Overview

Under Scenario 1, the jurisdictional proponent develops and registers a forest reference emission level (FREL) covering all or part of its jurisdictional territory. The jurisdictional FREL is allocated to REDD+ projects and lower-level jurisdictional programs[1] located within the geographic boundaries of such FREL to determine their baselines or FRELs, respectively. Carbon accounting and crediting only occur to the nested REDD+ projects and/or nested lower-level jurisdictional programs (and not to the higher-level jurisdiction).

Diagram 1 below provides an overview of the carbon accounting and crediting pathways under Scenario 1. Box 1 provides an example of the crediting options for activities nested into jurisdictional FRELs in line with these *JNR Scenario 1 Requirements*.

Diagram 1. Overview of Scenario 1



[1] In the context of Scenario 1, a "lower-level jurisdictional program" is a program that is nested into a FREL that covers a territory that is larger than the program area. This would be the case, for instance, of a province-level jurisdictional program nested into a country-wide FREL.

Box 1: Example of Crediting to Projects and/or Lower-Level Jurisdictional Programs Nested into a Jurisdictional FREL.

The government of Country A develops and registers a jurisdictional FREL covering the whole national territory. Each individual REDD project and subnational (lower-level) jurisdictional program within the country is allocated a baseline or a FREL, respectively. Projects are developed, validated, registered, monitored, and verified in accordance with the nesting requirements in this document, the *VCS Standard* and the relevant methodology, and may request issuance of VCUs. Lower-level jurisdictional programs, if any, are developed, validated, registered, monitored, and verified in accordance with the *Jurisdictional and Nested REDD+ Guide* and *JNR Scenario 2 Requirements or JNR Scenario 3 Requirements* and may request issuance of VCUs. The government of Country A may carry out monitoring in order to collect data for the FREL reassessment but does cannot seek issuance of VCUs.

2.2 REDD+ Non-Permanence Risk and Jurisdictional Pooled Buffer Account

2.2.1 Non-permanence risk in nested projects and lower-level jurisdictional programs is assessed through a risk analysis, using the VCS Program document *JNR Non-Permanence Risk Tool*, for nested lower-level jurisdictional programs, and the *AFOLU Non-Permanence Risk Tool*, for nested projects. Each tool determines the number of credits to be deposited in the jurisdictional or AFOLU pooled buffer account, respectively.

2.2.2 The AFOLU pooled buffer account holds non-tradable buffer credits to cover the non-permanence risk associated with nested projects. The jurisdictional pooled buffer account holds non-tradable buffer credits to cover the non-permanence risk associated with lower-level jurisdictional programs nested into a jurisdictional FREL.

2.2.3 The full rules and procedures with respect to non-permanence risk for lower-level jurisdictional programs are set out in Section 3.17 of the *JNR Scenario 2 Requirements* and Section 3.16 of the *JNR Scenario 3 Requirements* and, for nested projects, in the *VCS Standard* and Section 3.17, below.

2.2.4 The jurisdictional pooled buffer account and AFOLU buffer account are subject to periodic reconciliation, as set out in the *VCS Standard*.

2.2.5 Program and project non-permanence risk analyses and tools will be subject to periodic review by Verra, as set out in the *VCS Standard*.

3 JURISDICTIONAL FREL AND NESTING REQUIREMENTS

This section sets out the rules and requirements for jurisdictional FRELs with nested projects and/or jurisdictional programs under the VCS Program.

To complete the VCS Program certification process, jurisdictional FRELs and nested projects and lower-level programs must meet all rules and requirements set out in this section. Compliance is assessed through the validation and verification processes, which are defined in Section 4 below. Once jurisdictional FRELs complete the validation process, they become eligible for registration. Note that the full process for requesting FREL registration is set out in the VCS Program document *JNR Registration and Issuance Process*.

3.1 General Requirements

Concept

Establishing consistent and standardized rules and requirements is critical to ensuring the integrity of VCS jurisdictional FRELs. Accordingly, certain high-level requirements must be met by jurisdictional FRELs, as set out below.

Jurisdictional FREL Requirements

3.1.1 Default factors and standards used to ascertain GHG emission data and any supporting data for establishing the FREL shall be publicly available from a recognized, credible source, such as the *IPCC 2006 Guidelines for National GHG Inventories and their 2019 refinement*, *IPCC Good Practice Guidance for Land Use, Land-Use Change and Forestry* and the *Methods and Guidance from the Global Forest Observations Initiative (GFOI)*. See the VCS Program document *VCS Methodology Requirements* for the full rules and requirements for the use of default factors and standards.

3.1.2 The development and implementation of subnational jurisdictional elements (i.e., jurisdictional programs and/or jurisdictional FRELs) shall seek alignment with the national REDD+ strategy and policy framework and comply with all national and subnational laws and regulations.

3.1.3 Where implementing partner(s) are acting in partnership with the jurisdictional proponent, the implementing partner(s) shall be identified in the jurisdictional FREL description, as appropriate. The jurisdictional proponent shall identify their roles and responsibilities with respect to the FREL, including but not limited to, estimation, allocation, and monitoring of the GHG emissions within the boundaries of the FREL over the FREL validity period.

3.2 Jurisdictional FREL Description

Concept

Jurisdictional FREL descriptions outline all elements of a jurisdictional FREL and describe how it has been allocated to nested projects and lower-level jurisdictional programs.

Jurisdictional FREL Requirements

3.2.1 The jurisdictional FREL and any accompanying documents shall be detailed in the jurisdictional FREL description using the *JNR FREL Description Template* available on the Verra website. The jurisdictional proponent shall adhere to all instructional text within the template.

3.2.2 All information in the jurisdictional FREL description and any accompanying documents shall be presumed to be available for public review, though sensitive information may be protected, as set out in the VCS Program document *JNR Registration and Issuance Process*. The validation/verification body shall check that any information designated by the jurisdictional FREL proponent as sensitive meets the VCS Program definition of program sensitive information. Information in the jurisdictional FREL description and any accompanying documents related to the determination of the FREL and monitoring of GHG emission reductions shall not be considered to be sensitive and shall be provided in the public versions of the documents.

3.2.3 The jurisdictional FREL description shall identify any existing or forthcoming (where known) nested projects and/or lower-level jurisdictional programs. The full description of any nested projects and/or lower-level jurisdictional programs shall be included in a separate project description or jurisdictional program description, as relevant.

Jurisdictional FREL Description Deviations

3.2.4 Deviations from the jurisdictional FREL description are permitted at validation following the process for project description deviations set out in the *VCS Standard mutatis mutandis*.

3.2.5 Jurisdictional FREL description deviations are not considered to be precedent setting.

Nesting Requirements

Projects and Lower-Level Jurisdictional Programs

3.2.6 Nested projects and lower-level jurisdictional programs shall be described in full in a separate project description or jurisdictional program description, respectively.

3.2.7 Nested projects and their context shall be described in the project description using the *VCS Project Description Template* or an approved combined template (e.g., the *CCB & VCS Project Description Template*) available on the Verra website. The project proponent shall adhere to all instructional text within the template.

3.2.8 Lower-level jurisdictional programs shall follow the requirements set out in Section 3.2 of the *JNR Scenario 2 Requirements* or Section 3.2 of the *JNR Scenario 3 Requirements*, as appropriate.

3.3 Start Date

Concept

In the case of jurisdictional FRELs, because such FRELs may be developed where a jurisdictional proponent has not yet begun implementing policies or activities, the start date cannot be set based on the implementation of such activities. Therefore, to facilitate nesting of projects and lower-level jurisdictions, the start date is based on when projects and lower-level jurisdictions may begin using the FREL.

Jurisdictional FREL Requirements

3.3.1 The start date of the FREL shall be set on the earliest date at which nested projects and jurisdictional programs may start crediting using the FREL and allocated baselines.

Nesting Requirements

Projects and Lower-Level Jurisdictional Programs

3.3.2 The start date of allocated project baselines and lower-level jurisdictional programs shall not be prior to January 1st, 2016.[2]

3.3.3 Nested projects shall follow the start date requirements as set out in the *VCS Standard*.

3.3.4 Lower-level jurisdictional programs shall follow the requirements set out in Section 3.3 of the *JNR Scenario 2 Requirements* or Section 3.3 of the *JNR Scenario 3 Requirements*, as appropriate.

3.4 Crediting Period

Concept

The crediting period is the time period for which GHG emission reductions generated by nested projects and lower-level jurisdictional programs are eligible for issuance as VCUs. In the case of jurisdictional FRELs, there are no requirements with respect to the crediting period, since no credits are issued to the higher-level jurisdiction. The jurisdictional FREL and nested project baselines and lower-level jurisdictional FRELs are expected to change periodically and therefore are not set for the entirety of the project or program crediting period.

[2] In accordance with the adoption of the Paris Agreement under the UNFCCC, Decision 1/CP.21.

Jurisdictional FREL Requirements

3.4.1 There are no requirements for jurisdictional proponents developing and registering a FREL with respect to the crediting period, because there is no crediting to the jurisdiction in Scenario 1.

Nesting Requirements

Projects and Lower-Level Jurisdictional Programs

3.4.2 Where VCS projects and lower-level jurisdictional programs were registered prior to the registration of the jurisdictional FREL they are nesting into, the first nested crediting period shall begin on the date when their first allocated baseline (or FREL, respectively) is applied in accordance with Section 3.13.

For example, where a standalone project starts in 2017, and in 2021 a new FREL and allocation are completed by the government with the new allocated baseline being applied from 2022–2027, the project's first nested crediting period would begin with the new allocated baseline in 2022.

3.4.3 Nested lower-level jurisdictional programs shall follow the crediting period requirements as set out in Section 3.4 of the *JNR Scenario 2 Requirements* or Section 3.4 *JNR Scenario 3 Requirements,* as appropriate.

3.5 Jurisdictional REDD+ FREL Area, Location and Nesting Levels

Concept

The jurisdictional FREL area and location define the spatial extent where the jurisdictional FREL will be estimated. A jurisdictional FREL may cover an entire country or a subnational jurisdiction.

Jurisdictional FREL Requirements

3.5.1 The geographic location of a jurisdictional FREL shall be specified in the jurisdictional FREL description in terms of its geographic area coverage. The location description of the jurisdictional FREL shall include the following information:

1) Name of the jurisdictional FREL;

2) Maps of the area covered by the jurisdictional FREL;

3) Geodetic coordinates of the jurisdictional FREL area boundary, provided in the format specified in the *VCS Standard;*

4) Total area covered by the jurisdictional FREL.

3.5.2 A national government may determine the boundaries of subnational jurisdictional FRELs and may submit such boundaries to the Verra registry as set out in Sections 3.2 and 4.1. All subsequent subnational jurisdictional FREL boundaries shall conform to the boundaries submitted by the national government. Such boundaries may follow existing administrative (i.e., politically defined) boundaries or may be based on ecosystems (e.g., ecoregions). Subnational governments may use ecosystem boundaries where such ecosystems are contained within the administrative boundaries of their jurisdictions. Jurisdictional proponents shall not exclude from the FREL boundary areas within the administrative boundaries of subnational jurisdictional FRELs where GHG emissions from deforestation or forest degradation may be reasonably expected to increase with respect to the historical reference period during the FREL validity period (e.g., a case where areas within the jurisdiction with high historical GHG emissions and low deforestation threat are included and those with low historical GHG emissions and high threat are excluded).

3.5.3 The determination of subnational boundaries shall be precise and shall not result in overlapping subnational jurisdictional FRELs.

3.5.4 Where a subnational jurisdictional FREL is registered, and the national government subsequently defines different boundaries for subnational jurisdictional FRELs (e.g., based on ecoregions), the subnational jurisdictional FREL shall follow the requirements set out in Section 3.13, after which the subnational FREL proponent shall adapt the jurisdictional FREL area to reflect the boundaries set by the national government.

3.5.5 The lowest eligible jurisdictional level for a subnational FREL geographically delimited by administrative units is the second administrative level below the national level.

For example, in Brazil this would be a municipality (i.e., one administrative unit below the state) or, in Indonesia, a regency (i.e., one administrative level below the province).

3.5.6 A country shall have no more than two registered jurisdictional levels (e.g., national and state, or state and municipality).

3.5.7 Where the precise boundary of an administrative unit is unclear, the national government shall provide written approval of the boundary as set out in Section 4.1.

3.5.8 Multiple administrative subdivisions, such as several municipalities, may form one jurisdiction for the purposes of a jurisdictional FREL.

3.5.9 The geographic boundary of a jurisdictional FREL may only be changed after validation under the following conditions:

1) A border dispute that affected the boundary when the jurisdictional FREL was initially set has been resolved. Adjustments to the geographic boundary due the resolution of such conflicts may be made at any time after validation.

2) A new border dispute that affects the jurisdictional FREL boundary has arisen since the boundary was initially set. Adjustments to the geographic boundary due to such conflicts may be made at any time after validation.

3) A border is modified as part of an administrative re-districting. Adjustments to the geographic boundary due to administrative re-districting may be made at any time after validation.

3.5.10 Where the geographic boundary of a jurisdictional FREL is changed, the following applies:

1) All changed areas shall be noted in at the time of the next FREL reassessment.

2) The new geographic boundary and the reassessed FREL shall be validated at the time of the validation of the FREL reassessment.

3) Updated geodetic coordinates of the jurisdictional FREL boundaries shall be submitted to the Verra registry prior to the issuance of any further VCUs for nested projects and jurisdictional programs.

Nesting Requirements

Jurisdictional FREL Proponents

3.5.11 Where a nested project straddles a jurisdictional FREL boundary, the jurisdictional FREL proponent shall decide how to encompass such project for nesting and follow the requirements for transitioning to a nested system, as set out in Section 3.13.

Projects and Lower-level Jurisdictional Programs

3.5.12 Where the geographic boundary of a jurisdictional FREL is modified and the FREL is reassessed, the allocated project baselines and/or lower-level jurisdictional FRELs shall remain fixed for the remainder of the FREL validity period.

3.5.13 Nested projects shall follow the requirements as set out in Section 3.10 of the *VCS Standard*.

3.5.14 Lower-level jurisdictional programs shall follow the requirements set out in Section 3.5 of the *JNR Scenario 2 Requirements* or Section 3.5 *JNR Scenario 3 Requirements,* as appropriate.

3.6 Authority and Rights to GHG Emission Reductions

Concept

In the case of jurisdictional FRELs, there are no requirements with respect to authority and rights to GHG emission reductions since no credits are issued to the higher-level jurisdiction. These requirements apply only to nested jurisdictional programs. It is important that nested lower-level jurisdictional proponents seeking credit have program authority over the jurisdictional program and can demonstrate rights to the GHG emission reductions resulting from it. Program authority is the legal authority to adopt REDD+ policies and measures within the lower-level jurisdictional program

boundaries. Rights to GHG emission reductions are the right to participate in jurisdictional benefit-sharing or transact GHG emission reductions resulting from 1) formal or informal, statutory, customary or ancestral land rights or land management rights, or 2) participation in activities that generate GHG emission reductions.

Jurisdictional FREL Requirements

3.6.1. There are no requirements for jurisdictional FRELs with respect to authority and rights to GHG emission reductions because there is no crediting to the jurisdiction in Scenario 1.

Nesting Requirements

Projects and Lower-level Jurisdictional Programs

3.6.2. Nested projects shall follow the project ownership rules and requirements set out in the *VCS Standard*.

3.6.3. Lower-level jurisdictional programs shall follow the requirements set out in Section 3.6 of the *JNR Scenario 2 Requirements* or Section 3.6 of the *JNR Scenario 3 Requirements*, as appropriate.

3.7 Participation under Other GHG Programs and Other Forms of REDD+ Incentives

Concept

Jurisdictional programs with the same program boundaries and scope may participate under the VCS Program, another GHG program[3] such as FCPF Carbon Fund, or a results-based payment mechanism such as the Green Climate Fund's (GCF) REDD+ pilot program. In order to maintain environmental integrity, GHG emission reductions that are issued as VCUs cannot be issued as other types of GHG credits or allowances under other GHG programs or GHG emissions trading programs, or as other environmental credits.

In the case of jurisdictional FRELs, there are no requirements with respect to participation under other GHG programs and other forms of REDD+ incentives since no credits are issued to the higher-level jurisdiction. However, projects and lower-level jurisdictional programs that adhere to specific market criteria (including those related to double counting) set out under Paris Agreement Article 6 rules and procedures and international Paris-related programs such as CORSIA are identified via VCU labels. Jurisdictional and nested project proponents who want to demonstrate that their VCUs adhere to such criteria should refer to the Verra website for more information about VCU labels.

[3] The term "GHG program" covers carbon crediting programs, as defined further in the VCS Program document Program Definitions.

Jurisdictional FREL Requirements

3.7.1 No requirements with regard to other GHG programs are applicable to FRELs.

Nesting Requirements

Projects and Lower-level Jurisdictional Programs

3.7.2 Nested projects registered under the VCS Program and another GHG program shall comply with the requirements set out in the *VCS Standard.*

3.7.3 Lower-level Jurisdictional programs shall follow the requirements in this Section 3.7 of the *JNR Scenario 2 Requirements* or Section 3.7 of the *JNR Scenario 3 Requirements*, as appropriate.

3.8 Social and Environmental Safeguards and Benefit-Sharing

Concept

It is important for jurisdictional FREL proponents to transparently communicate with relevant stakeholders during the FREL development and allocation of nested project baselines and lower-level jurisdictional FRELs.

Jurisdictional FREL Requirements

3.8.1 Jurisdictional FRELs shall be developed and documented in a transparent manner and in consultation with stakeholders. Stakeholders include, inter alia, project proponents of existing REDD projects, private landowners, rural and/or indigenous communities, as well as relevant government agencies, private sector, academy representatives, and NGOs. Principle 6 of the *REDD+ Social & Environmental Standards* (REDD+SES); the *Guidelines on Stakeholder Engagement in REDD+ Readiness* of the Forest Carbon Partnership Facility and/or the UN-REDD Programme may be used to guide the stakeholder consultation process.

3.8.2 Jurisdictional proponents shall develop a mechanism for receiving, screening, addressing, monitoring and reporting feedback on grievances and concerns submitted by stakeholders relating to the design and allocation of the FREL. This mechanism shall include appropriate means of communication to enable all interested and/or stakeholders to participate. Principle 6.6 of the REDD+ SES may be used to guide development of grievance mechanisms.

Projects and Lower-level Jurisdictional Programs

3.8.3 Nested projects registered under the VCS Program shall comply with the requirements set out in the VCS Standard.

3.8.4 Lower-level Jurisdictional programs shall follow the requirements in this Section 3.8 of the *JNR Scenario 2 Requirements* or Section 3.8 of the *JNR Scenario 3 Requirements,* as appropriate.

3.9 Eligible Activities

Concept

Jurisdictional proponents may decide which REDD activities, as defined under the UNFCCC, to include as part of their jurisdictional FREL. Nested project participants and lower-level jurisdictional participants may account for additional activities as standalone projects and jurisdictional programs, respectively.

Jurisdictional FREL Requirements

3.9.1 Jurisdictional FRELs may include REDD activities as defined under the UNFCCC,[4] and in line with the VCS Program AFOLU categories as set out in the VCS Program document *VCS Methodology Requirements* (see Appendix 1: Comparison of IPCC, UNFCCC and VCS Program Components of REDD+ for a full classification of activities), as follows:

1) Reduced emissions from deforestation.

2) Reduced emissions from forest degradation (including both REDD and IFM activities focused on avoided degradation).

Note – Requirements for carbon stock enhancement activities (e.g., afforestation/reforestation assisted natural regeneration, and IFM Low-productive to High-productive Forest set out in the VCS Program document VCS Methodology Requirements*) will be included in a future update to the* JNR Requirements.

Note - Activities falling under the UNFCCC activity of forest conservation in non-threatened forests are not eligible under the VCS Program.

3.9.2 Jurisdictional proponents shall determine which activities set out in Section 3.9.1 will be accounted for within their jurisdictional FREL, noting the following:

1) GHG emissions from deforestation shall always be accounted for, regardless of which other activities are (or are not) included.

2) It is required to include GHG emissions from forest degradation, where they are above *de minimis*. Where forest degradation is not included, nested projects and lower-level jurisdictional programs shall establish procedures to account for possible leakage from deforestation to forest degradation, in accordance with Section 3.16 of the *JNR Scenario 2 Requirements* or Section 3.15 of the *JNR Scenario 3 Requirements,* as appropriate.

3.9.3 The definition of forest used in the construction of the FREL shall be specified and shall be consistent with the forest definition used for reporting under the UNFCCC.[5] Where there is a difference between the most recent definition of forest used in UNFCCC reporting and the

[4] UNFCCC Decision 1/CP.16 paragraph 70.
[5] UNFCCC Decision 12/CP.17

definition of forest used in the construction of the FREL, the jurisdictional proponent shall explain how and why the current forest definition was chosen.

3.9.4 The definition of deforestation and of forest degradation shall be established with reference to IPCC land-use categories of *forest land converted to non-forest land* and *forest land remaining forest land*, respectively.

3.9.5 Jurisdictional proponents shall use activity-based accounting[6] to develop their jurisdictional FREL.

Note - Activity-based accounting does not prevent a jurisdiction from accounting for its forests in accordance with IPCC categories of forest converted to non-forest and forest remaining forest.

Note –Verra may develop rules and requirements for land-based accounting in the future if jurisdictional proponents demonstrate an interest in applying such an accounting approach.

Nesting Requirements

Projects and Lower-level Jurisdictional Programs

3.9.6 Project proponents of nested projects may carry out REDD+ activities not included in the jurisdictional FREL boundary as independent projects, following the project-level requirements set out in the *VCS Standard.*

For example, a project nested into a jurisdictional FREL covering only deforestation may develop an avoided forest degradation project and generate both GHG emission reductions from deforestation (accounted for within the jurisdictional FREL) and GHG emission reductions from forest degradation (accounted in accordance with the VCS Standard) in the same project boundary.

3.9.7 Lower-level jurisdictional proponents may include REDD+ activities not considered in the jurisdictional FREL boundary as independent programs following the requirements set out in Sections 3.9.1 to 3.9.5, above and any other relevant JNR Program requirements.

3.10 Scope and Jurisdictional FREL Boundary

Concept

The jurisdictional FREL boundary includes the GHG sources and carbon pools that are accounted for under a jurisdictional FREL and any projects and lower-level jurisdictional programs nested into the higher-level jurisdictional FREL. Nested projects participants and lower-level jurisdictional programs

[6] The activity-based approach to emissions estimation consists of identifying specific activities occurring on the land that influence GHG fluxes and focusing on the intervention, allowing for differentiation between activities. See Iversen P., Lee D., and Rocha M. (2014). Understanding Land Use in the UNFCCC, Chapter 2.2.3. for more information.

may account for additional GHG and pools as standalone projects and jurisdictional programs respectively.

Jurisdictional FREL Requirements

3.10.1 The relevant carbon pools for REDD activities are aboveground biomass, belowground biomass, litter, dead wood, harvested wood products (HWP), and soil.[7]

3.10.2 Jurisdictional proponents may determine which carbon pools and GHG sources will be accounted for in the FREL, though above-ground biomass and below-ground biomass shall always be included. The choice of carbon pools and sources of GHG emissions shall be conservative (i.e., pools that are at risk of decreasing, relative to the jurisdictional FREL, due to the REDD activities included in the FREL shall not be excluded, where deemed above *de minimis* in accordance with Section 3.10.4). HWP are always considered *de minimis*. Soil organic carbon is not included.

Note - Requirements to account for GHG emission reductions from soil organic carbon, organic soils in wetlands (including peatlands) and GHG emissions from biomass burning will be included in a future update to the JNR Requirements.

3.10.3 Specific carbon pools and GHG sources do not have to be accounted for in the FREL if their exclusion leads to conservative estimates of the total GHG emission reductions generated. Such conservative exclusion may be determined by using approximative calculations, references from scientific literature, tools from an approved GHG program, or based upon peer-reviewed literature.

3.10.4 Specific carbon pools and GHG sources are deemed *de minimis* and do not have to be accounted for in the FREL where together the omitted decreases in carbon stocks (in carbon pools) and increases in GHG emissions (from GHG sources) collectively amount to less than 10 percent[8] of the total estimated GHG emissions generated by the jurisdiction over the lifetime of the jurisdictional FREL. *De minimis* exclusions shall be demonstrated and justified at validation only. Such exclusions shall be demonstrated using approximative calculations and references from scientific literature, including applicable default (Tier 1) data.

[7] Although wetlands are not currently included within the JNR program, peat soil may be a relevant carbon pool (e.g., where leakage may affect wetlands).

[8] The VCS Program document *VCS Methodology Requirements* sets *de minimis* (insignificance) at 5 percent (i.e., individual emissions sources need not be accounted for where they represent less than 5 percent of total project emissions) and allows methodologies to determine how this is calculated. To allow more flexibility for jurisdictions where the inclusion of minor pools may be costly or infeasible, significance is defined as 10 percent rather than 5 percent for jurisdictional accounting, which is consistent with the Forest Carbon Partnership Facility Methodological Framework.

Nesting Requirements

Projects and Lower-level Jurisdictional Programs

3.10.5 Nested projects and lower-level jurisdictional programs may account for GHG sources and carbon pools that are not accounted for by the jurisdictional FREL as standalone projects or jurisdictional programs.

3.10.6 Where such GHG sources and carbon pools are accounted for, nested projects shall follow the requirements set out in the *VCS Standard* and the applied methodology, and nested lower-level jurisdictional programs shall follow the requirements set out in Section 3.10 of the *JNR Scenario 2 Requirements* or Section 3.10 of the *JNR Scenario 3 Requirements*, as appropriate.

3.11 Additionality

Concept

To ensure that the GHG mitigation benefits of activities nested into a jurisdictional FREL are additional compared to a business-as-usual scenario, it is critical for nested projects and lower-level jurisdictional proponents to implement new and/or enhanced activities or strategies, policies and measures, respectively, and estimate the resulting GHG emission reductions against a credible FREL.

Jurisdictional FREL Requirements

3.11.1 Additionality is factored into the FREL by establishing a conservative benchmark for measuring the performance of the nested projects and lower-level jurisdictional programs such that any GHG emission reductions relative to the FREL are considered additional. To this end, relevant policies and measures to reduce GHG emissions that were enacted before the start of the crediting period shall be included in the FREL estimation,[9] in accordance with Section 3.12.

Nesting Requirements

Nested Projects and Lower-level Jurisdictional Programs

3.11.2 Nested projects shall follow the additionality requirements as set out in the *VCS Standard* and in accordance with the procedures set out in the methodology applied by the project.

3.11.3 Lower-level jurisdictional programs shall follow the requirements set out in Section 3.11 of the *JNR Scenario 2 Requirements* or Section 3.11 of the *JNR Scenario 3 Requirements,* as appropriate.

[9] These policies and measures are incorporated in practice by using historical emission data to construct the FREL including data from the period were these policies started implementation.

3.12 Jurisdictional FRELs and Nested Project Baselines

Concept

A jurisdictional FREL represents the basis for the allocation of nested jurisdictional lower-level program FRELs and project baselines that serve as the benchmark against which project and program results are measured to determine the volume of GHG emission reductions achieved. The jurisdictional FREL is comprised of activity data (i.e., area of land transitioning to different land-uses) and emission factors (i.e., estimates of carbon stock loss in land-use transitions) using data from a historical reference period. The FREL is updated periodically in order to take changes in drivers and rates of deforestation and forest degradation into account, and therefore it is only applicable during a FREL validity period, after which it must be updated.

Nested projects and lower-level jurisdictional programs obtain their project baselines and jurisdictional FRELs, as appropriate, through the allocation of the higher-level jurisdictional FREL across the jurisdictional FREL boundaries, based on the risk of deforestation or forest degradation and the applicable emission factors.

Jurisdictional FREL Requirements

General Requirements

3.12.1 A jurisdictional FREL shall be established for the allocation of nested jurisdictional program FRELs and project baselines. Jurisdictional proponents shall follow the requirements in this section to estimate jurisdictional FRELs.

3.12.2 The jurisdictional FREL shall remain fixed for a period of 4 to 6 years, as defined by the jurisdictional proponent (referred to as the *FREL validity period*). The jurisdictional FREL shall be updated at the end of the FREL validity period, following the requirements set out in Section 3.12.29, below. A reassessed FREL shall be equal or lower than the previous jurisdictional FREL.

3.12.3 The jurisdictional FREL shall be disaggregated by activity (i.e., deforestation or forest degradation, as set out in Section 3.9.1, above).

3.12.4 The FREL may be further disaggregated by specific AFOLU activities (such as *unplanned deforestation*; see Appendix 2: Comparison of IPCC, UNFCCC and VCS Program Components of REDD+ for a comparative breakdown of these different activities). Where a jurisdictional FREL separates the broad UNFCCC REDD+ activities into specific AFOLU activities, the following applies:

1) It is considered good practice to differentiate between planned and unplanned activities, as their historical rates may be different, and should therefore be estimated using different methods whenever possible (see Sections 3.12.6 and 3.12.7).

2) Forest degradation may include all or only specific activities leading to forest degradation in the jurisdictional FREL (e.g., a jurisdictional FREL may include timber harvesting but not fuelwood collection).

3.12.5 The jurisdictional FREL shall be consistent, to the extent possible, with the data and methods used to account for forest related GHG emissions in the country's existing or emerging UNFCCC GHG inventory.

FREL GHG Emissions

3.12.6 As a default, the jurisdictional FREL shall be calculated as the historical annual average GHG emissions over a period of 4 to 6 years (ending within two years of the start of the jurisdictional FREL validity period) for GHG emissions from unplanned deforestation and forest degradation (referred to as the "historical reference period"). Longer historical reference periods may be used if the resulting FREL is more conservative than the one that would be obtained by using a 4, 5 or 6-year period. Guidance on the use of trends for the construction of FRELs is forthcoming (see note below).

3.12.7 Where GHG emissions from planned deforestation and planned forest degradation are estimated separately from unplanned activities, the jurisdictional FREL shall be calculated based on the observed historical average rate of change per permit type that allows for the deforestation or forest degradation (i.e., not only based on the rate allowed by the type of permit). Note that the jurisdictional FREL for these activities may be higher than the historical annual average GHG emissions because more areas could be granted permits that allow for planned deforestation and/or planned forest degradation when compared to the historical reference period. Emissions from planned deforestation and planned degradation shall be deducted from the unplanned historical average emissions estimates to avoid counting them twice.

Note – Verra is exploring methodologically robust and credible options to establish jurisdictional FRELs that include increasing GHG emissions where they can be justified by national circumstances (e.g., high forest low deforestation countries and countries with legacy GHG emissions, e.g., from peatland decomposition).

Note – Verra is exploring methodologically robust and credible options to establish jurisdictional FRELs that include forest carbon enhancement activities (e.g., afforestation/reforestation and improved forest management).

3.12.8 In jurisdictions where the annual average of the estimated historical emissions would represent GHG emissions above those that could be caused by the loss of the remaining forest lands under threat within the jurisdictional boundaries during the FREL validity period,[10] a downward

[10] This situation may be expected in jurisdictions where historically persistent high rates of deforestation have been registered but that in recent years have seen a continuous decline that may be attributable to the lack of forest areas accessible to deforestation agents. In jurisdictions with these characteristics, an assessment of the remaining forests at risk shall be carried out by applying the *JNR Risk Mapping Tool*. The potential GHG emissions of the forest areas under risk of deforestation shall be estimated considering the same pools included in the FREL and compared to such FREL. If the

adjustment factor or a decreasing linear extrapolation of the historical trend in GHG emissions shall be used to construct the FREL so as to avoid an overestimation of GHG emissions.

3.12.9 Jurisdictional FRELs shall not include GHG emissions from forest loss events that occurred during the historical reference period but are unlikely to reoccur during the FREL validity period (i.e., in the next 4 to 6 years). Accordingly, large (i.e., more than 1,000 ha) forest loss due to geological (e.g., volcano or landslide) or weather-related (e.g., hurricane) impacts that have a return interval of more than 10 years shall be excluded from the calculation of historical GHG emissions from unplanned deforestation and unplanned forest degradation. Where areas of loss are not contiguous, it shall be demonstrated that all affected areas are associated with the same natural disturbance event.

3.12.10 Where excluded, the area associated with historical losses attributed to natural disturbances shall be clearly identified and shall not be included in jurisdictional FREL, until such time as the forest has recovered to a state similar to that which existed prior to the disturbance. Once recovered the area may be included in the jurisdictional FREL during a future update. However, if the area where historical losses attributed to natural disturbances is subsequently converted by human activities to a non-forest land use, the GHG emissions associated with the forest loss shall be accounted for by the nested project or lower-level jurisdictional program where the area is located.

3.12.11 Significant future GHG emissions from large unavoidable infrastructure projects (e.g., deforestation related to planned hydroelectric projects) may be included in the jurisdictional FREL as planned deforestation under the following circumstances:

1) Committed forest loss is expected to exceed 1,000 ha;

2) The committed activity is included in official development plans and has received all approvals required for the activity to commence; and,

3) Either the activity causing the GHG emissions has already commenced (e.g., construction is underway) or it can be demonstrated that at least 80 percent of the finances are in place.

The GHG emissions from unavoidable infrastructure projects shall be included in the FREL in a way that represents the historical deforestation rate observed in similar infrastructure projects in the country. If the clearance of the forest areas associated to the development of such infrastructure requires more than one FREL validity period, the associated emissions should be allocated proportionately over several FREL periods. The area associated with this future loss shall be clearly identified when the jurisdictional FREL is developed, and any future GHG emissions associated with the area shall be accounted for.

potential GHG emissions are lower than the total FREL emissions during the FREL validity period, the FREL shall be adjusted downwards so that it does not exceed the GHG emission potential of the remaining forest.

Historical GHG Emissions

3.12.12 The level of GHG emissions over a historical reference period shall form the basis of the jurisdictional FREL, as set out in Section 3.12.1. Historical GHG emissions shall be estimated separately for each activity included in the jurisdictional FREL. The historical level of GHG emissions is determined by multiplying activity data (in ha/year) by the emission factor for the forest transition (e.g., forest to non-forest or forest to degraded forest) (in tCO_2e/ha). Requirements for estimating activity data and emission factors are set out in Sections 3.12.13 to 3.12.28, below.

Activity Data

3.12.13 Activity data represents estimates of land-use transitions over time in ha/year (e.g., forest to non-forest or forest to degraded forest).

3.12.14 Only one activity (e.g., deforestation or forest degradation) shall be considered for each location during the FREL validity period. Standard classification rules shall be used to determine which activity takes place in each location within the jurisdictional FREL area.

3.12.15 A time series of area estimates shall be used to estimate the rate of different land-use transitions during the historical reference period. The maximum number of years between measurements shall be two years. For the initial development of the jurisdictional FREL, the period between measurements may be up to four years.

3.12.16 Area measurements shall be undertaken through remote sensing, using either maps or area sampling approaches.

3.12.17 Where activity data are estimated from maps, the following applies:

1) The maps shall include deforestation and forest degradation (where included in the jurisdictional FREL set out in Section 3.9.1) as classes.

2) An accuracy assessment shall be undertaken for each map separately (e.g., relying on visual sampling of high-resolution imagery as a reference) following the same requirements for reference data stated in Section 3.12.18 below regarding sample-based methods for establishing activity data. The accuracy assessment shall be conducted separately for deforestation and forest degradation, when applicable.

3) A bias correction shall be made to the area estimates based on the accuracy assessment and using standard best practice methods.[11]

3.12.18 Where activity data are estimated using area sampling approaches, the following applies:

1) Area sampling shall use high-resolution imagery with a maximum pixel size of 5 meters per pixel. Such high-resolution imagery shall be available for most of the historical reference

[11] See the GFOI Methods and Guidance document, v2.0, page 136, Box 24 or v3.0, page 185, Box 32 for an example.

period and for the entirety of the FREL validity period. Lower resolutions imagery may only be used if high-resolution imagery is not available.

2) Classification error shall be quantified and minimized.

3) Stratified or non-stratified sampling and random or systematic sampling may be used. The approach to setting the sample size and to sample allocation shall be described.[12]

4) Data shall be analysed using standard best practice methods.[13]

3.12.19 Activity data estimation shall result in mean area estimates for the land-use transitions between land-use (sub) strata over the historical reference period. Each area estimate shall include an uncertainty estimate representing sampling error, as set out in Section 3.15.4.

Emission Factors

3.12.20 Emission factors represent estimates of GHG emissions (based on carbon stocks in the carbon pools included in the jurisdictional FREL boundary) corresponding to land-use transitions in tCO_2e/ha.

3.12.21 Emission factors shall be fixed at validation. The same emission factors shall be used to estimate GHG emissions in the FREL scenario and to estimate GHG emission reductions by the nested projects and lower-level jurisdictional programs during the FREL validity period.

3.12.22 Emission factors shall be calculated as the difference in carbon stocks due to land-use transitions:

1) Where GHG emissions occur from above-ground biomass, below-ground biomass, deadwood and litter following the land-use transition, it shall be assumed that all GHG emissions from these carbon pools occur instantaneously.

2) Where there is post-deforestation revegetation, it shall be assumed that GHG removals occur instantaneously, and the emission factor shall be calculated from the long-term average carbon stock (see the *VCS Standard)*.

3) Where the post-deforestation land-use is cyclical (e.g., slash-and-burn agriculture with periodic fallow clearing), the biomass estimates shall reflect the long-term average over time (see the *VCS Standard* for more information on the long-term average GHG benefit).

4) Where the land-use after the land-use transition is degraded forest, the biomass estimates shall reflect an average state of carbon stock in the degraded forest.

[12] Uncertainty discounts will apply where there is a small sample size and resulting high uncertainty. Jurisdictional proponents are encouraged to use larger sample sizes in order to minimize uncertainty.
[13] See GFOI Methods and Guidance document, v2.0, page 127, section 5.1.5 or v3.0, page 176, section 4.2.3 for an example.

3.12.23 Data sources for estimating forest carbon stocks shall be chosen as follows:

1) Above-ground and below-ground biomass shall be estimated based on a plot-based field inventory conducted within the jurisdictional area. Where only few sample units of national forest inventories fall into the jurisdictional area, sample units from other areas can be used if these can be shown to be representative of the forest within the jurisdictional area.

2) Above-ground and below-ground biomass shall be derived from tree measurements using allometric models and/or root-to-shoot ratios:

   a) Where available, allometric models and/or root-to-shoot ratios based on local data (e.g., from the jurisdictional area) that meet the requirements for use of default factors and models as set out in the VCS Program document *VCS Methodology Requirements* shall be used.

   b) Where such allometric equations and/or root-to-shoot ratios are not available, globally developed allometric equations and/or root-to-shoot ratios that meet the requirements for use of default factors and models as set out in the VCS Program document *VCS Methodology Requirements* shall be used.

   c) Uncertainty associated with allometric equations may optionally be included. Uncertainty associated with root-to-shoot ratios shall be propagated.

3) Deadwood and litter biomass shall be estimated through field inventories conducted within the jurisdictional area. Default data (e.g., from *the 2019 Refinement to the 2006 IPCC guidance*) may only be used where:

   a) Suitable field inventories are unavailable;

   b) Deadwood and litter are collectively expected to amount to less than fifteen percent of the total carbon stocks;

   c) The default data meets the requirements for use of default factors and models as set out in the VCS Program document *VCS Methodology Requirements*.

4) Plot-based field inventories shall comply with the following requirements:

   a) Raw measurements shall be available and have been analysed;

   b) It is considered good practice to collect this information regularly (e.g., at least every second update of the jurisdictional FREL);

   c) A unique set of measurements shall be used for each forest type (i.e., the same sample plots cannot be used to develop emission factors for more than one forest type);

   d) A minimum of 20 sample units shall be used in each forest type;

   e) Where field measurements are compiled from several sources and do not represent one sampling frame for the entire jurisdictional area, it shall be demonstrated that the

measurements are collectively representative of the forest in the jurisdictional FREL area.[14]

3.12.24 Data sources for estimating non-forest biomass shall be chosen noting the following:

1) Biomass shall be estimated through field inventories where suitable data that meets the requirements for field inventories, set out in Section 3.12.23 above, are available;

2) Default data (e.g., from the *2019 Refinement to the 2006 IPCC guidance*) may be used where it meets the requirements for use of default factors and models as set out in the VCS Program document *VCS Methodology Requirements*.

3.12.25 Uncertainty shall be estimated for each carbon pool and each forest type as follows:

1) Where biomass is estimated from field measurements, the associated sampling uncertainty shall be estimated;

   For example, where only one stratum is used and a national forest inventory has been conducted with 101 sample plots and a standard deviation of 50 tCO_2e, then the associated sampling uncertainty will be equal to: $\frac{50}{\sqrt{101-1}} = 5\ tCO_2e$.

2) Where biomass is estimated from default sources, the associated uncertainty shall be estimated based on the range of values provided in the source;[15]

   For example, in tropical moist forests, the average carbon stock in litter per hectare for all vegetation types is 5.9 tCO2e with a range of 1.9 – 14.8 tCO2e. The uncertainty lower bound is calculated as: $\frac{(1.9-5.9)}{5.9} = 67.8\%$. The uncertainty upper bound is calculated as: $\frac{(14.8-5.9)}{5.9} = 150.8\%$. The average is calculated as: $\frac{(67.8\%+150.8\%)}{2} = 109.3\%$.

3.12.26 Biomass estimation shall result in mean biomass estimates for the land-use (sub) strata. The mean biomass estimate is calculated by summing all the pools. The uncertainty shall be propagated.

3.12.27 Biomass estimates shall be converted to tCO_2e per ha using a carbon fraction and ratio of molecular weights as per the *2019 Refinement to the 2006 IPCC guidance*. Uncertainties shall be propagated.

3.12.28 Each estimate shall include an uncertainty estimate representing the error sources, as set out in Section 3.15.6 below.

[14] Where there is nesting under Scenario 1, crediting would take place only for the areas that correspond to nested projects or lower-level jurisdictional programs.

[15] For instance, where the *2019 Refinement to the 2006 IPCC guidance* is used, Table 2.2 in Volume 4, Chapter 2 of the lists default values for litter and deadwood and Box 3.0B in Volume, Chapter 3 explains how to convert a range to an uncertainty. The uncertainty lower bound and uncertainty upper bound should be calculated, and an average can be calculated to derive a symmetric interval.

Updating the Jurisdictional FREL

3.12.29 Jurisdictional FRELs shall be updated and revalidated every 4 to 6 years, as determined by the jurisdictional proponent. It is considered good practice to update the jurisdictional FREL more frequently where deforestation and forest degradation dynamics are expected to change in the near future.

3.12.30 The following components of the jurisdictional FREL shall be updated:

1) Activity data representing land-use transitions shall be updated during every update to the jurisdictional FREL;

2) The GHG emission factors shall be revisited[16] at least every other update to the jurisdictional FREL.

3.12.31 The scope of the jurisdictional FREL may be broadened at any time (i.e., not only at the 4 to 6 year periodic update) through a FREL description deviation (as set out in Section 3.2.5) to include either additional activities set out in Section 3.9, GHG sources and/or carbon pools as set out in Section 3.10. Such new activities, GHG sources and/or carbon pools may be accounted and credited by nested projects and lower-level programs for prior monitoring periods. Where such updates are undertaken separately from the required periodic updates, only the additional pools or activities and associated emission factors, where necessary, may be updated. All other FREL elements (such as unrelated emission factors) may be updated only as part of required periodic updates.

3.12.32 Where the scope of the jurisdictional FREL has been expanded in advance of the required periodic update, the entire FREL shall be updated at the subsequent periodic update (i.e., all activities shall be updated, not only those activities included in the scope of the original jurisdictional FREL).

3.12.33 The scope of the jurisdictional FREL may be narrowed at the time of FREL update only where it can be demonstrated that the activity or carbon pool to be removed is (or has become) *de minimis*, or that it is conservative to exclude it, and this will remain the case for the duration of the new jurisdictional FREL validity period.

Nesting Requirements

Jurisdictional FREL Proponents

3.12.34 Jurisdictional proponents shall use the *JNR Allocation Tool* to allocate the higher-level jurisdictional FREL to nested projects and lower-level jurisdictional programs for both deforestation and forest degradation.

[16] Emission factors need to be revisited but raw field data does not need to be collected every other FREL validity period.

3.12.35 In order to apply the *JNR Allocation Tool*, risk maps for deforestation and forest degradation, if applicable, shall be developed as follows:

1) Risk maps shall depict at least 10 and up to 31 discrete categories of risk (called "risk classes" in the *JNR Allocation Tool),* including a category where the risk is considered insignificant (called "zero risk class" in the *JNR Allocation Tool);*

2) Risk maps shall cover the entire forest area that exists within the jurisdictional FREL area at the beginning of the FREL validity period;

3) Forests with a negligible or insignificant risk of deforestation or forest degradation shall be included in a risk class assumed to be zero and shall be identified by applying the *JNR Risk Mapping Tool* (of another risk mapping methodology as set out in Section 3.12.35(6)).

4) Forest areas in projects and lower-level jurisdictional programs that have been credited for avoided deforestation in the past (including prior to nesting) shall not be eligible for crediting again in future FREL validity periods. For this reason, such areas shall be included within the zero risk class;

5) Forest areas in projects and lower-level jurisdictional programs that have been credited for avoided forest degradation in the past (including prior to nesting) shall not be eligible for crediting for avoided forest degradation again in future FREL validity periods, although they may be credited for avoided deforestation. In this case, the emission factor shall be calculated as the difference between the emission factor for deforestation and the emission factor for forest degradation. Such areas shall not be included in the zero-risk class of the deforestation risk map, but shall be included in the zero risk class of the forest degradation map;

6) Risk maps may be developed using the *JNR Risk Mapping Tool* or another method. Where they are developed using another method, the following applies:

   a) Risk maps shall always include a zero risk class;

   b) The risk map shall be more accurate than the risk map that would have been created using the *JNR Risk Mapping Tool;*

   c) The accuracy assessment and risk map comparison shall be carried out following the procedures set out in the *JNR Risk Mapping Tool*.

3.12.36 All projects and lower-level jurisdictional programs that are registered under the VCS Program, including those that are undergoing a transition period as set out in Section 3.12.37 and already nested projects and lower-level jurisdictional programs, shall be considered in the application of the *JNR Allocation Tool*.

Projects and Lower-level Jurisdictional Programs

3.12.37 Projects that reduce planned forest degradation (e.g., IFM logged-to-protected forest projects) shall nest where the jurisdictional FREL includes forest degradation by applying the *JNR Allocation Tool*. Where the jurisdictional FREL does not include planned forest degradation, such projects shall continue to use the applicable VCS project methodology until it is included within the jurisdictional FREL scope.

3.13 Transition to a Nested System

Concept

Where a standalone project or lower-level jurisdictional program is integrated into a higher-level jurisdictional FREL, it must follow requirements to transition into a nested system (referred to as being grandparented in previous versions of the *JNR Requirements*) to ensure the consistent estimation of emissions and carbon accounting across projects and jurisdictional programs.

Jurisdictional FREL Requirements

3.13.1 There are no general requirements for jurisdictional FRELs, though higher-level jurisdictional proponents and lower-level jurisdictional programs shall follow the relevant requirements set out in Sections 3.13.2 and 3.13.3 to 3.13.5, respectively.

Nesting Requirements

Projects and Lower-level Jurisdictional Programs

3.13.2 Where a higher-level FREL is registered after the registration of a project or lower-level jurisdictional FREL or program (e.g., where a lower-level jurisdictional FREL has been registered and a national jurisdictional program is subsequently registered), the following applies:

1) A lower-level jurisdictional FREL shall remain valid for a transition period of up to 18 months after the higher-level FREL registration and then be replaced by an allocated FREL, in accordance with Section 3.12.34.

2) A project baseline shall remain valid for the number of years remaining before it is due to be reassessed and then replaced by an allocated baseline, in accordance with Section 3.12.34. Projects and lower-level jurisdictional programs are encouraged to adopt the higher-level jurisdictional FREL at any time prior to the end of the transition period;

   For example, where the project baseline is still valid for 6 years and a higher-level FREL is registered in year 4 after the project start date, the project baseline would be valid for the 6 remaining years.

3) Jurisdictional proponents may establish their own transition period requirements, which shall supersede the requirements set out in Section 3.13.2(1)(2), above, where the transition period is the same length or shorter than those set out in Section 3.13.2(1)(2).

4) Where the project baseline or lower-level jurisdictional FREL has a different scope (i.e., different REDD activity, GHG sources or carbon pools are included) than the higher-level FREL, the rules and requirements in Section 3.13.2(1), above, only apply to those activities, GHG sources and carbon pools that overlap with the higher –level jurisdictional FREL.

5) Where individual activities, GHG sources and carbon pools do not overlap between the project baseline or lower-level jurisdictional FREL and the higher-level jurisdictional FREL, the non-overlapping activities, GHG sources and carbon pools may be developed as independent (standalone) project or jurisdictional program activities. Standalone project activities shall follow the requirements set out in the *VCS Standard* and the applied methodology, and standalone lower-level jurisdictional programs shall follow the requirements set out in Section 3 of the *JNR Scenario 2 Requirements* or *JNR Scenario 3 Requirements,* as appropriate.

   For example, where a project includes carbon stock enhancement and the higher-level jurisdictional FREL does not, the project proponent may register another project to account for these activities independently.

6) Where a jurisdictional FREL has not been updated in accordance with the requirements in Section 3.12.29 (e.g., where a jurisdictional FREL has not been reassessed within the required timeframe and has expired), projects and lower-level jurisdictional programs that have been nested into it may request an extension to continue using the project baselines and lower-level jurisdictional FRELs allocated from the higher-level jurisdictional FREL. The allocated project baseline or lower-level jurisdictional FREL may be used for up to 24 months or a period defined by the higher-level jurisdictional proponent, whichever is shorter, after the higher-level jurisdictional FREL expires. Where applicable, project proponents and lower-level jurisdictional proponents shall provide a letter from the higher-level jurisdictional proponent that states the allowed extension period.

3.13.3 Where a project or lower-level jurisdictional program is registered after the registration of a higher-level jurisdictional FREL (e.g., where a higher-level jurisdictional FREL has been registered and a nested project or lower-level jurisdictional program is subsequently registered), the project or lower-level jurisdictional program may maintain their allocated baseline or lower-level FREL for the remaining of the current FREL validity period and the subsequent FREL validity period, after which they shall adopt a reassessed allocated baseline or lower-level FREL.

For example, when a project is registered in year 3 of a 4-year FREL validity period, it may maintain its allocated baseline for the remaining of that FREL validity period (1 year), and for the duration of the following FREL validity period (4 years). After 5 years, the project would need to adopt the allocated baseline corresponding to the reassessed FREL.

3.13.4 Where the scope of the higher-level jurisdictional FREL is narrowed at the time of FREL update, a project- baseline or a lower-level jurisdictional FREL may be developed and registered for the removed REDD activity, GHG source or carbon pool to allow projects and lower-level jurisdictional programs to continue claiming GHG emission reductions from such activities, GHG sources or carbon pools.

3.13.5 Where a higher-level jurisdictional FREL has been registered, projects and lower-level FRELs (independent or as part of a jurisdictional program) going beyond its scope may be subsequently registered to account for the excluded activities, pools and GHG sources independently. If, at a later date, the scope of the higher-level FREL is broadened to cover such activities, pools and GHG sources, the transition requirements set out in Section 3.13.3 above shall be applied.

3.13.6 Where any transition period has expired and projects or lower-level jurisdictional programs are nested within a higher-level jurisdictional FREL, nested project baselines and lower-level jurisdictional FRELs shall be updated and revalidated, noting the following:

1) Where a lower-level jurisdictional program is nested within a higher-level jurisdictional FREL, the following applies:

   a) The lower-level jurisdictional program shall adopt all relevant activities, GHG sources and carbon pools included in the higher-level FREL;

   b) The lower-level FREL allocation shall be updated with the same frequency as the higher-level FREL that it is nested under;

   c) Allocated lower-level FREL updates shall be completed and validated within a time period of 18 months following the validation of the higher-level jurisdictional FREL;

   d) The updated lower-level jurisdictional FREL shall be used to estimate the GHG emission reductions occurring starting on the date of validation of the higher-level jurisdictional FREL.

2) Where the project is nested within a jurisdictional FREL, the following applies:

   a) Nested projects shall adopt all relevant activities, GHG sources and carbon pools included in the higher-level FREL;

   b) The allocated project baseline shall be updated and validated within a grace period of 18 months after the higher-level jurisdictional FREL is validated;

   c) The allocated project baseline shall be used to estimate the GHG emission reductions occurring starting from the date of validation of the higher-level jurisdictional FREL.

3.14 Monitoring

Concept

Monitoring refers to the collection and analysis of data to allow the assessment of the GHG emission reductions generated by nested projects and lower-level jurisdictional programs during a given time period in accordance with the monitoring plan set out in the program and project descriptions. Monitoring in the context of a jurisdictional FREL refers to the collection and analysis of data allowing for the reassessment of the FREL at the end of the FREL validity period.

Jurisdictional FREL Requirements

3.14.1 Higher-level Jurisdictional programs shall conduct monitoring every two years to provide data to update the FREL.

3.14.2 Higher-level monitoring data shall, at minimum, be validated during the subsequent FREL update.

3.14.3 Where higher-level jurisdictional proponents fail to monitor or update the FREL, nested projects and lower-level jurisdictional programs may continue operating as standalone activities.

3.14.4 Jurisdictional proponents shall monitor the activities and carbon pools that were selected in the jurisdictional FREL using the same methods used to set the FREL.

3.14.5 The geographic area to be monitored shall be the entire forested area of the jurisdiction, though certain areas may be excluded under the following conditions:

1) Where they are determined not to have been impacted by the nested project and lower-level jurisdictional program's activities (including leakage from those activities);

2) Where they have been excluded due to a significant natural disturbance or large-scale infrastructure projects in accordance with Sections 3.12.9 and 3.12.11, respectively;

3) Monitoring reports shall cover the entire jurisdiction (other than any areas allowed to be excluded as set out in this Section 3.14.5(1) and 3.14.5(2).

3.14.6 Monitoring shall be carried out at least every two years starting from the FREL start date or the end of the last FREL validity period). The periodicity of measurements is set out in Sections 3.12.15 and 3.12.23.

3.14.7 The jurisdictional proponent shall use the *JNR Monitoring Report Template* available on the Verra website and adhere to all instructional text within the template. The jurisdictional monitoring report describes all the data and information related to the monitoring of GHG emissions to reassess the FREL.

3.14.8 The monitoring period of the jurisdictional monitoring report shall be a distinct time period that does not overlap with previous monitoring periods. In addition, monitoring periods shall be contiguous with no time gaps between them and in aggregate shall cover the entire crediting period of all the nested projects and lower-level programs nested into the FREL.

Nesting Requirements

Jurisdictional FREL proponents

3.14.9 It is considered best-practice to incorporate independently verified lower-level monitoring results (e.g., from projects or lower-level jurisdictions) into higher-level monitoring. Where a project or lower-level jurisdictional program has more accurate GHG emissions factors, it is recommended that such emission factors are incorporated at the higher–level jurisdictional FREL at the subsequent jurisdictional FREL update.

Projects and Lower-level Jurisdictional Programs

3.14.10 Nested projects shall follow the monitoring requirements set out in the methodology applied to the project.

3.14.11 Where monitoring for the reassessment of the FREL is carried out, monitoring results from higher-levels may be used by lower-levels where there is overlap in activities and boundaries. Such monitoring data may be used when they meet the minimum accuracy requirements set out in Section 3.15 or after they have been refined as necessary to achieve such accuracy.

3.15 Uncertainty

Concept

Uncertainty is a characteristic of a measurement or sample that describes the dispersion of the values that could be reasonably attributed to the measurement. It is determined for the measurements used to estimate GHG emissions and GHG emission reductions achieved by nested projects and lower-level jurisdictional program activities. Uncertainty discounts are used to ensure that estimates are conservative.

Jurisdictional FREL Requirements

3.15.1 Jurisdictional FRELs shall undertake an analysis of uncertainty in estimating GHG emissions.

3.15.2 A qualitative uncertainty analysis shall be undertaken that lays out how systematic uncertainty and random uncertainty are reduced as far as possible through the use of high-quality data and adequate quality management procedures.

3.15.3 A quantitative analysis of remaining random uncertainty shall be undertaken. Jurisdictional proponents shall calculate error propagation for the GHG emissions estimated for the FREL historical reference period and for the monitoring period, where monitoring is carried out.

3.15.4 Uncertainties shall be reported referring to the half width of the two-sided 90% confidence interval. Uncertainties should be reported in the units of measurement for the estimate in question and as a percentage of the mean estimate.

3.15.5 Uncertainty requirements for activity data are set out in Sections 3.12.17 to 3.12.19. The area estimates of deforestation and of forest degradation for each forest type shall be accompanied by an estimate of the associated uncertainty. As set out in Section 3.12.18, sampling uncertainty associated with sample plot allocation for visual inspection of land-use transitions in satellite imagery shall be included.

3.15.6 The uncertainty requirements for emission factors are set out in Sections 3.12.25 and 3.12.26. Emission factors for each forest type shall be accompanied by an uncertainty estimate. According to the requirements in Section 3.12.25, the following sources of uncertainty are to be covered:

1) Uncertainty associated with calculation parameters such as the carbon fraction, root-to-shoot ratios and others.

2) Sampling uncertainty associated with plot allocation for field inventories for all carbon pools.

3) Uncertainty associated with default values for litter and deadwood in forests, and for all pools in non-forest vegetation.

4) Other sources of uncertainty, e.g., associated with allometric equations, can be covered optionally.

3.15.7 The uncertainty of GHG emission estimates shall be determined based on the uncertainties of activity data and of emission factors as laid out in Sections 3.15.5 and 3.15.6 above.

Nesting Requirements

Jurisdictional FREL Proponent

3.15.8 Before allocating project baselines and lower-level jurisdictional FRELs, the higher-level jurisdictional FREL is required to be conservatively discounted, in order to reduce the risk of overestimation. This discount is automatically applied by the *JNR Allocation Tool* based on the uncertainty estimate of the higher-level jurisdictional FREL. The *JNR Allocation Tool* automatically calculates the uncertainty using error propagation from its required inputs.

Note – Since uncertainty discounts are applied to the higher-level jurisdictional FREL before it is allocated to nested projects or lower-level jurisdictional programs through the application of the JNR Allocation Tool*. Therefore, the allocated project baseline and lower-level jurisdictional FREL are not required to apply a further discount for uncertainty.*

Projects and Jurisdictional Programs

3.15.9 Nested projects and lower-level jurisdictional programs shall undertake an analysis of uncertainty in estimating GHG emissions.[17] Nested projects and lower-level jurisdictional programs shall follow the requirements set out in Section 3.15 in the *JNR Scenario 2 Requirements* or Section 3.14 of the *JNR Scenario 3 Requirements,* as appropriate. A qualitative and a quantitative uncertainty analysis shall be undertaken where use of Monte Carlo simulation is optional. The rules on uncertainties of activity data and emission factors in Sections 3.15.5 and 3.15.6 shall be followed.

3.15.10 Both the estimate of GHG emissions in the allocated project baselines or lower-level FRELs and the estimate of GHG emission during the monitoring period shall be accounted for conservatively.

1) The higher-level jurisdictional FREL is required to be conservatively discounted, in accordance with the requirements set out in Section 3.15.8. This discount is automatically applied by the *JNR Allocation Tool* before allocating project baselines or lower-level jurisdictional FRELs.

2) Projects and lower-level jurisdictional program proponents must also conservatively discount the estimates of monitored GHG emissions during each monitoring period,[18] using the discounting factors provided in Table 1.[19]

[17] Nested projects and lower-level jurisdictional programs cannot sensibly calculate the uncertainty of the GHG emission reduction estimate because their baseline and/or FREL was allocated (and the allocation does not come with an uncertainty estimate).
[18] For the GHG emission during the monitoring period, "discounting" means increasing emission estimate.
[19] Background on this approach to discounting is available in: Neeff, T. 2021. What is the risk of overestimating emission reductions from forests – and what can be done about it. Climatic Change. accepted for publication.

Table 1. Uncertainty discount factors for GHG emissions[20]

Uncertainty of the volume of GHG emissions	Discount factor	Uncertainty of the volume of GHG emissions	Discount factor
95% - 100%	-25.53%	45% - 50%	-12.44%
90% - 95%	-24.22%	40% - 45%	-11.13%
85% - 90%	-22.91%	35% - 40%	-9.82%
80% - 85%	-21.60%	30% - 35%	-8.51%
75% - 80%	-20.29%	25% - 30%	-7.20%
70% - 75%	-18.99%	20% - 25%	-5.89%
65% - 70%	-17.68%	15% - 20%	-4.58%
60% - 70%	-16.37%	10% - 15%	-3.27%
55% - 60%	-15.06%	5% - 10%	0.0%
50% - 55%	-13.75%	0% - 5%	0.0%

3.15.11 At the end of the reference level validity period, projects and lower-level jurisdictional programs may optionally estimate the aggregate uncertainty of estimated emission over the whole period (and for several monitoring and verification events), as well as the applicable conservativeness discounts. Should these applicable conservativeness discounts differ from the sum of discounts applied for the individual monitoring events, then the volume of creditable emission reductions will be adjusted accordingly.

[20] The *JNR Allocation Tool* automatically calculates conservativeness discounts using an equation that also underlies the tabular values. The discounts in the *JNR Allocation Tool* can slightly differ from the tabular values. The discount factors are given by the following:

- If the uncertainty is smaller or equal to 10% of the mean, then the discount factor is 0%.
- If the uncertainty is greater than 10% of the mean and smaller than 100%, then: discount factor = - uncertainty / $t_{alpha=10\%}$ * $t_{alpha=66.6\%}$. In this, uncertainty is the half width of the 90% confidence interval as percentage of the mean estimate; $t_{alpha=10\%}$ is the t-value for the two-sided 90% confidence interval, approximately 1.6449; $t_{alpha=66.6\%}$ is the t-value for a one-sided 66.66% confidence interval, approximately 0.4307. The discount factor is in percent.
- If the uncertainty of the GHG emission reduction estimate is equal to or greater than 100%, the jurisdictional programme is not eligible for crediting.

3.16 Leakage

Concept

Leakage is the net change of anthropogenic GHG emissions that occurs outside the nested project or lower-level jurisdictional program boundary and is attributable to the project or program activities. In the case of jurisdictional FRELs, leakage requirements apply only to nested projects and lower-level jurisdictional programs.

Jurisdictional FREL Requirements

3.16.1. No leakage requirements apply to jurisdictional FRELs.

Nesting Requirements

Projects and Lower-Level Jurisdictional Programs

3.16.2. A project nested into a jurisdictional FREL shall apply the leakage requirements set out in the VCS Standard and applied methodology to calculate project leakage.

3.16.3. Projects that have the potential to displace GHG emissions outside the boundaries of the jurisdictional FREL into which they are nested shall account for such leakage in accordance with the requirements set out in the *VCS Standard* and applied methodology.

3.16.4. Lower-level jurisdictional programs shall follow the relevant requirements set out in Section 3.16, in the *JNR Scenario 2 Requirements* or Section 3.15 of the *JNR Scenario 3 Requirements,* as appropriate.

3.17 Non-Permanence Risk and Natural Disturbances

Concept

Non-permanence risk in nested projects or lower-level jurisdictional programs, is addressed through the use of a jurisdictional risk analysis and the pooled jurisdictional buffer pool. Buffer credits are cancelled to cover carbon known, or believed, to be lost. Jurisdictional FREL Requirements.

Jurisdictional FREL Requirements

3.17.1 Non-permanence risk and natural disturbances requirements do not apply to jurisdictional FRELs, because there is no crediting to the jurisdiction.

Nesting Requirements

Projects and Lower-level Jurisdictional Programs

3.17.2 Nested projects shall follow non-permanence risk requirements set out in the *VCS Standard*, except where requirements in Section 3.17 of the *JNR Scenario 2 Requirements* or Section 3.16 of the *JNR Scenario 3 Requirements* take precedence.

3.17.3 Lower-level jurisdictional programs shall follow requirements in this Section 3.17 in the *JNR Scenario 2 Requirements* or Section 3.17 of the *JNR Scenario 3 Requirements,* as appropriate.

3.17.4 Projects nested under a VCS jurisdictional FREL shall deposit buffer credits into the AFOLU pooled buffer account.

3.17.5 Lower-level jurisdictional programs shall deposit buffer credits into the jurisdictional pooled buffer account.

3.18 Quantification of GHG Emission Reductions

Concept

The net GHG emission reductions achieved by nested projects and lower-level jurisdictional programs are determined as the difference between the GHG emissions from GHG sources and carbon pools in the allocated project baseline or jurisdictional FREL scenario and the project or jurisdictional program scenario.

Jurisdictional FREL Requirements

3.18.1 The quantification of emission reductions is not relevant for the development of jurisdictional FRELs.

Nesting Requirements

Projects and Lower-level Jurisdictional Programs

3.18.2 Nested projects and lower-level jurisdictional program proponents shall calculate GHG emission reductions by comparing their GHG emission estimate during the monitoring period against the allocated project baseline or lower-level jurisdictional FREL, respectively.

3.18.3 The number of GHG credits issued to nested projects is determined by subtracting out the buffer credits from the net GHG emission reductions (including leakage) associated with the project. The buffer credits are calculated by multiplying the non-permanence risk rating (as determined by the *AFOLU Non-Permanence Risk Tool*) times the change in carbon stocks only. The full rules and procedures with respect to assignment of buffer credits are set out in the VCS Program document *JNR Registration and Issuance Process*

3.18.4 The volume of GHG credits available to be issued to the lower-level jurisdictional proponents is determined by subtracting out the buffer credits from the net GHG emission reductions associated with the jurisdictional program (which represent the net of program emissions minus FREL minus leakage) and subtracting any GHG emission reductions issued (or available to be issued) to nested projects, including buffer credits. Credits and other forms of incentives issued or anticipated for the same GHG emission reductions under the VCS Program and another GHG program shall also be deducted in accordance with Section 3.7.2 of the *JNR Scenario 2 Requirements* or Section 3.7.2 of the *JNR Scenario 3 Requirements*, as appropriate. Buffer credits are calculated by multiplying the non-permanence risk rating, determined in accordance with the VCS Program document *JNR Non-Permanence Risk Tool*, by the total number of GHG emission reductions that may be issued to the jurisdictional program only.

4 GOVERNMENT APPROVAL, VALIDATION AND VERIFICATION REQUIREMENTS

4.1 Approvals

Concept

Different government entities may have authority over components included in a jurisdictional program. Program authority is the legal authority to adopt REDD+ policies and measures at the jurisdictional level, including the development of the FREL. Such authority can reside in a national or subnational government. Jurisdictional FRELs require documented authority over the area covered by the FREL and need approval or no-objection where authority is overlapping (e.g., between a national and a subnational government). Program Requirements

4.1.1 The jurisdictional proponent shall provide documentary evidence establishing authority over the FREL (see the VCS Program document *Program Definitions* for the definition of program authority) in order to complete registration.

4.1.2 Where national and subnational authority overlaps for components of a jurisdictional FREL, the following applies:

1) Where a national jurisdictional proponent submits a FREL that covers a subnational area and such subnational government exercises control or authority over FREL elements, the national jurisdictional proponent shall provide evidence that the subnational government approves or has no-objection to the registration of the national FREL.

2) Where a subnational jurisdictional proponent submits a FREL and the national government exercises control or authority over FREL elements, the subnational-level jurisdictional proponent shall provide evidence that the national government approves or has no-objection to the registration of the subnational FREL. Where the subnational jurisdictional proponent exercises full authority over the FREL, no further approvals are required.

   For example, a subnational government agency with control over forest and environmental management may register the jurisdictional FREL without a no-objection response from the national government. However, such jurisdictional proponents shall follow the stakeholder consultation requirements set out in Section 3.8.1, including consultation with any relevant national government agencies.

4.1.3 Where any domestic regulations exist for government approval of a jurisdictional FREL, evidence shall be provided to demonstrate that the jurisdictional FREL complies with any relevant regulation.

Nesting Requirements

4.1.4 Where projects and lower-level jurisdictional programs are located within the boundary of a jurisdictional FREL, they shall follow any approval procedures set out in relevant laws and regulations. Where no such laws or regulations exist, at a minimum, projects shall secure a no-objection letter from the jurisdictional approval authority.

4.2 Validation/Verification and Registration

Concept

Validation is the independent assessment of the jurisdictional FREL by a validation/verification body that determines whether the FREL complies with the *JNR Requirements*. Verification is the periodic *ex-post* independent assessment by a validation/verification body the net GHG emission reductions that have occurred as a result of the nested projects or lower-level jurisdictional program during the monitoring period, conducted in accordance with the *JNR Requirements*. In the case of jurisdictional FRELs, there are no requirements with respect to verification of GHG emission reductions since no credits are issued to the higher-level jurisdiction. Registration is the process of submitting documents to Verra to be listed on the Verra Registry.

Jurisdictional FREL Requirements

4.2.1 The full validation process for jurisdictional FRELs is set out in the VCS Program document *JNR Validation and Verification Process.*

Non-Permanence Risk Analysis

4.2.2 The validation and verification of non-permanence risk analysis is not relevant for the development of jurisdictional FRELs. However, for nested projects and lower-level jurisdictional programs the non-permanence risk analysis shall be assessed by a validation/verification body in accordance with the *VCS Standard*.

Registration

4.2.3 Jurisdictional FRELs may only be submitted to the Verra registry by jurisdictional government entities or agencies that qualify as jurisdictional proponents (see the VCS Program document *Program Definitions* for definition of jurisdictional proponent), or by a public or a private entity where such entity has been nominated as the authorized representative by the jurisdictional proponent. National jurisdictional proponents may register national and/or subnational jurisdictional FRELs. Subnational jurisdictional proponents may register only their own jurisdiction's FREL.

Note that FRELs may be developed by non-governmental organizations or other partners, but such partners may not submit such elements for registration, unless they have been designated as the authorized representative by the jurisdiction.

4.2.4 The full rules and requirements with respect to the registration of jurisdictional FRELs are set out in the VCS Program document *JNR Registration and Issuance Process*.

Nesting Requirements

4.2.5 Nested projects shall follow the rules and requirements with respect to validation and verification and registration of projects as set out in the *VCS Standard* and the VCS Program document *Registration and Issuance Process*, respectively.

4.2.6 Lower-level jurisdictional programs shall follow the requirements set out in Section 4.2.1 to–4.2.4, above.

APPENDIX 1 COMPARISON OF IPCC, UNFCCC AND VCS PROGRAM COMPONENTS OF REDD+

IPCC Categories	UNFCCC REDD+ Activities	Broad VCS Program Jurisdictional and Nested REDD+ Activities	Major Activities	Broad VCS Program Project Activities	Specific VCS Program Project Activities
Conversion of forest to non-forest	RED (Reducing Emissions from Deforestation)	Reducing Emissions from Deforestation	Reducing deforestation (conversion of forest to non-forest).	REDD (Reduced Emissions from Deforestation and Degradation)	APD (avoided planned deforestation)
					APD + RWE (avoided planned deforestation plus wetland restoration)
					APD + CIW (avoided planned deforestation and wetland conservation)
					AUD (avoided unplanned deforestation)
					AUD + RWE (avoided unplanned deforestation plus wetland restoration
					APD + CIW (avoided planned deforestation and wetland conservation)
Forests remaining as forests	REDD (Reducing Emissions from Degradation)	Reducing Emissions from Degradation	Reducing emissions from forests remaining forests.		AUDD (avoided unplanned degradation)
					AUDD + RWE (avoided unplanned degradation plus wetland restoration)
					AUDD+ CIW (avoided unplanned degradation and wetland conservation)

				IFM (Improved Forest Management)	RIL (reduced impact logging)
					LtPF (logged to protected forest)
					ERA (extended rotation age)
					IFM + RWE (improved forest management plus wetland restoration)
					IFM + CIW (improved forest management and wetland conservation)
	REDD+ (Sustainable management of forests and enhancement of forest carbon stocks)	Enhancement of forest carbon stocks	Increasing removals from forests remaining forests		LtHP (low productive to high-productive forest)
				ARR (Afforestation, Reforestation and Revegetation)	ARR (afforestation, reforestation and revegetation)
					ARR + RWE (afforestation, reforestation and revegetation plus wetland restoration)
Conversion of non-forest to forest			Increasing conversion to forests.		ARR (afforestation, reforestation and revegetation)
					ARR + RWE (afforestation, reforestation and revegetation plus wetland restoration) and wetland conservation)

APPENDIX 2 DOCUMENT HISTORY

Version	Date	Comment
v4.0	15 April 2021	Initial version released under VCS Version 4

VERRA

Standards for a Sustainable Future

Verified Carbon Standard

Jurisdictional & Nested REDD+

Climate, Community & Biodiversity Standards

Sustainable Development Verified Impact Standard

Plastic Waste Reduction Standard