



THE RAINFOREST STANDARD

Integrating social, environmental and economic well-being

June, 2012

Version 2.0

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THE RAINFOREST STANDARD

Integrating Social, Environmental, and Economic Well-being

EXECUTIVE SUMMARY

The Rainforest Standard (*The RFS*) is the **world's first** fully integrated forest carbon credit standard, built from the ground up by - Columbia University's Center for Environment, Economy, and Society, Bolivia's PUMA Environmental Fund Foundation, Brazil's Fund for Biodiversity, Colombia's Environmental Action Fund, Ecuador's National Environmental Fund, and Peru's Trust Fund for National Parks and Protected Areas - to accommodate the ecological conditions and social realities of the Amazon region and the demands of emerging carbon markets. It integrates in a single standard all requirements and protocols for carbon accounting, socio-cultural/socio-economic impacts, and biodiversity outcomes. In the interest of space and practicality, we summarize here the key elements of *The RFS* in bullet form.

Overall

- **The RFS is based on** the fundamental understanding that environment, economy, and society are "*in it together*;" one cannot thrive if the others do not thrive as well.
- **The RFS aims** is to conserve natural forests, their biodiversity, and the sustainable livelihoods they provide using real, additional and permanent reductions in CO₂e emissions resulting from forest conservation in order to generate long-term revenue streams from the sale of forest carbon credits.
- **The RFS requires** that emission reductions must be permanent to justify credit revenues, and reductions will not be permanent unless economic benefits flow fairly to all local forest users and owners, who would otherwise have no stake in their permanence.

Socio-cultural / Socio-economic component

- Integrated into *The RFS*, with credits dependent on compliance.
- Frequent monitoring over lifetime of project.
- Operationalized using practicable, measurable, replicable performance indicators.
- All those in a position to remove trees are necessary parties to guarantee permanence.
- Participation by indigenous groups, local communities, forest dwellers, forest users (identified as *De Facto Rightsholders* if not legal owners), is completely voluntary.
- Revenue streams/benefits will be distributed in accordance with plans established by *De Facto Rightsholders* and enforceable against *Project Proponent*.
- Rigorous participatory consultation requirements.
- Transparent and enforceable benefit-sharing plans.
- Detailed informed, prior, written consent protocols.

Biodiversity component

- Integrated into *The RFS*, with credits dependent on compliance.
- Frequent monitoring over lifetime of project.
- Monitored at ecosystem and species level according to referenced criteria.
- Monitoring criteria based on peer-reviewed science.

Additionality – 3 simple tests

- *Legal Additionality Test*: removals are not prohibited by law, regulation, or contract.
- *Economic Incentives Test*: removals provide economic benefit to those who remove lawfully, or unlawfully (e.g. illegal loggers).
- *Existing Incentives Test*: project is not already receiving credits or payments for not removing tree biomass or deadwood under other regimes.
- No “other barriers” or “common practice” test.
- *Additionality* does not have to be re-established during the *Project Period*.

Projected Removal Baselines (Business as Usual - BAU) – 3 types of baselines are permitted.

- *Governmental Removal Baseline*: a baseline published by a governmental authority.
- *Documented Prospective Conversions*: Baselines that document intent, capacity, and authority to remove tree biomass - including public or private infrastructure or development plans, sustainable harvesting management plans, forest concessions, life history or community plans with embedded tree removal practices.
- *Approved Validated Baseline*: Even though there is currently no validated multivariate algorithm or model for a driver-based assessment of BAU, *The RFS* will accept future validated models based on algorithms combining historical removal rates with projected removals from deforestation drivers.
- *Protected Areas*: recent historical removal rate inside protected area is accepted as BAU baseline.
- *Project Period*: BAU rates are not adjusted downward, even if rates decrease in surrounding areas over time.

Carbon Accounting

- Aboveground tree biomass is measured; with 20% added for belowground tree biomass and 10% for deadwood biomass. The standard additions are presumptive values that can be rebutted with empirical data furnished by *Project Proponent*.
- Benchmark Map for carbon stock assessments - High resolution mapping required that will pick up almost all tree removal (i.e., degradation); only natural forest is considered part of Benchmark.
- Plantations, afforestation-reforestation, other carbon enhancements are not considered.
- Traditional community forest gardening activities do not affect accounting.

Leakage

- Activity-shifting leakage is accounted for by standard deduction. The standard deduction is a presumptive value that can be rebutted by empirical data furnished by *Project Proponent*.
- Market leakage is accounted for by standard deduction based on a look-up table reflecting the peer-reviewed literature, updated at regular intervals. The presumptive value can be rebutted by empirical data furnished by *Project Proponent*.

Permanence

- *Project Proponent* chooses from menu of permanence options.
- *Permanence* options provide assurances that any voluntary reversal during the *Project Period* will be secured by identifiable, available credits or funds.
- *Permanence* options include:
 - Buyer Liability;
 - Transparent, regulated buffer system with validated risk modeling and adequate buffer assets;
 - Adequate guarantees (public or private);
 - Ton-year model based on a 100-year equivalence;
 - *Permanence Trust Fund* (see *The RFS Permanence Chapter*); or
 - Alternative proposed by *Project Proponent* and vetted by *RFS* expert.

Administrative

- New streamlined model for project document submission, validation, and verification:
 - *The RFS* provides minimum qualifications for experts.
 - *Project Proponent* hires expert of its choice, vouches for *Expert's* conclusions.
 - *Project* documentation supported by personal representations.
 - No DOE bottlenecks - many experts available to project proponents.
- All project documents are available to public via *The RFS* website.
- *Public Commentary* on all project documents solicited: disputes refereed by *RFS* expert.
- Clear and objective review standards, with little reviewer discretion and specific review timelines

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Integrating Social, Environmental, and Economic Well-being

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GENERAL OBJECTIVES

The Rainforest Standard is the world's first carbon credit standard to fully integrate requirements and protocols for carbon accounting, socio-cultural/socio-economic impacts, and biodiversity outcomes. It is the product of a four-year collaboration among five leading environmental trust funds based in five Amazon Basin countries and Columbia University's Center for Environment, Economy, and Society.

The Rainforest Standard's overarching goal is to conserve natural forests, their biodiversity, and the sustainable livelihoods they provide using real, additional and permanent reductions in CO₂e emissions resulting from forest conservation in order to generate long-term revenue streams from the sale of forest carbon credits.

The Rainforest Standard's underlying principle is that emission reductions must be permanent to justify credit revenues, and reductions will not be permanent unless economic benefits flow fairly to all local forest users and owners, who would otherwise have no stake in their permanence.

The Rainforest Standard's commitment to an integrated standard is based on the fundamental understanding that the environment, economy, and society are "*in it together*"; one cannot thrive if the others do not thrive as well.

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STRUCTURE: REQUIREMENTS AND PROTOCOLS

[Methodologies]

The Rainforest Standard consists of *Requirements* and protocols organized into five subject Sections: *Initial Conditions* (IC1-3) requiring a description of the natural, social, and legal status of the project area at the outset; Socio-cultural and Socio-economic requirements (S1-3), biodiversity considerations (B1-7), emission reduction considerations (ER1-5), and administrative operations (A1-8). A Glossary follows the five subject sections. Exhibits, Schedules, Templates, and an Appendix (*RFS Interactive Permanence Tool* link) follow the Glossary.

Initial Conditions	Socio-Cultural Socio-Economic	Biodiversity	Emission Reductions	Administration	Glossary
IC1: <i>Project Area Initial Conditions</i>	S1: Identifying and respecting de facto rightsholders	B1-1 to B1-3: Benchmarks	ER1: <i>Project Additionality</i>	A1: <i>RFS Website and Project Webpage</i>	Exhibits
				A2: <i>Experts, Representative Organizations, Commentators and Referees</i>	Schedules
IC2: <i>Project Participants</i>	S2: Transparency	B1-4 to B1-6 Monitoring, Reporting, Verification	ER2: <i>Emission Reduction Additionality and Baselines</i>	A3: <i>Project Validation</i>	Templates
				A4: Monitoring, Reporting, Verifying	Appendix
IC3: Legal Foundation	S3: Sustainable Quality of Life Benefits	B1-7: Data	ER3: CO ₂ e Emission Reduction Calculations	A5: <i>Crediting Period, Permanence Period</i>	
				A6: Credit Registration, Transfer, Retirement	
			ER4: <i>Leakage</i>	A7: Defaults and Remedies	
			ER5: <i>Permanence</i>	A8: Fees A9: Miscellaneous	

Box 1: THE RAINFOREST STANDARD'S FOUR CORNERSTONES**Credibility – Practicability – Marketability - Compatibility**

The Rainforest Standard recognizes that for a standard to attract significant levels of investment all of the following are required: **Credibility** in the world at large; **Practicability** for project proponents and developers; **Marketability** for buyers and sellers, and **Compatibility** with the rules of governmental authorities and compliance markets. To that end, **The Rainforest Standard** maximizes Credibility, Practicability, Marketability, and Compatibility.

Credibility refers to whether a specified component of the standard is a valid measure: i.e. that it actually measures what it is intended to measure. Several types of components can be subjected to this test. For example, at the highest level, goals of the standard can be tested for credibility: can “increases” or “decreases” in carbon stocks be meaningfully measured? Credibility is also applicable to methods or protocols for monitoring, measuring, or verifying whether the goal can be achieved: e.g., is the measure of free, prior informed *consent* sufficiently objective and invariable to be credible?

Practicability refers to whether the standard offers participants predictability, efficiency, and cost controls throughout the review process. The Validation, and Monitoring, Reporting, and Verification protocols are designed to be as frictionless, straightforward, and standardized as possible. The *RFS* provides timelines to ensure participants can plan their activities and enter into agreements within the timeframes that make financial arrangements less susceptible to price fluctuations. To that end, *The RFS* protocols minimize reviewer discretion and maximize protocols that are objectively and replicably assessed.

Marketability refers to sufficient certainty for sellers and buyers that any credits generated by a standard are real, permanent, additional, transferred in accordance with law, produce benefits for all rightsholders consistent with their goals and pursuant to a plan agreed to by all rightsholders after they have been adequately informed.

Compatibility refers to the effort to make *The RFS* protocols and crediting consistent with the requirements, guidelines, and practices of *Governmental Authorities* and with the crediting regimes of other compliance markets.

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A BRIEF HISTORY

The seed of the idea for **The Rainforest Standard** (*The RFS*) was planted at a meeting in Sao Paulo, Brazil in October 2007, organized by the Brazilian Environmental Trust Fund, Funbio, at which the directors of four of the six institutions involved in developing *The RFS* were present. This meeting was followed by a meeting in Lima, Peru, between Columbia University's Center for Environment, Economy, and Society (CEES) and Peru's Environmental Trust Fund, Profonanpe, and a meeting in New York, USA, between CEES and Colombia's Environmental Trust Fund, Fondo Acción, in early 2008. Following these meetings a decision was taken to create a collaboration between CEES and the Environmental Trust Funds of Bolivia (PUMA), Brazil (Funbio), Colombia (Fondo Acción), Ecuador (FAN), and Peru (Profonanpe) to pursue the development of a new fully integrated standard for reducing forest carbon emissions in the Amazon.

These institutions, Founding Members of **The Rainforest Standard**, met together as a group for the first time in June 2008 in Sao Paulo, Brazil, with the aim of making a significant contribution to reducing forest carbon emissions in the Amazon by reducing the conversion of forested land. All six institutions were convinced that “avoided deforestation” *projects* could be made attractive to the carbon markets, facilitate long-term conservation of tropical forests, and benefit the human communities that live in and around them. They jointly analyzed the need for a new standard that responded to the ecological conditions and social realities of the Amazon region and the demands of emerging markets.

The Founding Members met regularly through 2011 (see list below) to work on the key issues identified in July 2009. With the support of experts from the United States and the five Amazon countries, they put together the building blocks for *The RFS*. Face to face interactions during workshops, virtual interactions on multi-country conference calls, and extensive discussions over draft documents allowed the group to integrate the realities of the Amazon region and design innovative alternatives for outstanding issues around “avoided deforestation”¹ *projects* in the carbon market.

The four-year process that culminated in *The RFS* benefited from the participation of dozens of experts from throughout South America, the United States, and Europe. These experts ranged from leading academics in natural science, social science, and economics to legal experts throughout the Amazon to those from the private sector and civil society experienced in forestry and carbon markets. Work started with a careful review of existing standards and the current biological and social situation of the Amazon basin in five countries: Colombia, Ecuador, Perú, Bolivia and Brazil. This review identified five thematic areas that needed to be

¹ During development of **The Rainforest Standard**, the “avoided deforestation” concept was expanded to include “degradation” (including fine-grained removals of tree biomass (aboveground, belowground, and deadwood)).

addressed effectively in order to overcome reservations and concerns expressed by local forest users, national and subnational governments, NGOs, and the international financial community that were slowing down large-scale implementation of “reduced deforestation” projects in the Amazon.

DATE	LOCATION	TOPIC
October 2007	Sao Paolo, Brasil	Initial discussions between CEES and some ETFs
2007 - 2008	Lima, Peru; NY, USA	Meetings between CEES and two ETFs
June 2008	Sao Paolo, Brasil	Founding Members inaugural meeting
March 2009	Lima, Perú	Organizational meeting of Founding Members
July 2009	New York City, USA	Analysis of existing standards and tools
February 2010	Bogotá, Colombia	Institutional Arrangement
March 2010	Palo Alto, CA, USA	Scientific-Technical advisory team meeting
April 2010	Quito, Ecuador	Legal advisory team meeting
May 2010	Rio de Janeiro	Socio-cultural advisory team meeting
May 2010	Rio de Janeiro	Economics advisory team meeting
August 2010	New York City, USA	Issue resolution protocol design
November 2010	Mexico City, Mexico	Report reconciling meeting
June 2011	New York City, USA	Lead authors meeting

Five expert groups were assembled, each led by world renown experts and their counterparts from each of the five Amazon countries mentioned. Each expert group produced a detailed report laying out the pros and cons of the issues, the options available, and their recommendations. The issues, options, and recommendations were discussed over several days by the Issues Resolution Group consisting of the Executive Committee, staff, and the thematic experts. Following that meeting, first drafts of the operational *RFS* chapters (**The Rainforest Standard** v1.0) were prepared and sent to the five expert groups for their review and comment. This allowed the expert groups to review and comment directly on the proposed protocols (methodologies). Following a further series of reviews and iterations, a full second draft of **The Rainforest Standard** v1.4 was drafted by the Lead Authors and sent out for public comment to a group of independent reviewers. Many of their comments and recommendations were integrated into the present version of **The Rainforest Standard – Version 2.0**.

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Box 2: GUIDING PRINCIPLES

- I. *RFS Projects* shall generate real, additional, measurable, verifiable, registrable, transparent, and permanent reductions in CO₂ emissions by reducing the removal of *Tree Biomass* in *Eligible Forested Lands* thereby enabling buyers and sellers of *RFS Credits* to contribute to climate change mitigation, forest conservation, sustainable development, poverty reduction, enhancement of quality of life of forest communities, and biodiversity conservation.
- II. *RFS Projects* shall involve activities in a geographically defined forested area that are fully compatible with national and/or sub-national climate change mitigation, forest conservation, and management regimes, and national and international environmentally-related policies.
- III. *RFS Projects* shall be conceived, developed, and implemented with active participation by forest rightsholders.
- IV. *RFS Projects* shall contribute to national natural resource conservation and sustainable use policies *inter alia*, demonstrable long-term conservation of biodiversity, environmental services, and forest management plans.
- V. *RFS Projects* shall contribute to national sustainable development objectives, including poverty reduction and/or enhancement of quality of life of forest rightsholders.
- VI. *RFS* implementing organizations shall be transparent in their issuance of *RFS Credits* and shall provide full transparency and clarity in the chain of custody of all issued *RFS Credits*.
- VII. *RFS* requirements shall be maximally objective, practicable, replicable, and marketable.
- VIII. *RFS* implementing organizations shall be transparent in their holding of assets, including those held as security against *reversals* and the respective distribution of benefits.
- IX. *RFS Projects* shall respect all constitutional, statutory and customary rights associated with land ownership, the official designation on occupied land, local communities *representation*, and the use of natural resources of *indigenous peoples* and small landowners, including full observance of the UN Declaration on the rights of *indigenous peoples* and International Labor Organization's Convention 169.
- X. The *RFS* is committed to the systematic and continuous review and improvement of *The RFS* to reflect changes in international treaties, cooperative arrangements, national and subnational laws and policies, and markets.

IC1: INITIAL CONDITIONS IN PROJECT AREA

OBJECTIVES:

Provide accurate and complete information about the *Initial Conditions*² of area, boundaries, land use, tenure, zoning, and the extent and nature of forest type and condition in the *Project Area*.

RATIONALE:

This section describes the *Project Area*'s boundaries and the conditions in the *Project Area* prior to the *Project* with respect to land tenure, existing activities, and *Eligible Forested Lands*. These descriptions will serve as the basis for identifying the lands from which *RFS Credits* will be generated as well as those who will participate directly and indirectly in the generation of *RFS Credits*.

REQUIREMENTS:

The following maps and tables shall be provided with the *Initial Project Submission Documents*:

IC1-1 Project Boundary Map:

A. The *Project Area* is defined as that area within the geographical boundary lines displayed on the *Project Boundary Map*. The *Project Boundary Map* shall show the course and distance of all the boundary lines of the *Project Area* with their geographic coordinates. GIS-informed mapping is preferred for establishing geographic coordinates.

² **PLEASE NOTE:** All *Italicized* terms are defined terms found in the GLOSSARY.

B. The *Project Boundary Map* shall be prepared in accordance with the survey standards acceptable to national, sub-national, or local *Governmental Authorities* or, in the absence of any such standard, by an Approved Association identified in Schedule IC1-1_A.

C. The *Project Boundary Map* shall display:

1. All governmental designations (e.g., tax map data; state, city, regional, municipal, customary designations); and
2. The total number of hectares in the *Project Area*.

IC1-2 Project *Land Tenure Map* and Table:

A. The *Project Land Tenure Map* shall show areas within the *Project Area* owned, leased, occupied, used, or regulated by any and all *Project Participants* as defined in IC2-1, including but not limited to:

1. Areas that are owned, directly or indirectly, by the State, and
 - a. have been designated by the state as *Protected Areas*, national parks, national forests, or such other designations that may relate to their public and private use;
 - b. whose use is assigned by law to *Indigenous Peoples* or other communities; or
 - c. are subject to a concession, whether for a specific or a general use, to a private person or a for-profit (e.g., a corporation or partnership) or non-profit (e.g., a foundation, nongovernmental organization) entity (*Concessionaires*);
2. Areas owned, leased, occupied, or used by private persons or entities (including *Indigenous Peoples*, local communities, *Forest Dwellers And Forest Users* with legal title);
3. Areas owned, leased, occupied, or used by private persons or entities (including *Indigenous Peoples*, local communities, *Forest Dwellers And*

Forest Users with legal title) where there is a legal obligation to preserve or protect the existing forest areas (e.g., because it is a *Protected Area* by legal decree, public or private conservation easement, or a local legally valid equivalent, or otherwise);

4. Areas in which families or communities customarily reside (*Forest Dwellers*) or which they use although residing elsewhere (*Forest Users*).

B. The **Tenure Table** shall be affixed to the *Project Land Tenure Map* and shall provide the following information:

1. Name and/or identity of all *Project Participants*;
2. Number of hectares in the areas in which each *Project Participant* has its interest;
3. Nature of the property rights held by each *Project Participant* (e.g. legal title, lease, concession, easement, traditional or customary, other); and
4. Subject of the property rights held by each *Project Participant* (e.g. use, control, and/or transfer rights with respect to land use, development, natural resources, carbon emission reduction activities, etc.).

IC1-3 Project Activities Map.

The *Project Activities Map* shall show the following within the *Project Area*:

- A. Current official governmental zoning map designations; and
- B. *Local Zonation* listing all *Forest Resources* and showing all current *Resource Uses* and *Resource Use Territories* in the *Project Area*.

IC1-4 Benchmark Eligible Forested Lands Map.

The *Benchmark Eligible Forested Lands Map* shall have a minimum resolution of $\leq 1\text{m}$ as currently available from remote-sensing satellites or aerial photos, and shall display the following within the *Project Area*:

- A. Spatially referenced demarcation of all areas of *Eligible Forested Lands* and *Ineligible Forested Lands* with a *Minimum Mapping Unit* of .09 ha, with cells in a square configuration (e.g. 30x30 with a resolution of 1m);
- B. A calculation of the total hectares of *Eligible Forested Lands*;
- C. A calculation of the total hectares of *Ineligible Forested Lands*;
- D. *Forest Types* in the *Eligible Forested Lands* (i.e., riparian, moist, dry, and other categories as specified in Schedule IC1-4_A);
- E. *Forest Conditions* in the *Eligible Forested Lands* (i.e., logged, mature, regrowing, and other categories as specified in Schedule IC1-4_B); and
- F. A *Forest Type*Condition Stratification Matrix*³ showing the percentage of *Eligible Forested Land* in each cell. The following sample is an illustration for clarification:

SAMPLE <i>Forest Type*Condition Matrix</i> – Percent <i>Forest Type</i> in a given Condition.			
TYPE	Moist	Dry	Riparian
CONDITION			
Logged	2%	15%	5%
Mature	23%	5%	10%
Regrowing	10%	15%	15%

³ The RFS recognizes that the *Forest Type*Condition Stratification Matrix* may not describe every *Forest Types* or *Forest Conditions*.

IC1-5 General Conditions:**A. All Maps shall:**

1. be in digital form;
2. be GIS-compatible;
3. use the *Project Boundary Map* as a template;
4. provide the name of the *Project Proponent*, the name of the *Project*, and the Descriptive Title of the Map;
5. be accompanied by a *Personal Representation* (see Template: *Representations*) by the *Project Proponent's* and the *Project Developer's* top executive officer (e.g., CEO, Principal Partner, Executive Director) in his or her personal capacity as well as by the *Project Proponent* and *Project Developer* that the information on the accompanying map is accurate and complete in all material respects to the best of his/her knowledge and belief after a full, good faith investigation;
6. be accompanied by the *Representation* of the *Project Proponent's Proponent Forestry Mapping Expert* that the information on the accompanying map is accurate and complete in all material respects to the best of his/her knowledge and belief after a full, good faith investigation; and
7. be consistent with accurate official government maps.

B. All accompanying schedules or matrices shall:

1. provide the name of the *Project Proponent*, the name of the *Project*, and the descriptive title of the map;
2. be accompanied by a *Personal Representation* (see Template: *Representations*) by the *Project Proponent's* and the *Project Developer's* top executive officer (e.g., CEO, Principal Partner, Executive Director) in his or her personal capacity as well as by the *Project Proponent* and

Project Developer that the information on the accompanying schedule or matrix is accurate and complete in all material respects to the best of his/her knowledge and belief after a full, good faith investigation;

3. be accompanied by the *Representation* of the *Project Proponent's Forestry Mapping Expert* that the information on the accompanying schedule or matrix is accurate and complete in all material respects to the best of his/her knowledge and belief after a full, good faith investigation;

4. be consistent with official government information; and

5. be internally consistent (e.g. hectares of *Eligible Forested Lands* plus *Ineligible Forested Lands* must equal the total hectares in the *Project Area*).

IC2: PROJECT PARTICIPANTS

OBJECTIVE:

Provide an accurate and complete list of all *Project Participants* including all *Rightsholders* and *Governmental Authorities* over activities in the *Project Area*.

RATIONALE:

Principle of Inclusion: Everyone that is in a position on the ground to remove *Tree Biomass* from the *Project Area Eligible Forested Lands* (or to authorize such removals, or to fail to deter such removals) should be encouraged to avoid such removals. Without such inclusive participation, *Project Permanence* will always be threatened and significant *Reversals* difficult to prevent.

Participatory Consultation: Consistent with the *Principle Of Inclusion*, *The RFS* treats any party in a position to cause removals within a *Project Area* as a *Project Participant*, and a necessary party to *Project* planning and implementation throughout the life of the *Project*. The *Requirements* for Participatory Consultation are detailed in Section S1. The *Principle of Inclusion* leads to a broad definition of *Rightsholders*, especially *De Facto Rightsholders*.

REQUIREMENTS:

The *Project Proponent* shall furnish a *Project Participant Identification Document* with its *Initial Project Submission Documents*. Section IC2-1 defines the categories of individuals, groups, entities, and organizations that are considered *Project Participants*. Section IC2-2 sets out the information that must be provided for each *Project Participant*. Section IC2-3 provides the type of evidence required to demonstrate compliance with Sections 1C2-1 and IC2-2.

IC2-1 The *Project Participant Identification Document* shall identify all *Project Participants*, including:

A. *Project Proponent*: Party with right to trade emission reductions stemming from reducing removal of *Tree Biomass* from *Eligible Forested Lands* that is proposing the *Project*.

B. *Project Developer*: Individual(s) or legal entity designated by legally binding authority from the *Project Proponent* to prepare and submit documents required by *The RFS*, to act as *Project Proponent's* agent throughout the validation process, to modify submissions, to make *Representations* as required in *The RFS*, and to otherwise act on behalf of the *Project Proponent*.

C. *Rightsholders* (a term that includes both *De Jure* and *De Facto Rightsholders* collectively):

1. *De Jure Rightsholders*: Holders of legal title to any land or any rights (e.g. concessions, easements, occupancy) within the *Project Area*.

2. *De Facto Rightsholders*: *Forest Users* or *Forest Dwellers*, including but not limited to *Indigenous Peoples*, local communities with traditional or customary rights to use, control, or transfer rights in or appurtenant to lands in the *Project Area*. *The RFS* recognizes as *De Facto Rightsholders*, *Forest Dwellers* and *Forest Users*, who while having no clear title or legal use rights may have locally recognized use or control rights that do not violate private or public property rights, laws, or traditions (“extra-legal users”). However, it is recognized that some *Forest Users* may act illegally (e.g., illegal commercial loggers; violators of valid legal orders), and *The RFS* does not attribute legal rights to those acting illegally: all

such illegal actors are deemed not to be *De Facto Rightsholders*. The term “*De Facto Rightsholder*” does not refer to the individual members of a larger group (such as *Indigenous Peoples*, local communities, *Forest Dwellers* and *Forest Users*, or other group with traditional or customary rights to use, control, and or transfer rights). Individuals’ rights are deemed to derive from their association with the group, defined here as a *De Facto Rightsholder*, of which they are a member. Thus, a group but not an individual can be considered as a *De Facto Rightsholder* under *The RFS*. Family farmers shall be deemed *De Facto Rightsholders* if, and only if, a governmental certificate confirms their possession of lands in the *Project Area* (e.g. Municipal Certificate of Possession and Neighborhood). All *De Facto Rightsholders* shall also be listed on the *De Facto Rightsholder List* referred to in Sections IC2-3C and S1-1.

D. *Governmental Authorities* with jurisdiction to regulate the lands or activities within the *Project Area*.

IC2-2 The *Project Participant Identification Document* shall include:

- A. Proper and popular names of entities, individuals, organizations, communities, groups, *Governmental Authorities*, and other identifying labels;
- B. Contact information to the extent available, including addresses, phone, email, or other internet contact;
- C. Names of officers, executives, or leaders of entities; and
- D. Publicly available legal registration information.

IC2-3 The following are required to demonstrate compliance with Sections IC2-1 and IC2-2:

A. A *Personal Representation* by the *Project Proponent's* and the *Project Developer's* top executive officer (e.g., CEO, Principal Partner, Executive Director) in his or her personal capacity as well as by the *Project Proponent* and *Project Developer* that the information is accurate and complete in all material respects to the best of his/her knowledge and belief after a full, good faith investigation; and

B. Where the identification is required to be filed with a *Governmental Authority*, confirmation by that authority evidenced by an official document; and

C. *De Facto Rightsholders List* prepared in accordance with the *Requirements* of S1-1.

IC3: LEGAL FOUNDATION

OBJECTIVES:

Identify legal, traditional, or customary rights of all *Project Participants* to use, control, or transfer any rights in or appurtenant to the lands in the *Project Area*.

Demonstrate that all necessary agreements have been reached with all *Project Participants* affirming the legal right of the *Project Proponent* to transfer, monetize, and trade in reduced emissions of carbon from reduced removal of *Tree Biomass* through receipt and transfer of *RFS Credits* described in Section A6 (“Credit Registration, Transfer, Retirement”).

Demonstrate that the proposed activity or *Project* does not conflict with any national or sub-national REDD or similar programs or activities in the relevant jurisdiction.

Demonstrate that the award of *The RFS Credit* is not itself a violation of applicable law, and the economic benefits of any subsequent trade are not already assigned by applicable law to a third party whose *Consent* or assignment has not yet been obtained.

RATIONALE:

The RFS seeks to assure purchasers of *RFS Credits* that sellers have the right to transfer carbon emission reductions for value under the law in which the *Project Area* is located. This requires more than a mere showing of legal title to *Project Area* lands. The *Project Proponent* must demonstrate its right to monetize and trade carbon reductions in lieu of or in partnership with: *Governmental Authorities*; contract

counterparties (e.g., *Project Developers*, assignees, concessionaires); or *De Facto Rightsholders*.

REQUIREMENTS:

Section IC3-1 requires documentary support for the information provided on the *Project Land Tenure Map* and *Tenure Table* in addition to the IC1-5 *Representations*. Section IC3-2 describes the *Requirements* the *Project Proponent* must demonstrate it has met in support of its right to trade in the credits to be issued as *RFS Credits*. IC3-3 specifies the documentary evidence required to substantiate IC3-2 claims.

IC3-1 In addition to the *Requirements* of IC1-5, in support of the information on the *Project Land Tenure Map* and *Tenure Table* required under IC1-2, as part of its *Initial Project Submission Document*, the *Project Proponent* shall provide the following documentary evidence:

A. With respect to *De Jure Rightsholders*, registered legal titles confirmed by the *Governmental Authority* in accordance with law evidenced by an official document (e.g. stamped deed; affidavit), and, in the case of a disputed title, Final Judicial Orders from a court from which there is no further appeal; and

B. *Legal Opinion* of a qualified attorney admitted to the practice of law in the jurisdiction in which the *Project* is located that the information on the *Project Land Tenure Map* and *Tenure Table* is accurate and complete in all material respects to the best of his/her knowledge and belief after a full, good faith investigation.

IC3-2 As part of its *Initial Project Submission Documents*, the *Project Proponent* shall provide satisfactory documentary evidence, in accordance with subparagraph IC3-3 below, that:

A. The *Project Proponent* or one or more of the persons or entities who are parties to binding contractual arrangements with the *Project Proponent* has been assigned under the law of the host country the right to trade in, transfer, and monetize the reductions in carbon emissions that result when removals of *Tree Biomass* are reduced; and

B. A *Governmental Authority* (local, state or municipal) has not put in place a national, sub-national or other program that is materially inconsistent with, or purports by its terms to supersede or annul:

1. Any legal measure and/or instrument on which the proposed activity or *Project* is based; or
2. Any method chosen to fulfill any *Requirement* under *The RFS* (for example, a permanence method, a baseline method, or *Requirements* under Section S, such as free, prior informed consent; and

C. No agency or instrumentality of the government in the jurisdiction(s) in which any part of the *Project* is located claims the right to transfer carbon emission reductions; and

D. There is no provision of applicable law in the jurisdiction(s) in which any part of the *Project* is located whereby any person (including any agency or instrumentality of the government), other than the *Project Proponent* and/or one or more of the counterparties with which the *Project Proponent* has contracted or its permitted assigns, is entitled to transfer carbon emission

reductions, and specifically those that result from reducing the removal of *Tree Biomass*; and

E. If the jurisdiction(s) in which the *Project* is located has a mechanism in place for tracking and/or registering activities or *Projects* of the kind proposed or undertaken by the *Project* (whether or not as part of that jurisdiction's committed *Nationally Appropriate Mitigation Actions* or "*NAMA*"), and recordation and/or registration is required by applicable law at the time the *Initial* or *Final Project Submission Documents* are delivered or at any subsequent *Verification Date*, the *Project Proponent* shall represent and provide legally valid documentary evidence that:

1. The proposed *Project* or proposed activity is duly recorded and/or registered; and
2. Such recordation and/or registration is not inconsistent under applicable law with the qualification of the *Project* or activity for issuance of credits under *The RFS*; and

F. Neither the issuance of *RFS Credits* to the *Project Proponent* nor to any one or more of the counterparties with whom the *Project Proponent* has contracted, nor any eventual sale of a *RFS Credit* by the *Project Proponent* or by any such counterparty or its assigns will result in a violation of any applicable law of the jurisdiction in which the *Project* is located; and

G. The *Project Proponent* will take all required actions, as provided under applicable law, to report to the *Governmental Authorities* the receipt or transfer of a *RFS Credit*.

IC3-3. Evidence in support of the information required in IC3-2A-G.

A. For purposes of IC3-2, satisfactory documentary evidence of the matter to be demonstrated shall require one or more of the following as per Table IC3-3:

1. A *Personal Representation* by the *Project Proponent's* and the *Project Developer's* top executive officer (e.g., CEO, Principal Partner, Executive Director) in his or her personal capacity as well as by the *Project Proponent* and *Project Developer* that the information in the IC3-2A-G is accurate and complete in all material respects to the best of his/her knowledge and belief after a full, good faith investigation;

2. *Legal Opinion* of a qualified attorney admitted to the practice of law in the jurisdiction in which the *Project* is located that the information required by IC3-2A-G is accurate and complete in all material respects to the best of his/her knowledge and belief after a full, good faith investigation;

3. Official written statements by *Governmental Authorities*; or

4. Final Judicial Orders from a court from which there is no further appeal.

B. Table IC3-3 describing satisfactory documentary evidence alternatives for IC3-2A-G *Requirements*.

Table IC3-3: Satisfactory documentary evidence alternatives for IC3-2A-G Requirements.								
Sub-paragraphs	A	B	C	D	E1	E2	F	G
	1 + 2	1 + 2; or 3; or 4	1 + 2; or 3.	1 + 2; or 3.	1 + 3	1 + 2; or 3.	1 + 2; or 3.	1

C. Should any *Representation* prove inaccurate, subsequent credits will not be verified except in accordance with the remedial procedures in Section A7.

S1: IDENTIFYING AND RESPECTING DE FACTO RIGHTSHOLDERS

OBJECTIVES:

Consistent with the Principles of Inclusion and Participatory Consultation (see IC2 Rationale), *RFS Projects* must be designed to respect socio-economic and socio-cultural facts on the ground. To do so requires the accurate and complete identification of all *De Facto Rightsholders*, as well as of *De Jure Rightsholders* and other *Project Participants* (IC2). The emphasis on accurate and complete identification of *De Facto Rightsholders* is to provide assurance that *RFS Projects* are designed so that:

Existing rights to lands and resources, whether statutory or customary, will be identified and respected;

Indigenous Peoples', Forest Dwellers' and Forest Users' and local communities' traditional resource management knowledge and practice consistent with *The RFS* goal of reducing removal of *Tree Biomass* in *Eligible Forested Lands* will be identified and respected;

All applicable laws, international agreements and conventions, as well as customary law, including international conventions that call for protection of indigenous knowledge and practice are identified and complied with; and

Project activities identify and account for culturally relevant zoning categories (*Local Zonation*) (see IC1-3B) that recognize local knowledge and historical uses.

It is permitted and desirable, although not required, that a *Project* be designed to help formalize local customary recognized rights of indigenous, ribereño, caboclo, colono, mestizo, campesino, and other private landowners, local communities, and households.

RATIONALE:

A fundamental principle of *The RFS* is that full engagement of *De Facto Rightsholders* is essential for *Projects* to reduce removals of *Tree Biomass* in the long term. The focus in this section on *De Facto Rightsholder* engagement is based on the presumption that *De Facto Rightsholders* are not always afforded the same legal protections as *De Jure Rightsholders*. With respect to *De Jure Rightsholders*, *The RFS* requires that they be identified as *Project Participants*; they can then access the protections of existing laws to assure their rights in connection with the activities described in *The RFS*.

REQUIREMENTS:

S1-1 As part of its *Initial Project Submission Documents*, the *Project Proponent* shall submit a list of all *De Facto Rightsholders* (*De Facto Rightsholders List*) in the *Project Area* (including *Indigenous Peoples*, local communities, *Forest Dwellers* and *Forest Users*).

S1-2 To ensure that affected *De Facto Rightsholders* have an adequate opportunity to be included in or excluded from the *De Facto Rightsholder List*, the *Project Proponent* shall publicize the *De Facto Rightsholder List* (*De Facto Rightsholder Notice*) for 90 days (*De Facto Rightsholder Notice Period*) using:

- A. Locally recognized legal and traditional communication channels;
- B. Publication in all local newspapers at least three times;

- C. Broadcast at least three announcements over local radio or television, if available;
- D. Posting on the internet in a manner required by Section A2;
- E. Written notification to *Representative Organizations* with an interest in the *Project Area*,
- F. Written notification to *Governmental Authorities* with any jurisdiction over the *Project Area*;
- G. Written or traditional communication to all known *De Facto Rightsholders*.

S1-3 Compliance with *De Facto Rightsholder Notice*. The *Initial Project Submission Documents* shall include:

- A. A written statement by *Project Proponent* that the *De Facto Rightsholder Notice* has been provided in accordance with S1-2A-G, describing the method of compliance with each of A-G, the dates thereof, and identifying any third parties participating in compliance (e.g. newspaper, radio, NGO).
- B. A *Personal Representation* by the *Project Proponent's* top executive officer (e.g., CEO, Principal Partner, Executive Director) in his or her personal capacity as well as by the *Project Proponent* that the information provided in S1-3A is accurate and complete in all material respects to the best of his/her knowledge and belief after a full, good faith investigation.

S1-4 The *De Facto Rightsholder Notice Period* can be initiated by the *Project Proponent* at any time in its sole discretion, after or before *Presubmission Consultations* (see S2-1F1); however, to ensure that the *De Facto Rightsholder List* is not stale, the *De Facto Rightsholder Notice Period* shall not be valid if it was initiated more than 12 months prior to the *Initial Project Document Submission Date*.

S1-5 The *De Facto Rightsholder Notice* shall state that, from the beginning of the *De Facto Rightsholder Notice Period* to 90 days after the *De Facto Rightsholder Notice Period* (*De Facto Rightsholder Claim Period*), any of the following may submit a written claim to the *Project Proponent* (*De Facto Rightsholder Claim*) that it, or any other *De Facto Rightsholder*, should be included or excluded from the *De Facto Rightsholder List* with its justification for the claim:

A. Any group claiming to be a *De Facto Rightsholder* as defined in IC2;

B. A *Representative Organization*

C. A *Governmental Authority*

S1-6 Within 30 days of the expiration of the *De Facto Rightsholder Claim Period*, the *Project Proponent* shall list all *De Facto Rightsholder Claims* filed with them and shall include all such claims in its *Initial Project Submission Document* along with its response if it chooses not to list or delist the claimant. Failure to submit a *De Facto Rightsholder Claim* shall be considered a *Major Default* under subsection A7-2 and will be treated in accordance with the *Requirements* of that section.

S2: TRANSPARENCY

DISCLOSURES and FREE, PRIOR, INFORMED *CONSENT*

OBJECTIVES:

Consistent with the *Principles Of Inclusion And Participatory Consultation*, throughout the planning and development process *Project Proponents* shall provide accurate and complete information on all aspects of the *Project* to all *Project Participants*, afford all *Project Participants* the opportunity to contribute to the planning and execution of the *Project* and its activities, gain acceptance of the *Project* from all *Project Participants*, and continue to communicate openly and transparently with all *Project Participants* throughout the *Project Period*.

All communications with and by *Project Participants* shall be made in a manner that is recognized as readily understood by each *Project Participant* and culturally appropriate.

All understandings with and consents by *Project Participants* shall require their *Free, Prior, Informed Consent*.

The nature and pattern of distribution of benefits and responsibilities stemming from the *Project* and its activities shall be detailed in a documented understanding within and among all *Project Participants*.

Socio-economic and socio-cultural risks associated with receiving or not receiving potential benefits throughout the duration of the *Project* shall be fully disclosed, acknowledged, and accepted by all *Project Participants*.

RATIONALE:

One goal of *The RFS* is to ensure that *Rightsholders* are fully aware of all the risks, obligations, costs, and contingencies they might encounter at the outset of a *Project* or over time by entering into any agreement for the transfer of their CO₂e emission reduction rights to any counterparty.

Consistent with fundamental principles of contract and equity, *The RFS* requires that each decision made by any *Rightsholder* be made with their *Free, Prior, Informed, Consent* (“*FPIC*”). Mindful of its twin underlying principles of credibility and practicability, *The RFS* seeks to require the maximum possible demonstration that each *Rightsholder* decision has been made and will continue to be made with their *Consent*.

The *RFS* operationalization of *FPIC* considers two constraints: (1) How to know whether an individual knows something; and (2) Whether the decision-maker actually has the time, inclination, and information to learn and understand everything that would allow them to make a “fully informed” decision? While neither of these constraints can ever be fully overcome, *The RFS* sets forth *FPIC Requirements* that it believes achieve a reasonable level of confidence that *Rightsholders* will have had as much information with which to make their decisions as would satisfy the quality of *FPIC* normally required in social, legal, and commercial interactions.

REQUIREMENTS:

S2-1 The *Project Proponent* shall provide a written disclosure statement (“*Proponent Disclosure*”) to each *Project Participant* (including all those on the *De Facto Rightsholder List*), which shall provide or state the following:

- A. A legible copy of all maps and schedules required by IC1;

B. A complete description of the *Project* and its activities, with an emphasis on its goal of reducing or eliminating removal of *Tree Biomass* from *Eligible Forested Land*. The description shall include a clear and highlighted statement that planted forests are not subject to the *Requirements of The RFS*; that any activity in such planted forests (such as harvesting or additional planting) will have no affect on any benefits, neither decreasing them through harvesting nor increasing them with plantings.

C. The requirement for a *Rightsholder Benefit Plan* in accordance Section S2-4;

D. That *Project Proponent* is required to provide a *Rightsholder Benefit Plan* in accordance Section S2-8;

E. An update as to the current status of *Project* planning and development;

F. Schedule of workshops or meetings (or other forms of communication sanctioned by authorized members of the *Rightsholder*) publicized and open to all to inform all members of each *Rightsholder* of the matters described in S2-1 (“*Participatory Consultations*”) and to get their feedback.⁴ The schedule shall provide for a minimum of:

1. Two such events per *Rightsholder*, which shall be scheduled and shall take place prior to the *Initial Project Submission Date* (“*Pre-Submission Consultation*”);

⁴ Sections S2-1F1 and S2-1F2 require two workshops or meetings: in the first meeting information will be presented and questions asked, but participants will not have had time to digest and discuss the information. The second meeting assures participants that they will have an opportunity to give their feedback after they have had time to consider it. In contrast, S2-1F3 and S2-1F4 require only one meeting since these are informational only and do not require feedback, although there should be an opportunity for *Project Participants* at such a meeting to clarify any matter about which they feel uncertain.

2. Two such events per *Rightsholder* which shall be scheduled and shall take place between the *Initial Project Submission Date* and *Final Project Submission Date* (“*Final Submission Consultation*”);
3. One such event per *Rightsholder* within 180 days after *Project* validation (“*Validation Consultation*”); and
4. One such event per *Rightsholder* 90 days prior to each subsequent verification (“*Verification Consultation*”).

G. That *Participatory Consultations* shall afford every individual on whose behalf the *Participant Acknowledgment* (see S2-2 below) purports to speak a full opportunity to understand the content of the *Proponent Disclosure*, to ask any questions they might have about its contents, to receive replies to such questions they deem adequate, and to provide his or her opinion about the content.

H. Names of the institutions and individuals who have control over decision-making, fund management, and information dissemination on behalf of the *Project Proponent*;

S2-2 Compliance with *Proponent Disclosure* and *Participatory Consultation Requirements*.

A. The *Initial Project Submission Documents* shall include:

1. A written statement by *Project Proponent* that:
 - a. The *De Facto Rightsholder Notice* has been provided in accordance with S1-2A-G, describing the method of compliance with each of A-H, the dates thereof, and identifying any third parties participating in compliance; and
 - b. The two *Pre-Submission Consultations* have taken place.

2. A *Personal Representation* by the *Project Proponent's* and *Project Developer's* top executive officer (e.g., CEO, Principal Partner, Executive Director) in his or her personal capacity as well as by the *Project Proponent* and *Project Developer* that the information provided in S2-2A1 is accurate and complete in all material respects to the best of his/her knowledge and belief after a full, good faith investigation.

B. The *Final Project Submission Documents* shall include:

1. A written statement by *Project Proponent* that the two *Final Submission Consultations* have taken place.
2. A *Personal Representation* by the *Project Proponent's* and *Project Developer's* top executive officer (e.g., CEO, Principal Partner, Executive Director) in his or her personal capacity as well as by the *Project Proponent* and *Project Developer* that the information provided in S2-2B1 is accurate and complete in all material respects to the best of his/her knowledge and belief after a full, good faith investigation.

C. *Verification Request* documents shall include:

1. A written statement by *Project Proponent* that:
 - a. the *Validation Consultation* has taken place; and that
 - b. the *Verification Consultation* has taken place.
2. A *Personal Representation* by the *Project Proponent's* and *Project Developer's* top executive officer (e.g., CEO, Principal Partner, Executive Director) in his or her personal capacity as well as by the *Project Proponent* and *Project Developer* that the information provided in S2-2C1 is accurate and complete in all material respects to the best of his/her knowledge and belief after a full, good faith investigation.

S2-3 With its *Initial Project Submission Documents*, the *Project Proponent* shall submit a written acknowledgement ("*Participant Acknowledgement*") from each *Project Participant* (other than *Governmental Authorities*), signed by those with legal or traditional authority to do so, that includes the following:

- A. Whether the *Project Participant* believes it has the legal or customary right to remove *Tree Biomass* from *Eligible Forested Lands* in the *Project Area*;
- B. Whether the *Project Participant* believes any other *Project Participant* has the legal or customary right to remove *Tree Biomass* from *Eligible Forested Lands* in the *Project Area*;
- C. Whether the *Project Participant* believes it has a primary right to all or part of the CO₂e emission reduction credits for reduced removal of *Tree Biomass*;
- D. A *Representation* that each member of the *Project Participant* (partner, shareholder, family, group, or individual – as the case may be) has had the full opportunity to participate in *Participatory Consultations*;
- E. Names of the institutions and individuals who have control over decision-making, fund management, and information dissemination on behalf of the *Project Participant*;
- F. Description of the process the *Project Participant* has established for giving and documenting free, prior, informed *FPIC* in culturally appropriate and accessible forms and in accordance with law and international agreements;
- G. Acknowledgment that the *Project Participant* has given its *Free Informed Prior Consent* for all *Project* activities that affect it and its members and their resources;

H. Acknowledgment that the *Project Participant* understands it has the right to refuse to participate in the *Project*; and

I. Description of the process the *Project Participant* has in place to resolve disputes among its members over rights to remove *Tree Biomass* and/or to carbon emission reduction credits.

S2-4 Prior to *Final Project Document Submission*, the *Project Proponent* shall obtain a *Rightsholder Benefit Plan* from each *Rightsholder* signed by those with legal or traditional authority to do so, and by any non-governmental or governmental organization with regulatory authority over such matters.

A. The *Rightsholder Benefit Plan* shall include at a minimum the following (see Template S2-4):

1. An accurate and complete description of all benefits of any kind that may be received by the *Rightsholder* during the *Project Period* from the *Project Proponent*, NGOs, *Governmental Authorities*, other *Rightsholders*, or other private parties including direct or indirect monetary payments, in-kind payments, or other incentives to reduce removal of *Tree Biomass*, switch to alternative livelihoods, or change residence patterns directly or indirectly;
2. An accurate and complete description of the *Rightsholder Benefit Plan* agreement by the *Rightsholder* and its members, that includes at a minimum the following:
 - a. the nature of the property to be distributed (e.g. cash, credit, in-kind supplies or equipment, vouchers for health or education services)
 - b. the share of net benefits to go to each *Rightsholder* member

- c. the allowable expenses that may be deducted from gross benefits and identify who may receive payments for the services expensed;
- d. the form of annual reporting of income and expense in a format that is designed to be understandable by all *Rightsholders*;
- e. a mechanism for dealing with disputes among members or groups of members of a *Rightsholder*
- f. a mechanism to monitor changes in the distribution of benefits and costs and to make this information available in a transparent manner to all *Rightsholders*; and
- g. Identification of individuals, positions, or groups responsible for benefit collection and distribution.

B. *Indigenous Peoples or Traditional Community Life Plans* (or a *Community Document* in the case of *De Facto Rightsholders*) authorized in accordance with the legal and traditional *Requirements* of the *Rightsholder* (and, if required by law or tradition, sanctioned by any non-governmental or governmental organization with regulatory authority with respect to such plans) shall be deemed sufficient to satisfy the *Rightsholder Benefit Plan* requirement of S2-4A, provided such plans or documents address the *Rightsholder Benefit Plan Requirements* of section S2-4A2-a,b,e-h.

S2-5 Prior to the *Final Project Submission Date*, *Project Proponent* shall provide a *Master Rightsholder Benefit Plan*.

A. The *Master Rightsholder Benefit Plan* shall:

1. List all *Rightsholder Benefit Plans*;

2. Consolidate the *Rightsholder Benefit Plans* and demonstrate the absence of any inconsistencies or conflicts among the *Rightsholder Benefit Plans*;
3. Provide a mechanism(s) for dealing with disputes between *Rightsholders*; and
4. Describe and acknowledge:
 - a. the fiduciary obligation of the *Project Proponent* to provide each *De Facto Rightsholder* with the benefits described in their *Rightsholder Benefit Plan*, including the amount, method and timing of payments; and
 - b. the agreements underlying S2-4A obligations, including remedies for any defaults thereunder, which agreements shall be attached to and made part of the *Master Rightsholder Benefit Plan*.

S2-6 Master Rightsholder Benefit Plan Compliance.

A. *Credit Verification* is contingent on compliance with the *Master Rightsholder Benefit Plan*. In the event that the documentary evidence does not demonstrate full compliance, credits will not be verified. As part of any *Verification Request*, the *Project Proponent* shall submit documentary evidence that it has complied with the *Master Rightsholder Benefit Plan*.

1. Documentary evidence of compliance shall include:
 - a. a *Personal Representation* by the *Project Proponent's* top executive officer (e.g., CEO, Principal Partner, Executive Director) in his/her personal capacity rather than official capacity, representing that he or she has personal knowledge of compliance with each *Rightsholder Benefit Plan* as well as by the *Project Proponent* itself; and
 - b. Either:

(1). An acknowledgment of receipt of benefits from authorized representatives of the *De Facto Rightsholder*; or

(2). Documentary evidence of payments such as evidence of monetary payments or delivery of goods or services.

B. Notwithstanding the *Requirements* of subsection S2-6A, in the event that a *De Facto Rightsholder* declines to continue to participate in the *Project*, credits can be verified in accordance with the following procedure.

1. A *Rightsholder* is considered as having declined to continue to participate in the *Project* if it has:

- a. Given written notice to that affect;
- b. Failed to respond in accordance with the dispute mechanism sanctioned by the *Master Rightsholder Benefit Plan*;
- c. Otherwise failed to accept documented good faith efforts of the *Project Proponent* to provide the benefits required by the *Rightsholder Benefit Plan*.

2. The *Verification Request* shall describe in detail which of the three criteria above is the basis for the *Project Proponent's* claim that the specified *De Facto Rightsholder* has failed to continue its participation, and shall provide a *Personal Representation* by the *Project Proponent's* top executive officer (e.g., CEO, Principal Partner, Executive Director) in his/her personal capacity rather than official capacity, representing that he or she has personal knowledge of the discontinued participation of the *De Facto Rightsholder* in question and the basis therefor.

3. If the *Verification Request* procedure required by Section A4-2 concludes without contradicting the claim that the *De Facto Rightsholder* has discontinued its participation, a *Verification Certificate* shall be issued as if Subsection S2-6A has been fully complied with.

4. Within one year from the date the *Verification Certificate*, *Project Proponent* shall submit an amended *Master Rightsholder Benefit Plan* that has eliminated the withdrawn *De Facto Rightsholder*.

S2-7 Any institution authorized to hold any assets to be distributed under a *Rightsholder Benefit Plan* or *Master Rightsholder Benefit Plan* shall meet minimum financial *Requirements* set forth in Section A9-A.

S2-8 Prior to the *Final Project Submission Date*, the *Project Proponent* shall prepare and deliver to each *Rightsholder* a *Rightsholder Benefit Plan* and obtain from each *Rightsholder* a *Rightsholder Risk Acknowledgement* signed by those with legal or traditional authority to do so.

A. The *Rightsholder Benefit Plan* shall describe accurately and completely:

1. Any risks to traditional livelihoods that changing their activity patterns might entail;
2. The full range of circumstances that could result in their not receiving all or some benefits described in the *Rightsholder Benefit Plan*;
3. All obligations, explicit or implicit, agreed to be undertaken in connection with receiving any benefits;
4. The range of contingencies that could deprive them of their benefits (e.g., their voluntary removal of *Tree Biomass* or by other *Rightsholders*, corruption, market price shifts, investment failures, internal and external conflicts, et al.);
5. Options for eliminating or reducing risks to projected benefit streams; and
6. The extent of their benefits and risks in relation to the benefits and risks of other participants in the “value chain.”

B. The *Rightsholder Risk Acknowledgement* shall acknowledge the risks described in S2-7A1-6 and expressly accept such risks.

S2-9 Free, Prior, Informed Consent (FPIC).

A. With its *Final Project Submission Documents*, *Project Proponents* shall provide evidence to demonstrate that *Rightsholders* have had sufficiently accurate and complete information in a timely and culturally appropriate manner to allow a reasonable person to make an informed decision in connection with any consent, acknowledgment, or acceptance required of the *Rightsholder*.

B. Sufficient evidence of compliance with *RFS FPIC Requirements* (see Template S2-9B) shall consist of delivery of the following with respect to each *Rightsholder*:

1. Evidence of completion of required *Participatory Consultations*;
2. *Proponent Disclosure*;
3. *Project Participant Acknowledgement*;
4. *Rightsholder Benefit Plan*;
5. *Rightsholder Risk Acknowledgement*; and
6. *Personal Representation* of *Project Proponent* signed by its top official (e.g. President, Executive Director, Chief, Leader) in his/her personal capacity rather than official capacity, representing that he or she has personal knowledge of compliance with respect to the minimum *Requirements* for demonstrating *Rightsholder FPIC* in S2.

C. If the *Requirements* of any law or regulation with respect to *Free, Prior, Informed Consent* governing *De Facto Rightsholders* or other *Project Participants* are more restrictive than the *Requirements* of S2-9, such

Requirements shall supervene S2-9 and be deemed to satisfy the *Free, Prior, Informed Consent Requirements* of this Section S2-9.

S3: SUSTAINABLE QUALITY OF LIFE BENEFITS

OBJECTIVE:

The *Project* shall be designed and managed to sustainably maintain or augment the quality of the socio-economic or socio-cultural domains a *De Facto Rightsholder* determines is in accordance with its goals and preferences; *Projects* are expected to achieve measurable, sustainable *Quality Of Life Benefits* (“QOL Benefits”) for *De Facto Rightsholders*.

RATIONALE:

The *RFS* seeks to balance its goal of facilitating sustainable tangible improvements in the quality of life of *De Facto Rightsholders* with the autonomy of those *De Facto Rightsholders* to determine for themselves how they choose to use benefits stemming from the *Project*.

Only *De Facto Rightsholders* are referenced in this section because of the concern that the Quality of Life (“QOL”) of *Indigenous Peoples*, local communities, and other forest-dependent groups could be adversely affected by carbon market revenues, while in general there is little or no concern about adverse affects on the quality of life of *De Jure Rightsholders*. However, in those cases where *Forest Dwellers* or *Forest Users* are *De Jure Rightsholders*, *QOL Benefits* must be measured and monitored in accordance with the *Requirements* of this Section S3 throughout the *Project Period*.

REQUIREMENTS:

Section S3-1 sets out the *QOL* benefit *Requirements* for validation of the *Final Project Submission Documents*. Section S3-2 sets out the *QOL* benefit *Requirements* for subsequent *Project* verifications.

S3-1 QOL Benefit Validation Requirements: As part of its *Final Project Submission Documents*, the *Project Proponent* shall submit a Quality of Life document (“*QOL Document*”) from each *Project Participant* that is an *Indigenous People*, local community, or *Forest Dwellers* or *Forest Users* (whether a *De Jure Rightsholder* or on the *De Facto Rightsholder List*) describing their plans, if any, for sustainably maintaining or improving quality of life socio-economic or socio-cultural domains. *Indigenous Peoples* or local community *Life Plans* (or *Community Documents* in the case of other *De Facto Rightsholders*) authorized in accordance with the legal and traditional *Requirements* of the *Rightsholder* (and if required by law or tradition, sanctioned by any non-governmental or governmental organization with regulatory authority with respect to such plans) shall be deemed sufficient to satisfy the *QOL Document* requirement if they address the same or similar issues. Every *QOL Document* shall at a minimum specify the following:

A. Changes to be measured, monitored, and verified in the following domains (“*QOL Domains*”), at least two of which shall be from Group A, and one from Group B.

Group A:

1. Household income
2. Access to health care
3. Education
4. Diversity of income sources
5. Infrastructure facilities.

Group B:

1. Use of traditional integrated forest management practices.
2. Access to and security of land and resource tenure
3. Sustainable *Eligible Forested Lands Resource Use*
4. Level of conflict over resources

B. The method for establishing a *QOL Benchmark* for each *QOL Domain* selected:

1. If a *Governmental Authority*, recognized NGO, or *Peer-reviewed Literature* has published data not more than five years old establishing a benchmark for the *QOL Domain* covering a community within the *Project Area*, such benchmark must be used by the *Project Proponent* ("*Validated QOL Benchmark*"). (If there is more than one *Validated QOL Benchmark*, the one indicating the best performance shall be used.)
2. When *Validated QOL Benchmarks* are not available, the following shall be used as guidelines for establishing *QOL Benchmarks* ("*Permissible QOL Benchmarks*"):
 - a. Existing data sources considered reliable or valid by any one of the following can be used:
 - (1) Data published by a *Government Authority*;
 - (2) Data from *Representative Organizations*;
 - (3) Data published in *Peer-reviewed Literature*;
 - (4) Data collected locally for the intended purpose using sampling protocols appearing in *Peer-reviewed Literature* or an in-print statistics textbook.
 - b. A *Participatory Rural Appraisal*, *Diagnostic Of Rural Participation*, or *Sustainability Impact Assessment* from the approved list (see Schedule S3-1), prepared in accordance with minimum *Requirements*:

- (1) Of a *Governmental Authority*;
- (2) A *Representative Organization*;
- (3) Published in *Peer-reviewed Literature*; or
- (4) An in-print textbook.

c. Multiple iterative collaborative consultations with *Rightsholder* members, one or more *Governmental Authorities*, and a *Representative Organization*.

d. For any benchmark established pursuant to S3-1B2a–c to be deemed a Permissible *QOL Benchmark*, a *QOL Validation Certificate* must be provided by the *Proponent QOL Expert(s)* (see Exhibit E for minimum qualifications required of a *Proponent QOL Expert*). The *QOL Validation Certificate* shall state:

- (1) In the case of S3-1B2a, that the data are reasonably accurate with respect to the referenced domain;
- (2) In the case of S3-1B2b, that the data were collected in accordance with the method's published *Requirements* including sampling protocols, data collection methods, and data analysis; and
- (3) In the case of S3-1B2c, evidence that the data from the consultations was reasonably accurate and complete and reasonably applied to derive the benchmark.

C. The identity of the individuals and or organizations responsible for developing the *QOL Benchmarks*, including any participation of local groups in planning, implementation, and assessment of *QOL Benchmarks*.

D. A commitment to reconsider and revise the *QOL Document* every five years from the *Final Project Submission Date*.

E. Goals for improvement (*QOL Domain Goal*) in each *QOL Domain* in relation to the *QOL Benchmark*.

F. A monitoring and reporting plan ("*QOL Monitoring Plan*") prepared by a *Proponent QOL Expert* that incorporates:

1. Transparent monitoring and reporting procedures for each *Project Participant* for which a *QOL Document* is required.
2. Any courses or programs the *Project Proponent* has elected to make available for training local community members in validated scientific methods for measuring, monitoring, and/or verifying activities in *QOL Domains*. Trained local community members can be employed in all aspects of the studies including data collection, analysis, and interpretation; outside monitors and experts may participate when invited.
3. Protocols for monitoring and reporting changes in the *QOL Domains* identified in the *QOL Document*. Results shall be reported in writing ("*QOL Report*"), signed by the *Project Proponent* representing that the report has been completed in accordance with the *QOL Monitoring Plan*. Monitoring and reporting shall be conducted and the *QOL Report* filed not less frequently than once every two years. Thus, the first *QOL Report* shall be due within two years from the *Project Start Date* and then every two years from the previous *QOL Report* filing. (See A5-2A for method to determine *Project Start Date*.)

S3-2 Verification Requirements: For *Project Credits* to be verified, the *Project Proponent* must be in compliance with the *Requirements* of this Section S3-2.

A. The *Project Proponent* must file a *QOL Report* prepared by a *Proponent QOL Expert* for each *Project Participant* for which a *QOL Document* is required within

two years of the *Project Start Date* and then within two years of the immediately previous *QOL Report*;

B. Within 30 days of receiving a *QOL Report*, a *QOL Report Card* shall be issued by *The RFSMU* that compares the *QOL Report* results with *QOL Benchmarks* in each *QOL Domain* identified by the *QOL Document* as one for which change is to be measured, monitored, and verified and previous *QOL Reports*. The *QOL Report Card* shall be made public through the *Project Webpage*, the *RFS Website*, and to the *Rightsholder* members;

C. In the event that a *QOL Report Card* shows that the increase from the *Benchmark* is below any *QOL Domain Goal*, the immediately subsequent *QOL Report* shall set forth a detailed program for achieving the *QOL Domain Goal* during the new *QOL Monitoring Plan* term.

D. In the event that a *QOL Report Card* shows an absolute decrease from a *QOL Benchmark*, the immediately subsequent *QOL Report* shall provide the following:

1. An explanation for the failure to improve the *QOL Benchmark*; and
2. A set of remedies for overcoming the failure to improve the *QOL Benchmark*.

E. *Suspended QOL Verification*. When a *QOL Report Card* has shown an absolute decrease from a *QOL Benchmark*, the issuance of otherwise verifiable credits will be suspended in accordance with the Table S3-2E: *QOL Credit Issuance Suspension Schedule*. Any suspended credits will be issuable when and only when a subsequent *QOL Report Card* shows there has been an increase in the *QOL Domain* in which there had been a decline. The *Project*

Proponent may provide a new *QOL Report* as soon as six months of any suspension and a new *QOL Report Card* will be provided within 60 days thereof.

Table S3-2E: <i>QOL</i> Credit Issuance Suspension Schedule	
Years after <i>QOL Report Card Benchmark</i> Decrease	% Credits Suspended Per Domain
<1	1
1 to <2	3
2 to <3	5
3 to <5	10
5 or more	20

B1: BIODIVERSITY

OBJECTIVE:

A key objective of *The RFS* is for its *Projects* to retain the *Biodiversity* of their *Eligible Forested Lands*. Under **The Rainforest Standard**, *Biodiversity* is an umbrella concept defined to encompass two of three levels of biological organization: the species level and the ecosystem level. While the genetic level is generally considered important, measuring changes at that level is deemed impracticably fine-grained in the context of forest projects at the present time. *RFS Biodiversity* Requirements strive to accomplish the goal of *Biodiversity* conservation by applying protocols that are validated scientifically and that are also practicable.

RATIONALE:

The principles described here as they relate to forest *Biodiversity* conservation align closely with those developed by CIFOR (Prabhu et al 1996, CIFOR 1999, Prabhu et al 1999) and FSC (2002). Foremost among these principles is the conservation of ecosystem and species diversity. This means that *RFS Projects* should periodically monitor the health of ecosystems and the species they host. Evidence of negative trends in these systems requires *RFS Projects* to take effective steps to counteract those trends and to reestablish positive performance.

The RFS recognizes that to give effect to these principles, its protocols need to be clear and practicable. Therefore, in lieu of costly, time-consuming, and often impracticable methods for measuring directly changes in all ecosystems and species in the *Project's Eligible Forested Lands*, *The RFS* relies on subsets of biological organization for measuring changes at the ecosystem level and at the species level. To measure changes at the ecosystem level, selected *Habitat-Types* are identified to act as

ecosystem surrogates. To measure changes at the species level, *Ecological Indicator Group Species* are selected from among carefully chosen *Ecological Indicator Groups* to act as species surrogates.

The purpose for measuring changes in these carefully chosen *Biodiversity* surrogates is to address whether *The RFS Project* is effectively maintaining the area's benchmark *Biodiversity*.

It is worth noting again that *The RFS* is, generally speaking, a performance standard rather than a process or prescriptive process standard. For the purposes of the *Biodiversity* section, this means that *The RFS* does not monitor or regulate management practices, but rather monitors outcomes. An underlying assumption of *The RFS* is that the more a forest is left undisturbed, the more its ecosystems will be maintained; the more a forest is disturbed, the more its ecosystems' structure and function will be altered and negatively affected.

REQUIREMENTS:

B1-1 Project Biodiversity Benchmarks Assessment. As part of its *Final Project Submission Documents*, the *Project Proponent* shall provide a *Project Biodiversity Benchmarks Assessment* prepared by the *Proponent Forest Ecologist*, which shall describe the procedures performed to comply with the Requirements of Section B1-2 for establishing the *Habitat-Type Benchmark*, and Section B1-3 for establishing the *Ecological Indicator Group Species Benchmark*. The *Project Biodiversity Benchmarks Assessment* shall include the data and statistical analysis associated with the results of those procedures, including the *Project Biodiversity Benchmarks* for *Habitat-Type* and for *Ecological Indicator Group Species*.

B1-2 Habitat-Type Benchmark.

A. As high-level *Biodiversity* surrogates, the same *Forest Types* by *Forest Condition* identified and mapped for the *Benchmark Eligible Forested Lands Map* shall be treated as *Habitat-Types* for the purposes of the *Biodiversity* subsection.

B. *Habitat-Type* data shall be created using remote sensor imagery and GIS analytical tools. All information derived from remote sensor images and their corresponding maps must be *Ground-Truthed* in accordance with a protocol published in *Peer-reviewed Literature*.

C. *Habitat-Type* descriptions and *Habitat-Type* monitoring must encompass the entire *Project Area*.

D. The *Habitat-Type Benchmark* must use a minimum of the three variables cited below in subsections B1-2_D.1-3 to monitor changes at the habitat level.⁵

1. Total area covered by each *Habitat-Type* – these data are described and presented in Table IC1-4F and will provide information on the general habitat composition and the particular dominance of different *Habitat-Types* in the *Project Area*.

⁵ The *Project Biodiversity Baseline* may also include additional variables, provided their use is consistent with and supported by relevant *Peer-reviewed Literature* such as Ferraz, S. F. D. B., Vettorazzi, C. A., & Theobald, D. M. (2009). Using indicators of deforestation and land-use dynamics to support conservation strategies: A case study of central Rondônia, Brazil. *Forest Ecology and Management*, 257(7), 1586-1595.

(Peer reviewed software programs may also be used to support these analyses: see for example: <http://resources.arcgis.com/gallery/file/geoprocessing/details?entryID=0C61934D-1422-2418-7F7A-54DE2A0799E5>).

2. Spatial arrangement of *Habitat-Types*. The length of the boundary of each *Habitat-Type* in each location where that *Habitat-Type* occurs shall be calculated using the *Benchmark Eligible Forested Lands Map*.

3. Habitat fragmentation. At a minimum, the *Project Biodiversity Benchmarks Assessment* shall calculate the ratio of edge to area for each *Habitat-Type*⁶.

B1-3 Ecological Indicator Groups and Ecological Indicator Groups Species

Benchmark. Assessing the impacts of environmental changes at the species level during periodic biodiversity monitoring requires a focused strategy of sampling certain groups of species that are likely to reflect those changes. *The RFS* strategy is to select *Ecological Indicator Group Species* from among a carefully chosen subset of *Ecological Indicator Groups*. Generally, indicator groups are broad taxa or guilds that are sensitive to particular environmental changes and are likely to be consistently present in the areas once monitoring commences (see Gardner et al 2008, and Gardner 2010, Figure 12.2). They are selected according to widely accepted scientific methods. Broadly speaking, the process for choosing appropriate *Ecological Indicator Groups* and their *Ecological Indicator Group Species* and establishing their benchmark values involves two steps. In the first step, the *Proponent Forest Ecologist* prepares a taxonomically broad survey of presence or absence and relative abundance of species based on either systematic sampling, or stratified-random or stratified-systematic sampling depending upon the complexity of *Habitat Types* in the *Project Area*. In the second step, the *Proponent Forest Ecologist* first chooses the appropriate *Ecological Indicator Groups* (B1-3B). Then the *Proponent Forest Ecologist* selects the specific *Ecological Indicator Group Species* from those *Ecological Indicator Groups*. A minimum

⁶ The RFS acknowledges that several variables are commonly used to estimate habitat fragmentation based on GIS and habitat maps. For example, information on the perimeter of *Habitat-Type* polygons may be readily calculated using spatial analysis software. Other informative variables include number of fragments, fragment density, average fragment size, fragment shape index, average distance to nearest neighbor (fragment).

of 10 *Ecological Indicator Group Species* must be selected from each *Ecological Indicator Group*. The *Ecological Indicator Groups Species Benchmark* is then established by noting the presence or absence of each *Ecological Indicator Group Species* and its relative abundance obtained in the first step to the *Ecological Indicator Group Species*.

A. Step One - Species level descriptions. The species-level description shall be prepared by the *Proponent Forest Ecologist* in accordance with the following protocols.

1. Scale: Spatial. The boundaries for a *Biodiversity* benchmark and its monitoring could be the entire *Project Area*, but generally this is neither logistically nor financially feasible. It is not clear that an appreciably better picture of changes occurring over the duration of the *Project* would be obtained by surveying the entire *Project Area* rather than systematically and periodically sampling a smaller but representative sub-area. Following Magnusson et al. (2005) and the Brazilian Government Research Program on Biodiversity (PPBio), the *Project Biodiversity Benchmarks Assessment* shall use a minimum representative sampling area of 15 km² (3 sampling modules according to the RAPELD system) in each *Habitat-Type* (see Stratification). The RAPELD system allows surveys of taxa best surveyed in line transects (e.g. Buckland et al. 2010) and species best surveyed in plots (e.g. Castilho et al. 2010), and can be used for a wide variety of taxa and ecosystem processes (Costa & Magusson 2010).

a. Each sampling module shall be laid out as a grid, 5 km x 1 km, with a trail system that defines 1km² quadrates.

b. Permanent uniformly-distributed plots (see Hill et al. 2005, Appendix 5) shall be sited along the trails, at 1 km intervals, and consist of 250m transects that follow an altitudinal contour line (see Figure 14.6, Gardner, 2010).

- c. Where the landscape configuration does not permit installation of 5-km transects, smaller modules with the same internal configuration should be used.

2. Scale: Temporal.

- a. Monitoring intervals must be specified to detect relative rates of change in species presence or absence and relative abundance in accordance with species-specific differences in life history and generation length.

- b. To detect relative rates of change in species presence or absence and relative abundance of the *Ecological Indicator Groups* selected to monitor forest *Biodiversity* (see B1-2-F), sampling shall be conducted, and data analyzed and reported, at intervals not longer than every five years from the *Project Start Date*.

3. Stratification. In order to accommodate the environmental heterogeneity of a *Project Area*, stratifying sampling among broad, course-grained *Habitat Types* shall be done in one of two ways:

- a. Stratified-systematic sampling requires the application of the replicated grid system as specified in B1-1-A1 for each *Habitat Type* (i.e. each stratum) in a *Project Area*. The modules (combinations of plots and transects) can be placed randomly within strata when practical, and if random placement is not viable, situated to capture the greatest variety of conditions at that location. Where the landscape configuration does not permit installation of 5-km transects within a single stratum, the module can cross several strata.

- b. Stratified-random sampling requires a standard algorithm that locates randomly selected sampling locations for each *Habitat Type* and sampling unit (plot or transect) in proportion to

percentage of the total area made up of each *Habitat Type*. The sampling locations in each *Habitat Type* must be at least 1 km apart. In either of the above sampling strategies, sampling plots at each site must be 250m long and follow an altitudinal contour line as described in B1-1-A1. Where possible, plots and line transects should be conjugated in modules to increase efficiency and comparability.

c. Features, such as watercourses and rock outcrops, should be sampled, when possible, where they intersect line transects so that they are representative of the area. This is especially important for aquatic and riparian plots.

4. Sampling Methods: Whether for the initial taxonomically broad species benchmark survey or for the subsequent periodic monitoring of a smaller number of taxa of high indicator value, species must be systematically and scientifically sampled.

a. Sampling techniques will vary by taxonomic group, but they must be conducted using generally accepted survey methods (e.g. direct counts, catch returns, pitfall traps, mist nets, etc.), that are specific to each group (e.g. birds, bats, dung beetles, etc.) (cf. Hill et al., 2005).

b. Survey methods must either allow direct density estimates corrected for detectability of individuals, or be repeated within survey periods to allow estimation of detectability of species (e.g., Chelgren et al. 2011).

c. Sampling techniques, sampling effort, and sampling location must be fixed across the original survey and all subsequent periodic monitoring surveys, except where changes in apparent abundance within permanent sampling modules or other aspects of the species life history require additional sampling at

alternative locations for verification. Locations of all sampling sites must be permanently marked, and their geographic coordinates reported, even if regular sampling is not feasible in those locations.

5. Taxonomic Diversity: Sampling must include representative vertebrate, invertebrate, and plant taxa in developing the *Project Biodiversity Baseline* to identify a broad range of species with varying potential responses to human induced or natural environmental changes, and both terrestrial and aquatic habitats should be included when present.

B. Step 2 - *Ecological Indicator Groups* and *Ecological Indicator Group Species* selection.

1. Step 2-Phase 1: In the first phase of Step 2, *Ecological Indicator Groups* shall be chosen based on how well they address whether the *Project* is effectively maintaining the area's benchmark species-level biodiversity. The power (or ability) of a given biological group to reflect larger scale phenomena (community or ecosystem scale) can be expressed as its indicator value.

a. Indicator value, or IndVal, shall be determined according to the method described in *Peer-reviewed Literature*, for example: Dufrene and Legendre (1997), as expanded upon in Gardner (2010, Box 12.1). IndVal may also be determined using methods in *Peer-reviewed Literature* derived from studies conducted in the same ecosystem(s) as one finds in the *Project Area*.

b. In most instances, there is sufficient information in both national and international *Peer-reviewed Literature* to make the determinations required in B1-3B1 without engaging in primary research at each *Project* site. The choice of *Ecological Indicator*

Groups for monitoring must be justified on the basis of that literature. Where the *Peer-reviewed Literature* does not provide adequate recommendations for determining the *Ecological Indicator Groups*, they will have to be determined through on-site research as described in *Peer-reviewed Literature*, which references shall be cited as a justification for the *Ecological Indicator Groups* chosen.

c. As a result (see Fig. 12.7 in Gardner, 2010) of the filtering process described in subsection B1-3B1a-b, a small subset of *Ecological Indicator Groups*, which can be feasibly surveyed over time, shall be chosen to act as surrogate indicators of the health of the entire array of habitats within the *Project Area*.⁷

d. Selection of the groups to survey should take into account the practical limitations of training surveyors and the accuracy of field or laboratory identifications.

e. Once *Ecological Indicator Groups* are chosen, the cost effectiveness of their monitoring, and secondary factors, such as prior ecological knowledge, functional importance, and the degree to which their reaction to changes represents the reaction of a larger group of taxa, must be taken into consideration (Gardner 2010).

2. Step 2-Phase 2. *Ecological Indicator Group Species* selection. Within each *Ecological Indicator Group* a representative set of a minimum of 10 *Ecological Indicator Group Species* shall be chosen to represent each *Ecological Indicator Group*. The presence or absence and relative

⁷ In the case of a large area in the Brazilian Amazon, Gardner et al (2008) reduced a broad array of 14 taxonomic groups to two, birds and dung beetles, which were “both highly sensitive to changes in forest structure and cost-efficient to sample” (Gardner 2010). However, in many areas specialists to identify dung beetles may not be available, and bird sampling requires mist netting, which has strong legal restrictions in most countries, or call surveys which are subjective and have not been validated in many areas.

abundance of these species shall be monitored throughout the *Project Period*.

C. **Automatic Review.** The selection of each *Ecological Indicator Group* and each *Ecological Indicator Group Species* for monitoring shall be subject to *Automatic Review* by an *Assigned Forest Ecology Expert* (see Exhibit E) pursuant to Section A2-4.

D. Allowable alternatives to recommended *RFS Biodiversity* protocols.

1. If the *Project Proponent* opts not to use *The RFS* recommended methods for the *Project Biodiversity Benchmark Assessment*, or for establishing the *Project Biodiversity Benchmark*, the *Ecological Indicator Groups*, the *Ecological Indicator Group Species*, or the *Project Biodiversity Monitoring Protocol* (see B1-3 below), as part of its *Initials*, the *Project Proponent* shall submit the following documents in support of any proposed alternative method:

a. A complete technical report authored by the *Proponent Forest Ecologist* justifying the alternative methods chosen. This justification must include evidence that the methods used have been published in the *Peer-reviewed Literature* and have been tested multiple times in the field; and

b. A *Representation* that the technical report produced by the *Proponent Forest Ecologist* in accordance with B1-6A1 is accurate and complete in all material respects to the best of her/his/its knowledge and belief after a full, good faith investigation.

2. The proposed alternative protocol shall be subject to *Automatic Review* by an *Assigned Forest Ecology Expert* (see Exhibit E) pursuant to Section A2-4.

B1-4 Monitoring and Reporting. The *Project Biodiversity Monitoring Protocol* is a logistically and financially feasible method of assessing the impact of human activities on biodiversity in the *Project Area*. As part of its *Final Project Submission Documents*, the *Project Proponent*, through its *Proponent Forest Ecologist*, shall provide a *Project Biodiversity Monitoring Protocol* that incorporates transparent monitoring procedures for each identified *Habitat-Type* and *Ecological Indicator Group Species* in accordance with the following requirements.

A. *Habitat-Type* monitoring protocol. As part of its *Final Project Submission Documents*, the *Project Proponent*, through its *Proponent Forest Ecologist*, shall provide a *Project Biodiversity Monitoring Protocol* that incorporates transparent monitoring procedures for each *Habitat-Type* identified in the *Project Biodiversity Benchmark Assessment* in accordance with the following requirements.

1. Each variable measured as part of the *Project Biodiversity Benchmark Assessment* shall be re-measured prior to the issuance of any *Project Biodiversity Monitoring Report*.
2. Measurements for subsection B1-4A shall be based on data collected within 180 days prior to the issuance of any *Project Biodiversity Monitoring Report* that is derived from either:
 - a. a *Carbon Verification Map*, or
 - b. a map of the *Project Area* that conforms to the requirements for a *Benchmark Eligible Forested Lands Map* except that its resolution can be as great as 5m.

B. *Ecological Indicator Group Species* monitoring protocol. As part of its *Final Project Submission Documents*, the *Project Proponent*, through its *Proponent Forest Ecologist*, shall provide a *Project Biodiversity Monitoring Protocol* that

incorporates transparent monitoring procedures for each *Ecological Indicator Group Species* in accordance with the following requirements:

1. The transect system described in subsection B1-3A must be maintained (Hill et al, 2005, Appendix 5) so that monitoring results can be compared to those originally derived for the species-level benchmark assessment surveys.
2. The same sampling strategies and survey techniques used for the species-level benchmark assessment must be employed.
3. The same amount of time and effort used during the species-level benchmark assessment to survey species must be deployed for those same species in each survey.
4. All data should be recorded clearly, according to accepted practices and analyzed to assess changes ((see subsection B1-7 below).

C. *Project Biodiversity Monitoring Report*. Results of monitoring in accordance with the protocols established by the *Project Biodiversity Monitoring Protocol* shall be reported in writing (*Project Biodiversity Monitoring Report*) by the *Proponent Forest Ecologist*, signed by the *Project Proponent* representing that the report has been completed in accordance with the *Project Biodiversity Monitoring Protocol*. Monitoring and reporting shall be conducted and the *Project Biodiversity Monitoring Report* filed not less frequently than once every five years. Thus, the first *Project Biodiversity Monitoring Report* shall be due within five years from the *Project Start Date* and then within five years of the immediately previous *Project Biodiversity Monitoring Report* filing.

D. *Project Proponents* and their *Proponent Forest Ecologists* are encouraged to design *Project Biodiversity Monitoring Protocols* that employ local community members for data collection, analysis, and interpretation. To that end, *Project Proponents* and their *Proponent Forest Ecologists* should consider using existing

training courses or developing training courses for interested local community members.

B1-5 Verification

A. For *RFS Credits* to be verified, the *Project Proponent* must have filed a *Project Biodiversity Monitoring Report* within five years of the *Project Start Date* and then every five years from the previous *Project Biodiversity Monitoring Report* filing.

B. *Project Biodiversity Report Card*. Within 30 days of receiving the *Project Biodiversity Monitoring Report*, The *RFSMU* shall issue a *Project Biodiversity Report Card* that compares the *Project Biodiversity Monitoring Report* results with the *Project Biodiversity Benchmarks* and previous *Project Biodiversity Monitoring Reports*. The *Project Biodiversity Report Card* shall be made public through the *Project Webpage*, *The RFS Website*, and to each *Rightsholder*.

1. For each *Habitat-Type*, the *Project Biodiversity Report Card* shall show the presence or absence of a statistically significant:

- a. Decline in total area;
- b. Change in spatial arrangement, and
- c. Increase in fragmentation.

2. *Failing Habitat-Types* are defined as any *Habitat-Type* that, according to the *Project Biodiversity Report Card*, shows:

- a. An increase or decrease of 25% or more in its total area relative to its *Habitat-Type Benchmark*;
- b. An increase in fragmentation as measured by an increase in the ratio of edge to area in excess of 50% relative to its *Habitat-Type Benchmark*.

3. For each *Ecological Indicator Group Species* in each *Habitat-type*, the *Project Biodiversity Report Card* shall show its:

- a. Presence or absence; and
 - b. Relative abundance.
- 4. *Failing Species* are defined as *Ecological Indicator Group Species* that, according to a *Project Biodiversity Report Card*, either:
 - a. are no longer present; or
 - b. show a unidirectional downward trend in relative abundance compared with the *Ecological Indicator Group Species Benchmark* (or the immediately preceding *Project Biodiversity Report Card*).
- 5. *Failing Ecological Indicator Group* is defined as any *Ecological Indicator Group* in which 50% or more of its *Ecological Indicator Group Species* are *Failing Species* according to a *Project Biodiversity Report Card*.
- 6. *Failure Exemption*. Aware of the complexities and uncertainties involved in any response of a natural system to any management intervention, *The RFS* recognizes that undesirable declines in *Habitat-Type* or *Ecological Indicator Group Species* may not be attributable to activities of the *Project*, but may instead be attributable to external factors over which the *Project Proponent* has no control or significant influence. In such cases, the undesirable decline shall not be considered as indicative of a failure attributable to the *Project* and shall receive a *Failure Exemption*.
 - a. A *Failure Exemption Appeal* may be filed at any time by a *Project Proponent*.
 - b. For the appeal to succeed, the *Project Proponent*, through its *Proponent Forest Ecologist*, shall provide clear and convincing evidence ("*Failure Exemption Excuse*") that for widely accepted scientific reasons the particular *Failing Habitat-Type* or *Ecological Indicator Group Species* was due to factors that:

- (1) affected areas greater than the Project Area; and
- (2) were beyond the *Project Proponent's* reasonable control and influence.

c. The *Failure Exemption Excuse* shall be subject to *Automatic Review* by an *Assigned Forest Ecology Expert* (see Exhibit E) pursuant to Section A2-d. If the review finds that the *Failure Exemption Excuse* is valid, the *Failure Exemption* is granted, and the change that was the subject of the *Failure Exemption Appeal* shall be deemed excused and shall not trigger a *Biodiversity Recovery Plan* or RFS Credit suspension.

C. *Biodiversity Recovery Plans.*

1. *Habitat Recovery Plan.* If the *Project Biodiversity Report Card* shows there is a *Failing Habitat-Type* in the *Project Area*, the *Project Proponent* shall provide a *Biodiversity Recovery Plan* within 120 days of the issuance of the *Project Biodiversity Report Card*. The *Biodiversity Recovery Plan* shall be prepared by a *Proponent Forest Ecologist* and shall provide for each *Failing Habitat-Type* a plan to mitigate the:

- a. Increase or decrease in its total area relative to its *Habitat-Type Benchmark*; and
- b. Increase in fragmentation as measured by its increase in the ratio of edge to area relative to its *Habitat-Type Benchmark*.

2. *Ecological Indicator Group Recovery Plan.* If the *Project Biodiversity Report Card* shows one or more *Failing Ecological Indicator Groups*, the *Project Proponent* shall provide a *Species Recovery Plan* within 120 days of the issuance of the *Project Biodiversity Report Card*. The *Ecological Indicator Group Recovery Plan* shall be prepared by a *Proponent Forest Ecologist* and shall provide for each *Failing Species*:

- a. An explanation for the absence of the species;
- b. An explanation for the decline or change in relative abundance;
- c. An assessment as to whether the change is reversible; and
- d. A set of proposed remedies for reversing the change.

D. *Suspended Biodiversity Verification*. Credits that would otherwise have been verified credits shall be deemed suspended and nontransferable (a “*Suspended Biodiversity Verification*”) in accordance with the schedule shown in Table B1-5 if:

1. With respect to a *Failing Habitat-Type*, the *Project Biodiversity Report Card* immediately subsequent to the one that showed a *Failing Habitat-Type* does not show a statistically significant trend in the direction of the *Habitat-Type Benchmark* with respect to:
 - a. its total area relative to its *Habitat-Type Benchmark*; and
 - b. the ratio of edge to area relative to its *Habitat-Type Benchmark*.
2. With respect to a *Failing Ecological Indicator Group*, the *Project Biodiversity Report Card* immediately subsequent to the one that showed a *Failing Ecological Indicator Group* continues to show that more than 50% of its *Ecological Indicator Group Species* are *Failing Species*.
 - a. Does not show a statistically significant trend toward the *Ecological Indicator Groups Species Benchmark* with respect to presence or absence and relative abundance of that *Failing Species*, or
 - b. shows new *Failing Species* so that in the aggregate one-third or more of the *Ecological Indicator Group Species* are defined as *Failing Species*.

Table B1-5. Suspended Biodiversity Verification schedule	
Number of <i>Failing Habitat-Types</i>	Percent of Verifiable Credits Suspended
1	5%
2	15%
3 or more	25%
Failing Ecological Indicator Groups	Percent of Verifiable Credits Suspended
1	5%
2-4	15%
>5	25%

E.

Upon the issuance of any *Project Biodiversity Report Card* that follows a *Suspended Biodiversity Verification*, previously suspended credits will be transferable in accordance with the results of the new *Project Biodiversity Report Card* and Table B1-5. The *Project Proponent* may provide a new *Project Biodiversity Monitoring Report* as soon as six months after any suspension and a new *Project Biodiversity Report Card* will be provided within 60 days thereof.

F. *Biodiversity Suspension Appeal*. Aware of the complexities and uncertainties involved in any response of a natural system to any management intervention, *The RFS* will allow a *Biodiversity Suspension Appeal* on the part of the *Project Proponent* if the steps proposed in the *Biodiversity Recovery Plan* are taken, but do not produce the expected trends toward the benchmark values.

1. The *Biodiversity Suspension Appeal* may be filed at any time by a *Project Proponent*.

2. For the appeal to succeed, the *Project Proponent*, through its *Proponent Forest Ecologist*, shall provide clear and convincing evidence (*"Biodiversity Recovery Plan Excuse"*) that the expected positive changes from those management measures described in the *Biodiversity Recovery Plan* and implemented to remediate the conditions leading to *Failing Habitat-Types* or *Failing Species* should not be detectable for clear and widely accepted scientific reasons and that a longer period for recovery is required.

3. The *Biodiversity Recovery Plan Excuse* shall be subject to Automatic Review by an *Assigned Forest Ecology Expert* (see Exhibit E) pursuant to Section A2-4.

B1-6 Confirmation of the completeness and accuracy of required biodiversity information. Any document required to be submitted by or through a *Proponent Forest Ecologist*, shall include the *Proponent Forest Ecologist's Representation* that after full investigation, meeting the highest professional standards, the information provided is accurate and complete in all material respects and prepared in strict accordance with the Requirements set forth throughout Section B1 to the best of her/his knowledge and belief.

B1-7 Biodiversity Data.**A. Data Analysis**

1. Basic descriptive statistics, measures of change, and modeling forward predictions will be employed using, for example, the methods described in Chapter 15 of Gardner 2010 and Chapter 2 of Hill et al
2. Data analytic methods shall be specific to the data collected and the questions asked. For example, statistical methods for describing the *Project Biodiversity Benchmarks* will differ significantly from methods for establishing periodic monitoring for evidence of change.

B. All original data and metadata necessary to interpret any data cited by a Proponent Expert, Assigned Expert, Referee, or Commentator shall be published on the *Project* webpage with no restrictions to access or use of the data.

C. Metadata should meet the standards necessary for understanding and replication of the study by others.

D. All data must have explicit geographic coordinates to within 4m, or be spatially defined by coordinates within plots to 0.1 m accuracy.

E. Ecological Metadata Language. Metadata structure should meet Ecological Metadata Language (EML) standards, and should include tables of metadata of standard format. Ecological Metadata Language (EML) is a metadata specification developed by the ecology discipline and for the ecology discipline. It is based on prior work done by the Ecological Society of America and associated efforts (Michener et al., 1997, Ecological Applications; for more information go to <http://knb.ecoinformatics.org/software/eml/>).

ER1: PROJECT ADDITIONALITY

OBJECTIVES:

There is a broad consensus among governments (e.g., UNFCCC; *IPCC*; Kyoto Protocol), NGOs (e.g., EDF; WRI), and standards (e.g., CAR; VCS) that *Projects* should not be able to claim carbon offset credits unless they demonstrate that their carbon emission reductions exceed what would have occurred in the absence of the *Project*. In the language of carbon credits, emission reductions must be “*Additional*” to “business-as-usual” scenarios.

There are two ways of thinking about *Additionality*: First - Is the *Project Additional*? Second - Are the *Project’s* emission reductions *Additional*? The *RFS* requires that *Project Proponents* demonstrate both modes of *Additionality*. The first type of *Additionality*, *Project Additionality*, is described in this Section, ER1. The second type of *Additionality*, *Emission Reduction Additionality*, is described in Section ER2.

RATIONALE:

Additionality is one of the more complex and controversial elements in the debate surrounding carbon offsets. One reason is the two very different perspectives on using CO₂e reduced emission credits as offsets. Those whose primary concern is conserving forests may not see *Additionality* as a critical issue: many think all tropical forests are vulnerable to removal, and thus conserving any tropical forest is additional. On the other hand, those whose primary concern is climate change do not believe fossil fuel users in developed countries should be allowed to increase their emissions by applying credits from *Projects* or nations where they believe there is not convincing evidence that forests will be removed and thus emissions effectively reduced. The *RFS Project Requirements* are designed to satisfy both the concerns of those focused on climate

change and those whose primary concern is forest conservation. This means that *Additionality* has to address both issues rigorously.

The *RFS* uses widely accepted tests in its three-pronged determination of *Project Additionality*: a *Legal Additionality Test*, an *Economic Incentive Test*, and an *Existing Incentives Test*. In general, a “strict” *Legal Additionality Test* states that if there is a law, regulation, or contractual obligation that prohibits *Tree Biomass* removals in the *Project Area* the *Project* is not additional, regardless of the extent to which the prohibition has been enforced. *The RFS* endorses the strict *Legal Additionality Test*, but allows one exception under very limited circumstances: i.e. where there is a history of recent and repeated *Tree Biomass* removals inside a *Protected Area*.

Limiting evidence of removals to those that have occurred inside a *Protected Area* eliminates consideration of threats from external *Drivers Of Deforestation* such as highway construction or expanding farming and ranching activity. In the view of *The RFS*, outside threats should not be considered because the law has already recognized those threats when prohibiting removals inside the *Protected Area*. In other words, external threats to a *Protected Area* cannot trigger a finding of *Additionality*; instead there must be evidence that the *Protected Area* is experiencing recent and repeated *Tree Biomass* removals despite its legal protection, i.e., there is clear evidence of ineffective enforcement in the *Protected Area*. *The RFS* recognizes that there may also be examples of ineffective enforcement of laws against removing *Tree Biomass* outside of *Protected Areas*; however, the extent to which any *Project Proponent* is complicit or compliant with respect to illegal removals is presently deemed too difficult to determine. *The RFS* makes the presumption that the *Governmental Authority* managing a *Protected Area* would not be so complicit or compliant. Therefore, *The RFS* retains strict legal *Additionality* for all *Project Areas* other than *Protected Areas*.

In addition to the *Legal Additionality Test*, *The RFS* requires the application of the *Economic Incentive Test*. The *Economic Incentive Test* requires showing that removals of *Tree Biomass* provide a net economic benefit to either the removers or the *Forest Users* or *Rightsholders*. Net economic benefit to removers exists when their cost of removal is exceeded by the economic benefits derived from what is removed (e.g. logging). Net economic benefit to *Forest Users* or *Rightsholders* exists when lands are more valuable if *Tree Biomass* is removed (e.g. for farming or ranching). Net economic benefits can occur in one of these situations and not the other. Either satisfies the *Economic Incentive Test*.

Thirdly and finally, an *Existing Incentives Test* is applied. *Projects* will not be validated or verified while receiving any form of crediting or payments for reducing their *Tree Biomass* removals from sources other than *RFS Credits*; and once a *Project* is validated, credits will not be verified if the *Project* is concurrently the source of such credits or payments.

In essence, *The RFS* concludes that a *Project* is additional when (1) removing its *Tree Biomass* does not violate any law, regulation, or contractual obligation; (2) there is an economic incentive for actors to remove its *Tree Biomass*; and (3) the *Project* is not already receiving credits or payments for reducing the removal of its *Tree Biomass*.⁸

⁸ The Barrier and Common Practice Tests have not been adopted by *The RFS*. When the only project activity required is to not to remove *Tree Biomass*, a Barrier Test (e.g., demonstrating an impediment to not cutting down trees other than a legal prohibition or lack of economic incentive) does not appear to add anything substantive to the Legal Additionality and Economic Incentive Tests adopted by *The RFS*. The Common Practice Test (if the project type is “common” for similar projects it is not additional) is complex, difficult to bring to closure, and therefore extremely time-consuming and costly; and may ultimately be self-defeating. If legal and economically incentivized removals of *Tree Biomass* are reduced or eliminated by the implementation of *The RFS* and other crediting systems, and, as we hope, these reductions become widespread, their success should not be deemed a reason to find other projects non-additional and to terminate them or prohibit other projects from participating in the system if they meet the other Additionality tests.

Notably, *The RFS* does not require *Project Additionality* to be re-examined after its initial *Project* validation. Once a *Project Proponent* demonstrates its *Project* is additional under *The RFS* the *Project* is deemed additional for the duration of the *Project Period*. The risk of having a *Project* initially designated as additional losing that designation during the *Project Period* could both discourage initial *Project* development and promote impermanence following a declaration of non-*Additionality* leading to *Voluntary Reversals*. If *Projects* could be “de-validated”, *Project Proponents* such as *Indigenous Peoples*, local communities, governments supporting *Protected Areas*, and private landowners seeking to preserve *Eligible Forested Lands* for generations would be at risk that their long-term planning goals could be cut short even though they were fulfilling their obligations, often after having sacrificed short-term economic gains to do so.

REQUIREMENTS:

ER1-1 Legal Additionality Test.

A. To establish *Legal Additionality*, the *Project Proponent* shall submit with its *Initial Project Submission Documents* the following:

1. A *Personal Representation* by the *Project Proponent’s* and the *Project Developer’s* top executive officer (e.g., CEO, Principal Partner, Executive Director) in his or her personal capacity as well as by the *Project Proponent* and *Project Developer* stating that to the best of his/her knowledge and belief after a full, good faith investigation (see Template: *Representations*):

- a. There are no laws or regulations prohibiting or limiting removal of *Tree Biomass* in the *Project Area*, except as specifically stated on Schedule ER1-1_A; and
- b. There are no contracts or agreements pertaining to the *Project Area* and any *Project Participant* related to removal of

Tree Biomass in the *Project Area*, except as specifically stated on Schedule ER1-1_ B; and

c. The information set forth in the *Legal Opinion* in ER1-1-A2 below is accurate and complete in all material respects.

2. A *Legal Opinion* setting forth:

a. All laws and regulations in the jurisdictions in which the *Project Area* is located that relate to removal of *Tree Biomass*, including those related to such parameters as species, size, condition, the number that might be removed, any time periods specified, the administrative procedures for any required permits, and any other information pertaining to whether there is a legal or regulatory prohibition or constraint on *Tree Biomass* removals; and

b. All contracts or agreements pertaining to the *Project Area* and any *Project Participant* related to *Tree Biomass* removal; and

c. Whether the *Project* or any *Project Participant* has received, is receiving, or has entered into any agreement or understanding, written or oral, that gives the *Project Participant* a reasonable expectation of receiving any remuneration for reducing removals of *Tree Biomass* other than submission of the *Project* for *RFS Crediting*.

B. All portions of the *Project Area* covered by laws, regulations or agreements that prohibit *Tree Biomass* removal entirely have been defined as *Ineligible Forested Lands* to ensure that *Tree Biomass* removals in such areas are not creditable.

C. All portions of the *Project Area* where *Tree Biomass* removal is not entirely prohibited by law, regulation, or agreement shall be deemed *Additional* with

respect to the *Legal Additionality Test* and are defined as *Eligible Forested Land*.

D. The *Protected Area Exception* to the strict *Legal Additionality Test*: Reduced removals of *Tree Biomass* have *Additionality* in *Protected Areas* if official reports prepared by a *Governmental Authority* confirm that all three of the following conditions are met:

1. Illegal removals have occurred inside the *Protected Area* during the *Protected Area Illegal Removal Period* defined as a period starting (a) after the *Protected Area* was constituted, and (b) not more than ten (10) years prior to the *Initial Project Submission Date*. For purposes of clarity:

Table ER1-D: Illustration of Protected Area Illegal Removal Periods		
<i>Initial Project Submission Date</i>	<i>Protected Area creation date</i>	<i>Protected Area Illegal Removal Period</i>
January 2013	January 1998	Jan 2003-Dec 2012
January 2013	January 2003	Jan 2003-Dec 2012
January 2013	January 2008	Jan 2008-Dec 2012

2. Illegal removals have occurred within 3 years prior to the *Initial Document Submission Date*.
3. Illegal removals have occurred at least once every 3 years during the *Protected Area Illegal Removal Period*.

ER1-2 Economic Incentive Test.

A. To establish that removals of *Tree Biomass* provide a net economic benefit to either those engaging in illegal removals or a *Project Participant*, the *Project Proponent* shall provide the following with its *Initial Project Submission Documents*:

1. A written valuation report (*Forestry Valuation Report*) by a *Proponent Land Use Expert* stating that the cost of illegal removals of *Tree Biomass* (e.g. logging) is exceeded by the economic benefits derived from that which is removed; or that lands used or owned by the *Project Proponent* or *Project Participants* are more valuable without forest than with forest (e.g. for farming or ranching). The *Forestry Valuation Report* shall provide an analysis of costs and benefits in monetary terms, and shall cite published evidence in support of its analysis.

2. A *Personal Representation* by the *Project Proponent's* and the *Project Developer's* top executive officer (e.g., CEO, Principal Partner, Executive Director) in his or her personal capacity as well as by the *Project Proponent* and *Project Developer* stating that to the best of his/her knowledge and belief after a full, good faith investigation the *Forest Valuation Report* is complete and accurate.

3. A *Representation* by the *Proponent Land Use Expert* stating that to the best of his/her/its knowledge and belief after a full, good faith investigation the *Forest Valuation Report* is complete and accurate.

B. The *Forestry Valuation* shall be reviewed in accordance with the *Public Commentary*, review, and *Referee* procedures described in Section A2.

ER1-3 Existing Incentives Test.

A. To establish that the proposed *Project* is not receiving any form of crediting or payments for reducing its *Tree Biomass* removals other than from *The RFS Project*, the *Project Proponent* shall submit the following with its *Initial Project Submission Documents*:

1. A *Personal Representation* by the *Project Proponent's* and the *Project Developer's* top executive officer (e.g., CEO, Principal Partner, Executive Director) in his or her personal capacity as well as by the *Project Proponent* and *Project Developer* stating that to the best of his/her knowledge and belief after a full, good faith investigation (see Template: *Representations*):

- a. The history of any form of Non-*Project* crediting or payments for reducing its *Tree Biomass* removals for three years immediately preceding its *Initial Project Submission Documents*; and
- b. At the time of submission of its *Initial* and *Final Project Submission Documents*, the *Project* is not receiving any form of crediting or payments for reducing its *Tree Biomass* removals, except as specifically stated on Schedule ER1-1_A; and
- c. There are no contracts or agreements pertaining to the *Project* or any *Project Participant* related to any form of crediting or payments for reducing its removal of *Tree Biomass* in the *Project Area*, except as specifically stated on Schedule ER1-1_B; and
- d. Whether the *Project Proponent* or *Project Developer* has filed a tax return within the three years immediately preceding the submission of the *Initial Project Submission Documents*, or had a

financial statement prepared, and if it has done so, identifying the *Tax Preparer* or *Financial Statement Preparer*.

2. In the event the *Project Proponent* or the *Project Developer* has filed a tax return within the three years immediately preceding the submission of the *Initial Project Submission Documents*, or had a financial statement prepared, all such *Tax Preparer* or *Financial Statement Preparers* shall provide a statement that to the best of their knowledge and belief after a full, good faith investigation (see Template: *Representations*):

- a. The history of any form of Non-*Project* crediting or payments for reducing its *Tree Biomass* removals for three years immediately preceding its *Initial Project Submission Documents*; and
- b. At the time of submission of the *Initial* and *Final Project Submission Documents*, the *Project* is not receiving any form of crediting or payments for reducing its *Tree Biomass* removals, except as specifically stated on Schedule ER1-1_A; and
- c. There are no contracts or agreements pertaining to the *Project* or any *Project Participant* related to any form of crediting or payments for reducing its removal of *Tree Biomass* in the *Project Area*, except as specifically stated on Schedule ER1-1_B.

B. Once a *Project* is validated credits cannot be verified if the *Project* is concurrently the source of credits or payments for reduced *Tree Biomass* removal other than through *RFS Credits*. In the event such a validation or verification were to be made erroneously, credits issued would be treated as erroneously issued and reimbursed using the same method as if a *Voluntary Reversal* had occurred (see ER-4).

ER2: PROJECT EMISSION BASELINES and EMISSION REDUCTION ADDITIONALITY**OBJECTIVES:**

As noted in ER1, there are two ways of thinking about *Additionality*: 1 - Is the *Project Additional*? 2 - Are the *Project's* emission reductions *Additional*? To conclude that a *Project's* emission reductions are *Additional*, those emission reductions must exceed those that were expected based on a “business-as-usual” scenario.

The objective of Section ER2 is to establish protocols for identifying business-as-usual scenarios for emissions, termed *Project Emission Baselines*. *Project Emission Baselines* can then be compared to observed emissions to determine whether emissions during a *Crediting Period* have been reduced relative to the *Project Emission Baseline*. If emissions have been reduced, they are *Additional*, and give rise to *RFS Credits* (see ER3 for *RFS Credit* calculation protocol).

RATIONALE:

At first glance establishing whether reductions in *Tree Biomass* removals are *Additional* seems simple and straightforward: Is less carbon emitted from the *Project Area* than would have been had the *Project* not been undertaken? However, for at least two reasons this determination is not straightforward: (1) it involves demonstrating a “counterfactual” – what would have happened in the *Project Area* in the absence of the *Project*; and (2) it involves predicting the future interaction of numerous and diverse variables (e.g., market prices; regulatory regimes; road-building; population density) that are not under a single entity’s control and are subject to large fluctuations and other uncertainties.

Two of the most widely applied solutions to this problem are (a) the “historical” approach, and (b) the “blended” approach combining historical data with data related to *Drivers Of Deforestation*. Both approaches have their advocates and both

approaches have had intermittent success in predicting some short-term future changes. However, at the date of **The Rainforest Standard** Version 2.0, neither approach has demonstrated widespread and consistent validity.

With these limitations in mind, *The RFS* has taken the position that it will accept as valid projected baseline emissions (a) documented evidence of the intention, capacity, and authority to remove *Tree Biomass* in the *Project Area* (“*Documented Prospective Removals*”); (b) a *Governmental Removal Baseline*, validated in accordance with *The RFS* criteria described in ER2-2A below, or (c) a *Validated Removals Baseline*, validated in accordance with *The RFS* criteria described in ER2-2A below.

REQUIREMENTS:

ER2-1 The term *Documented Prospective Removals* refers to proposed activities that have documented evidence of intent, capacity, and authority to remove *Tree Biomass* in the *Project Area*.

A. If a *Project* chooses to use a *Documented Prospective Removals Baseline*, the *Project Proponent* shall provide the following in its *Initial Project Submission Documents*:

1. a *Documented Prospective Removals Justification* consisting of one of the following:
 - a. Permit issued by a *Governmental Authority* for the removal of *Tree Biomass*;
 - b. Plans for development authorized by a *Governmental Authority*;
 - c. Private development plans authorized by a *Governmental Authority*;
 - d. Logging concessions or other extractive concessions or activities authorized by *Governmental Authorities*;

- e. sustainable forestry harvest management program pursuant to binding plan or agreement;
- f. community forestry harvest practices pursuant to a *Life Plan* or *Community Document*;
- g. other documented forest harvest practices pursuant to enforceable contractual obligations; or
- h. other activities that have documented evidence of intent, capacity, and authority to remove *Tree Biomass* including:

- (1) permits, if required, and

- (2) either:

- (a) an enforceable arm's length contract for work to remove *Tree Biomass*, or

- (b) an enforceable contract for the sale of *Tree Biomass* from the prospective removal, or

- (c) a contract on a property contiguous with the *Project Area* for work to remove *Tree Biomass* or for the sale of *Tree Biomass*.

2. A *Documented Prospective Removals Map* demarcating the area of the prospective *Tree Biomass* removals superimposed on the *Benchmark Eligible Forested Land Map* in accordance with the *Requirements* of IC1.

3. A *Documented Prospective Removals Timeline* of the times for all prospective *Tree Biomass* removals; such timetable shall be confirmed by and consistent with all *Documented Prospective Removals Justifications*.

B. In addition to the documentation required by ER2-1A, the *Project Proponent* shall provide the following:

1. A *Personal Representation* by the *Project Proponent's* and the *Project Developer's* top executive officer (e.g., CEO, Principal Partner, Executive Director) in his or her personal capacity as well as by the *Project Proponent* and *Project Developer* stating that to the best of his/her knowledge and belief after a full, good faith investigation (see Template: *Representations*) the *Documented Prospective Removals Justification*, *Documented Prospective Removals Map*, and *Documented Prospective Removals Timeline* are accurate and complete in all material respects; and,

2. either:

a. a *Legal Opinion* confirming the validity and accuracy of the *Documented Prospective Removals Justification*, *Documented Prospective Removals Map*, and *Documented Prospective Removals Timeline*; or

b. an official document of the *Governmental Authority* confirming the *Documented Prospective Removals Justification*, *Documented Prospective Removals Map*, and *Documented Prospective Removals Timeline*.

ER2-2 Alternate Removal Baselines

For *Projects* that cannot use the *Documented Prospective Removals Baseline*, the expected reduction in *Tree Biomass* carbon stock in the *Project Area* in the absence of the *Project* can be established using a *Governmental Removals Baseline* or, if no *Governmental Removals Baseline* is available, a *Validated Removals Baseline*.

A *Governmental Removal Baseline* is a baseline model published by a duly authorized governmental unit encompassing the entire *Project Area* (as shown on the *Project Boundary Map*). If, and only if, no *Governmental Removals Baseline* exists, *The RFS* will

accept any other baseline that complies with all *Conditions For Acceptability - Baselines* (“*Validated Removals Baseline*”).

A. If a *Project* chooses to use either a *Governmental Removal Baseline* or a *Validated Removals Baseline*, the *Project Proponent* shall provide in its *Initial Project Submission Documents* an *Alternate Baseline Methodology Report* prepared by its *Proponent Baseline Expert*.

1. If the *Alternate Baseline Methodology Report* opts to use a *Governmental Removal Baseline*, the report must establish the following:

- a. the *Governmental Removal Baseline* was produced in accordance with subparagraphs 1 and 4 of *The RFS Conditions For Acceptability-Baselines* described in ER2-2C describing the specific ways in which it complied with the *Requirements* of each subparagraph; and
- b. whether there is more than one *Governmental Removal Baseline* covering the *Project Area*; and
- c. if there is more than one applicable *Governmental Removal Baseline*, a composite *Governmental Removal Baseline* has been calculated by multiplying each *Governmental Removal Baseline* by the proportion of the *Project Area* to which it applies, and then summing the results. For example, if one *Governmental Removal Baseline* is 2% in 50% of the *Project Area* and one *Governmental Removal Baseline* is 1% in 50% of the *Project Area*, the composite *Governmental Removal Baseline* is 1.5%.

2. If the *Alternate Baseline Methodology Report* opts to use a *Validated Removals Baseline*, the report must establish the following:

- a. no *Governmental Removal Baseline* is available;
- b. the *Validated Removals Baseline* was produced in accordance with all subparagraphs 1, 2, 3, and 4 of *The RFS Conditions For*

Acceptability-Baselines described in ER2-2C, describing the specific ways in which it complies with the *Requirements* of each subparagraph.

B. The *Alternate Baseline Methodology Report* shall be subject to an *Automatic Review* (A2-4) by an *Assigned Baseline Expert* but the A2-4 timelines shall be modified as follows:

1. If prior to the issuance of its findings, the *Assigned Baseline Expert* requests clarifications, the *Proponent Baseline Expert* shall provide them within 30 days of the request.
2. The *Assigned Baseline Expert* shall issue its findings within 30 days of receiving any requested clarifications. If the *Assigned Baseline Expert* finds that the methodology is not in compliance with the *Requirements* of ER2-2, the findings will specify the deficiency. The *Proponent Baseline Expert* may file a revised *Alternate Baseline Methodology Report* within 60 days of receiving the initial findings. If the *Assigned Baseline Expert* finds that the revision is in compliance with the *Requirements* of ER2-2, the baseline will be deemed accepted. If the *Assigned Baseline Expert* finds that the revision is not in compliance with the *Requirements* of ER2-2, the baseline will be deemed rejected.

C. The *RFS Conditions For Acceptability - Baselines* are:

1. historical data alone are not sufficient - site specific *Drivers Of Deforestation* must be addressed; and
2. any modeling approach must have been published in *Peer-reviewed Literature* and found to be valid; and

3. site-specific *Drivers Of Deforestation* (including those to be entered into a validated model) are assessed with a methodology that has been published in *Peer-reviewed Literature* and found to be valid with respect to those drivers that are acting on the *Project Area* within three years prior to the *Initial Project Submission*, as confirmed by an *Proponent Baseline Expert*; and
4. *Project Emission Baselines* rates must be expressed as annual rates.

D. In addition to the documentation required by ER2-2A, the *Project Proponent* shall provide a *Personal Representation* by the *Project Proponent's* and the *Project Developer's* top executive officer (e.g., CEO, Principal Partner, Executive Director) in his or her personal capacity as well as by the *Project Proponent* and *Project Developer* stating that to the best of his/her knowledge and belief after a full, good faith investigation (see Template: *Representations*) the proposed removals baseline model is accurate.

ER3: CO₂e EMISSION REDUCTION CALCULATIONS

OBJECTIVE:

To calculate a *Project's* reduced CO₂e emissions resulting from lower levels of *Tree Biomass* removals (*Project Emission Change*) by comparing observed *Tree Biomass* carbon stocks to carbon stocks expected without the *Project* during a *Crediting Period*.

RATIONALE:

The *RFS* provides a 10-step protocol for calculating an estimate of *Project Emission Change*. One important goal of the protocol is to maximize the ability to capture small-scale removals of *Tree Biomass*, often referred to as “degradation”. This is accomplished without defining deforestation or degradation, since attempts to precisely define deforestation can open the door to an inability to account for small to moderate but significant removals widely referred to as degradation.

The RFS does not measure change in carbon stocks arising from growth or removal of biomass planted by people. Thus, afforestation and reforestation are not creditable under *The RFS*. Defining *Tree Biomass* to refer only to natural forests and to exclude biomass growth from human plantings, advances two central *RFS* goals: the protection of natural-growth forests and their biodiversity; and incentivizing sustainable long-term *Forest Dweller* livelihoods because planting and harvesting cycle activities will not affect carbon stock change and crediting calculations as they would if removals of planted material were considered *Tree Biomass* removals.

The following briefly summarizes the protocol.

Step 1: Calculate the *Carbon Stock Benchmark*.

Step 2: Calculate *Expected Carbon Stock Change* for a *Crediting Period*.

Step 3: Calculate *Observed Carbon Stock Change* for a *Crediting Period*.

Step 4: Compare *Expected to Observed Carbon Stock Change* to calculate *Gross Carbon Emission Change*.

Step 5: Deduct *Leakage* using method described in ER4 from *Gross Carbon Emission Change* to arrive at *Aboveground Carbon Emission Change*.

Step 6: Multiply *Aboveground Carbon Emission Change* by 20% (or other empirically established percentage) to arrive at *Belowground Carbon Emission Change*.

Step 7: Multiply *Aboveground Carbon Emission Change* by 10% (or other empirically established percentage) to arrive at *Deadwood Carbon Emission Change*.

Step 8: Sum *Aboveground Carbon Emission Change*, *Belowground Carbon Emission Change*, and *Deadwood Carbon Emission Change* to arrive at *Net Carbon Emission Change*.

Step 9: Multiply *Net Carbon Emission Change* by 3.67 to arrive at *Project Emission Change* for the *Crediting Period*.

Step 10: *Five-Year Adjustment Calculation*

RFS Credits and *RFS Debits* are issued for each *Crediting Period*: if *Project Emission Changes* are negative, credits are issued; if *Project Emission Changes* are positive, debits are issued (see ER3-2).

REQUIREMENTS:

ER3-1 The following steps describe the procedure for calculating *Project Emission Change*.

A. Step 1: Estimating the *Carbon Stock Benchmark*:

As part of its *Final Project Submission Document*, the *Project Proponent* shall submit its calculation of the *Carbon Stock Benchmark* in the *Project Area's Eligible Forested Land* in accordance with the following methods:

1. *General Requirements*.

- a. To calculate the *Carbon Stock Benchmark*, the *Proponent Carbon Stock Expert* shall refer to the *Benchmark Eligible Forested Lands Map* (IC1-4) and the accompanying *Forest Type*Condition Stratification Matrix* (IC1-4F).
 - b. The *Carbon Stock Benchmark* is deemed to be the estimate of Carbon (C) in the *Project Area* as of the *Project Start Date* provided its supporting data were not collected more than 270 days prior to the *Project Start Date*. If the supporting data were collected more than 270 days prior to the *Project Start Date* they are deemed “stale” and must be updated so that they are not older than 270 days prior to the *Project Start Date*.
2. The *Proponent Carbon Stock Expert* shall follow the following procedure to estimate the *Carbon Stock Benchmark*:
- a. Sampling design. Using the *Forest Type*Condition Stratification Matrix*, the layout and number of plots needed to achieve 90% accuracy shall be determined by using established methods and guidelines for determining the number, size, and distribution of sample plots described in Section 6.5 in Pearson et al. 2005.
 - b. If a duly authorized *Governmental Authority* has sanctioned particular allometric equations those shall be applied.
 - c. If no allometric equations have been sanctioned by a duly authorized *Governmental Authority*, generalized allometric equations shall be applied in accordance with *Peer-reviewed Literature*.⁹

⁹ Developing site-specific, species-specific allometric relationships is time-consuming and expensive because it requires destructive harvesting of a large number of trees. Tropical forests often contain 300 or more species, but research has shown that species-specific allometric relationships are not needed to generate reliable estimates of forest carbon stocks. Grouping all species together and using generalized allometric relationships, stratified by broad forest types or ecological zones, is highly effective for

d. *Carbon Stock Benchmark: Aboveground Tree Biomass* carbon stocks are estimated using the statistically sampled ground-based data. Allometric relationships are first applied to the ground-based forest measurements to estimate the average carbon stock per hectare in each *Forest Type* in each *Forest Condition* (C/ha). To estimate the *Carbon Stock Benchmark*, multiply the average carbon stock per *Forest Type* by *Forest Condition* by the total number of hectares per *Forest Type* by *Forest Condition* and sum the results across all cells.

B. Step 2: In the *Final Project Submission Documents*, calculate the *Expected Carbon Stock Change* for a given *Crediting Period* using the selected baseline (*Documented Prospective Conversion Baseline*; *Governmental Removal Baseline*; or *Validated Removal Baseline*).

1. The general formula for estimating *Expected Carbon Stock Change* for a given *Crediting Period* is:

$$\Delta E(cp) = cp * R * (C_1 * FL_1 + C_2 * EFL_2 \dots C_n * EFL_n)$$

$\Delta E(cp)$ = *Expected Carbon Stock Change* in period *Cp*

cp = *Crediting Period* in years (to nearest hundredth).

R = Annual rate of *Removals* during the *Crediting Period* according to the selected baseline.

the tropics because diameter at breast height (DBH) alone explains more than 95% of the variation in aboveground tropical forest carbon stocks, even in highly diverse regions. Generalized allometric equations also have the major advantage of being based on larger numbers of trees that span a wider range of diameter classes. An extensive review of allometric equations concluded that the generalized models were 'the best available' way to estimate forest biomass and recommended them over local allometric models that may be based on less than 100 destructively sampled trees. Generally, the effort required to develop species-or location-specific relationships will not typically improve accuracy even if occasionally a localized relationship is warranted, as generalized equations may not adequately represent all forest types in all areas.

C = tons of carbon per hectare per *Forest Type* in a given *Forest Condition*

EFL = number of hectares of *Eligible Forested Land* per *Forest Type* in a given *Forest Condition*

2. Calculating the *Crediting Period* baseline rate of *Removals* (R).

a. *Documented Prospective Removals Baseline*. The *Documented Prospective Removals Baseline* rate during the *Crediting Period* is calculated by multiplying the percentage of total prospective *Removals* during the *Crediting Period* by the annualized rate of the *Removals* during the *Crediting Period* according to the *Documented Prospective Removals Timeline* (ER2-1A3).

(1) The annualized rate of *Removals* during the *Crediting Period* is determined as follows:

(a) If all *Removals* are scheduled to be completed within one year, the annualized rate of *Removals* would be 100% divided by the number of years in the *Crediting Period*.

(b) If the *Documented Prospective Removals Timeline* called for *Removals* to be evenly distributed over 5 years, the annualized rate would be 20%.

(c) If the *Documented Prospective Removals Timeline* calls for unevenly distributed *Removals*, the annualized rate would reflect that percentage of *Removals* each year. (For example, 40% in year 1; 30% in year 2; 15% in year 3; 10% in year 4; and 5% in year 5.)

(2) By way of illustration, if 50% of the *Tree Biomass* is scheduled to be removed and the annualized rate for

Removals is 20%, the *R* for *Documented Prospective Removals Baseline* would be 10% ($50\% * 20\%$) for each of the five years *Removals* were scheduled.

b. The *Governmental Removal Baseline* and the *Validated Removal Baseline* are themselves projected annual *Removal* rates that shall be used as *R* in the *Expected Carbon Stock Change* formula in B1 above.

C. Step 3: Calculate the *Observed Carbon Stock Change* for the *Crediting Period* for which the *Project Proponent* is seeking *RFS Credits*. The *Project Proponent* shall verify *Observed Carbon Stock* at such intervals as *Project Proponent* determines, but not less frequently than every five years.

1. The *Observed Carbon Stock* shall be calculated by the *Proponent Carbon Stock Expert* in accordance with the following, and subject to the *Public Commentary* and an *Automatic Review* in Section A2-4:

a. With its *Verification Request*, *Project Proponent* shall submit a *Carbon Verification Map*.

b. Remote-sensing resolution for a *Carbon Verification Map* can be as great as 5m, subject to the *Requirements* for resolution of less than 1m with respect to the five-year *Carbon Stock Adjustment* described in Step 10 (ER3-1J).

c. All remote-sensing data appearing on the *Carbon Verification Map* shall have been collected within 180 days prior to the *Verification Request*.

d. The *Proponent Carbon Stock Expert* shall estimate the *Observed Carbon Stock* on the *Carbon Verification Map* by multiplying the average carbon stock per *Forest Type* by *Forest Condition* times the total number of hectares per *Forest Type* by *Forest Condition* and summing the results across all cells.

2. The *Observed Carbon Stock Change* shall be calculated by subtracting the *Observed Carbon Stock* on the current *Verification Date* from the *Observed Carbon Stock* on the immediately preceding *Verification Date*.

$$\Delta O (cp) = O (V2) - O (V1),$$

where O is the *Observed Carbon Stock*; cp is the *Crediting Period* in years (to nearest hundredth), V2 is the *Observed Carbon Stock* on the most recent *Verification Date*; and V1 is the *Observed Carbon Stock* on the preceding *Verification Date*.

D. Step 4: To calculate *Gross Carbon Emission Change* during *Crediting Period*, compare *Expected to Observed Carbon Stock Change*.

1. *Gross Carbon Emission Change in Crediting Period = Expected Carbon Stock Change in Crediting Period less Observed Carbon Stock Change in Crediting Period*; or

$$\text{Gross } \Delta C (cp) = E (cp) - O (cp).$$

E. Step 5: Calculating Aboveground Carbon Emission Change for the Crediting Period..

1. Multiply applicable *Leakage* rate, as determined under the *Requirements* of Section ER4 by the *Gross Carbon Emission Change* to arrive at the *Leakage Deduction*.

2. Subtract the *Leakage Deduction* from the *Gross Carbon Emission Change* to arrive at the *Aboveground Carbon Emission Change for the Crediting Period.*

F. Step 6: Multiply *Aboveground Carbon Emission Change* by 20% (or other empirically established percentage pursuant to ER3-4) to arrive at *Belowground Carbon Emission Change*.

- G. Step 7: Multiply *Aboveground Carbon Emission Change* by 10% (or other empirically established percentage pursuant to ER3-4) to arrive at *Deadwood Carbon Emission Change*.
- H. Step 8: Sum *Leakage Deduction*, *Aboveground Carbon Emission Change*, *Belowground Carbon Emission Change*, and *Deadwood Carbon Emission Change* to arrive at *Net Carbon Emission Change*.
- I. Step 9: To arrive at *Project Emission Change*, multiply *Net Carbon Emission Change* in *Crediting Period* by 3.67.
- J. Step 10: Five year *Carbon Stock Adjustment* calculation.
1. If during any five-year interval following the *Project Start Date*, any *Observed Carbon Stock Change* verification is done with remote-sensing resolutions equal to or greater than 1m, the *Project Proponent* is required to provide a *Carbon Stock Adjustment* at the end of such five-year interval (plus or minus one year). The *Carbon Stock Adjustment* requires remote-sensing data collection at a resolution <1m because it is intended to capture evidence of small-scale removals that may have been missed with coarser scale sensing.
 2. If the *Carbon Stock Adjustment* reveals greater *Removals* of *Tree Biomass* than did the *Observed Carbon Stock Change Verification*, the difference (adjusted for calculation of *Belowground* and *Deadwood Carbon Emission Changes*) shall be treated as a *Reversal* and the appropriate number of credits deducted from any current balance in the *Project's* credit account. If there is not a sufficient balance in the credit account, the deduction shall be from the next credits earned. The increase in *Removals* shall be presumed to have occurred solely

during the *Crediting Period* immediately prior to the *Carbon Stock Adjustment*.

ER3-2 Project Emission Changes: Conversion to RFS Credits or RFS Debits.

A. In any *Crediting Period*, if *Project Emission Change* is positive, the change is considered a net reduction of CO₂e, and each tCO₂e shall earn one *RFS Credit* that shall be issued and documented as such in accordance with Section A6.

B. In any *Crediting Period*, if *Project Emission Change* is negative, the change is considered a net addition of CO₂e having produced greater emissions than expected, and each such tCO₂e shall earn one *RFS Debit* documented as such in accordance with Section A6. *RFS Debits* shall be deducted as of the *Verification Date* of the relevant *Crediting Period* from any *RFS Credit* balance; if no balance is available for immediate deduction, such *RFS Debits* shall be deducted from the next *RFS Credits* earned until the Debits are zero.

ER3-3 Automatic Review of Project Emission Change calculations. The multi-step calculation of *Project Emission Change* shall be subject to an *Automatic Review* by an *Assigned Carbon Expert* (see Exhibit E) pursuant to Section A2-4.

ER3-4 Belowground Tree Biomass and Deadwood Biomass standard addition adjustments to Aboveground Tree Biomass calculations are rebuttable presumptions. A *Project Proponent* may retain a *Proponent Carbon Stock Expert* to prepare a *Belowground Adjustment Report* or a *Deadwood Adjustment Report* providing clear and convincing evidence that the adjustments should be greater than the standard adjustments based on empirical data provided in accordance with the *Requirements* below. *Project Proponent* may, in its discretion, submit a *Belowground* or a *Deadwood Adjustment Report* as part of its *Final Project Submission Documents* or

in any *Verification Request*. Any such submission shall explicitly accept the findings of the Assigned Carbon *Expert* as final.

A. *Belowground and Deadwood Adjustment Report Requirements.*

1. All data submitted shall be derived from recognized *Peer-reviewed Literature* or government datasets.
2. All statistical analyses shall use formulas and tests recognized as broadly valid in *Peer-reviewed Literature*.

B. Any proposed *Belowground* or *Deadwood Adjustment* is subject to *Automatic Review* by an Assigned Carbon *Expert* in accordance with A2-4. The Assigned Carbon *Expert* shall issue its finding as to whether the evidence submitted by the *Project Proponent* is clear and convincing enough to change the standard addition and if so, the size of the alternative addition adjustment. The Assigned Carbon *Expert's* finding shall be final, and the *Project Proponent* shall be bound by the Assigned Carbon *Expert's* finding whether the discount is higher or lower than the standard deduction. For verification purposes, the discount shall reflect the finding.

ER4: LEAKAGE

OBJECTIVES:

Properly account for *Activity-shifting* and *Market Leakage* when calculating *RFS Credits*.

RATIONALE:

Activity-shifting Leakage. When actors change their actions to reduce *Tree Biomass* removals inside the *Project Area* they may simply shift those actions to nearby areas. This phenomenon is known as *Activity-shifting Leakage*. *The RFS* requires *Activity-shifting Leakage* to be deducted from any *RFS Credits* in accordance with Section ER3-5. *Activity-shifting Leakage* is of two principal types: (a) leakage resulting from the intentional displacement of a *Documented Prospective Removal* activity such as infrastructure development or managed removals of *Tree Biomass*; and (b) leakage resulting from shifting local-scale activities such as grazing, agriculture, logging of timber, fuel wood collection, charcoal production, conversion to settlements, or fires set to clear land for non-forest purposes.

The RFS has adopted a standard discount for *Activity-shifting Leakage* rather than requiring *Projects* to do an actual on-site/off-site reconciliation study which is complex, expensive, and may not be replicable. *The RFS* standard discount is based on the most recent peer-reviewed studies of *Activity-shifting Leakage*. *The RFS* treats the standard discount as a rebuttable presumption, allowing *Project Proponents* to present evidence that the discount should be adjusted. For example, if an infrastructure project such as a power plant is moved from *Eligible Forested Land* in the *Project Area* to *Ineligible Forested Land* inside or outside the *Project Area*, there would be no deduction for *Activity-shifting Leakage* since activity is clearly displaced to a non-forest area.

Market Leakage: Some agricultural and timber products harvested in a proposed *RFS Project Area* may have previously been sold into local, regional, national, or

international markets. Stable or rising demand interacting with decreased product supplies caused by *The RFS Project(s)* may create market pressure and possibly price increases, giving other producers financial incentive to grow supplies in other places, near or far from the *Project Area* ("*Market Leakage*"). The relative emission potential of different production regions can significantly affect the CO₂e emissions related to the spatial shift in production of these commodities and this is determined mainly by the carbon stocks of the affected *Forest Types* (or other land uses) which vary significantly across regions. *The RFS* acknowledges that while national monitoring and reconciliation would be the ideal way to detect all *Leakage*, it sees that option as many years away and therefore applies a standard deduction based on published market models. *Market Leakage* studies can be even more complex than *Activity-shifting Leakage* studies.

REQUIREMENTS:

ER4-1 The *Project Proponent* is advised that *The RFS* requires the following standard deductions be taken with respect to offsetting *Activity-shifting Leakage* and *Market Leakage* presumed to occur as the result of reducing *Tree Biomass* removals within the *Project Area*. The deductions will be taken in every *Crediting Period* in accordance with Step 5 of Requirement ER3-1. For example, if 1000 *RFS Credits* would otherwise have been verified, and a discount of 10% is taken, 900 credits will actually receive verification. The standard discounts may change from time to time.

ER4-2 In the event a standard deduction is increased during the *Project Period*, the standard deduction shall not increase for the *Project*.

ER4-3 In the event a standard deduction is decreased during the *Project Period*, the standard deduction shall be decreased for the *Project*. Such decrease shall take effect on the *Verification Date* immediately following the decrease.

ER4-4 The *RFS* standard deduction for *Activity-shifting Leakage* shall be 5%.

ER4-5 The *RFS* standard deduction for *Market Leakage* shall be the applicable percentage found in Table ER4-5 below¹⁰.

Table ER4-5 Standard deductions for <i>Market Leakage</i> (commodity / country)				
	Soybeans	Cattle	Timber (tropical)	Sugarcane
Bolivia	2.9%	0.6%	0.4%	0.5%
Brazil	30.8%	18.6%	8.3%	21.3%
Colombia	0.1%	3.0%	0.5%	2.7%
Ecuador	0.1%	0.8%	0.1%	0.7%
Peru	0.0%	0.6%	1.0%	0.6%

The deduction shall be calculated using the values in Table ER4-5 with the *Contiguous Use Method*, as follows:

A. The proportion of the *Project Boundary* contiguous to each use described in Table ER4-5 shall be deemed the *Market Leakage* type to be calculated.

1. As an illustration, assume the *Project* is in Colombia and the *Project Boundary* is 40km. Assume further that contiguous uses along the *Project Boundary* are: soybean fields, 0.8 km; cattle ranches, 5 km; legal timber extraction, 3km; sugarcane fields, 10 km; activities other than the four commercial activities identified in Table ER4-5, 21.2km.

a. The first step is to determine what proportion of the *Project Boundary* is occupied by a particular use. In the case of this

¹⁰ The source of the percentages in this Table are Murray, B.C., B.A. McCarl, and H. Lee. 2004. Estimating *Leakage* from Forest Carbon Sequestration Programs. *Land Economics* 80(1):109-124; and Murray, B. C., C. S. Galik, W. A. Jenkins, J. D. Schneck 2010. *Project Standards Development for the Amazon Forest Carbon Partnership: An Assessment of Options for Additionality, Permanence, and Leakage* – Final Report; Nicholas Institute for Environmental Policy Solutions, Duke University. Methods of Murray, et al (2004) may be used for other commodities using most recent data of FAOSTAT.

illustration: soybeans = 2% (.8/40); cattle = 12.5% (5/40); timber = 7.5% (3/40); and sugarcane = 25% (10/40).

b. The second step is to multiply the proportion of the use by the *Leakage* factor in Table ER4-5: soybeans = .002% (2%*.1%); cattle = .375% (12.5%*3%)*timber = .0375% (7.5%*.5%); and sugarcane = .675 % (25%*2.7%).

c. The third step is to aggregate the totals for each factor to create a composite *Market Leakage* rate for the *Project*. For the above illustration, the composite rate would be (.002+.375+.0375+.675) = 1.0895%.

2. It is understood that the *Contiguous Use Method* may not reflect the actual proportion of nearby area uses. However, it is difficult to determine the appropriate overall area to include in any assessment (i.e., how far to go beyond the *Project Boundary*); any general rule is likely to be somewhat arbitrary. The *Contiguous Use Method* assures that the threat of conversion is real since it touches the *Project Area*. Moreover, describing the boundaries of a larger area to be included in a broader analysis requires significantly more mapping and analysis, at a significant cost in time and money without providing a clearly more valid assessment.

B. The *Market Leakage* standard deduction calculations in ER4-5A shall be provided in a *Market Leakage Report* as part of the *Final Project Submission Documents* and subsequent *Verification Requests*.

1. The *Market Leakage Report* shall be prepared by a *Proponent Land Use Expert* active in the *Project Area* selected by *Project Proponent* and shall include the following:

- a. the calculations set forth in ER4-5A;
- b. the sources of information used to identify contiguous uses;

- c. *Representation* by the *Proponent Land Use Expert* that to the best of their knowledge and belief the sources of information and calculations are accurate and complete in all material respects; and
- d. A *Personal Representation* by the *Project Proponent's* and the *Project Developer's* top executive officer (e.g., CEO, Principal Partner, Executive Director) in his or her personal capacity, as well as by the *Project Proponent* and *Project Developer* that the information in the *Market Leakage Report* is accurate and complete in all material respects to the best of his/her knowledge and belief after a full, good faith investigation.

ER4-6 Alternatives to standard deduction for Activity-shifting Leakage and Market Leakage. Standard deductions are based on rebuttable presumptions with respect to *Leakage*. The *Project Proponent* may retain a *Proponent Leakage Expert* to prepare a *Leakage Alternative Deduction Report* providing clear and convincing evidence that the deductions should be lower than the standard deductions based on empirical data provided in accordance with the *Requirements* below. The *Project Proponent* may, in its discretion, submit a *Leakage Alternative Deduction Report* as part of the *Final Project Submission Documents* or in any *Verification Request*. Any such submission shall explicitly accept the findings of the *Assigned Leakage Expert* (see ER4-6C below) as final.

A. Leakage Alternative Deduction Report Requirements.

1. All data submitted shall be derived from recognized *Peer-reviewed Literature* or government datasets.
2. All statistical analyses shall use formulas and tests recognized as broadly valid in *Peer-reviewed Literature*.

B. Any proposed *Leakage* Alternative Deduction is subject to *Automatic Review* by an *Assigned Leakage Expert* in accordance with A2-4. The *Assigned Leakage Expert* shall issue its finding as to whether the evidence submitted by the *Project Proponent* is clear and convincing enough to change the discount and if so, what the *Project Leakage* discount should be. The *Assigned Leakage Expert's* finding shall be final, and the *Project Proponent* shall be bound by the *Assigned Leakage Expert's* finding whether the discount is higher or lower than the standard deduction. For verification purposes, the discount shall reflect the finding.

ER5: PERMANENCE

OBJECTIVES:

RFS Credits represent permanent¹¹ rather than temporary reductions in CO₂e emissions. Therefore, throughout the *Permanence Period*, the *RFS Credit* accounting system requires the *Project Proponent* to demonstrate its ability to provide the number of credits required to replace all previously issued *RFS Credits* to the full extent required by a *Reversal* of any size (“*Full Replacement*”).

Consistent with *The RFS*’s design as outcome-based rather than prescriptive, *The RFS* does not specify whether *Full Replacement* is provided through sellers, buyers, third parties, or a combination thereof, allowing *Project Proponents* to make that decision. Similarly, *The RFS* provides a range of financial options *Project Proponents* may use to comply with the *Permanence Requirements*.

RATIONALE:

Temporary nature of emission reductions from reduced removals of *Tree Biomass*.

RFS Projects create value by retaining carbon in terrestrial carbon stocks instead of releasing it into the atmosphere. However, the stored carbon is subject to later emission, or “*Reversal*.” The potential for *Reversal* stems from a range of intentional and unintentional occurrences. For example, a *Rightsholder* may decide to remove *Tree Biomass* to allow farming or ranching, or to sell harvested timber; or a fire set off by lightning destroys forest; or there is illegal harvesting beyond the control of *Rightsholders*. The potential for *Reversals* means that credits issued are essentially provisional or temporary; they do not become permanent until the carbon represented by the credit has stayed in the terrestrial stock for the entire *Permanence*

¹¹ The *RFS* defines “permanent” as 100 years from a *Project Start Date*, i.e., its *Permanence Period*.

*Period*¹². This is especially important for credits that will be used as offsets in a compliance market: the failure to replace reversed credits means that more CO₂e was emitted than would have been if no crediting were permitted in the first place. This has been formally recognized under the Kyoto Protocol in the cases of afforestation and reforestation in which credits for creating those carbon sinks are deemed temporary and only time-delimited credits (CERs) requiring *Full Replacement* are permitted. *The RFS* takes the position that *Permanence* requires *Full Replacement* as if the credited reductions had been used as offsets, even in a voluntary system in which credits are not used as offsets.

Ensuring that *RFS Credits* are permanent is a central goal of *The RFS* and means effectively solving the *Reversal* problem. The ability of relatively small *Reversals* in restricted areas to negate (reverse) presumed emission reductions from large areas over long periods of time is not intuitive and may have been underestimated as can be seen in the following example:

Box 3: The *Reversal* Problem.

Assume an average of 400 tCO₂e per hectare, a *Project Area* of 100,000 ha, and a reduction in emissions of 1% per ha below expectations. This would yield 4 credits per ha and 400,000 credits per year. If the project has received 400,000 credits per year for 10 years, it will have received 4,000,000 credits in total. Now assume a *Reversal* on just 10,000 ha or 10% of the *Project Area*. This *Reversal* releases 4,000,000 tCO₂e into the atmosphere. All the CO₂e savings from the past 10 years are eliminated. The *Project* will have been credited for reducing emissions by 4,000,000 tCO₂e when in effect it will have not have accounted for any reductions in the end once the *Reversal* has occurred. Emitters that used *The RFS Credits* as offsets put an additional 4,000,000 tCO₂e into the atmosphere and the *Reversal* put 4,000,000 tCO₂e into the atmosphere for a total of 8,000,000 tCO₂e, twice the expected emission. To restore the tCO₂e account to balance, the *Project* owes 4,000,000 tCO₂e – it must replace credits in that amount, i.e. *Full Replacement*. This example demonstrates why all issued credits (other than *Ton-Year* credits) can be viewed as Temporary until there is an assurance that *Reversals* can be accounted for and compensated by *Full Replacement*.

¹² The *Ton-Year Accounting* approach is an exception – under that arrangement crediting is limited to the equivalent CO₂e value only for the time sequestration has occurred. For example, if 200,000 tCO₂e were not emitted, only 2,000 tCO₂e would be available for crediting under the T/Y approach. Thus, upon a reversal no compensating catch-up is required; *Full Replacement* is effectively a constant state under T/Y.

To earn the label Permanent instead of Temporary, *The RFS* allows *Project Proponents* to choose among a range of mechanisms that guarantee that any *RFS Credits* can and will be replaced in the event of a *Reversal* during the *Permanence Period*. Depending on the mechanism the *Project Proponent* chooses, the source of the replacement can be sellers, buyers, third parties, or a combination thereof.

Permanence Period

The *RFS* requires that *Full Replacement* be guaranteed for the *Permanence Period*, which it defines as 100 years from the *Project Start Date*. There is some scientific uncertainty about how long CO₂e resides in the atmosphere. Individual molecules of CO₂e are reabsorbed typically within 5–10 years, but rising aggregate emissions of CO₂e can alter the equilibrium and lead to elevated levels of CO₂e for 50–200 years or more (*IPCC* 2007). Amid this scientific uncertainty, common practice is to treat the relevant atmospheric residency for CO₂e as 100 years. For example, the global warming potential (GWP) factors across the 6 major GHGs are developed by the *IPCC* using the cumulative radioactive forcing of these individual gases for 100 years as the effective point of comparison for their relative potency. In this sense, 100 years is a policy decision rather than a purely scientific finding.

Post-Project Liability

In addition to the *Reversal* risks described above, there is another risk *The RFS* is designed to avoid – “*Post-Project Liability*”. *Post-Project Liability* arises when the *Project Period* is shorter than the *Permanence Period*. This can occur if: the *Project Proponent’s* rights in the *Project Area* are limited to a specified period (e.g., a 20-year concession; a 50-year lease); if the *Project Proponent* has provided a *Termination Date Notice*; or if there is a *Project Abandonment*. *Post-Project Liability* also arises if a *Project Proponent* voluntarily terminates the *Project* (which it is free to do at any time). Several mechanisms offered as options in the *Requirements* have relatively

straightforward means for offsetting *Post-Project Liability* (*Ton-Year Accounting*; *Permanence Trust Fund*; *Qualified Buffer System*; temporary *RFS Credits*). Others require assurances of ongoing *Post-Project Liability* protection (Guarantees).

Sellers, Buyers, Third Parties: Who bears the risk of Full Replacement?

The RFS does not specify and does not intend to designate the party that is ultimately economically responsible for fulfilling *Permanence Requirements*. In economic terms, sellers and buyers always price risk thereby sharing in the risk: a seller will accept a lower price with less risk; a buyer will pay a higher price with less risk. Some of the *Permanence* mechanisms that a *Project Proponent* can choose in *Requirements* shift the risk of replacement in whole or part to the buyer (offset-buyer guarantees; temporary credits). Other mechanisms (*Ton-Year Accounting*; *Permanence Trust Fund*; *Qualified Buffer System*) provide the seller with access to partial credit income without any future liability, but require performance throughout the *Permanence Period* for full crediting. Still other mechanisms look to third parties for assurances, or to a combination of mechanisms that may include sellers, buyers, and third parties.

REQUIREMENTS:

A *Reversal* is defined as the voluntary, human-induced removal of *Project Area Tree Biomass* that had previously generated a *RFS Credit* for having stored carbon in that *Project Area Tree Biomass* (see ER5-10 for more detailed explanation). To assure the *Permanence* of credits issued under **The Rainforest Standard**, defined as the *Full Replacement* of issued credits in the event of a *Reversal* during the *Permanence Period*, *Project Proponents* can choose from among the *Permanence* mechanisms detailed in ER5-1 through ER5-9. A *Project Proponent* shall identify the mechanism or combination of mechanisms it chooses on the *Permanence Option Template* (see

Template ER5), which shall be submitted with its *Initial Project Submission Documents*.¹³

ER5-1 Offset Purchaser Guarantees

In at least one compliance market being developed at the present time, buyers of issued credits using them as offsets (*Offset Purchasers*) are being asked to guarantee that *Reversals* of any reduced emissions underlying such credits be replaced by the *Offset Purchaser*. To our knowledge, no such requirement has been suggested for buyers of voluntary credits. From a carbon accounting perspective, if there is a *Reversal* that is reimbursed by the *Offset Purchaser*, no net increase in emissions will have occurred. A credit reimbursement requirement can be imposed effectively by a regulatory authority in a compliance system; however a credit reimbursement requirement cannot be effectively imposed in a voluntary system unless there are well-established legal rights and remedies that assure effective enforcement. Therefore, *The RFS* accepts *Offset Purchaser* guarantees subject to the following:

- A. *Offset Purchaser* must have a binding and enforceable legal obligation to the *Governmental Authority* responsible for maintaining and managing the compliance system in question for making *Full Replacement* of any credits issued for emission reductions in the *Project Area*.
- B. *Offset Purchaser* must demonstrate that it has the financial capacity to meet its obligations in ER5-1A. Such capacity shall be deemed met if:
 - 1. The *Governmental Authority* officially accepts the *Offset Purchaser* guarantee; or
 - 2. *Offset Purchaser* has a *Financial Strength Rating* of A- or higher; or
 - 3. A third party with a *Financial Strength Rating* of A- or higher unconditionally guarantees the *Offset Purchaser's* obligation; or

¹³ For an interactive tool to analyze project cash flow and present value for the *Ton-Year Accounting* approach (ER5-5), the *Permanence Trust Fund* (ER5-6), and the *Qualified Buffer System* (ER5-7), and to compare these options in terms of cash flow and present value, see Appendix ER5.]

4. The *Offset Purchaser* has provided satisfactory security in cash or in kind for *Full Replacement*.

ER5-2 Seller Guarantees

For the purpose of this section ER5, the term “Seller” includes any individual or entity that participates in developing or transferring a *RFS Credit* to an *Offset Purchaser*. In this broad sense, Seller includes any *Project Participant* and any *Intermediary* between a *Project Participant* and an *Offset Purchaser*, as well as any partner of a *Project Participant* or *Intermediary*. Any one or more individuals or entities defined in this section as a Seller can provide all or part of a *Seller Guarantee* (such individual or entity: “*Seller Guarantor*”). The *RFS* accepts *Seller Guarantees* subject to the following requisites:

- A. The *Seller Guarantee* shall be in the form set forth in Template ER5-2, and signed by the *Seller Guarantor*.
- B. *Seller Guarantor* must demonstrate that it has the financial capacity to meet its obligations in ER5-3A. Such capacity shall be deemed met if:
 1. The *Seller Guarantor* has a *Financial Strength Rating* of A- or higher; or
 2. A third party with a *Financial Strength Rating* of A- or higher unconditionally guarantees the Seller’s obligation; or
 3. The Seller has provided satisfactory security in cash or in kind for *Full Replacement* in the event of a *Reversal*.

ER5-3 Third-Party Guarantee

A third party individual or entity other than a *Project Participant*, *Intermediary*, or *Offset Purchaser* may guarantee *Full Replacement*¹⁴. Possible examples of such *Third-*

¹⁴ While it is conceivable that an insurance company could offer insurance to cover a voluntary reversal, this appears to be a moral hazard problem that even if legal under its regulatory regime, no reputable

Party Guarantor include: a donor, a foundation, a consortium of public or private entities. The *RFS* accepts *Third-Party Guarantees* subject to the following requisites:

A. The *Third-Party Guarantee* shall be in the form set forth in Template ER5-3, and signed by the *Third-Party Guarantor*.

B. *Third-Party Guarantor* must demonstrate that it has the financial capacity to meet its obligations in ER5-3A. Such capacity shall be deemed met if:

1. The *Third-Party Guarantor* has a *Financial Strength Rating* of A- or higher; or
2. The *Third-Party Guarantor* has provided satisfactory security in cash or in kind for *Full Replacement* that in the event of a *Reversal* is transferable in accordance with Section A6.

ER5-4 Ton-Year Accounting

The underlying concept of *Ton-Year Accounting* is that even if carbon stored rather than emitted today is emitted in the future it has provided at least a temporary carbon removal function that has kept atmospheric concentrations down for a period of time. In essence, there is a time value of temporary storage or emissions delay. Therefore, if a *Reversal* occurs during the *Permanence Period*, carbon stored rather than emitted prior to the *Reversal* can be treated as if some proportion had been kept out of the atmosphere for 100 years, i.e. its “100 year equivalence value” (see Noble et al. 2000 for a review). This concept is operationalized by *The RFS* in this section ER5-4.

The *Ton-Year Accounting* algorithm adopted by *The RFS* assumes an *Accumulation Rate* of 1% per annum on a linear basis. While both linear and nonlinear alternative *Accumulation Rate* algorithms have been proposed, *The RFS* accepts the 1% linear rate as a reasonable, conservative, and practicable reflection of current scientific knowledge with respect to equivalence over 100 years.

company would be likely to undertake. In the event such insurance were to become available, *The RFS* would prescribe *Requirements* therefor.

Calculation of the total number of tons of CO₂e stored permanently by the *Project* in any given year under *Ton-Year Accounting* is illustrated in Table ER5-4. The resulting “Permanent Tons Earned” (see Table ER5-4) are those considered permanent based on their 100-year equivalence value, and thus have no residual *Reversal* liability regardless of the cause or size of a *Reversal*.

The illustration in Table ER5-4 assumes annual reductions of 1000 tons of CO₂e each year. The 1000 tons reduced in Year 1 produces 1000 ton years worth of savings. The next year, that same 1000 tons saved in Year 1 is successfully maintained, which counts for another 1000 ton-years worth of savings in Year 2. But another 1000 tons is also saved from removal in that period, so the total ton years produced in Year 2 is 2000, and the cumulative ton-years produced by the *Project* is 3000. Using an *Accumulation Rate* of 1% of permanent tons generated for each ton year produced, the *Project* produces 10 tons of credits in the first year, 20 more in the second year, 30 more in the third year, and so on. (See Appendix ER5 for an interactive example that shows actual reductions based on carbon density, the level of removal reductions, and *Project* size, as well as projected cash flows and present values depending on a range of assumptions.)

Table ER5-4. “Permanent” reductions over time using the Ton-Year equivalence approach (one tone-year = 0.01 permanent tons).

Period	Emission Reduction (tons)	Cumulative Reduction (tons)	Cumulative Ton Years	Permanent Tons Earned @ 0.01	Percentage of Full Credits
1	1,000	1,000	1,000	10	1.0%
2	1,000	2,000	3,000	30	1.5%
3	1,000	3,000	6,000	60	2.0%
4	1,000	4,000	10,000	100	2.5%
5	1,000	5,000	15,000	150	3.0%
6	1,000	6,000	21,000	210	3.5%
7	1,000	7,000	28,000	280	4.0%
8	1,000	8,000	36,000	360	4.5%
9	1,000	9,000	45,000	450	5.0%
10	1,000	10,000	55,000	550	5.5%
20	1,000	20,000	210,000	2,100	10.5%
30	1,000	30,000	465,000	4,650	15.5%
40	1,000	40,000	820,000	8,200	20.5%
50	1,000	50,000	1,275,000	12,750	25.5%
60	1,000	60,000	1,830,000	18,300	30.5%
70	1,000	70,000	2,485,000	24,850	35.5%
80	1,000	80,000	3,240,000	32,400	40.5%
90	1,000	90,000	4,095,000	40,950	45.5%
100	1,000	100,000	5,050,000	50,500	50.5%

A. The *Project* will receive *RFS Credits* only upon the filing of a *Ton-Year Credit Request*, on the form shown on Template ER5-4 in accordance with the following:

1. The *Ton-Year Credit Request* must be filed within 30 days of a *Verification Date*; and
2. The *Ton-Year Credit Request* shall specify the number of credits being requested which shall not exceed the number of issued credits

indicated as the Percentage of Full Credits in Table ER5-4 for the verified storage duration.

3. The *Ton-Year Credit Request* shall specify any previously issued credits, which shall be deducted from the gross amount earned according to Table ER5-5.

B. If the *Project* has opted for *Ton-Year Accounting*, the *Project Proponent* shall be permitted to either pledge or borrow against the number of issued credits indicated as the Percentage of Full Credits in Table ER5-4 for the verified storage duration.

C. **Alternative Accumulation Rates.** While having adopted the 1% *Accumulation Rate*, *The RFS* recognizes legitimate differences in scientific judgments about the 100-year equivalence factor.

1. In the event that a peer-reviewed consensus emerges that another algorithm better captures the realities of equivalence, that algorithm may be adopted by *The RFS*. However, if the new algorithm allows fewer credits for the same storage duration, the original algorithm shall remain in force for the *Project*. In the event the new algorithm allows more credits for the same storage duration, the *Project Proponent* shall have the option to apply the new algorithm and be credited immediately for any credits it would have earned in the past if the new algorithm had been in effect since the *Project Start Date*.

2. Alternatively, if the *Project Proponent* believes it can provide clear and convincing evidence of the reasonable validity of another *Accumulation Rate* algorithm, the *Project Proponent* may, in its discretion, submit an *Alternative Accumulation Rate Report* as part of its *Initial* or *Final Project Submission Documents*. Such a Report shall be prepared by a *Proponent Full Replacement Alternative Expert* selected

by the *Project Proponent* and retained at its sole cost and expense. The Report shall be prepared for the purpose of providing clear and convincing evidence that the proposed *Accumulation Rate* algorithm is valid and shall include a *Representation* by the *Proponent Full Replacement Alternative Expert* that to the best of her/his/its knowledge and belief after a full, good faith investigation the information in the Report is accurate and complete in all material respects. The submission of such a Report shall be deemed an explicit acceptance of the findings of the *Assigned Full Replacement Alternative Expert* as final, without right of further review or appeal.

a. *Alternative Accumulation Rate Report Requirements.*

1. All general data submitted shall be derived from recognized *Peer-reviewed Literature* or government datasets.
2. All statistical analyses shall use formulas and tests recognized as broadly valid in *Peer-reviewed Literature*.

b. Pursuant to Section A2, a *Public Comment Period* follows submission of the *Initial* or *Final Project Submission Documents*. Within 10 business days of the end of the *Public Comment Period*, all analyses and all comments posted shall be submitted to the *Assigned Full Replacement Alternative Expert*.

c. Within 30 days of submission to the *Assigned Full Replacement Alternative Expert*, the *Assigned Full Replacement Alternative Expert* shall issue its finding as to whether the evidence submitted by the *Project Proponent* is sufficiently clear and convincing to justify use of the proposed *Accumulation Rate* algorithm. The *Assigned Full Replacement Alternative Expert's* finding shall be final, and the *Project Proponent* shall be bound by the *Assigned Full Replacement Alternative Expert's* finding.

D. *Ton-Year Accounting* may be blended with other *Permanence* mechanisms in this section ER5. For example, in the case of Guarantees, *Ton-Year Accounting* could be used to absorb a proportion of *Full Replacement* liability, thus reducing the *Full Replacement* obligations of those options. (See Appendix ER5 for an interactive tool in which *Ton-Year Accounting* can be combined with the *Permanence Trust Fund* or Qualified Buffer).

ER5-5 Permanence Trust Fund

The *Permanence Trust Fund* option requires that all issued *RFS Credits* be placed in a trust or escrow account for the entire *Permanence Period*, but issued credits can be withdrawn and sold annually to the extent necessary to distribute to the *Project* the *Average Endowment Rate Of Return* (currently assumed to be 5% for purposes of analysis with the *Permanence Tool* in Appendix ER5) of the cumulative current value of the *Permanence Trust Fund*. In limited circumstances, some principal may be released (see ER5-5D). (See Appendix ER5 for an interactive example that shows *projected* cash flows and present values depending on a range of assumptions.)

The concept behind the *Permanence Trust Fund* (PTF) is that in the event of a *Reversal* requiring *Full Replacement*, a very high percentage of verified *RFS Credits* remain in the PTF and available for replacement. The actual percentage of *RFS Credits* retained in the PTF varies with the rate of emission reductions, the market price of *RFS Credits*, the *Average Endowment Rate Of Return* and other variables all of which can be entered into the interactive the *RFS Interactive Permanence Tool* at Appendix ER5. In addition, the rapidly building cumulative credit balances provide a strong financial incentive for *Project Proponents* to remain committed to conserving the *Eligible Forested Lands* for the long-run, regardless of the alternative uses that emerge over time. Cash flows are generated on the full value of the verified *RFS Credits* that are in the PTF. Importantly, each *Project* provides all the credits required for *Full*

Replacement without relying on any pooled or other credits from other sources; therefore, *Project* risk assessments are not necessary and complex portfolio risk decisions do not need to be modeled.

A. Verified *RFS Credits* will be issued and placed in the account of the *Project* (*Project PTF Account*) held in trust or escrow by an entity (*Depository*) selected by the *Project Proponent* from those listed on Schedule ER5-5_A. The *Depository* shall provide a quarterly *Depository Statement* to the *Project Proponent*. The *Depository Statement* shall set forth, in form substantially equivalent to Template ER5-5_A, the transactional history of the account including the dates *RFS Credits* were issued, their amounts, any withdrawals, and cumulative balances. *Depository Statements* shall be published on the *Project Webpage*.

B. Upon the filing of a *RFS Distribution Request* on the form shown on Template ER5_B, the *Depository* shall distribute to the *Project* the number of credits (*RFS Current Credit Distribution*) calculated in accordance with the Steps set forth in Schedule ER5-5_B (see Appendix ER5, *RFS Interactive Permanence Tool*, for an interactive example of the calculation).

C. The price used to calculate the Cumulative Current Market Price Value is defined as the median Bid Price of a *RFS Credit* on the *Verification Date* immediately preceding *The RFS Distribution Request* determined by any of the following sources, one of which shall be selected by the *Project Proponent* and identified in *The RFS Distribution Request*:

1. Any public exchange on which *RFS* or equivalent credits are traded;
2. An exchange-based trading mechanism allowing daily price discovery for emission allowances equivalent to *The RFS Credits* traded on such exchange (whether on a spot or forward basis), or

3. An OTC market sufficiently active to enable reputable commodity broking firms to operate and thus provide at least three price points on any trading day.

D. Releasing principal by blending mechanisms. The *Permanence Trust Fund* may be blended with other *Permanence* mechanisms in this section ER5. Blending mechanisms could permit the principal balance in the *Permanence Trust Fund* to be released to the *Project Proponent*. For example, *Ton-Year Accounting* could be applied to release from principal a Percentage of Full Credit in accordance with the schedule set forth in Table ER5-4. Similarly, any qualifying guarantees could be applied to cover credits released from a principal account.

E. Other than by withdrawing issued *RFS Credits* pursuant to ER5-5B or D, the *Project Proponent* or any *Project Participant* shall be permitted to pledge, borrow against, or otherwise monetize credits in the *Permanence Trust Fund* to a maximum of that amount it could have released if it had opted for *Ton-Year Accounting*.

F. *Credit Deficit Reduction*. In the event that *Full Replacement* for a *Reversal* requires debiting more than the entire balance of credits in the *Project PTF Account*, a *Credit Deficit* will be noted. Any subsequently verified credits shall be applied first to reducing to zero the Credit Deficit.

ER5-6 Qualified Buffer System

The *RFS* will issue credits without the requirement of *Full Replacement*, if a *Qualified Buffer System* is in place and has assessed the *Project* in accordance with its rules. The *RFS* will provide credits to the *Project Proponent* and to the *Qualified Buffer System* in accordance with the *Qualified Buffer System's* buffer credit requirement for the

Crediting Period in question. (See Appendix ER5 for an interactive example that shows *projected* cash flows and present values for a Qualified Buffer depending on a range of assumptions.)

A. A *Qualified Buffer System* shall be an entity that has all of the following attributes:

1. Transparency with respect to the identity and amount of all credit holdings, all contingent obligations to deliver credits, audited balance sheet and income and expense statements, and full disclosure as if the entity were a large financial institution, insurance company, or public company in the country in which the *Project* is located, subject to the same governmental oversight and regulation with respect to its balance sheet, and risk and capital management.

2. A management unit that:

- (a) is legally constituted and authorized to do business in the jurisdiction in which the *Project Area* is located;
- (b) is legally authorized to hold credits and disburse credits;
- (c) has a *Financial Strength Rating* of A- or better;
- (d) has a staff of or binding contractual arrangements with *Experts* with a successful history of evaluating the appropriate number of credits to be placed in the buffer system that is consistent with the model described in ER5-6A4.

3. All parameters of its portfolio are transparent and published. At a minimum, the following information shall be provided:

- a. Whether the buffer system accepts all *Projects*, all *Projects* with a risk assessment profile below a certain threshold, or only *Projects* whose risk assessment profiles match a pre-existing model for overall risk management when within the existing portfolio of *Projects*; and

- b. which factors, and their respective weightings, the buffer system uses to build its *Project* portfolio, including *Project* size, forest density, carbon density, proximity and accessibility to *Drivers Of Deforestation*, strength of *Project* ownership, number of *Rightsholders*, and similar factors that affect the likelihood and size of *Reversals*; and
 - c. the algorithms used to determine *Project* acceptance, and the size of the buffer.
- 4. The buffer system protocols and permitted portfolio options have been subjected to quantitative risk modeling using widely accepted econometric techniques and tested using sensitivity analysis across a wide range of realistic possibilities.
 - (a) Quantitative risk modeling shall be done in accordance with protocols published in *Peer-reviewed Literature* or using algorithms that have been tested and have produced consistently positive results that have been published in *Peer-reviewed Literature*.
 - (b) Sensitivity analysis should at a minimum apply the variables listed in ER5-6A3.
- 5. Demonstrable capacity and willingness to provide *Full Replacement* credits in the event of a *Reversal*.
 - (a) An unconditional *Representation* by the buffer system that it has the obligation and capacity to provide *Full Replacement* in the event of a *Reversal* from whatever source.
 - (b) Unconditional written commitment that in case of a *Reversal* the buffer system will deliver credits, up to *Full Replacement*, to the individual or entity designated by *The RFS* upon its issuance of *RFS Credits*.

B. A *Qualified Buffer System* may be private, public, charitable, for-profit, not-for-profit, a government or governmental entity, or other set of public and or private entities.

C. If the *Project Proponent* proposes to use a *Qualified Buffer System*, the *Project Proponent* shall submit a *Qualified Buffer System Report* as part of its *Initial* or *Final Project Submission Documents* or in any *Verification Request*. Such Report shall be prepared by a *Proponent Full Replacement Alternative Expert* selected by the *Project Proponent* and retained at its sole cost and expense. The Report shall be prepared for the purpose of providing clear and convincing evidence that the *Qualified Buffer System* meets the *Requirements* of subsection ER5-6A and shall include a *Representation* by the *Proponent Full Replacement Alternative Expert* that to the best of her/his/its knowledge and belief after a full, good faith investigation the information in the Report is accurate and complete in all material respects. The submission of such a Report shall be deemed an explicit acceptance of the findings of the *Assigned Full Replacement Alternative Expert* as final, without right of further review or appeal.

1. *Qualified Buffer System Report Requirements.*

- a. All general data submitted shall be derived from recognized *Peer-reviewed Literature* or government datasets.
- b. All statistical analyses shall use formulas and tests recognized as broadly valid in *Peer-reviewed Literature*.
- c. All financial information shall be prepared in accordance with Generally Accepted Accounting Practices supported by documentation independently verified in writing by a *Financial Statement Preparer*.
- d. Any references to legal constraints, legal enforcement mechanisms, or other legal aspects of the *Full Replacement*

Alternative shall be supported by a *Legal Opinion* provided by a law firm retained by *Project Proponent* directly and explicitly confirming the accuracy of all information and interpretations.

2. Pursuant to Section A2, a *Public Comment Period* follows submission of the *Initial* or *Final Project Submission Documents* and pursuant to Section A5 a *Public Comment Period* follows submission of a *Verification Request*. Within 10 business days of the end of the *Public Comment Period*, all analyses and all comments posted shall be submitted to the *Assigned Full Replacement Alternative Expert*.

3. Within 30 days of submission to the *Assigned Full Replacement Alternative Expert*, the *Assigned Full Replacement Alternative Expert* shall issue its finding as to whether the evidence submitted by the *Project Proponent* is clear and convincing enough to assure *Full Replacement* by the *Project Proponent* in the event of a *Reversal*. The *Assigned Full Replacement Alternative Expert's* finding shall be final, and the *Project Proponent* shall be bound by the *Assigned Full Replacement Alternative Expert's* finding.

ER5-7 Temporary RFS Credits

Temporary RFS Credits are in some ways analogous to the credits generated by an *Offset Purchaser Guarantee*: both rely on guarantees by buyers that use the credits in a compliance offset market. In the case of a *Temporary RFS Credit*, the purchaser is guaranteeing replacement of all issued credits upon their expiration (commonly, five years), whereas in the case of the *Offset Purchaser Guarantees* the obligation of the purchase only arises in the event of a *Reversal*. One difference between the *Offset Purchaser Guarantee* and a *Temporary RFS Credit* is that the *Temporary RFS Credit* creates an ongoing incentive for sellers to prevent removals since the *Project Proponent* can resell its verified reductions at the end of each five-year term throughout the *Permanence Period*.

A *Project Proponent* may opt for the issuance of "*Temporary RFS Credits*" which shall expire at the end of five years from the date on which they are issued subject to the following conditions:

- A. The transfer of *Temporary RFS Credits* is restricted to *Offset Purchasers* that:
 - 1. Use the *Temporary RFS Credits* in a compliance market that explicitly accepts temporary credits and requires all of the *Temporary RFS Credits* to be replaced upon their expiration; and
 - 2. Otherwise meet all the *Requirements* for *Offset Purchasers* set forth in ER5-1.
- B. Once expired, the *Temporary RFS Credits* may not be transferred.
- C. The expiration date of the *Temporary RFS Credits* shall be recorded as part of their documentation.

ER5-8 Full Replacement Alternative

If the *Project Proponent* claims that it can provide clear and convincing evidence of its unconditional willingness and capacity for *Full Replacement* by means other than as described in Sections ER5-1 through ER5-7, the *Project Proponent* may, in its discretion, submit a *Full Replacement Alternative Report* as part of its *Initial* or *Final Project Submission Documents* or in any *Verification Request*. Such Report shall be prepared by a *Proponent Full Replacement Alternative Expert* selected by the *Project Proponent* and retained at its sole cost and expense. The Report shall be prepared for the purpose of providing clear and convincing evidence that the *Project Proponent* is willing and able to provide for *Full Replacement* in case of a *Reversal* in accordance with the *Requirements* of this Section ER5 and shall include a *Representation* by the *Proponent Full Replacement Alternative Expert* that to the best of her/his/its knowledge and belief after a full, good faith investigation the information in the Report is accurate and complete in all material respects. The submission of such a

Report shall be deemed an explicit acceptance of the findings of the *Assigned Full Replacement Alternative Expert* as final, without right of further review or appeal.

A. *Full Replacement Alternative Report Requirements.*

1. All general data submitted shall be derived from recognized *Peer-reviewed Literature* or government datasets.
2. All statistical analyses shall use formulas and tests recognized as broadly valid in *Peer-reviewed Literature*.
3. All financial information shall be prepared in accordance with Generally Accepted Accounting Practices supported by documentation independently verified in writing by a *Financial Statement Preparer*.
4. Any references to legal constraints, legal enforcement mechanisms, or other legal aspects of the *Full Replacement Alternative* shall be supported by a *Legal Opinion* provided by a law firm retained by *Project Proponent* directly and explicitly confirming the accuracy of all information and interpretations.
5. A written statement from any third-party that is proposed as a participant in the *Full Replacement Alternative* confirming their willingness to participate as proposed and providing clear and convincing evidence of their capacity to carry out their proposed function.

B. Pursuant to Section A2, a *Public Comment Period* follows submission of the *Initial* or *Final Project Submission Documents* and pursuant to Section A5 a *Public Comment Period* follows submission of a *Verification Request*. Within 10 business days of the end of the *Public Comment Period*, all analyses and all comments posted shall be submitted to the *Assigned Full Replacement Alternative Expert*.

C. Within 30 days of submission to the *Assigned Full Replacement Alternative Expert*, the *Assigned Full Replacement Alternative Expert* shall issue its finding as to whether the evidence submitted by the *Project Proponent* is clear and convincing enough to assure *Full Replacement* by the *Project Proponent* in the event of a *Reversal*. The *Assigned Full Replacement Alternative Expert's* finding shall be final, and the *Project Proponent* shall be bound by the *Assigned Full Replacement Alternative Expert's* finding.

ER5-9 “Reversals” Defined. The *RFS* defines the term *Reversal* as the voluntary, human-induced removal of *Tree Biomass* that had previously generated a verified *RFS Credit*. As described in the Rationale, removals, and thus *Reversals* can be human-induced or natural (e.g. fires started by lightning; natural disease). Human-induced removals can be voluntary (e.g. intentional harvesting) or involuntary (e.g. fires started by negligence; actively monitored and resisted illegal harvesting). The goal of *The RFS* is to change removal behavior and so the target of *The RFS Crediting* incentive system is voluntary human-induced removals. However, at times it has proved difficult to make unequivocal assessments of whether *Removals* are or are not human-induced and are or are not voluntary. The following rules attempt to strike a reasonable balance that assures *Project Proponents* and the public that when removals occur that are involuntary or natural the *Project Proponent* will not be penalized, and that when they are voluntary and human-induced they will be considered a *Reversal* requiring *Full Replacement*.

A. *Human-Induced vs. Natural Removals.* Fires in the *Project Area* due to intentional, slash-and-burn clearing for pasture or farmland purposes are treated as voluntary human-induced removals. It has been well-established that such fires can be difficult to distinguish from fires that are entirely accidental (Cochrane, 2000). However, there are several distinguishing features of human induced vs. accidental fires: intentionally cleared forest areas tend to have sharp, geometric edges and often expand existing pasture.

Areas cleared by accidental fire tend to have more ragged edges and are often far from developed land. Another indication that fires are accidental is when burned areas begin to regrow shortly after they have been burned (http://earthobservatory.nasa.gov/Features/AmazonFire/amazon_fire3.php).

Given the existence of strong indicators that can distinguish human-induced from accidental fires, *The RFS* allows *Projects* to claim that removals attributable to fire are accidental and not human-induced and that therefore they should not be treated as a *Reversal*. To substantiate such a claim, the following protocol shall be followed and its *Requirements* complied with:

1. With each *Verification Request*, the *Project Proponent* shall submit:

(a) *Representations* by the *Project Proponent's* top executive officer (e.g., CEO, Principal Partner, Executive Director) in his or her personal capacity, as well as by the *Project Proponent*, that the removals due to burning identified in the Verification process are accidental and not human-induced to the best of his/her knowledge and belief after a full, good faith investigation. This *Representation* shall explicitly state:

- (i) whether the cause of the fire is known or unknown;
- (ii) how the *Project Proponent* has determined the fire is accidental;
- (iii) whether the *Project Proponent* has had any reports of the fire being intentionally set; and
- (iv) that the *Project Proponent* has not received a notice from any *Governmental Authority* or *Project Participant* that the fire may have been intentionally set.

(b) a *Natural Fire Report* from a *Proponent Forest Ecologist* that in her/his professional opinion the burning has the attributes of accidental rather than human-induced burning and that upon inquiry of *Governmental Authorities*, there are no credible

reports of intentional slash-and-burn clearing activities that would account for the fires.

B. *Voluntary Vs. Involuntary Removals*. Human-induced removals that appear involuntary (e.g. illegal logging) may be interpreted as voluntary if the *Project Proponent* has approved or tolerated the removal. For example, for illegal logging to be viewed as entirely involuntary, the *Project Proponent* would be expected to have actively opposed the illegal logging by: (i) reporting in a timely fashion the activity to authorities legally charged with preventing it; (ii) posting the *Project Area* with notices that illegal logging would be prosecuted; (iii) taking steps to ensure that its personnel charged with preventing illegal logging have been trained appropriately and warned of prosecution if they accepted any form of consideration for looking the other way; (iv) actively enlisting the cooperation of all *Project Participants* in preventing, monitoring, and reporting illegal logging; and (v) similar preventative measures, including a monitoring program. Admittedly, it can be difficult to distinguish voluntary from involuntary actions by the *Project Proponent* or other *Project Participants*. However, consistent with *The RFS's* commitment to assuring that *RFS Credits* act as incentives to achieve avoidable reductions, and given the existence of indicators that can be reasonably interpreted as evidence of involuntary removals, *The RFS* allows *Projects* to claim that removals are involuntary and that therefore they should not be treated as a *Reversal*. To substantiate such a claim, the following protocol shall be followed and its *Requirements* complied with:

1. With each *Verification Request*, the *Project Proponent* shall submit:
 - (a) *Representations* by the *Project Proponent's* top executive officer (e.g., CEO, Principal Partner, Executive Director) in his or her personal capacity as well as by the *Project Proponent* that a given removal was done without their participation or tolerance

to the best of his/her knowledge and belief after a full, good faith investigation. This *Representation* shall explicitly state:

- (i) the dates of the removal to the best of its knowledge;
- (ii) whether the cause of the removal is known or unknown;
- (iii) actions taken by the *Project Proponent* to prevent or avoid the removal, including the dates of such actions;
- (iv) whether and when the *Project Proponent* had any reports of the actions leading to the removal;
- (v) that the *Project Proponent* reported the actions leading to the removal, and the removal itself, to a *Governmental Authority* to prevent or punish the removal if illegal;
- (vi) actions taken by the *Governmental Authority* to which *Project Proponent* reported the activity and removal; and
- (vii) that they received no consideration, direct or indirect, from or on behalf of those who did the removal.

(b) an *Involuntary Removal Report* from a *Proponent Forest Ecologist* that in her/his professional opinion:

- (1) The *Project Proponent* has substantially complied with ER5-10B(i)-(v);
- (2) That the removals in question were done without the participation or tolerance of any *Project Participant*; and
- (3) That upon inquiry of *Governmental Authorities*, there are no credible reports that any *Project Participant* participated or tolerated the removal in question.

A1: THE RAINFOREST STANDARD WEBSITE AND PROJECT WEBPAGE

OBJECTIVES:

To make **The Rainforest Standard** and the *Projects* to which it issues credits as transparent as possible in all respects: environmental, economic, and social.

RATIONALE:

Credits issued for reduction of voluntary, human-induced removals of natural *Tree Biomass* must be real, additional, and permanent. In addition, credits must benefit those living on or using the lands that are the source of the credits – otherwise reductions will be short-lived and impermanent.

Transparency is critical to the trust required by markets, *Project Participants*, *Governmental Authorities*, and the public to sustain crediting of reduced removals.

The Rainforest Standard has opted to use the internet to maximize transparency of each stage of *Project* approval and every aspect of *Project* development and performance.

To implement maximum transparency **The Rainforest Standard** *RFSMU* will operate a website (*RFS Website*) that provides and updates general *RFS* information as detailed in Section A1-1 and each *Project* will have its own dedicated webpage (*Project Webpage*) on which is found all *Project* information from the inception of the *Project* submission process to its current status.

REQUIREMENTS:**A1-1 Attributes of RFS Website**

- A. **The Rainforest Standard**, as revised and updated
- B. Map of *Project* locations
- C. Master list of *Projects*, including their stages of development. Each *Project* shall be listed by *The RFSMU* within 10 business days of its filing its first *Initial Project Submission Document*.
- D. List of *Experts*
- E. List of *Referees*
- F. List of *Representative Organizations*
- G. *Data Policy*
 - 1. All original data and metadata necessary to interpret any data cited by a *Proponent Expert*, *Assigned Expert*, *Referee*, or *Commentator* shall be published on the *Project* webpage with no restrictions to access or use of the data.
 - 2. Metadata should meet the standards necessary for understanding and replication of the study by others.
 - 3. All data must have explicit geographic coordinates to within 4m, or be spatially defined by coordinates within plots to 0.1 m accuracy.
 - 4. Metadata structure should meet Ecological Metadata Language (EML) standards, and should include tables of metadata of standard format.

H. *Intellectual Property Policy*

1. For example: Detailed ownership of The *RFS*, *Initial* or *Final Project Submission Documents*, Commentary, *Assigned Expert* reports, including Rights Reserved and licensing options.
2. No copyright, intellectual property, or privacy law or regulation promulgated by a *Governmental Authority* shall be violated.

I. Record of Credit Registration, Transfer, and Retirement, including reported prices of each transfer.

J. Other TBD

A1-2 Attributes of Project Webpage

A. The *Project Webpage* shall be created by *The RFSMU* within 10 business days of the *Project's* submission of the first of its *Initial Project Submission Documents*.

B. *Initial Project Submission Documents*: All required documents (see Exhibit A: *Project Submission Documents*) shall be posted in accordance with the timeframes required by the *Project Validation Protocol*.

C. *Final Project Submission Documents*: All required documents (see Exhibit A: *Project Submission Documents*) shall be posted in accordance with the timeframes required by the *Project Validation Protocol*.

D. *Commentators* and their *Public Commentary* on

1. *Initial Project Submission Documents*
2. *Final Project Submission Documents*
3. *Project activities*

4. *Verification Request*

E. *Validation Certificate*

F. *Verification Request*

G. *Verification Certificate*

H. Credit Account Information

1. Credits requested for verification (per request and in total)
2. Credits verified (per request and in total)
3. Credits suspended, if any (per request and in total)
4. Credits available for transfer
5. Credits transferred (per transfer and in total)
6. Credits retired (per retirement request and in total)

A2: COMPLIANCE WITH REQUIREMENTS: EXPERTS, REPRESENTATIVE ORGANIZATIONS, COMMENTATORS, REFEREES

OBJECTIVES:

Credible and practicable *RFS* validation and verification procedures.

Reducing validation and review timelines and uncertainty.

Lowering validation and verification costs.

RATIONALE:

To maximize the Credibility and Practicability, of determining compliance with *RFS Requirements*, *The RFS* relies on a systematic blend of *Project Proponent* and *Project Developer Representations*, *Project Proponent Experts*, independent *Experts*, *Public Commentary*, independent *Referees*, *Representative Organizations*, *Legal Opinions*, and *Governmental Authorities*.¹⁵

In general, the overall approach to assuring compliance with *RFS Requirements* is a standardized, time delimited, multi-step process that begins with the *Project Proponent* and any *Project Developer* it may have retained.¹⁶

With respect to any particular aspect of the *Requirements* (for example: maps; *Project Participants*; *De Facto Rightsholders*; CO₂e quantities, projected and actual changes; *QOL Benchmarks* and changes; *Biodiversity Benchmarks* and changes; *Additionality*; and *Permanence*), the *Project Proponent* is responsible

¹⁵ Third-party “all-inclusive” expert firms, such as Designated Operational Entities (DOEs) used with CDM reviews, qualified across all *RFS* domains (socio-cultural; legal; economic; biodiversity; remote-sensing and carbon accounting) are often difficult to find and qualify.

¹⁶ The general procedures for validating a *RFS* project are found in Sections A3. The general procedures for verifying *RFS* project credits are found in Section A4.

for developing the required information (normally in the form of a Report), including hiring experts to prepare that information. In addition to providing and substantiating information fulfilling the *Requirements*, the *Project Proponent*, the *Project Developer* and its experts are required to make written representations, (often including the personal representations of the top officials or individuals of the entities) that this information is complete and accurate.

The information produced by the *Project Proponent* (its *Initial* and *Final Project Submission Documents*) is posted on *The RFS Website* and a *Project Webpage*. Any individual or entity (*Commentator*) may then comment on any aspect of the *Initial* or *Final Project Submission Documents* (*Public Commentary*).

In the event the *Public Commentary* disputes the information provided in the *Initial* or *Final Project Submission Documents*, the *Project Proponent* may revise its information if it believes the *Public Commentary* is correct. If the *Project Proponent* decides not to revise, a *Referee* is appointed to settle the dispute.

In certain instances¹⁷, an *Assigned Expert* is appointed automatically to review the *Project Proponent's* information, regardless of *Public Commentary*.

The system of *Project Proponent* information reviewed by *Commentators*, *Referees*, and *Assigned Experts* is maintained throughout the *Project Period* including for each *Verification Request*.

The *Requirements* below detail the general procedures.

¹⁷ For example when the *Project Proponent* proposes an alternative permanence mechanism (ER5-9); or when a *Project Proponent* wants to use *Leakage* data other than the standard deduction (ER4-5).

REQUIREMENTS:

A2-1 Commentators and Public Commentary. As part of its systematic blend of *Project* information provided by *Project Proponents*, *Experts*, *Representative Organizations*, and *Governmental Authorities*, *The RFS* encourages *Public Commentary* for critical assessments of *Project* documents that have been submitted in compliance with *RFS Requirements*. *Commentators* may also provide commentary on *Project* activities at any time during *Project* and *Permanence Periods*, and in response to a *Verification Request* and its supporting documentation. The Commentary system is principally web-based inasmuch as *Project* information is provided on *The RFS Website* and *Project Webpage*.

A. *Commentators*:

1. Those who may provide *Public Commentary* (i.e. whose comments will be reproduced on the *Project Webpage*) include any individual or organization that fully identifies itself with a verifiable name, address, and method of contact (mail; phone; internet; personal delivery).
 - a. All *Project Participants* will be notified automatically whenever a required document is submitted and posted.
 - b. Any individual or organization that requests notification of document postings via a valid and verifiable internet address that submits a link for automatic posting or otherwise request notification via the internet will be automatically notified whenever a required document is submitted and posted.
2. Those who are not eligible to provide *Public Commentary* (i.e. whose comments will not be reproduced on the *Project Webpage* and whose comments are not deemed effective for initiating a *Commentary Dispute*) include any individual or organization:
 - a. Who has been ruled against in a *Commentary Dispute* three consecutive times;

- b. Who has violated any rule or regulation of a *Governmental Authority* with respect to the information transmitted;
- c. Whose *Commentary* is in violation of any confidentiality agreement;
- d. Who otherwise violates the rules of propriety established by *The RFSMU* from time to time and published on *The RFS Website*, including the requirement to make *Personal Representations* and to indemnify and hold harmless *The RFSMU* and its designees from any costs or expenses associated with the *Commentary*; or
- e. Whose *Commentary* is provided anonymously or without a verifiable identity and email address.

B. *Public Comment Period*:

- 1. If related to *Initial* or *Final Project Submission Documents*, 90 days from date of document posting.
- 2. If related to *Verification Requests*, 30 days from *Verification Request* posting.
- 3. If related to *Project* activity, no limit.

C. *Commentary Dispute* and *Commentary Concurrence* defined operationally

- 1. A *Commentary Dispute* arises when a *Commentator* disagrees with the *Project Proponent's* documentation provided in support of fulfilling any *Requirement* with respect to:
 - a. Adequacy of data in terms of its completeness or accuracy; or
 - b. Inferences from data.
- 2. All *Public Commentary* must specify what it is disputing in the spaces designated for that purpose on *The RFS Website*.

3. “*Commentary Concurrence*” is defined as the absence of a *Commentary Dispute* being noted in the spaces on *The RFS Website* designated for that purpose within the *Public Comment Period*.

A2-2 Commentary Dispute Resolution. Once a *Commentary Dispute* has been noted on *The RFS Website*, the following protocol is followed to resolve it.

A. Within 30 days of the filing of the *Commentary Dispute*, the *Project Proponent* (or its *Proponent Expert*, depending on the particular Requirement) shall respond to the *Commentator’s* disagreements in the space identified therefor on *The RFS Website* (*Project Response*). The length and scope of the *Project Response* is in the sole discretion of the *Project Proponent*.

1. In the event the *Project Response* is not filed within 30 days, the *Commentary Dispute* shall be deemed resolved in favor of the *Commentator* and the documents referenced therein shall be deemed to be noncompliant with *Project Requirements* and insufficient for validation or verification, as the case may be.

2. If the *Project Response* states that the *Commentator* is correct, and the *Project Proponent* modifies the relevant documents accordingly, the *Commentary Dispute* shall be deemed resolved, and closed.

B. Within 30 days of the filing of the *Project Response*, *Commentator* shall provide a *Commentator Response* in which it shall explicitly state either its agreement with the *Project Response*, or its disagreement with the *Project Response* and the basis therefore.

1. If the *Commentator Response* agrees with the *Project Response*, the disagreement shall be deemed closed and documents in compliance with respect to that matter.

2. If the *Commentator Response* disagrees with the *Project Response*, the disagreement shall be deemed open and the matter referred to a *Referee* in accordance with the *Referee Protocol*.
3. If the *Commentator Response* is not filed within 30 days of the filing of the *Project Response*, the disagreement shall be deemed closed and documents in compliance with *Project Requirements* with respect to that matter.

A2-3 Referee Protocol. When a *Commentator Dispute* remains open pursuant to A2-2B2, the disagreement shall be finally resolved by a *Referee* in accordance with the *Referee Protocol* described hereinafter.

A. The *Referee* is simply an *Expert* as defined as in A2-5 whose function is to act as a *Referee* under the *Referee Protocol*.

B. Within 10 business days of receiving a *Commentator Response* that disagrees with the *Project Response*, *The RFSMU* shall notify the *Expert* next due for assignment in accordance with the rules described in A2-5D of its assignment. If that *Expert* does not accept such assignment within 10 business days of the notice being given, the *Expert* shall be placed on the bottom of the *Expert List*, and the next *Expert* identified as *Referee*. The *Referee* is compensated the same as if she/he were acting as an *Expert*.

C. Within 30 days of accepting the assignment as *Referee*:

1. The *Referee* shall review only the documents and data pertaining to the *Commentary Dispute*: the *Initial* or *Final Project Submission Documents*, the *Commentary Dispute*, the *Project Response*, and the *Commentator Response*. The *Referee* may not request or require any additional data or information, being limited to what has been previously presented and available on *The RFS Website*.

2. The *Referee* shall issue its *Referee Decision* in favor of either the *Project Proponent* or the *Commentator*.

- a. The *Referee Decision* is limited to choosing between the *Project Proponent* and the *Commentator* and shall not offer compromises or other alternative resolutions.
- b. In the sole discretion of the *Referee*, the *Referee Decision* may or may not explain the basis of its ruling.

D. *Referee* Protocol outcomes

1. If the *Referee Decision* is in favor of the *Project Proponent*, the *Commentary Dispute* shall be deemed resolved, and closed.
2. If the *Referee Decision* is in favor of the *Commentator*, and the *Project Proponent* modifies the relevant documents accordingly, the *Commentary Dispute* shall be deemed resolved, and closed.
3. If the *Referee Decision* is in favor of the *Commentator*, and the *Project Proponent* does not modify the relevant documents accordingly within 30 days of the *Referee Decision*, the documents referenced therein shall be deemed to be noncompliant with *Project Requirements* and insufficient for validation or verification, as the case may be.

A2-4 Automatic Review. In certain cases (see section *Requirements* and Exhibit D titled “*Expert and Referee Task List*”), *Project Proponent* information will be automatically reviewed by an expert assigned (*Assigned Expert*) in accordance with the practices described below and in subsection A2-3, subject however to alternative timelines provided in specific *Requirements*. When *Automatic Reviews* are prescribed by any *RFS Requirements*:

- A. Within 10 business days of the end of the relevant *Public Comment Period*, all analyses and all comments posted shall be submitted to the *Assigned Expert*.

B. The *Assigned Expert* shall be the next expert on *The RFS Expert* List with the minimum *Requirements* cited in Exhibit E titled “*Expert and Referee Qualifications*.”

C. Within 30 days of submission to the *Assigned Expert*, the *Assigned Expert* shall issue its finding as to whether the evidence submitted by the *Project Proponent* is clear and convincing enough to justify the *Project Proponent’s* claim. The *Assigned Expert’s* finding shall be final, and the *Project Proponent* shall be bound by the *Assigned Expert’s* finding.

A2-5 Expert List. The *RFS Website* provides list of *Experts* consisting of those experts that have met the minimum qualifications associated with the task to which an *Expert* is required to be assigned (see Exhibit E titled “*Expert and Referee Qualifications*”).¹⁸

A. *Expert* Minimum Qualifications:

1. Education, experience, publications, position and other requisites as cited in Exhibit E or in specific section referencing the *Expert*.
2. Agreement with *RFS* to undertake the tasks for which the expert has met the minimum qualifications according to the timelines required by *The RFS* and at the standard *RFS* published compensation rates.

B. *Assigned Expert* compensation. *Assigned Expert* compensation for each task is specified and published on *The RFS Website*.

1. Rates are set by *RFSMU* and agreed to by *Assigned Experts*.
2. Rates may differ according to Minimum *Requirements* and may be modified from time to time (see *RFS Website* for current rates).
3. Compensation is paid by *Project Proponent* pursuant to a compensation agreement in the form set forth in Template A2-5.

¹⁸ This section does not apply to *Proponent Experts* who are selected by *Project* Proponents according to the *Requirements* of the section for which the *Proponent Expert* is retained. (See Exhibit E titled “List of Experts and Credentials.”)

C. *Rotational System Of Assigned Expert Selection.* This section is designed to avoid “expert shopping.”

1. Any *Expert* that has been qualified for a Task shall be placed on a list of qualified *Experts* for that Task. Upon qualification, new *Experts* are placed at the bottom of the list.
2. When an *Expert* must be selected from the *Expert* List to perform a function, the *Expert* at the top of the list is asked to handle the assignment.
3. Upon completion of the assignment, the *Expert* goes to the bottom of the *Expert* List.
4. If the *Assigned Expert* declines the assignment, the *Expert* goes to the bottom of the *Expert* List.
5. If the *Assigned Expert* fails to complete an accepted assignment in the allotted time, the *Assigned Expert* is removed from the assignment and placed at the bottom of the *Expert* List.
6. If the *Assigned Expert* fails to complete an accepted assignment in the allotted time for a second time, the *Assigned Expert* is removed from the assignment and removed from the *Expert* List for a period of five years.
7. Any *Expert* who has served as a *Project Proponent Expert* shall be ineligible for placement on the list of *Experts* for the 12 months immediately following its last action associated with its duties for the *Project Proponent* or *Project Developer*.
 - a. Before being placed (or placed again) on the *Expert* List, *Expert* shall represent to the *RFSMU* the date of its last action associated with its duties for the *Project Proponent* or *Project Developer*.

- b. Upon the expiration of the 12-month ineligibility period, the *Expert* shall be placed at the bottom of the *Expert* List.

A2-6 Expert Reports

A. *Project Expert* reports. Content of all reports is owned jointly by *Expert* and or *Project Proponent* (as per their separate agreement), subject to the right of *The RFSMU* to publish all content and supporting documents pursuant to a perpetual, free, and irrevocable license.

B. *Referee* and *Assigned Expert* reports.

- 1. *Referee* and *Assigned Expert* reports are owned by the *RFSMU* which shall publish all content and supporting documents on the *Project* Website.

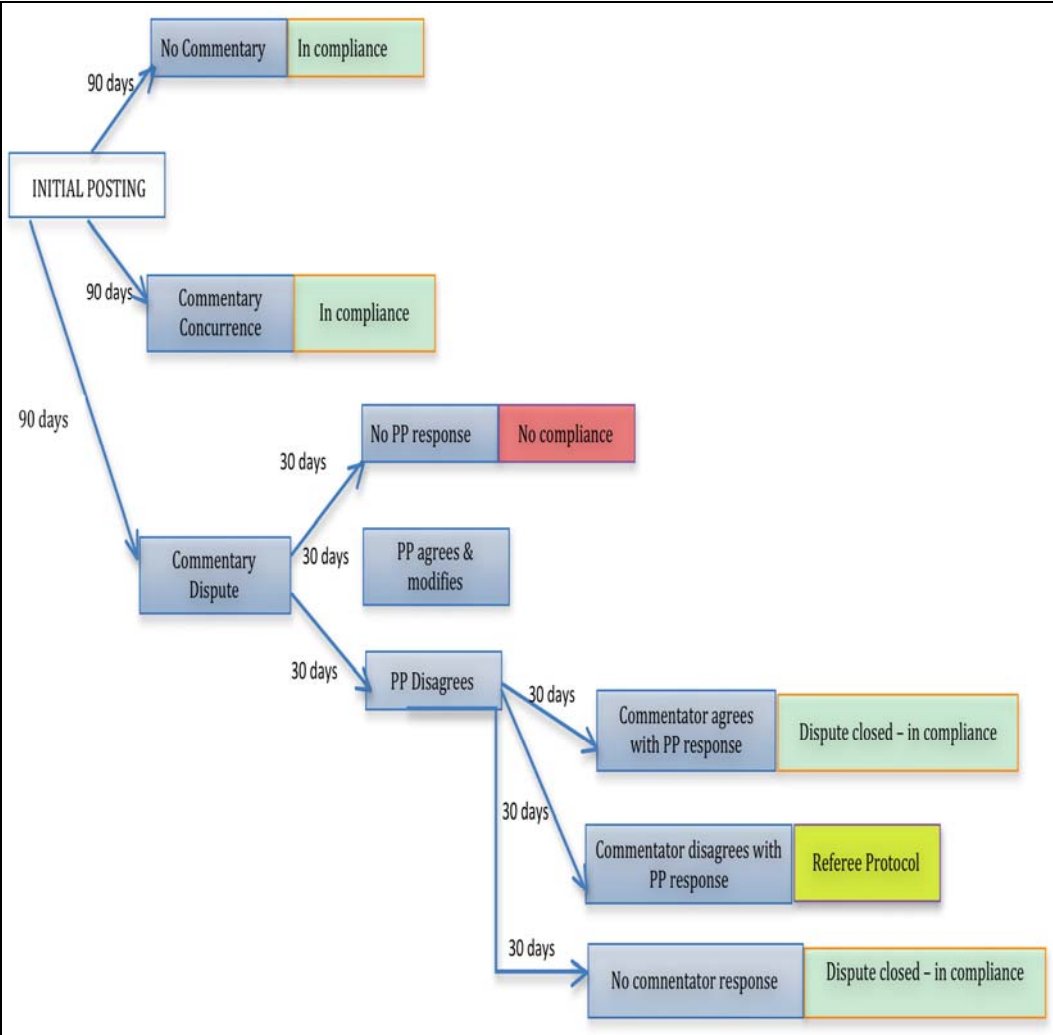
- 2. Timelines

- a. Completion and delivery of *Referee* and *Assigned Expert* Reports must meet required timelines stated in the relevant *Requirement*, time being of the essence.

- b. Failure to meet required timelines results in scheduled penalties (reductions in compensation) based on how late compliance occurs.

- c. Generally, if the timeline for completion and delivery is exceeded by 100%, the *Expert* will be deemed to have failed to perform, and another *Expert* will be selected to complete the Task.

Box 4: Timeline for Commentary Dispute



A3: PROJECT VALIDATION PROTOCOL

OBJECTIVES:

Provide a credible and cost-effective method for *Project Proponents* to document the compliance of their *Project* with *RFS Requirements*.

Adhere to strict timelines for responses to *Project Proponent*.

Assure compliance with *RFS Requirements*.

RATIONALE:

The *Requirements* of this Section are designed to both:

Assure *Rightsholders* and the general public that any *Project* receiving *RFS Credits* has complied with *RFS Requirements* and remains in compliance; and

Afford *Project Proponents* a cost-effective and time-delimited process for demonstrating compliance with *RFS Requirements*.

REQUIREMENTS:

A3-1 Initial Project Submission Documents

A. All *Initial Project Submission Documents* shall be filed with the *RFSMU*, accompanied by:

1. its dated notice that it is filing the *Initial Project Submission Documents*; and
2. all fees required in accordance with Section A8-B1.

B. Within 15 business days of its receipt of the *Initial Project Submission Document* filing, the *RFSMU* shall provide and post a checklist (see Exhibit F : “*Project Submission Checklist*”) showing which *Requirements* have been submitted and which have not. The *Project Submission Checklist* shall be updated at 30-day intervals.

A3-2 Final Project Submission Documents

A. All *Final Project Submission Documents* shall be filed with *RFSMU*, accompanied by:

1. its dated notice that it is filing the *Final Project Submission Documents*; and
2. all fees required in accordance with Section A8-B2.

B. Within 20 business days of the filing of the *Final Project Submission Document*, the *RFSMU* shall provide and post a checklist (see Exhibit F: “*Project Submission Document Checklist*”) showing which *Requirements* have been met and which have not. The *Project Submission Document Checklist* shall be updated at 30-day intervals.

A3-3 Validation Certificate. Within 20 business days of completion of the *Final Project Submission Documents* in accordance with *RFS Requirements*, the *RFSMU* shall issue a *Validation Certificate*, which shall be posted on *The RFS Website*. The *Validation Certificate* shall state the *Validation Date* (i.e. the date on which the *Final Project Submission Documents* were completed).

A3-4 Site Visits

A. *Assigned Experts, Referees.* Upon reasonable notice in advance to *Project Proponent*, any *Assigned Expert* or *Referee* may visit the site, if in its sole judgment, such a visit is necessary for the performance of its duties under *The*

RFS. By filing its *Initial* and *Final Project Submission Documents*, the *Project Proponent* agrees to fully cooperate with the *Expert* in affording her or him access to the *Project Area* as requested for the time required to complete its inquiry. The cost and expense of such a site visit shall be borne by the *Project Proponent*, paid in advance upon receiving a joint notice from the *Expert* and the *RFSMU* confirming the site visit, its duration, and its expense.

B. The *Project Proponent* may request that a site visit be conducted by an *Assigned Expert* or *Referee* at a mutually acceptable time. The cost and expense of such Proponent-initiated site visits shall be mutually agreed upon and borne by the *Project Proponent*, paid in advance.

A4: MONITORING, REPORTING, and VERIFICATION (MRV)**OBJECTIVES:**

Provide a credible and cost-effective method for *Project Proponents* to verify their CO₂e reductions and compliance with biodiversity and *QOL Requirements* entitling them to *RFS Credits*.

Adhere to strict timelines for *Project Proponent* verification review requests.

RATIONALE:

The *Requirements* of this Section are designed to both:

Assure *Rightsholders* and the general public that any *Project* that earns *RFS Credits* has complied with *RFS Requirements* with respect to its CO₂e reductions, and compliance with biodiversity and *QOL* obligations.

Afford *Project Proponents* a cost-effective and time-delimited process for demonstrating compliance with *RFS Requirements*.

REQUIREMENTS:

A4-1 Monitoring and Reporting protocols are described in their respective *Requirement* sections and shall be complied prior to submission of any *Verification Request*.

A4-2 Verification

A. *Verification Request*.

1. *Project Proponent* shall file a *Verification Request* that includes all documents necessary for *Credit Verification* according to the

Requirements of all Sections of *The RFS* (see Exhibit A, Project Submission Document List). The *Verification Request* shall not be considered filed until all necessary documents have been provided; partial submissions are not permitted.

2. The *Verification Request* shall state the *Verification Date*, which is the date identified by the *Project Proponent* as the date on which the *Credit Verification* shall be deemed to have occurred for purposes of calculating *RFS Credits*, *Quality of Life* compliance, *Biodiversity* compliance, and other related matters.

B. *Verification*

1. The *RFSMU* shall post the *Verification Request* within 15 business days of its receipt.

2. A 30-day *Public Comment Period* shall commence on the date the *Verification Request* is posted.

3. In the event of a *Commentary Dispute*, the provisions of A2-2 (*Commentary Dispute Resolution*) shall apply.

4. Within 10 business days of filing of the *Verification Request*, the *RFSMU* shall appoint the relevant *Assigned Experts* from the *Expert List* to authenticate the *Verification Request*.

5. Within 15 business days of her/his appointment, the *Assigned Expert* shall issue her/his *Verification Finding* which shall be posted within 10 business days.

6. *Project Proponent* shall have 15 business days to accept or dispute the *Verification Finding* in writing in whole or in part.

a. If the *Project Proponent* accepts the *Verification Finding* in whole, the number of *RFS Credits* described in the *Verification Request* shall be issued in accordance with the provisions of Section A6.

- b. If the *Project Proponent* disputes the *Verification Finding* in whole or in part, it shall specify its differences with the *Verification Finding* in a *Verification Finding Dispute Notice* filed within 10 business days of the posting of the *Verification Finding*.
- c. Within 10 business days of the filing of a *Verification Finding Dispute Notice*, a *Referee* shall be appointed from the *Expert List*.
- d. Within 15 business days of her/his appointment, the *Referee* shall review the *Verification Request* documents and the *Verification Finding* and render its decision in a *Verification Final Report* that shall choose between the *Verification Finding* or the amounts or positions in the *Verification Finding Dispute Notice*.

C. The *Verification Certificate* shall be issued within 10 business days of:

- a. the *Verification Finding* if it is accepted in whole by the *Project Proponent*; or
- b. *Verification Final Report* if a *Verification Finding Dispute Notice* had been filed.

A4-3 Site Visits:

A. *Assigned Experts, Referees.* Upon reasonable notice in advance to *Project Proponent*, any *Assigned Expert* or *Referee* may visit the site, if in its sole judgment, such a visit is necessary for the performance of its verification duties under *The RFS*. By filing its *Verification Request*, the *Project Proponent* agrees to fully cooperate with the *Expert* in affording her or him access to the *Project Area* as requested for the time required to complete its inquiry. The cost and expense of such a site visit shall be borne by the *Project Proponent*, paid in advance upon receiving a joint notice from the *Expert* and the *RFSMU* confirming the site visit, its duration, and its expense.

B. The *Project Proponent* may request that a site visit be conducted by an *Assigned Expert* or *Referee* at a mutually acceptable time. The cost and expense of such Proponent-initiated site visits shall be mutually agreed upon and borne by the *Project Proponent*, paid in advance.

A4-4 Suspended Verification (QOL; Biodiversity). When *Suspended Verifications* arise pursuant to Sections S3-2E, B1-4E, or such other section as may provide therefore, *Verification Certificates* shall be issued that specify the number of verified credits that have been suspended.

A5: CREDITING PERIOD, PROJECT PERIOD, PERMANENCE PERIOD**OBJECTIVES:**

Define *Crediting Periods*, *Project Periods*, and *Permanence Periods* and clarify the differences among them.

Create a standardized protocol for identifying when a *Project* shall be considered terminated.

RATIONALE:

Crediting Periods, *Project Periods*, and *Permanence Periods* can overlap in duration and in their meanings. The *Requirements* are designed to clarify these differences.

In order to apply *Post-Project Liability* mechanisms, it is essential to be able to objectively identify the date on which the *Project* has been terminated. Protocols have been established in the *Requirements* below to accomplish that goal.

REQUIREMENTS:**A5-1 *Crediting Period***

A. The *Crediting Period* is defined as the period between *Verification Dates*. It is the period for which *RFS Credits* have been issued pursuant to any given *Verification Request*. Thus, the duration of a *Crediting Period* can vary depending on the interval between *Verification Requests*.

B. There is no limit on the number of *Crediting Periods* that may occur during a *Project Period*.

A5-2 Project Period: A term of years beginning on the *Project Start Date* and ending on the *Project Termination Date*.

A. *Project Start Date*: The 61st day following the *Project Validation Date*.

B. *Project Termination*

1. *Project Termination Date*

a. The *Project Proponent*, in its sole discretion, shall designate the *Project Termination Date* in its *Final Project Submission Documents* by providing a *Termination Date Notice* therein. Such designation shall be binding unless and until modified pursuant to A5-2-B1b below.

b. *Revised Project Termination Date*: At any time during the *Project Period*, the *Project Proponent* may revise its original designation of the *Project Termination Date* by issuing a revised *Termination Date Notice*, provided the revision:

1. is in writing executed in the form required by this section;
2. proposes a *Revised Project Termination Date* that is more than 12 months after the date the notice is given;
3. is accompanied by documentary evidence that prior to the giving of the notice, all *Rightsholders* were notified of the *Revised Project Termination Date* in the manner that would be required by law if a written agreement had been entered into between *Project Proponent* and the *Rightsholder*; and
4. is accompanied by a *Representation* by *Project Proponent* that the change in the *Project Termination Date* does not violate any existing agreement to which it is a party or any law or regulations.

2. *Project Abandonment – Imputed Project Termination Date.* If the *Project* is abandoned prior to the *Project Termination Date*, the *Project Termination Date* shall be automatically revised to the date that is 12 months following *Project Abandonment (Imputed Project Termination Date)*. *Project Abandonment* shall be deemed to have occurred upon either of the following:

- a. no *Credit Verifications* for a continuous 5 year period;
- b. documentary evidence that for 12 continuous months the *Project* has not been actively managed or that management is not responsive to communications from the *RFSMU* regarding *Requirements* compliance; or fails to respond to properly issued communications;
- c. bankruptcy or dissolution (or death) of *Project Proponent* without lawfully appointed successor.

A5-3 Permanence Period: 100 years from the *Project Start Date*.

A6: CREDIT REGISTRATION, TRANSFER, AND RETIREMENT

OBJECTIVES:

Provide a reliable and transparent method for registering, transferring, and retiring *RFS Credits*.

RATIONALE:

Transparency, *The RFS Website* and its transfer and registration *Requirements* are the key ingredients in **The Rainforest Standard's** system for registering *RFS Credits*, monitoring their provenance (chain of custody), and verifying their retirement.

REQUIREMENTS:

A6-1 Credit Registration [This section is dependent in part on the method for credit registration that is adopted after study of registry options.]

A. [Each *Project* will have an account to which *RFS Credits* when earned and issued will be placed, i.e. "registered." The credits will be numbered, and posted on *The RFS Website* and the *Project Webpage*.]

B. [The system of credit accounting may vary with the type of *Full Replacement* mechanism the *Project Proponent* has elected to fulfill the *Requirements* of ER5; the calculations should identify the *Full Replacement* mechanism and the extent to which Verified Credits are transferable. For example, *Ton-Year Accounting* (ER5-5), the *Permanence Trust Fund* (ER5-6), and a *Qualified Buffer System* (ER5-7) will have verified credits that are not transferable.]

C. [Suspended Credits shall be noted, along with any changes in their status.]

A6-2 Credit Transfer

- A. No transfer of a *RFS Credit* is deemed valid unless certified by the *RFSMU* unit designated for regulating *Credit Transfers*.
- B. All verified credits will be numbered, even if suspended or not transferred.
- C. The *Project Webpage* shall identify the initial holder of every numbered *RFS Credit* and subsequently every Transferor and Transferee (or an *Offset Compliance Authority*) for the numbered *RFS Credit*.
- D. Any Transferee should verify that that the *Credit Transfer* is valid and that the Transferee is a bona fide purchaser for value by checking the Credit number on the *Project Webpage* and determining that its Transferor is the most recent Transferee shown on the Webpage.
- E. *Credit Transfer Report*. For a *RFS Credit Transfer* to be deemed effective, within 3 business days of the effective date of transfer, Transferor and Transferee must file a report with the designated *RFSMU* unit stating: the number of *RFS Credits* transferred, the date of transfer, and the full value in cash and kind of the transfer. The *Credit Transfer Report* shall be in the form provided in Template A6-2, signed by both Transferor and Transferee with the requisite *Representations*. The *Credit Transfer Report* shall be posted on the *Project Webpage* and noted on the *Project Website* within 10 business days of its receipt by the *RFSMU*. Alternatively, if the registry is electronic, the *Credit Transfer Report* may be generated instantaneously via the Registry.

A6-3 Credit Retirement

A. Voluntary markets. When a transferee wishes to claim that it has voluntarily offset CO₂e emissions, energy use, or other environmental degradation of one sort or another, it may retire its credits accordingly by notifying the designated *RFSMU* unit of its intention via the *Credit Retirement Form*. This information shall be posted on the *Project Webpage*. No further transfer of those credits will be permitted. Alternatively, if the registry is electronic, an electronic equivalent of the *Credit Retirement Form* may be generated automatically via the Registry.

B. Compliance markets. When a transferee uses a *RFS Credit* to offset CO₂e emissions in accordance with the regime of an *Offset Compliance Authority*, it shall also retire its credits accordingly by notifying the responsible *RFSMU* unit of its intention via the *Credit Retirement Form*. This information shall be posted on the Webpage. No further transfer of those credits shall be permitted. Alternatively, if the registry is electronic, an electronic equivalent of the *Credit Retirement Form* may be generated automatically via the Registry.

A6-4 [The Business development models will determine to what extent *RFS Credits* can be made fungible with AAU, CER, ERU, RMU, TCER, ICER, or other tCO₂e equivalent credits issued by an internationally recognized compliance market.]

A7: DEFAULTS AND REMEDIES

OBJECTIVES:

Prevent inaccurate or incomplete information being used as the basis for *Project* validation, verification, or the issuance of *RFS Credits*.

RATIONALE:

The *RFS* distinguishes inadvertent or unintentional error in transmitting information necessary to fulfill *RFS Requirements* from either negligent or intentional misstatements or direct violations of commitments, agreements, or understandings set forth in the *Project* documents. While both are considered Defaults, different penalties and remedies are applied for those considered Minor vs. those considered Major.

REQUIREMENTS:

A7-1 Minor Default

A. Defined as:

1. Substantiation for *Requirement* found to be unintentionally inaccurate. For example, there is a reference to published data and the data turn out to be inaccurate. Other examples include typographical errors and other inadvertent errors that are just as likely to disadvantage a *Project Proponent* as advantage it.
2. Failure to pay fees or other payments including penalties.

B. *Minor Default* Remedy

1. *Requirement* substantiation corrected
2. Fees and any penalty paid.

C. *Minor Default* Penalty. Administrative and *Assigned Expert* costs and expenses reimbursed.

A7-2 Major Default

A. Defined as:

1. Negligent or intentional misrepresentations or misstatements;
2. Violations of commitments, agreements, or understandings set forth in the *Project* documents
3. Failure to correct a *Minor Default* within 30 days of notice thereof.

B. *Major Default* Remedy:

1. Misrepresentations or misstatements are corrected.
2. Payment of any Financial / Credit Penalty required under A7-2C.

C. *Major Default* Penalty:

1. *Verification Requests* will not be processed while a *Major Default* is outstanding and uncured.
2. Any benefits received by the *Project Proponent* from the *Major Default* must be paid over to the *RFSMU* within 90 days of assessment.
3. In the case of a *Major Default* for which there is no cure (for example, *De Facto Rightsholders* do not receive promised benefits and are no longer available), no *Verification Requests* can be made for a period of 3 years from the date the *Major Default* is discovered and noted on the *Project Webpage*.
4. In the event a second *Major Default* occurs:
 - a. the *Project* validation shall be cancelled,
 - b. any earned *RFS Credits* that have not been transferred will be transferred to the *RFSMU* as liquidated damages, and

c. the *Project* shall be deemed terminated as of the date of the discovery of the second *Major Default*.

5. All *Major Defaults* shall be posted on *The RFS Website* and the *Project Webpage*.

A8: FEES**OBJECTIVES:**

Costs of *Project* development should be transparent and predictable costs for *Project Proponents*.

The *RFSMU* should be self-sustaining.

RATIONALE:

Operating expenses of the *RFSMU* must be covered by operating income.

REQUIREMENTS:**A8-1 Fees** [To be determined.]

A. Review of *Initial Project Submission Documents*

B. Review of *Final Project Submission Documents*

C. *Referees and Assigned Experts*

D. *Validation Certificate*

E. Verification Review

F. *Verification Certificate*

G. *Project Website Maintenance*

H. Credit Issuance

I. *Credit Transfer*

J. *Credit Retirement*

K. Credit Account Maintenance

A8-2 Method of Payment [To be determined. Under consideration: cash or cash equivalents, credits held in accounts, future credits, etc.]

A9: MISCELLANEOUS

REQUIREMENTS:

A9-1 Any institution authorized to hold any assets to be distributed under a *Rightsholder Benefit Plan* or *Master Rightsholder Benefit Plan* pursuant to Section S2-7 shall meet the following minimum financial *Requirements*:

A. [To be determined]

GLOSSARY	
TERM	DEFINITION
<i>Aboveground Carbon Emission Change</i>	ER3-1E. A calculation comparing <i>Observed vs. Expected Carbon Stock Change</i> of <i>Aboveground Tree Biomass</i> , after deducting the affects of <i>Leakage</i> . This is an estimate of C, not CO ₂ e.
<i>Aboveground Tree Biomass</i>	All natural aboveground living <i>Tree Biomass</i> that is an integral part of trees that can be obtained by their harvest (e.g. timber, branches, foliage, bark). Excluded are all forest products that cannot be obtained by the harvest of trees (e.g., grasses, soil, dead wood, nuts and seeds, berries, mushrooms, medicinal plants, and all animal biomass). Excluded is any biomass known to have developed as the result of plantings by humans.
<i>Acceptability, Conditions for</i>	ER2-2. CfA are the conditions a proposed protocol or methodology has to meet to be an Acceptable option in those cases where <i>The RFS</i> specifies that an option can be chosen if it meets certain criteria.
<i>Activity-shifting Leakage</i>	See ER4.
<i>Additional</i>	A <i>Project</i> is <i>Additional</i> when it has passed the three <i>RFS</i> tests of <i>Additionality</i> : the <i>Legal Additionality Test</i> , the <i>Economic Incentive Test</i> , and the <i>Existing Incentives Test</i> ; or if <i>The RFS</i> excludes the <i>Project</i> from a test. <i>Project</i> emission reductions are <i>Additional</i> if they are below the baseline <i>Project</i> emissions established in accordance with Section ER2.
<i>Additionality</i>	ER1 (<i>Project Additionality</i>); ER2 (<i>Emission Reduction Additionality</i>). The quality of being <i>Additional</i> .
<i>Alternate Baseline Methodology Report</i>	ER2-2A
<i>Assigned Expert</i>	Ibid. See A2; Exhibits D and E. An expert at the top of <i>The RFS Expert List</i> with the minimum qualifications required for the task required by the relevant section.
<i>Automatic Review</i>	A2-4. A review of <i>Project Proponent Expert</i> submission required automatically; a <i>Commentary Dispute</i> is not needed to generate the <i>Expert Review</i> .
<i>Average Endowment Rate of Return</i>	ER5-5 A rate that is the highest of benchmark rates selected by <i>RFSMU</i> and posted on <i>The RFS Website</i> . Rates may be country-specific. The rate for any given calendar year shall be determined based on either 3-year rolling average for immediately prior years, or as of: the first day of December of the immediately preceding year if the benchmark specifies a rate on a given day.

<i>Belowground Tree Biomass</i>	ER3: Root systems of <i>Aboveground Tree Biomass</i> . Excludes soil.
<i>Belowground Adjustment Report</i>	ER3-4: A report submitted by <i>Proponent Expert</i> that requests an increase in the standardized addition for Belowground Biomass.
<i>Benchmark Eligible Forested Land Map</i>	IC1-4
<i>Biodiversity</i>	B1: An umbrella concept that refers to two of the three levels of biological organization: the species level, and the ecosystem level. The genetic level, generally considered one of the three elements of biodiversity, is excluded from <i>The RFS</i> operational definition because changes at that level are impracticably fine-grained in the context of forest projects.
<i>Biodiversity Benchmark, Project</i>	See <i>Project Biodiversity Benchmark</i>
<i>Biodiversity Recovery Plan</i>	B1-5C Either a <i>Habitat Recovery Plan</i> or a <i>Ecological Indicator Group Recovery Plan</i> .
<i>Biodiversity Recovery Plan Excuse</i>	B1-5F.
<i>Biodiversity Suspension Appeal</i>	B1-5F.
<i>Buffer System, Qualified</i>	ER5-6; see also, <i>RFS Interactive Permanence Tool</i>
<i>Carbon (C)</i>	The element Carbon. Atomic number 6.
<i>carbon dioxide equivalent (CO₂e)</i>	<i>Carbon (C)</i> * 3.67. One ton of C = 3.67 tCO ₂ e.
<i>Carbon Emission Change: Gross; Net</i>	ER3-1
<i>Carbon Stock Adjustment</i>	ER3-1J. An adjustment every 5 years to account for degradation that may not have been picked up if the remote-sensing resolution used for intervening verifications was greater than 1m.
<i>Carbon Stock Benchmark</i>	ER3-1, Step 1. An estimate of C in <i>Aboveground Tree Biomass</i> in <i>Project Area's Forested Land</i> on the <i>Project Start Date</i> .
<i>Carbon Stock Expert</i>	ER3-1C2 Step 3; Exhibit D, Exhibit E
<i>Carbon Verification Map</i>	ER3-1C1a. A map showing the <i>Eligible Forested Lands</i> used to calculate the <i>Observed Carbon Stock Change</i> between <i>Verification Dates</i> .
<i>Commentary Concurrence</i>	A2-1C
<i>Commentary Dispute</i>	A2-1C
<i>Commentator</i>	A2-1
<i>Commentator Response</i>	A2-2B
<i>Community Document</i>	A written document representing the decision of a community with respect to any issue in question signed by those who have the traditional, customary, and legal authority to do so. The document must provide satisfactory

	evidence that every individual on whose behalf the document purports to speak acknowledges being offered a full opportunity to understand the content of the document, to ask any questions they might have about the contents of the document, to receive replies to such questions they deem adequate, and to provide his or opinions about the content. The document must represent that each member of the community acknowledges that the document reflects the decisions of the community with respect to the contents of the document including but not limited to any agreements, understandings, promises, <i>representations</i> , or other commitments. Such acknowledgement shall be held to the same standard that applies to <i>Free Prior Informed Consent</i> . The document shall be in language(s) accessible to all individuals in the community.
Concessionaires	IC1-2A1c
Contiguous Use Method	ER4-5A. The general method for calculating <i>Market Leakage</i>
Credit Deficit Reduction	ER5-5F
Credit Retirement	A6-3
Credit Retirement Form	A6-3
Credit Transfer	A6-2
Credit Transfer Report	A6-2
Credit Verification	The verification of <i>RFS Credits</i> permitting their issuance and transfer, provided they have not been suspended in accordance with the conditions in S3-2E, B1-4, or A4-A1
Crediting Period	A5-1. The period between <i>Verification Dates</i>
Deadwood Adjustment	ER3-1G
Deadwood Adjustment Report	ER3-4: A report submitted by <i>Proponent Expert</i> that requests an increase in the standardized addition for <i>Deadwood Biomass</i> .
Deadwood Biomass	Biomass of formerly living <i>Aboveground Tree Biomass</i> still present in <i>Project Area's Eligible Forested Land</i> .
De Facto Rightsholder	Defined in IC1-2C2,
De Facto Rightsholder Claim	S1-5 and S1-6
De Facto Rightsholder Claim Period	S1-5
De Facto Rightsholder List	S1-1
De Facto Rightsholder Notice	S1-2 A notice prepared and published by the <i>Project Proponent</i> listing all <i>De Facto Rightsholders</i> according the <i>De Facto Rightsholder List</i> to be submitted as part of the <i>Initial Project Submission Documents</i> .
De Facto Rightsholder Notice Period	S1-2
De Jure Rightsholder	Defined in IC2-1C1
Default, Major	A7-2
Default, Minor	A7-1
Depositary	ER5-5A. An entity that holds issued <i>RFS Credits</i> on behalf of

	the <i>Project Proponent</i> in accordance with the rules and <i>Requirements of The RFS</i> . The <i>Depository</i> shall have a <i>Financial Strength Rating</i> of A.
Depository Statement	ER5-5A. A statement in accordance with Template ER5-5_A.
Diagnostic of Rural Participation	S3-1B2b. {Full definition required.}
Documented Prospective Removals	ER2-1. Activities that have documented evidence of intent, capacity, and authority to remove <i>Aboveground Biomass</i> .
Documented Prospective Removals Baseline	ER2-1A. Expected rate of emissions of CO ₂ e resulting from <i>Documented Removals</i> of <i>Tree Biomass</i> in the <i>Eligible Forested Land</i> in the <i>Project Area</i> throughout a <i>Crediting Period</i> .
Documented Prospective Removals Justification	ER2-1A1. Documentary support for the <i>Documented Prospective Removals Baseline</i> .
Documented Prospective Removals Map	ER2-1A2. A map of the prospective <i>Tree Biomass</i> removals superimposed on the <i>Forested Land Map</i> .
Documented Prospective Removal Timeline	ER2-1A3. A timeline for all <i>Documented Prospective Removals</i> that is consistent with the <i>Documented Prospective Removals Justification</i> .
Drivers Of Deforestation	ER1 Human activities that increase the threats of deforestation such as highway construction or expanding farming and ranching activity
Ecological Indicator Groups	Generally, ecological indicator groups are broad taxa or guilds that are sensitive to particular environmental changes and are likely to be consistently present in the <i>Project Area</i> throughout the <i>Project Period</i> .
Ecological Indicator Group Recovery Plan	B1-5C2.
Ecological Indicator Group Species	A subset of species chosen from among the <i>Ecological Indicator Groups</i> used to monitor changes in biodiversity. B1-2E
Ecological Indicator Groups Species Benchmark	Data describing the relative abundance of Ecological Indicator Group Species noted to be present as of <i>Project Start Date</i> .
Economic Incentive Test	ER1-2. One of three tests of <i>Project Additionality</i> . The others are the <i>Legal Additionality Test</i> and the <i>Existing Incentives Test</i> .
Eligible Forested Land	Any <i>Minimum Mapping Unit</i> on a <i>Benchmark Eligible Forested Lands Map</i> that has more than 30% of its cells identified as having <i>Aboveground Tree Biomass</i> cover. Because biomass planted by humans is excluded from the definition of <i>Aboveground Tree Biomass</i> , any <i>Aboveground Tree Biomass</i> known to have been planted by humans is defined as <i>Ineligible Forested Land</i> . In addition, in order to conform to <i>Legal Additionality Requirements</i> , all areas on the <i>Project Land Tenure Map</i> with laws, regulations or agreements that prohibit <i>Tree Biomass</i> removal entirely are

	defined as <i>Ineligible Forested Land</i> .
Emission Reduction Additionality	ER2 Demonstrated when carbon emission reductions exceed what would have occurred in the absence of the <i>Project</i> .
Existing Incentives Test	ER1-3 One of three tests of <i>Project Additionality</i> . The others are the <i>Legal Additionality Test</i> and the <i>Economic Incentives Test</i> .
Expert	See A2-5. An individual or firm that experts that has met the minimum qualifications associated with the task to which an <i>Expert</i> is required to be assigned
Expected Carbon Stock Change	ER3-1 Step 2. A calculation of <i>Aboveground Tree Biomass Carbon Stock Change</i> .
Failure Exemption	B1-5B5.
Failure Exemption Appeal	B1-5B5a
Failure Exemption Excuse	B1-5B5b
Failing Ecological Indicator Group	B1-5B5. Any <i>Ecological Indicator Group</i> in which 50% or more of the <i>Ecological Indicator Group Species</i> are <i>Failing Species</i> according to a <i>Project Biodiversity Report Card</i> .
Failing Species	B1-5B4. The absence of a <i>Ecological Indicator Groups Species</i> or, with respect to the <i>Project Biodiversity Benchmark</i> , a decline in relative according to the <i>Project Biodiversity Report Card</i> .
Final Project Submission Date	The date set forth in the dated notice of filing required under A3-2A.
Final Project Submission Documents	See Exhibit A. Those documents listed in <i>Requirements</i> that must be submitted in accordance with the final <i>Project Validation Protocol</i> .
Financial Statement Preparer	A firm or individual authorized by a <i>governmental authority</i> with jurisdiction to audit financial statements that has prepared the relevant <i>Project Proponent</i> or Developer financial statements.
Financial Strength Rating	<i>Financial strength rating</i> according to the criteria used by A.M. Best (or other firm(s) as identified by <i>The RFSMU</i> from time to time) or equal in the country of the <i>Project</i> .
Final Submission Consultation	S2-1-F2
Forest Condition	IC1-4E. Whether the forest is logged, mature, regrowing, or any other category specified in Schedule IC1-4E from time to time.
Forest Ecologist, Proponent	B1-5. See Exhibit E for qualifications
Forest Dwellers	IC1-2A3
Forest Ecology Expert, Assigned	B1-2, B1-4, B1-6. See Exhibit E for qualifications
Forest Resources	IC1-3B. Timber; Woody Products, dead or alive; minerals; organic or inorganic materials that can be used in any human activity.
Forest Type	IC1-4D IC1-4E. Whether the forest is riparian, moist, dry, or any other category specified in Schedule IC1-4D from time to

	time
Forest Type*Condition Stratification Matrix	IC1-4F
Forest Users	IC1-2A3. Those using <i>Forested Lands</i> for: subsistence harvesting of <i>Aboveground Tree Deadwood Biomass</i> ; subsistence farming; subsistence extractions of organic or inorganic materials; or similar harvesting of <i>Forested Land</i> products or resources.
Forestry Mapping Expert	IC1-5A6. See Exhibit E for qualifications.
Forestry Valuation Report	ER1-2A1. A report by a <i>Proponent Land Use Expert</i> to establish a component of the Economic Incentives Test for <i>Additionality</i> .
Free Prior Informed Consent (FPIC)	S2-9. Evidence in accordance with S2-9B that <i>Rightsholders</i> have had sufficiently accurate and complete information in a timely and culturally appropriate manner to allow a reasonable person to make an informed decision in connection with any <i>consent</i> , acknowledgment, or acceptance required of the <i>Rightsholder</i> .
Full Replacement	ER5. The operational definition of “ <i>Permanence</i> ”. The obligation to replace all issued <i>RFS Credits</i> that are “reversed” by the voluntary removal of <i>Tree Biomass</i> whose non-removal was the basis of issuance of <i>RFS credits</i> .
Full Replacement Alternative	ER5-8
Governmental Authority (Governmental Authorities)	Any government or administrative agency with jurisdiction over the activities in question in the geographical area in which the <i>Project</i> is located.
Governmental Removal Baseline	The expected annualized rate of reduction in <i>Tree Biomass</i> carbon stock in the <i>Project Area’s Eligible Forested Land</i> published by a duly authorized governmental unit (see ER2-2).
Ground-truthing	B1-1A.
Gross Carbon Emission Change	ER3-1D. Calculation of change in estimated C in <i>Aboveground Tree Biomass</i> before deducting for <i>Leakage</i> .
Habitat Recovery Plan	B1-5E1. A plan for restoring habitat to benchmark levels.
Habitat-Type	B1-1A. A term used in the <i>Biodiversity</i> section to signify <i>Forest Types</i> by <i>Forest Condition</i> identified and mapped for the <i>Benchmark Project Eligible Forested Map</i> .
Habitat-Type Benchmark	Data describing (at a minimum) the three variables listed in subsection B1-1A deemed to be present as of <i>Project Start Date</i> .
Imputed Project Termination Date	The date upon which a <i>Project</i> is deemed abandoned according to criteria in subparagraph A5-2B2.
Indigenous Peoples	The definition of <i>Indigenous Peoples</i> has varied historically. The <i>RFS</i> recognizes as <i>Indigenous Peoples</i> those that are: (a) defined or described as such by a <i>Governmental Authority</i> , or (b) consistent with the definition of <i>Indigenous Peoples</i> by all such <i>indigenous peoples</i> in any country.

<i>Ineligible Forested Land</i>	(a) Any <i>Minimum Mapping Unit</i> on a <i>Benchmark Forested Lands Map</i> that has less than 30% of its cells identified as having <i>Aboveground Tree Biomass</i> cover. (b) In addition, in order to conform to <i>Legal Additionality Requirements</i> , all areas on the <i>Project Land Tenure Map</i> with laws, regulations or agreements that prohibit <i>Tree Biomass</i> removal entirely shall be defined as <i>Ineligible Forested Land</i> . (c) Because biomass planted by humans is excluded from the definition of <i>Aboveground Tree Biomass</i> , any trees, shrubs or other <i>Aboveground Tree Biomass</i> known to have been planted by humans is defined as <i>Ineligible Forested Land</i> .
<i>Initial Conditions</i>	IC1 – IC3. Refers generally to conditions at the <i>Project Area</i> when project development is initiated: including its legal boundaries, tenure, <i>Project Participants</i> , activity, and <i>Eligible Forested Lands</i> conditions on the <i>Project Submission Document Date</i> .
<i>Initial Project Submission Date</i>	The date set forth in the dated notice of filing required under A3-1A.
<i>Initial Project Submission Document</i>	Any document listed in Exhibit A and throughout <i>The RFS</i> that must be submitted as part of the <i>Initial Project Submission Document</i> package set forth in A3-1.
<i>Intermediary</i>	ER5-3. Any individual or entity that receives consideration for its participation in the transfer of a credit from a <i>Project Participant</i> to an <i>Offset Purchaser</i> , including a seller's agent, attorney, broker, NGO, or investor. Specifically excluded are <i>governmental authorities</i> that merely authorize the transfer or tax the transfer; however, a <i>governmental authority</i> that actively participates in a transfer and receives consideration therefore is considered to be an <i>Intermediary</i> .
<i>Involuntary Removal Report</i>	A report by a <i>Proponent Forest Ecologist</i> in accordance with ER5-9-B1(b) in support of the claim that a removal is involuntary
<i>IPCC</i>	Intergovernmental Panel on Climate Change
<i>Leakage</i>	ER4. Activities that move beyond the <i>Project Area</i> boundaries as the result of actions inside the <i>Project Area</i> . When used alone, the term refers to the cumulative effects of both <i>Activity-shifting</i> and <i>Market Leakage</i> .
<i>Leakage Alternative Deduction Report</i>	ER4-6. A report by the <i>Proponent Leakage Expert</i> in support of the claim that actual <i>Leakage</i> (either <i>Activity-shifting</i> or <i>Market</i> or both) will be lower than their standard deductions.
<i>Leakage Deduction</i>	ER3-1E Step 5. Multiply applicable <i>Leakage</i> rate times <i>Gross Carbon Emission Change</i> to arrive at the <i>Leakage Deduction</i> .
<i>Leakage Expert, Proponent</i>	ER4-6
<i>Legal Additionality Test</i>	ER1-1 One of three tests of <i>Project Additionality</i> . The others are the <i>Economic Incentive Test</i> and the <i>Existing Incentives Test</i> .
<i>Legal Opinion</i>	All <i>Legal Opinions</i> must comply with the following:

	<p>1. Lawyer Qualifications:</p> <ul style="list-style-type: none"> a. Education: graduate of accredited law school. b. Experience: Admitted to practice for 10 years in the legal jurisdiction in which the <i>Project</i> is located, with a practice (i) in the field for which the Opinion is rendered, and (ii) in the geographical area in which the <i>Project</i> is located. b. Position: partner in a law firm consisting of at least 3 partners c. CV must be provided <p>2. Form of opinion</p> <ul style="list-style-type: none"> a. Unconditional opinion required b. No disclaimers <p>3. Public disclosure on <i>RFS Website</i> and <i>Project Webpage</i> of:</p> <ul style="list-style-type: none"> a. name of attorney b. name of firm c. CV of attorney d. CV of firm e. the <i>Legal Opinion</i> contents
Life plan	A formalized document produced by an Indigenous People or a community pursuant to the written <i>Requirements</i> of an organization of <i>Indigenous Peoples</i> and/or a community which organization is recognized by a <i>Governmental Authority</i> .
Local Zonation	Actual practices in the <i>Project Area</i> . IC1-3; S1.
Major Default	A7-2 describes events defining a <i>Major Default</i> .
Market Leakage	ER4 <i>Leakage</i> from the demand for the product no longer produced in the <i>Project Area</i> .
Market Leakage Report	ER4-4B
Master Rightsholder Benefit Plan	S2-5. A document provided by <i>Project Proponent</i> consolidating all <i>Rightsholder Benefit Plans</i> .
Minimum Mapping Unit (MMU)	A square area not greater than 900 square meters (30m*30m).
Minor Default	A7-1 describes events defining a Minor Default .
Nationally Appropriate Mitigation Action (NAMA)	IC3-2E Policies and actions undertaken by a <i>Governmental Authority</i> as part of a national commitment to reduce greenhouse gas emissions.
Natural Fire Report	ER5-10A. Report from <i>Proponent Forest Ecologist</i> that in her/his professional opinion the burning has the attributes of accidental rather than human-induced burning.
Net Carbon Emission Change	ER3-1H. A calculation of <i>Observed vs. Estimated Carbon Stock Changes</i> in C of <i>Tree Biomass</i> (<i>Aboveground</i> , <i>Belowground</i> , and deadwood), net of <i>Leakage</i> . This is an estimate of C, not CO ₂ e.
Observed Carbon Stock	ER3-1C1: Carbon stock estimate as of <i>Verification Date</i> .
Observed Carbon Stock Change	ER3-1C2. Difference between <i>Observed Carbon Stock</i> on the a <i>Verification Date</i> from the <i>Observed Carbon Stock</i> on the

	immediately preceding <i>Verification Date</i>
Offset Purchaser	A buyer that uses the credit as an offset in a compliance system. ER5
Participant Acknowledgement	A Requirement that each <i>Project Participant</i> other than a <i>Governmental Authority</i> acknowledge certain facts specified in subsection S2-3.
Participatory Consultations	Workshops or meetings (or other forms of communication sanctioned by authorized members of the <i>Rightsholder</i>) publicized and open to all to inform all members of each <i>Rightsholder</i> of certain matters related to the <i>Project</i> as required by S2-1.
Participatory Rural Appraisal	S3-1B2b [To be defined].
Peer-reviewed Literature	An article published in a scholarly journal that, prior to acceptance for publication, requires review by independent scholars who are experts in the field.
Permanence	ER5 (<i>Requirements</i>). Operationalized to mean the <i>Full Replacement</i> of issued credits in the event of a <i>Reversal</i> during the <i>Permanence Period</i> . See <i>Reversal</i> and <i>Full Reversal Replacement</i>
Permanence Option Template	See Section ER5 and Template ER5.
Permanence Period	100 years from a <i>Project Start Date</i>
Permanence Trust Fund	ER5-6
Permissible QOL Baselines	S3-1B2 A baseline established to measure changes in Quality of Life supported by a <i>QOL Validation Certificate</i> provided by the <i>Proponent QOL Expert</i>
Pre-Submission Consultation	A set of two <i>Participatory Consultations</i> taking place prior to the <i>Initial Project SubmissionDate</i> in accordance with S2-1F1,
Post-Project Liability	ER5 Throughout the <i>Permanence Period</i> , liability for <i>Full Replacement</i> at the end of the <i>Project Period</i> , i.e. on the <i>Project Termination Date</i>
Principle of Inclusion	The principle that anyone in a position on the ground to remove <i>Tree Biomass</i> from the <i>Project Area Forested Lands</i> should be a <i>Project Participant</i> and engaged throughout the <i>Project Period</i> . IC2;
Principle of Participatory Consultation	The principle that all <i>Project Participants</i> are necessary parties to <i>project</i> planning and implementation throughout the life of the <i>Project</i> . IC2
Project	The set of activities within a <i>Project Area</i> as proposed by a <i>Project Proponent</i> and validated under <i>The RFS</i> designed to reduce CO ₂ e emissions from the voluntary removal of <i>Tree Biomass</i> from the <i>Forested Lands</i> in the <i>Project Area</i> .
Project Abandonment	Defined in subsection A5-3b2. Gives rise to an <i>Imputed Project Termination Date</i> .
Project Additionality	ER1. Evidence required under <i>The RFS</i> that the <i>Project's</i> protective activities were not required by law, regulation or contract; were not incentivized by economic benefits; and

	are not undertaken pursuant to an incentive system other than <i>The RFS</i> .
Project Area	Defined in subsection IC1-1A.
Project Biodiversity Benchmarks Assessment	B1-1. An assessment by the <i>Proponent Forest Ecologist</i> of <i>Habitat-Type</i> variable data and <i>Ecological Indicator Group Species</i> abundance and distribution deemed to exist on the <i>Project Start Date</i> , established to measure changes in <i>Biodiversity</i> in the <i>Project Area</i> during the <i>Project Period</i> .
Project Biodiversity Monitoring Protocol	B1-3A. The protocol prepared by a <i>Proponent Forest Ecologist</i> for monitoring the impact of human activities on biodiversity in the <i>Project Area</i> during the <i>Project Period</i> .
Project Biodiversity Monitoring Report	B1-3B. A report prepared by a <i>Proponent Forest Ecologist</i> detailing the results of the <i>Project Biodiversity Monitoring Protocol</i> .
Project Biodiversity Report Card	B1-5B. A comparison prepared by <i>The RFSMU</i> of the measurements in the <i>Project Biodiversity Monitoring Report</i> and the <i>Project Biodiversity Benchmarks</i> and previous <i>Project Biodiversity Monitoring Reports</i> .
Project Boundary	ER4-5A The boundary line shown on the <i>Project Boundary Map</i> .
Project Boundary Map	Defined in ICI-1
Project Developer	IC2-1B. Individual(s) or entity designated by legally binding authority from the <i>Project Proponent</i> to prepare and submit documents required by <i>The RFS</i> , to act as <i>Project Proponent's</i> agent throughout the validation process, to modify submissions, to make <i>representations</i> as required in <i>The RFS</i> , or to otherwise act on behalf of the <i>Project Proponent</i> during a <i>Project Validation Protocol</i> .
Project Emission Baseline	ER2. Expected rate of emissions of CO ₂ e resulting from <i>Removals</i> of <i>Aboveground Biomass</i> in the <i>Eligible Forested Land</i> in the <i>Project Area</i> throughout a <i>Crediting Period</i> .
Project Emission Change	ER3-1I. Change in estimated tCO ₂ e emissions resulting from <i>Removals</i> of <i>Tree Biomass</i> (<i>Aboveground</i> , <i>Belowground</i> , and <i>Deadwood</i>) in the <i>Eligible Forested Land</i> in the <i>Project Area</i> throughout a <i>Crediting Period</i> . <i>Net Carbon Emission Change</i> (a measure of C rather than Co ₂ e) times 3.67.
Project Land Tenure Map	Map described in ICI-2A
Project Participant	Defined in IC2-1: <i>Project Proponent</i> , <i>Project Developer</i> , <i>Rightsholders</i> (de jure and de facto), and <i>governmental authorities</i> with jurisdiction.
Project Participant Identification Document	IC2. A complete list of all <i>Project Participants</i> in the <i>Project Area</i> .
Project Period	A term of years beginning on the <i>Project Start Date</i> and ending on the <i>Project Termination Date</i> .
Project Proponent(s)	IC2-1A. Individual(s) or legal entity proposing the <i>Project</i> that has the right to trade carbon emission reductions stemming from reducing removal of <i>Tree Biomass</i> from

	<i>Eligible forested lands in the Project Area. Project Proponent may act as Project Developer.</i>
Project PTF Account	ER5-5A. Issued <i>RFS Credits</i> placed in the account of the <i>Project</i> held in trust or escrow by a <i>Depositary</i> and for which a quarterly <i>Depositary Statement</i> is provided to the <i>Project Proponent</i> and placed on the <i>Project Webpage</i> .
Project Start Date	A5-2A. The 61st day following the <i>Project Validation Date</i> .
Project Submission Checklist	A3-1. See Exhibit F.
Project Termination Date	A5-2. The date on which the <i>Project</i> is deemed terminated; the end of the <i>Project Period</i> .
Project Validation Protocol	A3
Project Webpage	Each <i>Project</i> will have its own webpage on <i>The RFS Website</i> with the attributes listed in A1-2.
Proponent Baseline Expert	ER2-2. A <i>Proponent Expert</i> responsible for preparing an <i>Alternate Baseline Methodology Report</i> . See Exhibits D and E for Tasks and Qualifications.
Proponent Carbon Stock Expert	ER3-1 Step 3 See Exhibits D and E for Tasks and Qualifications.
Proponent Disclosure	A written disclosure statement to each <i>Project Participant</i> in accordance with the <i>Requirements</i> of S2-1.
Proponent Expert	Ibid. An expert selected by <i>Project Proponent</i> with the minimum qualifications required for the task required by the relevant <i>Requirements</i> section. See Exhibits D and E for Tasks and Qualifications.
Proponent Full Replacement Alternative Expert	ER5-6, 8, 9. See Exhibits D and E for Tasks and Qualifications.
Proponent Forest Ecologist	B1-5. Forest Ecologist designated by <i>Project Proponent</i> . See Exhibits D and E for Tasks and Qualifications.
Proponent Land Use Expert	ER1-2. Land Use Expert designated by <i>Project Proponent</i> . See Exhibits D and E for Tasks and Qualifications.
Proponent QOL Expert	S3-1. Quality of Life Expert designated by <i>Project Proponent</i> . See Exhibits D and E for Tasks and Qualifications.
Protected Area	Any area designated by a <i>Governmental Authority</i> , (including so-called <i>protected areas</i> , national parks, national forests or equivalent designations) for the purpose of the long-term conservation of nature in the area with associated ecosystem services and cultural values.
Protected Area Exception	ER1-1D. An exception to the strict <i>Legal Additionality Test</i> that is applied only to <i>Protected Areas</i> .
Protected Area Illegal Removal Period	ER1-1D1. A period starting after the <i>Protected Area</i> was constituted, and not more than ten (10) years prior to the <i>Initial Project Submission Date</i>
Public Comment Period	A2-1B. The time allowed for <i>Public Commentary</i> with respect to validation, verification, or <i>project</i> activities..
Public Commentary	Comments in accordance with the <i>Requirements</i> of A2 on <i>Initial</i> or <i>Final Project Submission Documents</i> , on <i>Verification Requests</i> , on responses to <i>Public Commentary</i> , or other

	matters as described in A2.
Publications	Includes “grey literature” unless otherwise specified, e.g. as required to be published in <i>Peer-reviewed Literature</i> .
QOL	Acronym for Quality of Life. Ibid.
QOL Benchmark	S3-1B1. Either the <i>Validated</i> or the <i>Permissible QOL Benchmark</i> .
QOL Document	S3-1. A document from each <i>Project Participant</i> that is an Indigenous or traditional people or other forest-dependent group (whether a <i>De Jure Rightsholder</i> or on the <i>De Facto Rightsholder List</i>) describing their plans, if any, for sustainably maintaining or improving any two <i>QOL Domains</i> .
QOL Domain	S3-1 Any of the following where changes are measured, monitored, and verified: Household income; access to health care; type and security of land and resource tenure; education; sustainable <i>Forested Lands</i> Resource Use; diversity of income sources; level of conflict over resources; regional and extra-community relations; infrastructure facilities; use of traditional integrated forest management practices.
QOL Domain Goal	S3-1E. <i>projected</i> improvement in <i>QOL Domain</i> in relation to its <i>QOL Baseline</i> .
QOL Monitoring Plan	S3-1F The protocol prepared by a <i>Proponent QOL Expert</i> for monitoring changes in <i>QOL Domains</i> selected by <i>Project Participants</i> for measurement during the <i>Project Period</i> .
QOL Report	S3-1F3 A report prepared by a <i>Proponent QOL Expert</i> detailing the results of the <i>QOL Monitoring Plan</i> .
QOL Report Card	S3-2B A comparison prepared by <i>The RFSMU</i> of the measurements in the <i>QOL Report</i> and the <i>QOL Baseline</i> in the <i>QOL Domain</i> selected by <i>Project Participants</i> for measurement during the <i>Project Period</i> .
QOL Validation Certificate	S3-1B2d. For any <i>QOL Baseline</i> to be deemed a <i>Permissible QOL Baseline</i> , a <i>QOL Validation Certificate</i> must be provided by the <i>Proponent QOL Expert</i> .
Qualified Buffer System	A buffer system for assuring <i>Permanence</i> by meeting the <i>Requirements</i> of subsection ER5-7.
Qualified Buffer System Report	ER5-6D. A report in support of the use of a <i>Qualified Buffer System</i> prepared by a <i>Proponent Full Replacement Alternative Expert</i> .
Quality of Life Benefits (QOL Benefits)	S3-1
Referee	An <i>Expert</i> whose function is to act as a <i>Referee</i> under the <i>Referee Protocol</i> .
Referee Decision	S2-3.
Removals	A reduction in <i>Tree Biomass</i> between two points in time.
Representation	Good faith <i>representation</i> that a Requirement has been met or that the facts represented are accurate and complete in all material respects to the best of the knowledge and belief of

	the person or entity making the <i>Representation</i> after a full, good faith investigation.
Representation, Personal:	<i>Representation</i> by top responsible individual of organization.
Representation, Entity	<i>Representation</i> by individual or entity duly authorized to bind the organization.
Representative Organizations	1. Federation or NGO officially designated by a <i>Governmental Authority</i> as representing a group that is a potential <i>de facto</i> <i>rightsholder</i> . 2. Federation or NGO designated on Schedule ___ as representing a group that is a potential <i>de facto</i> <i>rightsholder</i> .
Requirements	The specific <i>Requirements</i> set forth in each section of The Rainforest Standard .
Resource Use Territories	Areas of <i>Resource Use</i> . IC1-3.
Resource Uses	Natural resources used by local groups, especially those used with local traditional knowledge. IC1-3; S1.
Reversal	ER5-9. The voluntary, human-induced removal of <i>Tree Biomass</i> that had previously generated a <i>RFS Credit</i> for having stored carbon in that <i>Tree Biomass</i> (e.g. intentional harvesting.)
Reversal: involuntary	ER5-9. <i>Removals</i> of <i>Tree Biomass</i> that were human induced but not done or allowed voluntarily by <i>Project Proponent</i> (e.g. fires started by negligence; actively monitored and resisted illegal harvesting).
Reversal: human-induced	ER5-9. <i>Removals</i> of <i>Tree Biomass</i> resulting from human activity rather than natural occurrences such as fire caused by lightening, drought, or disease.
Reversal: voluntary	ER5-9. Intentional removals of <i>Tree Biomass</i> .
Rainforest Standard Monitoring Unit or RFSMU	The organization(s) responsible for exercising the functions described as being performed by <i>The RFSMU</i> .
RFS	Abbreviation for The Rainforest Standard
RFS Credit	ER3-2A. An emission reduction credit authorized to be issued by an <i>RFSMU</i> in accordance with the <i>Requirements</i> , terms and conditions of <i>The RFS</i> . Each <i>RFS Credit</i> represents one ton of CO ₂ e emission reductions.
RFS Debit	ER3-2B. A debit required to be deducted from <i>RFS Credit</i> balance in <i>Project Proponent's RFS Credit</i> account in accordance with the <i>Requirements</i> of <i>The RFS</i> . Each <i>RFS Debit</i> represents one ton of CO ₂ e emission reductions.
RFS Interactive Permanence Tool	An interactive tool that allows the comparison of <i>Permanence</i> options based on a variety of variables, including area, carbon density, documented or projected baseline removal rates, leakage rate, price, buffer percentage, <i>Reversal</i> size and timing, et al. See Appendix ER5 for link.
RFSMU	An acronym standing for RFS Management Unit – the organization responsible operational functions of <i>The RFS</i> as described in the <i>Requirements</i> .
RFS Website	The website operated by <i>The RFS</i> or its <i>RFSMU</i> on which is

	posted <i>The RFS</i> information described in A1-1. Each <i>Project Webpage</i> is also available on <i>The RFS Website</i> .
Rightsholder	A term that refers to <i>De Jure</i> and <i>De Facto Rightsholder</i> collectively.
Rightsholder Benefit Plan	Generally, a description of all benefits of any kind that may be received by the <i>Rightsholder</i> during the <i>Project Period</i> See subsection S2-4 for specific <i>Requirements</i> .
Rightsholder Benefit Plan	A document prepared by <i>Project Proponent</i> detailing the risks that <i>rightsholders</i> may be subject to. See subsection S2-8 for specific <i>Requirements</i> .
Rightsholder Risk Acknowledgment	A document signed by <i>de facto rightsholders</i> acknowledging their receipt of the <i>Rightsholder Benefit Plan</i> and accepting the risks detailed therein. See subsection S2-8 for specific <i>Requirements</i> .
Seller Guarantee / Seller Guarantor	Any one or more individuals or entities defined in subsection ER5-2 as a “Seller” can provide all or part of a <i>Seller Guarantee</i> (such individual or entity: “ <i>Seller Guarantor</i> ”). For the purposes solely of subsection ER5-2, a “Seller” is any <i>Project Participant</i> and any <i>Intermediary</i> between a <i>Project Participant</i> and an <i>Offset Purchaser</i> , as well as any partner of a <i>Project Participant</i> or <i>Intermediary</i> .
Suspended Biodiversity Verification	B1-5D. A procedure by which credits that would otherwise be issued, have their issuance suspended until there has been compliance in accordance with B1-4E-F.
Suspended QOL Verification	S3-2E. A procedure by which credits that would otherwise be issued, have their issuance suspended until there has been compliance in accordance with S3-2E.
Sustainability Impact Assessment	S3-1B2b [To be provided]
Tax Preparer	A firm or individual licensed to prepare tax returns that has prepared the relevant <i>Project Proponent</i> or Developer tax return.
Temporary RFS Credit	Described and defined in Section ER5-7.
Tenure Table	A Table described in ICI-2B often accompanying a <i>Project Land Tenure Map</i> .
Termination Date Notice	A notice from the <i>Project Proponent</i> pursuant to Section A5-2 that advises <i>The RFSMU</i> of the <i>Project Termination Date</i> .
The RFS	Abbreviation for The Rainforest Standard
Third-Party Guarantee/Guaranty	Described and defined in ER5-3.
Ton-Year Accounting	A <i>Permanence</i> mechanism described in Section ER5-4.
Ton-Year Credit Request	ER5-4A. A notice from <i>Project Proponent</i> opting to use <i>Ton-Year Accounting</i> .
Tree Biomass	Defined as <i>Aboveground Tree Biomass</i> plus <i>Belowground Tree Biomass</i> plus <i>Deadwood Biomass</i> .
Validated QOL Baseline	Data describing a baseline for a <i>QOL Domain</i> covering a community within the <i>Project Area</i> , published by a

	<i>Governmental Authority</i> , recognized NGO, or <i>Peer-reviewed Literature</i> not more than five years old. See subsection S3-1B1.
Validated Removals Baseline	ER2-2A. The expected annualized rate of reduction in <i>Tree Biomass</i> carbon stock in the <i>Project Area's Eligible Forested Land</i> that can be used if no <i>Governmental Removals Baseline</i> is available.
Validation Consultation	S2-1F3. Consultation between <i>Project Proponent</i> and <i>De Facto Rightsholder</i> subsequent to each <i>Validation Date</i> .
Validation Certificate	A document issued by <i>The RFSMU</i> in accordance with subsection A3-3 certifying the completion of <i>Final Project Submission Documents</i> in accordance with <i>RFS Requirements</i> , and the <i>Validation Date</i> .
Validation Date	The date as of which the <i>Project</i> has been validated as per the <i>Validation Certificate</i> .
Verification Certificate	A5
Verification Consultation	S2-1F4. Consultation between <i>Project Proponent</i> and <i>De Facto Rightsholder</i> subsequent to each <i>Verification Date</i> .
Verification Date	A document issued by <i>The RFSMU</i> in accordance with subsection A4-2A2 certifying the date identified by the <i>Project Proponent</i> as the date on which the <i>Credit Verification</i> shall be deemed to have occurred for purposes of calculating <i>RFS Credits</i> , <i>Quality of Life</i> compliance, <i>Biodiversity</i> compliance, and related matters.
Verification Request	A4-2A1 The form submitted requesting <i>RFS credit verification</i> .

EXHIBITS

Exhibit A: PROJECT SUBMISSION DOCUMENT LIST

Location	Document	Req'd	Contingent	Initial	Final	Verification
IC1-1	<i>Project Boundary Map</i>	x		X		
IC1-2	<i>Project Land Tenure Map</i>	X		X		
IC1-2	Tenure Table	X		X		
IC1-3	Project Activities Map	X		X		
IC1-4	<i>Benchmark Eligible Forested Lands Map</i>	X		X		
IC1-4	<i>Forest Type*Condition Matrix</i>	X		X		
IC2-1/2	<i>Project Participant Identification Document</i>	X		X		
IC3-1	Documentary Evidence for <i>Project</i> land Tenure Map and Table	x		x		
IC3-2A-G	Documentary Evidence for Right to Transfer Carbon Emission Reductions for Value	x		x		
IC3-2E	If governmental registration system in place, evidence of compliance		x	x	x	x
S1-1	DFR List	X		x		
S1-3	DFR Notice Provided	x		x		
S1-4	DFR Claim		X	x		
S2-1	<i>Proponent Disclosure</i>	X		x		
S2-2A	<i>Pre-Submission Consultation Compliance</i>		x	x		
S2-2B	<i>Final Submission Consultation Compliance</i>		X		x	
S2-2C	<i>Validation Consultation Compliance</i>		x			x
S2-2C	<i>Verification Consultation Compliance</i>		x			x
S2-3	<i>Project Participant Acknowledgment</i>		x	x		
S2-4	<i>Rightsholder Benefit Plan</i>		X		x	
S2-5	<i>Master Rightsholder Benefit Plan</i>		x		x	
S2-6	<i>Master Rightsholder Benefit Plan compliance</i>		x			x
S2-8	<i>Rightsholder Benefit Plan</i>		X		x	
S2-8	<i>Rightsholder Risk Acknowledgment</i>		X			
S2-9	Free Prior Informed Consent compliance	x			x	
S3-1	<i>QOL Document</i>		X		x	
S3-2A	<i>QOL Report</i>	x				x
B1-1	<i>Project Biodiversity Benchmark</i>	x			x	
B1-3	<i>Project Biodiversity Monitoring Protocol</i>	X			x	
B1-3B; B1-4	<i>Project Biodiversity Report</i>	X				x
B1-4	<i>Biodiversity Recovery Plan</i>		X			x

Location	Document	Req'd	Contingent	Initial	Final	Verification
B1-7	Alternative to Recommended Protocol – Technical Report		X	x		
ER1-1	Legal <i>Additionality</i> documentation	x		x		
ER1-2	Economic Valuation documentation	X		x		
ER1-3	<i>Existing Incentives Test</i> documentation	x		x		
ER2-1	<i>Documented Prospective Removals Justification</i>		x	x		
ER2-2	<i>Alternate Baseline Methodology Report</i>		X	x		
ER3-1A	<i>Carbon Stock Benchmark</i>	x			x	
ER3-1B	Expected Carbon Stock calculations	x			x	
ER3-1C	Carbon Stock Verification Map	X				X
ER3-1D	<i>Gross Carbon Emission Change</i>	X				X
ER3-1E	<i>Leakage Deduction</i> calculation	x				X
ER3-1F	Belowground Emission Reduction calculation	x				x
ER3-1G	Deadwood Emission Reduction calculation	x				x
ER3-1H	<i>Net Carbon Emission Change</i>	X				X
ER3-1I	<i>Project Co2e Emission Change</i>	X				X
ER3-1J	<i>5-year Carbon Stock Adjustment</i>		x			X
ER4-5	<i>Market Leakage Report</i>	X			x	x
ER4-6	<i>Leakage Alternative Deduction Report</i>		x		x	x
ER5	<i>Permanence Option Template: Form selecting Full Replacement option(s).</i>	X		x		
ER5-5	<i>Ton-Year Credit Request</i>		x			x
ER5-9	<i>Full Replacement Alternative Report</i>		X	x	x	x
ER5-10	<i>Natural Fire Report</i>		X			x
ER5-10	<i>Involuntary Removal Report (logging)</i>		X			x
A2-2	<i>Project Response</i>		x	x	x	x
A4-2	<i>Verification Request</i>					x
A5-B2	<i>Project Termination Date Notice</i>	x			x	
A5-B2	<i>Revised Project Termination Date</i>		x		x	x
A6-2	<i>Credit Transfer Report</i>		x			
A6-3A	<i>Credit Retirement Report</i>		x			
A6-3B	<i>Credit Retirement Form</i>		x			

Exhibit B: REPRESENTATIONS

Location	<i>Representations</i> (r = required; a = alternative)	<i>Project Proponent</i>	<i>Project Developer</i>	Other
IC1-5A5	Maps [r]	x	x	
IC1-5A6	Maps [r]			Proponent <i>Forestry Mapping Expert</i>
IC1-5B2	Schedules and matrices accompanying Maps [r]	x	x	
IC1-5B3	Schedules and matrices accompanying Maps [r]			Proponent <i>Forestry Mapping Expert</i>
IC2-3	<i>Project Participant Identification Document</i> [r]			
IC3-3A	IC3-2A-G <i>Requirements</i> have been fulfilled [r]	x	x	
S1-3B	De Factor <i>Rightsholder</i> Notice compliance [r]	x		
S2-2A	Pre-Submission Consultation compliance [r]	x	x	
S2-2B	<i>Validation Consultation</i> compliance [r]	x	x	
S2-2C	<i>Verification Consultation</i> compliance [r]	x	x	
S2-3D,E	<i>Participant Acknowledgement</i> [r]			<i>Project Participants</i>
S2-6A1	Compliance with each <i>Rightsholder Benefit Plan</i> [r]	x		
S2-8B7	Compliance with <i>FPIC Requirements</i> [r]	x		
B1-6	<i>Biodiversity</i> information is complete and accurate [r]	x		<i>Proponent Forest Ecologist</i>
B1-7A2	Alternative <i>Biodiversity</i> Protocol technical report is complete and accurate [r]			<i>Proponent Forest Ecologist</i>
ER1-1A1	No laws or agreements prohibiting removals [r]	x	x	
ER1-2A2	<i>Forestry Valuation Report</i> is accurate [r]	x	x	<i>Proponent Land Use Expert</i>
ER1-2A3	<i>Forestry Valuation Report</i> is accurate [r]	x	x	
ER1-3A1	No other consideration received for reduced <i>Removals</i> [r]	x	x	
ER2-1B1	<i>Documented Prospective Removals</i> documentation (a)	x	x	
ER2-2F	Baseline Model [r]	x	x	
ER4-4B1c	<i>Market Leakage</i> [r]			<i>Proponent Land Use Expert</i>

Location	<i>Representations</i> (r = required; a = alternative)	<i>Project Proponent</i>	<i>Project Developer</i>	Other
ER4-4B1d	<i>Market Leakage Report</i> is accurate [r]	x	x	
ER5-10A1	Fires are accidental			
ER5-10B1	<i>Removal</i> was not voluntary			
ER5-7A5a	<i>Full Replacement</i> obligation and capacity (a)			Buffer System
ER5-9	<i>Full Replacement Alternative Report</i> accurate and complete			<i>Proponent Full Replacement Alternative Expert</i>
A5-B2a(2)(d)	<i>Project Termination Date</i> change does not violate existing agreements or any law or regulations.	x		
A6-2	<i>Credit Transfer Representations</i>	x		Transferor / Transferee

Exhibit C: LEGAL OPINIONS

Location	<i>Legal Opinion Subject</i> (r = required; a = alternative)
IC3-1C	Information on <i>Project Land Tenure Map</i> and Table (r)
IC3-3A2	Right to transfer and trade in emission reductions (a)
ER1-1A2	Legal <i>Additionality</i> : Laws and agreements do not prohibit <i>Removals</i> from <i>Project Area</i> (r)
ER2-1B2	<i>Documented Prospective Removals</i> documentation (a)
ER5-9A4	<i>Full Replacement Alternative</i> (a)

Exhibit D: EXPERT AND REFEREE TASK LIST

	Requirement	Section	Proponent Expert	Assigned	Referee
				Expert	
				Automatic	Conflict only
1	<i>Project Boundary Map</i>	ICI-1	Proponent Forestry Mapping Expert		R1
2	<i>Project Land and Tenure Map and Table</i>	ICI-2	Proponent Forestry Mapping Expert		R5
3	<i>Project Activities Map</i>	IC1-3	Proponent Forestry Mapping Expert		R7
4	<i>Benchmark Project Forested Land Map</i>	IC1-4	Proponent Forestry Mapping Expert		R2
5	<i>Project Participant Participation Document</i>	IC2-1	none		R3
6	<i>De Facto Rightsholder List</i>	S1-1	none		R3
7	Proponent disclosure	S2-1	none		R3
8	<i>Participant Acknowledgement</i>	S2-2	none		R3
9	Master Compliance Document	S2-5	none		R3
10	<i>Rightsholder Benefit Plan</i>	S2-7	none		R3
11	<i>Rightsholder Risk Acknowledgement</i>	S2-7	none		R3
12	<i>QOL Document</i>	S3-1	Proponent QOL Expert		R7
	<i>QOL Benchmark</i>	S3-1	Proponent QOL Expert		R7
	<i>QOL Monitoring Plan</i>	S3-1F	Proponent QOL Expert		R7
13	<i>QOL Report</i>	S3-2B	Proponent QOL Expert		R7
	<i>QOL Validation Certificate</i>	S31-B2c	Proponent QOL Expert		R7
14	<i>Biodiversity Benchmark</i>	B1-1	Proponent Forest ecologist		R2
	<i>Ecological Indicator Groups</i>	B1-3	Proponent Forest ecologist	x	R2
	<i>Ecological Indicator Groups Species</i>	B1-3	Proponent Forest ecologist	x	R2
15	<i>Biodiversity Monitoring Protocol</i>	B1-3	Proponent Forest ecologist		R2
16	<i>Biodiversity Report</i>	B1-4	Proponent Forest ecologist		R2
	<i>Biodiversity Recovery Plan</i>	B1-4	Proponent Forest ecologist		R2
18	<i>Recovery Period Excuse</i>	B1-4G	Proponent Forest ecologist	x	R2
19	Alternative Benchmark or Monitoring Plan Protocol	B1-6	Proponent Forest ecologist	x	R5
20	<i>Legal Additionality Test</i>	ER1-1	none		R5
21	<i>Protected Area Additionality Exception</i>	ER1-1	none		R6
22	<i>Economic Incentive Test</i>	ER1-2	Proponent Land Use Expert		R6
23	Forest Valuation Report	ER1-2B	Proponent Land Use Expert		R5
24	<i>Existing Incentives Test</i>	ER1-3	none		R5
25	<i>Documented Prospective Removals</i>	ER2-1	none		R5
26	<i>Alternate Baseline Methodology Report</i>	ER2-2	Proponent Baseline Expert	x	R9
	<i>Governmental Removal Baseline</i>		Proponent Baseline Expert	x	R9
	<i>Validated Removal Baseline</i>		Proponent Baseline Expert	x	R9
27	Emission Reduction Calculation	ER3	Proponent Carbon Stock Expert	x	R10
28	<i>Belowground/Deadwood Adjustment Report</i>	ER3-3	Proponent Carbon Stock Expert	x	R10
29	<i>Market Leakage Report</i>	ER4-5	Proponent Land Use Expert		R8
30	<i>Leakage Alternative</i>	ER4-6	Proponent Leakage Expert	x	R8
31	<i>Full Replacement Alternative</i>	ER5	Replacement Alternative Expert	x	R11
32	<i>Natural Fire Report</i>	ER5-10A	Proponent Forest Ecologist		R4
33	<i>Involuntary Removal Report (logging)</i>	ER5-10B	Proponent Forest Ecologist		R5

Exhibit E: EXPERT AND REFEREE QUALIFICATIONS

PROPOSER EXPERT'S TITLE	RFS Section(s)	Minimum Required Qualifications				
		Education	Experience	Publications	Position	Other
Proponent Forestry Mapping Expert	IC1-5A6; IC1-5B3; ER3-1A2	BS in geography, biology, forestry or related fields	5 years within the last 10 years in GIS and mapping land use differences	Grey literature: two or more <i>publications</i> related to forestry mapping	As forestry mapping consultant, researcher, or in related academic position for at least the previous two years.	Education + experience + <i>publications</i> or experience + <i>publications</i> + position
Proponent QOL Expert	S3-1B2d; S3-1F; S3-2A	Master's in anthropology, sociology or economics; or	5 years within the last 10 years	Grey literature: Two or more <i>publications</i> Quantitative Sociology / Anthropology	As consultant, researcher, or in related academic position for at least the previous 2 years.	
		BS degree in anthropology, sociology or economy; or	10 years	Grey literature: Two or more <i>publications</i> Quantitative Sociology / Anthropology	As consultant, researcher, or in related academic position for at least the previous 5 years.	
		BS in statistics	3 years statistics within the last 10 years; 1 year community development	Grey literature: Two or more <i>publications</i> Quantitative Sociology / Anthropology	As consultant, researcher, or in related academic position for at least the previous 5 years.	
Proponent Forest Ecologist	B1-1; B1-3; B1-4C,G; B1-5; B1-6A; ER5-10A1(b)	Master degree in forestry (biology, ecology, or engineering)	10 years working in forests in at least 80% of <i>Habitat Types</i> in <i>Project Area</i> .	Grey literature: two or more <i>publications</i> in forest ecology	As consultant, researcher, or in related academic position for at least the previous 5 years.	
Proponent Baseline Expert	ER2-2A; ER2-2B2b,c; ER2-2C3	Master in forestry, statistics or related field (ecology, biology, GIS, geography, engineering)	5 years in spatially explicit modeling.	One or more peer-reviewed publication on baseline methodology incorporating spatially explicit modeling.	As consultant, researcher, or in related academic position for at least the previous 5 years.	
Proponent Carbon Stock Expert	ER3-1A1b; ER3-1A2; ER3-1C1	Master's Degree in forestry or a related field (ecology, biology, geography, engineering)	10 years working in forest carbon estimation using both field and remote sensor techniques	Grey literature: two or more <i>publications</i> in forest carbon estimation	As consultant, researcher, or in related academic position for at least the previous 5 years.	

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PROPONENT EXPERT'S TITLE	RFS Section(s)	Minimum Required Qualifications				
		Education	Experience	Publications	Position	Other
Proponent Full Replacement Alternative Expert	ER5-6, 8,9	MBA or MA in Economics; or	10 years in financial underwriting including credit assessment, stress testing, risk analysis, scenario testing.	None required.	As consultant, researcher, or in related academic position for at least the previous 5 years.	
		Lawyer, Accountant	10 year experience in secure transactions.	None required.	Practicing professional for at least the previous 5 years.	
Proponent Leakage Expert	ER4-6	MA in economics or MBA	3 years in economics modeling	One or more peer-reviewed <i>publications</i> on <i>leakage</i> .	As consultant, researcher, or in related academic position for at least the previous 2 years.	
Proponent Land Use Expert	ER1-2A1,3; ER4-5B1	BS degree in economics, agronomy, or forestry; or certified property appraiser.	5 years within the last 10 years in land valuation including forestry lands;	None required.	As consultant, researcher, or in related academic position for at least the previous 5 years.	

ASSIGNED EXPERT'S TITLE	RFS Section(s)	Minimum Required Qualifications				
		Education	Experience	Publications	Position	Other
Assigned Forest Ecology Expert	B1-3; B1-4; B1-6B	Master's degree in forestry (biology, ecology, or engineering)	10 years working in forests in at least 80% of <i>Habitat Types</i> in <i>Project Area</i> .	One or more peer-reviewed <i>publications</i> on forest ecology.	As consultant, researcher, or in related academic position for at least the previous 5 years.	
Assigned Carbon Stock Expert	ER3-3	Master's degree in forestry or a related field (ecology, biology, geography, engineering)	10 years working in forest carbon estimation using both field and remote sensor techniques	Grey literature: two or more <i>publications</i> in forest carbon estimation	As consultant, researcher, or in related academic position for at least the previous 5 years.	
Assigned Baseline Expert	ER2-2B2,3	Master's degree in forestry, statistics or related field (ecology, biology, GIS, geography, engineering)	5 years in spatially explicit modeling	One or more peer-reviewed publication on baseline methodology incorporating spatially explicit modeling.	As consultant, researcher, or in related academic position for at least the previous 5 years.	
Assigned Full Replacement Alternative Expert	ER5-9; ER5-9B,C	MBA or MA in Economics; or	10 years in financial underwriting including credit assessment, stress testing, risk analysis, scenario testing.	None required.	As consultant, researcher, or in related academic position for at least the previous 5 years.	
Assigned Leakage expert	ER4-6B	MA in economics or MBA	3 years in economics modeling	One or more peer-reviewed <i>publications</i> on <i>leakage</i> .	As consultant, researcher, or in related academic position for at least the previous 5 years.	

REFEREE'S TITLE	RFS Section(s)	Minimun Required Qualifications				Other
		Education	Experience	Publications	Position	
Project Boundary and Land Tenure Map Referee R1	IC1-1; IC1-2	Land use lawyer; certified as land surveyor	5 years professional experience in land use map usage.	None	Land use lawyer; or land surveyor for at least the previous 5 years.	
Forested Land Map and Biodiversity Referee R2	IC1-4; B1-1/3/4	Master degree in forestry (biology, ecology, or engineering)	10 years working in forests in at least 80% of <i>Habitat Types</i> in <i>Project Area</i> .	One or more peer-reviewed <i>publications</i> on forest ecology.	As consultant, researcher, or in related academic position for at least the previous 5 years.	
Participants Referee R3	IC2-1; S1-1; S2-1/2/5/7	B.S. in anthropology, sociology, or economics	5 years experience within the last 10 years, in working with communities in the Amazon	Grey literature: two or more <i>publications</i> on Amazonian community life	As consultant, researcher, or in related academic position for at least the previous 2 years.	
Forest fire Referee R4	ER5-10A	PhD in forestry (biology, forestry engineer)	10 years experience working in tropical forest dynamics in the Amazon using both field and remote sensor technics	One or more peer-reviewed <i>publications</i> on Amazonian biodiversity	As consultant, researcher, or in related academic position for at least the previous five years.	
Legal Referee R5	ER1-1; ER1-3; ER2-1; ER2-2; ER5-10B	Degree in Law	10 years experience in land use and finance.	None	Practicing professional for at least the previous 10 years.	
Forest Valuations Referee R6	ER1-2	Master's degree in economics, agronomy, or forestry; or certified property appraiser.	10 years within the last 10 years in land valuation including forestry lands;	Grey literature: two or more <i>publications</i> on forest valuation issues.	As consultant, researcher, or in related academic position for at least the previous 5 years.	
QOL Referee R7	IC1-3; S3-1; S3-2	Master's degree in anthropology, sociology or economics	10 years of experience within the last 10 years in working with communities in the Amazon	One or more peer-reviewed <i>publications</i> on Quantitative Sociology / Anthropology	As consultant, researcher, or in related academic position for at least the previous five years.	
Leakage Referee R8	ER4-5A4	Master's degree in economics or MBA	3 years in economics modeling	One or more peer-reviewed <i>publications</i> on <i>leakage</i> .	As consultant, researcher, or in related academic position for at least the previous 5 years.	
Alternate Baseline Referee R9		Master's degree in forestry, statistics or related field (ecology, biology, GIS, geography, engineering)	5 years in spatially explicit modeling	One or more peer-reviewed publication on baseline methodology incorporating spatially explicit modeling.	As consultant, researcher, or in related academic position for at least the previous 5 years.	

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REFEREE'S TITLE	RFS Section(s)	Minimum Required Qualifications				
		Education	Experience	<i>Publications</i>	Position	Other
Emission Reduction Calculation Referee R10	ER3-3	Master's degree in forestry or a related field (ecology, biology, geography, engineering)	10 years working in forest carbon estimation using both field and remote sensor techniques	Grey literature: two or more <i>publications</i> in forest carbon estimation	As consultant, researcher, or in related academic position for at least the previous 5 years.	
Full Replacement Alternative R11	ER5-9; ER5- 9B,C	MBA or MA in Economics; or	10 years in financial underwriting including credit assessment, stress testing, risk analysis, scenario testing.	None required.	As consultant, researcher, or in related academic position for at least the previous 5 years.	

Exhibit F: PROJECT SUBMISSION CHECKLIST

SCHEDULES

Schedule IC1-1_A: Approved Survey Standards Associations

Schedule IC1-4_A: *Forest Types*

Schedule S2-7: Financial Requirements

Schedule ICI-4_B: Forest Conditions

**Schedule S3-1_A: Approved List of Forms of: Participatory Rural Appraisals,
Diagnostics of Rural Participation, Sustainability Impact Statements**

Schedule ER1-1_A: Crediting or Payments for Reducing Tree Biomass Removals

Schedule ER1-1_B: Contracts Related To Removal

Schedule ER5-5_A: Depositary List

Schedule ER5-5_B: RFS Current Credit Distribution Steps

TEMPLATES

Template S2-4: Rightsholder Benefit Plan Elements

Template S2-9B: FPIC Requirements

Template: Representations

Template ER5: Permanence Option Template

Template ER5-2: Seller Guarantee

Template ER5-3: Third-Party Guarantee

Template ER5-4: Ton-Year Credit Request

Template ER5-5_A: Depositary Statement

Template ER5-5_B: PTF Distribution Request

Template A2-5: Expert Compensation Agreement

Template A6 2: Credit Transfer Report

APPENDIX ER5: RFS INTERACTIVE PERMANENCE TOOL

See file: *RFS_Interactive_Permanence_Tool* v1-4.xl

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